

APPENDIX 7.0 – Connectivity

Introduction

Connectivity is the ecological term that describes connections among habitats, species, communities, and ecological processes, enabling the flow of energy, nutrients, water, natural disturbances, and organisms and their genes at many spatial and temporal scales (Noss and Harris, 1989; Noss, 1991). Connectivity corridors support biodiversity by: maintaining opportunities for genetic exchange between populations (Merriam, 1991); allowing for gradual shifts in the distribution of species and ecosystems in the event of catastrophic events; and enhancing the management of rare habitats for red and blue-listed species, other regionally significant species, and rare ecosystems that are under-represented in protected areas.

There is significant evidence that connectivity corridors aid the continuity and stability of populations (including plants, small and large mammals, birds and other organisms). The loss of connectivity, often referred to as fragmentation, is considered by some to be the greatest threat to natural biodiversity (Harris, 1984; Wilcox and Murphy, 1985; Wilcove et al., 1986; Noss, 1991). Fragmentation of habitat results in reduced habitat quality leading to isolated populations, reduced resilience and extirpations (Spies et al., 1994). Although there are challenges to carrying out studies of connectivity at a landscape level, the benefits of landscape corridors such as riparian areas are well documented. It is also possible that connectivity corridors may play a role in a changing climate by allowing plants and animals to make landscape-scale movements along the changing climate gradient to avoid adverse environments (Hobbs and Hopkins, 1991).

Connectivity is recognized as an appropriate indicator to measure how effectively a particular land use regime contributes to the maintenance of biodiversity and opportunities for the movement of species and genetic material over time and across landscapes. Connectivity can be achieved through a combination of land-use designations, including the designation of Protected Areas, special management areas, and the establishment of conservation-oriented management objectives in the appropriate land units.

Understanding connectivity requires viewing ecological systems over larger areas and longer time frames than most people are accustomed to - tens of thousands of square kilometres and many decades or even centuries. Over such scales, species' distribution and abundance are not static but fluctuate with changing climatic and ecological conditions. Local populations may become temporarily extirpated but may be recolonized if connectivity among populations exists. In addition to maintaining long-term movement potential, connectivity permits gene flow that ensures genetic variability is maintained. Genetic variability, although probably not as important as maintaining meta-population dynamics, may be important with respect to reducing the negative effects of inbreeding and maintaining the ability of species to evolve and adapt to local conditions (B. McLellan, 2002 pers. comm.).

Benefits of Connectivity

Connectivity or habitat linkages serve to:

- mitigate the negative impact of ecosystem and species fragmentation by providing contiguous movement and dispersal corridors between suitable habitats

- facilitate migration between seasonal habitats through provision of certain requirements such as security cover
- maintain genetic diversity within a population by facilitating movement and genetic exchange between populations
- allow organisms to establish in new areas or previously occupied areas
- aid the continuity and stability of populations of plants, small and large mammals, birds and other organisms
- facilitate the flow of energy, nutrients, water, natural disturbances, and organisms and their genes at many spatial and temporal scales
- mitigate adverse impacts to natural biodiversity
- reduce the threat of decreased habitat effectiveness which can precipitate isolation of populations, lower reproduction potential, negatively affect poor recruitment to unoccupied habitats, and reduce resilience potentially resulting in extirpations

Risks to Connectivity

The risk to successful fulfilment of connectivity is high if:

- representation is not achieved by Biogeoclimatic Ecosystem Classification (BEC)
- habitats are not maintained in a proper functioning condition
- access planning does not recognize the sensitivity of wildlife to the effects of cumulative industrial and recreational access activities
- compliance and enforcement is low
- barriers which adversely affect gene flow are not addressed

An example of risk within the SRMMP relates to the Highway 3 corridor, comprised of the highway, railway, towns and associated developments, that collectively create a fracture or physical barrier precipitating movement limitations which could subsequently reduce genetic variability among grizzly bear populations located North and South of the highway (M. Proctor 2002). Although many species, such as deer and elk, can live for months in the Highway 3 corridor and successfully move across this area, grizzly bears are less likely to do so. Although they are found in the corridor, they are more likely to become attracted to garbage, fruit trees, composts, or pet foods, and, because bears are potentially hazardous to people, they are frequently removed. DNA from most grizzly bears collected north of the Highway 3 corridor can be clearly differentiated from DNA collected from bears on the south side, suggesting that the Highway corridor has begun to fracture the population (B. McLellan, 2002 pers. comm.). To ensure the viability of populations of bears and other species on either side of the Highway 3 corridor, maintaining connectivity is clearly a principle wildlife conservation goal.

If connectivity is not maintained, the risk to individual species like grizzly bear, which have a low tolerance to human activity or are less mobile with respect to their ability to disperse, locate and utilize suitable habitats, can be high.

Connectivity in a Forest Matrix Context

As opposed to applying a conventional linear or corridor approach to connectivity, the forest matrix concept involves the integration of access planning with mature and old representation, specific habitat identification and zoning and the development of related habitat conservation

regimes across the landscape. This concept was applied to the landscapes within the Southern Rocky Mountain Management Plan (SRMMP).

Essentially, the forest matrix concept involves the spatial identification of:

- core grizzly bear security zones,
- old growth management zones and mature forest zones (where specified by the Higher Level Plan),
- high to moderate ranked avalanche tracks,
- riparian zones,
- ungulate winter range, and
- inoperable forested and non-forested components of the forest harvesting land base.

Appropriate conservation and access management objectives are then specified to ensure proper functioning condition and optimum habitat effectiveness.

From a strategic wildlife conservation perspective, connectivity is obviously important. The challenge confronting land use planners using the forest matrix approach is to determine:

- an ecologically effective means of achieving proper functioning condition and habitat effectiveness through the maintenance of connectivity,
- a realistic and practical operational method of implementing and achieving connectivity objectives at a landscape level, and
- an effective and balanced industrial, public and commercial recreation access plan that sustains functional connectivity.

Connectivity in the SRMMP Area

Within the SRMMP area, a decision was made to digress from the KBLUP-IS linear connectivity concept and address the development and implementation of connectivity in a forest matrix context. The logic for achieving the goals of connectivity and habitat effectiveness through this approach was based on the opinion that this concept would:

- be more ecologically appropriate
- be based on complementary science and local knowledge
- address the entire landscape as opposed to a singular corridor

Anecdotal and scientifically-based information, required to develop and support this concept, was acquired through separate public and research connectivity workshops which, respectively generated pertinent input from commercial guides, recreationalists, hunters, local experts, scientists, foresters and biologists

Information was gathered related to:

- the identification (through anecdotal and standardized inventories) of ungulate and wide ranging carnivore locations and distribution by season
- the identification of key daily and seasonal movement routes
- determining what constitutes connectivity
- determining how connectivity can be quantified
- the identification of discrete habitats and core security areas that are required to support connectivity
- determining how the identified habitats could be managed over time

- determining, from an ecosystem based perspective, that the connectivity line work and concept is appropriate and scientifically defensible
- determining that the support inventory is comprehensive
- developing management direction which would ensure that functional connectivity would be sustained and would realistically contribute to wildlife conservation management
- the operational practicality of achieving connectivity through the forest matrix concept
- identification of connectivity gaps
- the development of best management objectives and stewardship practices for each identified habitat unit
- developing a means of mitigating the influence of identified barriers to movement

With the assistance of wildlife inventory, habitat inventory, and the scientific and local knowledge and data generated from these sessions, the habitat components essential to connectivity were mapped, best management practices were developed, and stewardship objectives were designed and subsequently reflected in the Southern Rocky Mountain Management Plan document.

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**SOUTHERN ROCKY MOUNTAIN
MANAGEMENT PLAN
APPENDIX 8.0**

**A SYNOPSIS OF THE
EAST KOOTENAY UNGULATE WINTER RANGE
CAPABILITY MAPPING, MANAGEMENT
OBJECTIVES AND
BEST MANAGEMENT PRACTICES**

DRAFT

**Prepared for the
Ministry of Sustainable Resource Management
and the
Ministry of Water, Land and Air Protection
by the
East Kootenay
Ungulate Winter Range
Committee**

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Abstract

The East Kootenay ungulate winter range mapping and guideline development process was established to facilitate the requirements expressed in section 8 of the Higher Level Plan Order (HLP) and to address the operational planning regulation requirements of the Forest Practices Code (FPC). The respective HLP and the FPC direction provides the mandate for;

- the identification of ungulate winter range
- the management of ungulate winter range

Other relevant issues which precipitated this initiative involved questions relating to:

- the accuracy of the Kootenay Boundary Land Use Plan – Implementation Strategy (KBLUP-IS) ungulate winter range area
- the acceptance, from a scientific perspective, of KBLUP-IS forest cover guidelines
- the KBLUP-IS management objectives operational feasibility and potential adverse economic impact
- the continued concern about the diminishing abundance and quality of forage
- the recognition that forage quantity and suitability is a principle limiting factor affecting wintering ungulate populations
- the current separation of Fire Maintained Ecosystem Restoration and Ungulate Winter Range management regimes

The East Kootenay ungulate winter range mapping and guideline development process also strived to meet the overall intent and guiding principles for the confirmation and establishment of ungulate winter range and the administrative process for mapping which was described in the May 2000, Memorandum of Understanding between the Ministry of Forests and the former Ministry of Environment and Parks. The work of the East Kootenay Ungulate Winter Range Committee (EKUWRC) also linked to the legal requirements expressed in the new Forest and Range Practices Act, 2002, which replaces the Forest Practices Code of British Columbia Act.

Ungulate winter range (UWR) management objectives and best management practices (BMP) were developed to address the winter habitat requirements of all resident ungulate species in the East Kootenay, excluding mountain caribou, which are currently being dealt with through the work of the Kootenay Regional Caribou Committee and Recovery Action Groups.

Executive Summary

The East Kootenay Ungulate Winter Range maps were developed in consideration of the provincial standards and procedures for rating ecosystems which determine ungulate winter range habitat capability and suitability.

The British Columbia Wildlife Habitat Rating Standards document (May 1999, Version 2.0) defines capability and suitability ratings as, “the relative importance of various mapped ecological units to wildlife populations for the purpose of making land management decisions. Capability is defined as the ability of the habitat, under optimal natural (seral) conditions for a species to provide its life requisites, irrespective of the current condition of the habitat. Suitability is the ability of the habitat, in its current condition, to provide the life requisites of a species”.

With respect to defining Ungulate Winter Range (UWR) the East Kootenay Ungulate Winter Range Committee (EKUWRC) determined early in the process not to differentiate between UWR and Fire Maintained Ecosystems but to refer to the entire area identified with winter capability, regardless of its position within a Natural Disturbance Type (NDT) as Ungulate Winter Range. Although this decision may create confusion around the jurisdictional issues relevant to implementation, enforcement and monitoring responsibilities, the EKUWRC, to facilitate ease of interpretation and application, recommends and supports this integrated approach.

To maintain further continuity, the EKUWRC, with some alterations to emphasize variations in moisture regimes, also adopted the habitat type definition format used in the Fire Maintained Ecosystem Management (NDT4) objective setting process (Appendix A, Table A).

The EKUWRC also decided to recognize the significance of forest cover but would emphasize forage productivity as a habitat management priority. The EKUWRC also determined that the capability maps and ungulate winter habitat management objectives would be developed through rigorous scientific analysis of ungulate winter requirements and would be expressed in an ecosystem based context as opposed to a species driven process.

This ecosystem based objective, however, was not always achievable. For example, if the Predictive Ecosystem Model (PEM) system did not fully account for local climatic variations it had to be supplemented with the 1979 Biophysical Classification for Wildlife Capability, topographic and elevation rules.

With respect to the development of forage and cover objectives where specific research supported data was not always available, conservative negotiated determinations were made. Areas where further research is required were noted.

Table of Contents

Abstract	2
Executive summary	3
Table of Contents	4
1. East Kootenay Ungulate Winter Range (UWR) Committee	5
1.1 Participants	
2. Introduction	6
2.1 Ungulate Winter Range	
2.2 Goal	
2.3 Intent	
2.4 Issues	
2.5 Objectives	
2.6 Measures of Success	
3. East Kootenay UWR Committee Objectives	7
4. Pertinent Legislation	8
5. Licensee Requirements	8
6. Guideline and Ungulate Capability Mapping Methodology	8
6.1 Basis for the mapping and Guidelines: Best Available Science	
6.2 Ecosystem and Capability Mapping	
6.3 Objective and Best Management Practices Development	
6.3.1 Best Management Practices	
6.3.2 Management Objectives	
7. Access Planning	10
8. Information Gaps and Future Work Requirements	11
8.1 Biological Information	
8.2 PEM mapping	
8.3 Developing capability ratings using PEM mapping	
8.4 Effectiveness Monitoring	
8.5 Problem Forest Types	
References	13
Appendix A	15
Appendix B	22
Appendix C	26

1. East Kootenay Ungulate Winter Range Committee

1.1 Participants:

- Robert Neil (UWR committee chairperson) – planning biologist – Ministry of Sustainable Resource Management (MSRM)
- Dr. Kari Stuart-Smith – wildlife ecologist – Tembec Forest Industries
- Dr. Daryl Hebert – consulting wildlife biologist
- Oliver Thomae – consulting forester – Galloway Lumber Company Ltd.
- Martin Jalkotzy- consulting wildlife biologist
- Peter Holmes – ecosystem biologist – Ministry of Water, Land and Air Protection (WLAP)
- Al Neal – planning officer – Ministry of Forests - (MOF)
- John Bergenske – East Kootenay Environmental Society (EKES) and Rocky Mountain Trench Natural Resources Society
- Peter Davidson – ecosystem biologist – Ministry of Water, Land and Air Protection (WLAP) and Ktunaxa Kinbasket Tribal Council – (KKTC)
- Maureen Ketchison – consulting PEM contractor – JMJ Holdings

2.Introduction

2.1 Ungulate Winter Range:

Winter range is commonly described as the area that provides the resources required by ungulates during the winter. Although a number of factors, such as disease, displacement, predation and over harvesting can affect the viability of an ungulate population, the extent and suitability of their winter habitat is considered the ultimate limiting factor. Good quality winter range is therefore essential to the condition, survival and productivity of ungulate species and populations.

During the winter season ungulates must contend with the worst environmental conditions while consuming the poorest quality food. This has direct implications on an ungulates physical condition which is essentially dictated by their ability to maintain a positive net energy balance. If energy losses, which are influenced by cold temperatures, deep or crusted snow and inadequate or poor quality forage, exceed energy gains over an extended period, the condition of an animal will deteriorate and, if prolonged, the animal will die (Armleder, Dawson and Thomson, 1986). Consequently, to ensure over-wintering ungulates are provided with the best environment for survival, it is prudent to exercise the application of precautionary access management and forage conservation principles on identified ungulate winter range sites. From an ungulate winter range conservation perspective, providing direction that supports enhancing and sustaining forage availability and suitability characteristics, while providing for adequate cover has been the principle objective of the East Kootenay Ungulate Winter Range Committee (EKUWRC).

2.2 Ungulate Winter Range Management Goal

- To Conserve and Enhance Ungulate Winter Range

2.3 Ungulate Winter Range Management Intent:

- Maintain ungulate winter forage and cover in a condition that meets the life requisites of wintering ungulates.
- Maintain ungulates across their natural range.
- Enhance habitat effectiveness by: minimizing barriers to movement; maintaining current access management legislation; and, managing habitat deployment.
- Enhance suitability and forage productivity of ungulate winter range.
- Employ current biological and ecological science for the development and perpetuation of ungulate winter habitat structure, suitability and functional management requirements.
- Manage ungulate winter range on an ecological basis as opposed to a species-driven process.
- Apply stand level management prescriptions that are consistent with natural landscape characteristics.
- Manage public and commercial recreation access in order to maintain ungulate winter range habitat effectiveness.
- Develop and implement strategies required to manage industrial access in order to maintain ungulate winter range habitat effectiveness.

2.4 Ungulate Winter Range Issues:

- Forage availability and suitability, for wintering ungulates, which can be limited by:
 - inadequate forage carry over
 - domestic livestock and wild ungulate competition for available forage

- forest in-growth
- noxious and invasive weeds
- exclusion of fire from fire maintained and fire induced ecosystems
- land alienation and;
- imbalanced forest harvest regimes on ungulate winter range
- Ungulate winter range use, which can be limited by:
 - barriers (fences, reservoirs, roads)
 - disturbance related to commercial and public motorized recreation activity on winter ranges and;
 - industrial resource development and access use during seasonal periods when ungulate energy levels are lowest.
- Incomplete research and inventory related to the determination of wintering populations, distribution and habitat selection.
- Availability of suitable cover.
- Balancing cover and forage requirements.
- Balancing ungulate winter range carrying capacity and ungulate populations.

2.5 Ungulate Winter Range Legal Management Objectives:

- Within the mapped ungulate winter range, the landscape-level cover and forage targets will be applied by Landscape Unit by habitat type as expressed in Appendix A, Table B.
- Within ungulate winter range as mapped, the stand/site-level management objectives and stocking standard targets will be applied by habitat type as expressed in Appendix A, Table C.

2.6 Ungulate Winter Range Measures of Success:

- Suitable winter range forage and cover habitat attribute targets are achieved and sustained.
- Forage productivity is enhanced.
- The opportunity to access available forage is optimized.
- The managed ungulate winter range configuration resembles the characteristics of a landscape shaped by natural disturbance events.
- The reduction of unnatural movement and displacement of wildlife from highly suitable winter habitat is evident.
- The shelter and forage value of mature and old growth forests within identified ungulate winter ranges is achieved.
- The restoration of unsuitable ungulate winter habitat is achieved.

3. East Kootenay Ungulate Winter Range Committee Objectives

The East Kootenay Ungulate Winter Range Committee (EKUWRC) was assembled in 2001 with the express purpose of determining the accuracy of the KBLUP-IS winter range maps and the applicability of the management guidelines. In this regard, the EKUWRC developed a terms-of-reference to outline the principles and process that would be used to refine ungulate winter range mapping and management guidelines (Appendix B).

The quality and quantity of winter range is the most important limiting factor regulating carrying capacity and accordingly is significant with respect to ungulate species and population management. Consequently, from an ungulate winter range conservation perspective, providing direction that

supports enhancing and sustaining forage availability and suitability characteristics has been the principle stewardship objective of the EKWRC.

4. Pertinent Legislation

Government is currently replacing components of the 1995 Forest Practices Code with a new Results Based Code. Part of the new code framework, relevant to ungulate winter range, is intended to express a series of land use objectives that specify habitat targets. The intent is to ensure that strategic forest and forage management objectives are measurable, applicable and enforceable. In response to legislative requirements and government direction, the East Kootenay Ungulate Winter Range Committee has completed the development of ungulate winter range capability maps and habitat type management objectives which have the potential to fulfill the legal requirements expressed in the Higher Level Plan Order (HLP) and the pertinent regulatory sections of the Forest Practices Code of B.C.

5. Licensee Requirements

The ungulate winter range management objective, reflected in the Results Based Code discussion paper, is described as, “Forest cover and forage will be conserved over an area necessary for winter survival of ungulate species recognizing regional variance in the ecology of ungulate species.” The discussion paper also says that “ungulate winter range will be spatially defined and objectives set by the Ministry of Water, Land and Air Protection (WLAP). A licensee will have to demonstrate to the satisfaction of the District Manager that the location and intensity of forest development units in a Resource Development Plan will achieve objectives for ungulate winter range. If a stand level result is required by the objectives or general wildlife measures, a licensee’s operations will be required to deliver that result.”

6. Guideline and Ungulate Capability Mapping Methodology

The East Kootenay Ungulate Winter Range Committee elected to develop the objectives and best management practices recommendations in an ecosystem based context as opposed to a species driven process. The East Kootenay process involved: a compilation and summary of all research on ungulates in the East Kootenay and similar ecosystems, ecosystem mapping, development of capability and suitability ratings for the ecosystem mapping and guideline development.

6.1 Support Basis for Mapping and Guideline Development: Best Available Science

Three main projects were conducted in order to ensure the best possible scientific information was available as a basis for the mapping and guidelines. This information was used throughout the process.

1. An extensive literature review was commissioned to summarize research into habitat use and preferences for East Kootenay ungulates (excluding caribou), incorporating the latest telemetry studies available that represent East Kootenay ecosystems (Jalkotzy 2002). As part of this review the ecology of major forage and browse plant species was expressed.
2. Co-ordinates of winter ungulate sightings from approximately 25 years of winter inventories were plotted for each ungulate species (Jalkotzy 2002, East Kootenay Ungulate Aerial Survey Data: 1978-1998). It was hoped that this would help to verify winter range extent, patterns of use as the winter

season progresses, and any displacement pattern that may emerge due to in-growth or land use changes.

3. Recognizing there was no information on moose habitat use in the East Kootenay, a moose study was initiated by Tembec Industries Inc., funded by Forest Renewal BC, and implemented by Aurora Wildlife Services. Goals of this study were to clarify winter home range and habitat preferences in three representative East Kootenay areas; the Flathead valley, upper Elk valley and Spillimacheen valley northwest of Invermere. The results, in combination with the results from other studies of moose, were used to help define the extent of moose winter range and their use of forage and cover. Results from the first year of this study are summarized in Poole and Stuart-Smith (2002).

6.2 Ecosystem and Capability Mapping

1. A predictive ecosystem mapping project was commissioned in 2001 which engaged JMJ Holdings of Nelson B.C. to predict site series locations for each biogeoclimatic variant of the East Kootenay. This was achieved through the use of GIS analysis of landforms and computer algorithms, Terrestrial Ecosystem Mapping results, forest cover, satellite imagery and terrain information (Ketchison 2002, East Kootenay Predictive Ecosystem Mapping). The mapping was complicated by the fact that in 2001, the Regional Ecologist, Tom Braumandl, was completing the remapping of the biogeoclimatic units in the Cranbrook Forest District. As a consequence, some of the new biogeoclimatic variants recently mapped in the Cranbrook TSA were not fully documented so their predecessor characteristics or adjacent Terrestrial Ecosystem Mapping results had to be adapted. The resulting PEM map was used as a basis for the capability mapping.

2. Habitat capability ratings for each site series were developed by JMJ Holdings, reviewed and revised by Arc Wildlife Services, and finally reviewed and adjusted by the experts on the committee to classify the ungulate capability (under optimum conditions) and suitability (for existing structural stage) for each ungulate species except caribou. These ratings were based on information for site series climax vegetation characteristics (Braumandl and Curran 1992), which were used to approximate the forage species and cover characteristics for each site series and seral stage. Modifiers for slope, slope position, aspect and elevation were used to help delineate the highest potential winter habitat areas.

Capability classes, assigned to each site series in each biogeoclimatic unit, were occasionally adjusted by landscape unit or ecosection to reflect local differences in ungulate winter range carrying capacity. For example, within a specific biogeoclimatic unit, capability maps were often adjusted to exclude high elevations and mid-elevation narrow valleys known to have deep snow depth accumulations for long durations. In transitional biogeoclimatic variants, elevation rules based on local knowledge and previous inventories were used to approximate the zone within which snow was not limiting. For example in the MSdk, on warm aspects, the elevational extent is 1200-1650m, however, within this zone, the winter range habitat capability zone was limited to 1500m elevation except for a few small snow shadow areas.

(See the "Report and Recommendations of the East Kootenay Ungulate Winter Range Committee" for more detail)

Ungulate winter range to be managed was defined as capability classes 1 – 3 for the species with the highest rating in each site series. A few exceptional class 4 areas were incorporated where significant populations were isolated from higher class habitat.

During the process the committee discovered that it was not feasible to identify the escape terrain areas for Rocky Mountain bighorn sheep with relative certainty using GIS. Consequently, habitat and escape terrain areas known to the committee experts were mapped using aerial photographs and the East Kootenay biophysical mapping as a reference. The team mapped areas either presently used, or potentially having adequate forage and escape terrain to support sheep.

Mountain goat habitat was mapped using forest cover and TRIM map features as outlined in the Golden Mountain Goat Habitat Capability Study.

For some areas, such as high elevation winter habitats, the PEM ratings did not appear to capture ungulate winter range. In these cases the best habitat values reflected within the 1979 Biophysical Classification for Wildlife Capability polygons were selected. (See Information Gap section)

6.3 Management Objectives and Best Management Practices Development

6.3.1 Best Management Practices

Best management practices reflect recommendations for the application of strategic and operational practices which would assist the fulfillment of ungulate winter range management objectives (Appendix A, Tables D, E and F).

6.3.2 Management Objectives

1. Objectives were developed for the stand/site level (Appendix A, Table C). To assist with this, a review of stocking standards for fire-maintained ecosystems (natural disturbance type 4) as described in the Kootenay Boundary Land Use Plan Implementation Strategy was undertaken. The objective was to analyze, with the best available models, how to better optimize the mix of timber and forage produced with an emphasis on quality and quantity of each. Five forest growth models were used to simulate timber productivity under various stocking levels. The effect of thinning and burning on forest crown closure and understory plant cover were considered based on literature and local experience.

2. Objectives were developed at the landscape level for forage and cover (Appendix A, Table B). Committee members reviewed several approaches to setting objectives, including ecosystem capability, natural disturbance patterns, literature reviews on ungulate biology, and guidelines in other jurisdictions, research results from local studies, carrying capacity estimates, and timber management cycles. Final objectives were based on a combination of best available science and ecosystem and natural disturbance patterns. A rationale for both stand and landscape level guidelines is provided in a separate document.

A summary of the committee work, research reports, ungulate inventory, support documents and committee recommendations have been assembled for reference.

7. Access Planning

Although access planning is not a requirement of the East Kootenay Ungulate Winter Range Committee (EKUWRC), it is a factor of such significant importance with respect to retention of ungulate winter habitat effectiveness goals that the EKUWRC felt compelled to comment.

It is apparent, through the literature and previous experiences in B.C., that unregulated access related activities can adversely impact sensitive wildlife and wildlife habitats.

Wildlife responses to repetitive or cumulative access related disturbances may result in alterations of normal behavioral functions resulting in abandonment of quality habitat, interruption of foraging and breeding activities and intrude on seasonal and daily movement opportunities. Over time, this could result in reduced vigor, lower reproduction capability and ultimately reduced wildlife populations.

Consequently, the development and implementation of appropriate public recreation based access management strategies, such as the Recreation Management Strategy (RMS) and legislated access provisions expressed through the Wildlife Act (Access Management Areas, AMA's and Vehicle Access Hunting Closures, VAHC's) are instrumental with respect to achieving ungulate winter range management objectives in the Kootenay region.

To complement existing access legislation, the EKWRC developed an expression of best management practices designed to mitigate human disturbance in designated ungulate winter habitat types (Appendix C).

8. Information Gaps and Future Work Requirements

In developing the capability mapping and management strategies, it became apparent that there were several areas where the information required to support biologically based decisions was absent. These include the following.

8.1 Biological Information

1. More detailed information on deer and elk wintering at mid-elevation, particularly in the MSdk, is required. Specific data needs include;
 - an annual inventory of species deployment and populations wintering in these areas
 - an inventory of winter habitat use in these areas with particular emphasis on the duration of use and the preference of cover types by species
 - addressing areas where information is lacking such as the Kootenay River valley from the White River to Kootenay National Park, the Beaverfoot Valley, the Bush Arm and Cross River
2. Complete the evaluation of data from the East Kootenay Moose Project to evaluate the consistency of moose winter habitat use over the duration of the study.
3. Acquire and evaluate habitat use and selection by all species during high snowfall years and in particular acquire this information in the northern, deep snow pack, ecosections.
4. Data on key winter ranges for mountain goat is lacking. There was virtually no information on goats that could be used to assess the accuracy of the PEM model for goats. Potential winter ranges need to be surveyed to assess the mapping and to serve as a baseline for population trend estimates.

8.2 PEM mapping

The PEM mapping was intended as a strategic tool. Its accuracy can be improved by field truthing areas of sensitivity and areas where there was little field data to build the model, including:

- The wetter and drier site series in each BEC
- All site series in the ESSF in the Invermere district, and dry site series in the ESSF in general
- All site series in the MSdk
- All variants in the Golden district.

In future, field technicians should GPS locations of site series determinations, so that a file of ground-checked site series can be built. This can then be used to improve future iterations of PEM. Ideally, the PEM would eventually be replaced by TEM.

8.3 Developing capability ratings using PEM mapping

In general the PEM worked well to identify ungulate winter range. However, problems were encountered in trying to apply ratings consistently across the entire East Kootenay. For example, a rating for elk habitat in the MSdk that would identify the key winter range at Grave Prairie would incorrectly identify large areas of the MSdk in the rest of the EK that were not winter range. Consequently, for some BEC variants, ratings need to be area specific. Future iterations should develop ratings by a subset of areas, such as ecosections, within the East Kootenay.

8.4 Effectiveness Monitoring

The mapping and guidelines reflect the best current knowledge the EKWRC has about ungulates in the East Kootenay, as well as compromises necessary to achieve consensus on the committee. Both mapping and guidelines should be assessed for their accuracy and effectiveness over coming years. The intent should always be to continually improve and incorporate the best and most recent information about ungulate winter range, so that the guidelines achieve their objectives of providing high quality winter habitat for ungulates. Suggestions for this include:

- The Ministry of Sustainable Resource Management and the Ministry of Water, Land and Air Protection should work together to co-ordinate winter ungulate surveys for population trends on key winter ranges to survey areas where information is lacking.
- The link between habitat and population numbers is a critical one that needs further refinement. For example, ungulate populations in areas with differing proportions of cover and forage should be surveyed and compared.
- Evaluating browse production under various cover retention and site disturbance treatments in the trench. The EKWRC has some good information on light levels needed for bunchgrass production (Ross 1998). However, shrub production under different retention levels and distributions should be evaluated.
- Partial harvesting, in the managed forest, should be evaluated to determine snow interception capability, lichen and litter-fall contributions and ground forage production.

8.5 Problem Forest Types

Extensive areas within the Rocky Mountain Trench ecosection are overstocked.. This condition is limiting from a forage and merchantable timber perspective. Co-operative public, industrial and government efforts are required to convert and maintain these areas to a suitable condition.

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Appendix A:

Table A. Definitions of Habitat Types Used for East Kootenay Ungulate Winter Range Management Objectives and Best Management Practices.

Table B. Landscape Level Cover and Forage Objectives for East Kootenay Ungulate Winter Range.

Table C. Stand/Site Level Management Objectives and Stocking Standards for East Kootenay Ungulate Winter Range Management.

Table D. Stand/Site Level Tree Retention Best Management Practices for East Kootenay Ungulate Winter Range.

Table E. . Stand/Site Level Forage Best Management Practices for East Kootenay Ungulate Winter Range.

Table F. Recommended Landscape Level Site Series Management Objectives for East Kootenay Ungulate Winter Range.

Appendix B: East Kootenay Ungulate Winter Range Terms of Reference

Appendix C: Motorized Access: Best Management Practices

Appendix A:

6.0 Ungulate Winter Range Habitat Management Objectives and Best Management Practices

The following application notes are intended to clarify the intent of the objectives and practices in the tables which follow:

1) Forage and cover definitions are intended to apply to forest inventory attributes, and are not expected to require additional inventory beyond the regular update of forest cover. Height is inventory stand height or measured height where available. Crown closure, which is not currently projected in forest inventory, may be obtained from either forest inventory, air photo interpretation, or growth model projection. Age is projected inventory age or measured stand age where available.

2) Ungulate winter range objectives apply to Crown land outside of Protected areas.

Woodlot Licenses: The guidelines do not apply to private lands in Woodlot licenses. On Crown Land portions of Woodlot Licenses the guidelines should be applied in their entirety but Woodlot Licensees have the option to apply managed forest objectives on potential open range and open forest ecosystems, or open forest objectives to open range ecosystems, to respect the management intent conveyed by the tenure. Cover requirements apply to Woodlot crown lands on a proportionate basis.

Christmas Tree Permits: The guidelines do not apply to Christmas Tree Permits, however permittees are encouraged to follow best management practices provided in appendix 6 which have been developed in consideration of the management intent conveyed by the tenure. It is recommended that permits be reconfigured to remove managed forest and deciduous shrubland ecosystems from the permit area and ensure permit boundaries have minimal interference with surrounding habitat management, particularly broadcast burning.

3) Cover patches less than 3 hectares in size should not exceed 10% of the cover requirement. Cover patch size diversity is encouraged.

4) Variances to landscape level objectives which are necessary to address forest health issues require the approval of the Regional Manager, Ministry of Water, Land and Air Protection, or designate. Variances to stand level objectives may be approved by the District Manager, Ministry of Forests.

5) The implementation of habitat type definitions for landscape level forage and cover objectives is based upon Predictive Ecosystem Mapping which can be refined by Terrestrial Ecosystem Mapping or higher resolution Predictive Ecosystem Mapping where approved by the Regional Manager, Ministry of Water, Land and Air Protection. The spatial implementation of habitat types for stand level objectives is to be based on field verification.

6) Available models used to develop stand level objectives for open forest have a high degree of uncertainty. Current knowledge does not provide a high level of certainty about forage response, productivity or timber impacts. It is intended and recommended that each operator be permitted and encouraged to vary from the stand level objectives provided on up to 10% of treatment areas, subject to providing a rationale for the variance, and a commitment to providing a follow-up assessment on the effectiveness of the standards applied in achieving management objectives.

7) Objectives apply within mapped ungulate winter range by landscape unit. When landscape level objectives cannot be met, a recruitment strategy or a local habitat management plan that respects their intent must be prepared for approval by Regional Manager, Ministry of Water Land and Air Protection

Table A. Definitions of Habitat Types Used for East Kootenay Ungulate Winter Range Management Objectives and Best Management Practices.
Minimum required management unit size is 2 hectares.

Habitat Type	Definition	Field Verified Ecosystem Units
Open Range	Lands ecologically suited to production of bunchgrasses and dryland shrub species. Snow accumulations are typically low. (includes existing open range, meadows, cultivated and similar cover classes)	PPdh2 , 02a, 02b, 01 IDFdm2 , un, 02,03; IDFdm2a , un2, 02; MSdk , 02 ICHdm , 02; ICHwk1 , 02; ICHvk1 , 02 (& Rock talus sites)
Open Forest	Lands ecologically suited for production of large crowned open forest with bunchgrasses and dryland shrub species. Snow accumulations are typically light. (typically <40% crown closure, multi-storied stand structure, and low stocking levels)	PPdh2 , 03, 04 IDFdm2 , un, 01 warm, & neutral <1000m. IDFdm2a , un2, 03 Fd leading ¹ MSdk , 03 Fd leading; ICHdw , 02; ICHdm , 03 Fd leading ICHmk1 , 02; ESSFdk , 02; ICHmw1 , 02
Managed Forest (Dry)	Lands ecologically suited for Fd and Py dominated forest. These provide forage values for 1-3 decades during the forest regeneration phase.	IDFdm2 , un, 01 cool, and neutral >1000m 04, 05
Managed Forest (Transitional)	Lands ecologically suited for Douglas-fir climax stands often having a heavy lodgepole pine and larch component. These provide forage for 1-3 decades during the forest regeneration phase. Snowpack is typically light to moderate.	IDFdm2a , un2, 03 Non-Fd leading, 04, 01, 05
Managed Forest (Mesic)	Lands ecologically suited to pine leading stands which provide forage values for 1-3 decades during the forest regeneration phase. Moderate snow accumulations necessitate the retention of cover.	MSdk , 03 Non-Fd leading, 04, 01, 05 where elk, deer capability mapped.
Managed Forest (Moist)	Moist ecosystems providing forage values for 1-3 decades during the forest regeneration phase. Moderate snow necessitates retention of cover.	MSdk , 03 Non-Fd leading, 04, 01, 05 where moose capability only mapped. ICHdw , 01a, 01b, 03, 04; ICHdm , 03 non-Fd leading, 01, 04, 05
Managed Forest (Wet)	Wetter ecosystems providing forage values for 1-3 decades during the forest regeneration phase. Moderate to deep snow necessitates retention of cover.	All other site series not listed above or below in ICHmk1 , ESSFdm1 , ESSFdm2 , ESSFdk , ICHmw1 , ESSFmm1 , ESSFwm , ICHwk1 , ICHvk1 ESSFwc2 , ESSFvc
Riparian, Deciduous and Shrub Lands	Lands ecologically suited as brushfields, non-productive and deciduous forest and shrub communities generally along water features. Often containing patches of Sx, Cw, Hw or Bl.	Approximately characterized by IDFdm2 , un, dm2a , un2, 06,07 MSdk , 06,07; ICHmk1 , 08; ESSFdk , 06,07; ICHmw1 , 07 ESSFmm1 , 07; ICHwk1 , 09; ESSFvc , 06 And similar wetland riparian areas in other BECs.
Avalanche Tracks	High to moderate capability avalanche tracks as rated for Grizzly bear habitat ² . Usually characterized by lush tall shrub and forb vegetation.	Various site series.
Alpine/Subalpine	High elevation steep rocky habitats typically used by Mountain goats. Usually sparsely forested or open with sparse to moderate forage. .	Various biogeoclimatic variants—rock outcrops, and non-productive forest.
Alpine Grasslands	High elevation windswept ridges and warm aspect grasslands typically used by Rocky Mountain Bighorn Sheep and Mountain goats..	Alpine tundra with fair soils.

¹ Fd leading is defined as more than 30% Douglas-fir at time of harvest.

² Mowat G. and R. Ramcharita, 1999. A Review of Grizzly Bear Habitat Use and Management Options for the Kootenay Region of B.C. Final Report for MELP, Nelson.

Table B. Landscape Level Cover and Forage Objectives for East Kootenay Ungulate Winter Range.

Habitat Type	Ungulate Winter Range Management Objective	Primary Ungulate Species	Landscape Level Minimum Requirement ³		Cover and Forage Definitions	Comments
Open Range	Promote preferred forage production.	Elk, Bighorn sheep	Cover	N/A See comments.	Preferred forage is climax grass and dryland shrub communities.	Cover requirements will be met by adjacent open forest stocking standards and managed forest retention areas.
		Mule deer Whitetailed deer Mountain goat	Forage	N/A See footnote.		
Open Forest	Promote preferred forage production in understory.	Elk, Bighorn sheep	Cover	N/A See comments.	Preferred forage is climax grass and dryland shrub communities.	Cover requirements will be met through open forest tree retention requirements and adjacent managed forest retention areas.
		Mule deer White-tailed deer Mountain goat	Forage	N/A See footnote.		
Managed Forest (Dry)	Maintain a component of early seral vegetation through time.	Elk	Cover	10%	Age ≥100, and Evergreen ⁴ CC ≥20% , or Layer 1 age ≥ 100 years. ≤30 year-old forest	Applies to mapped dry managed forest. Preference for Fd leading stands is encouraged.
		Bighorn sheep Mule deer White-tailed deer	Forage	10%		
Managed Forest (Transitional)	Maintain a component of early seral vegetation through time.	Moose, Elk	Cover	20%	Height ≥ 15m, and Evergreen CC ≥40%. ≥100 years Fd, Sx leading ≤30 year-old forest	Applies to mapped transitional managed forest within ungulate winter range. Applies to suitable stands if available.
		Mule deer White-tailed deer	Including up to Forage	10% 10%		
Managed Forest (Mesic)	Maintain a component of early seral vegetation through time.	Elk	Cover	30%	Height ≥ 15m, and Evergreen CC ≥40% ≥100 year-old forest ≤30 year-old forest	Applies to mapped mesic managed forest. Prefer non-Pl leading where available. Partial cut stands with rank 1 layer meeting these specifications can qualify.
		Mule deer	Including mature & old Forage	20% 10%		
Managed Forest (Moist)	Maintain a component of early seral vegetation through time.	Moose	Cover	20%	Height ≥ 15m, and Evergreen CC ≥40% ≤30 year-old forest	Applies to mapped moist managed forest within ungulate winter range.
			Forage	10%		
Managed Forest (Wet)	Maintain a component of early seral vegetation through time.	Moose	Cover	30%	Height ≥ 15m, and Evergreen CC ≥40% ≤30 year-old forest	Applies to mapped wet managed forest within ungulate winter range.
			Forage	10%		
Riparian, Deciduous and Shrub Lands	Maintain high shrub production interspersed with good snow interception cover.	Moose, Elk Mule deer Whitetailed deer	Where ecologically suited, maintain or enhance climax (non-pine) conifer and deciduous forest			Riparian stands meeting cover definition can contribute to managed forest cover objectives.
Avalanche Tracks	Retain cover along high and mod. avalanche zones.	Moose, Elk	Retain all forest within track complexes and 50m of forest outside of complexes ⁵ . Retain 100m of cover adjacent to both sides of isolated tracks. Maximum harvest 20% of basal area on one side of avalanche track.			
Alpine/ Subalpine	Retain cover along moderate to high capability habitat	Mountain goat	Retain available forested habitat patches adjacent to moderate to high value habitats.			
Alpine Grasslands	Retain cover along moderate to high capability habitat	Bighorn sheep Mountain goat	Retain 100m wide forested habitat cover patches adjacent to moderate to high value habitats.			

³ Ideally manage for forage targets of 100% on Open Range and Open Forest sites, and at least 20% on managed forest sites. Forage maintenance and enhancement is a multi-jurisdictional responsibility and is not expected to be achieved by forest licensees alone. Licensees, ranchers, government, restoration committees, and other agencies are encouraged to collaborate to achieve forage objectives through slashing and burning programs.

⁴ Evergreen crown closure means all conifers except larch counted at full relative crown closure; and larch and deciduous at 50% of their relative crown closure.

⁵ Avalanche complexes are defined as a series of snow avalanche tracks alternating with strips of forest (>2 tracks/km, or <500 m between tracks).

Table C. Stand/Site Level Management Objectives and Stocking Standards for East Kootenay Ungulate Winter Range Management.⁶

Habitat Type	Target Stocking Standard (Stems/ha)	Minimum Stocking Standard (Stems/ha)	Maximum Stocking Standard (Stems/ha)	Species Preference for Residual Trees ⁷	Free-Growing Window
Open Range	20 including 5 of the largest 1/3 of the diameter range	0 0	75 20 of the largest 1/3 of the diameter range	Favour Py in PPdh2, and Douglas- fir with a component of deciduous trees where available in other BECs.	0-2 years
Open Forest⁸	150 including 30 of the largest 1/3 of the diameter range	76 including 20 of the largest 1/3 of the diameter range	400 50 of the largest 1/3 of the diameter range	Favour Py in PPdh2, and Douglas- fir with a component of deciduous trees and Lw where available in other BECs.	1-3 years
Managed Forest (Dry)	(300, 400, 500), 600 Multi-layered stocking standards	(300, 400, 500), 600 Multi-layered stocking standards	Provincial standards ⁹	Favour climax trees, including Lw with a component of decid. trees where available.	12-20 years; 3 yrs where stocked with L1&2.
Managed Forest (Transitional)	Provincial standards	Provincial standards	Provincial standards ¹⁶	Favour deciduous and groups of climax tree species.	12-20 years
Managed Forest (Mesic)					
Managed Forest (Moist)					
Managed Forest (Wet)					
Riparian, Deciduous and Shrub Lands	Normal riparian standards. See Best Management Practices	Normal riparian standards See Best Management Practices	Normal riparian standards See Best Management Practices	Favour large crowned Fd, Sx, Act, Cw, Bl	N/A See Best Management Practices
Avalanche Tracks Reserve Zone	N/A	70% of existing stand basal area	N/A	Prefer Sx, Bl retention.	1-3 years
Alpine/ Subalpine	N/A	N/A	N/A	N/A	N/A
Alpine Grasslands	N/A	N/A	N/A	N/A	N/A

⁶ Up to 10% of an operator's plans may deviate from these standards where a suitable rationale is provided and a commitment is made to do a follow-up assessment of the effectiveness of the alternative standards at achieving forage and timber objectives.

⁷ Species preference must consider other wildlife, biodiversity, silviculture and forest health factors balanced with these objectives.

⁸ These stand targets are based on growth models which indicate that at least one half of site timber potential will be produced, and forage response data that indicate that preferred grass (eg. bluebunch wheatgrass and rough fescue) and browse species (eg. Saskatoon) can be sustained if stands are managed to these levels.

⁹ "Management should not exceed the maximum stocking standard. Co-operation among licensees, government, restoration committees and other agencies will be required in circumstances where excess regeneration beyond the maximum is retained on site. Harvest activity should be consistent with ecosystem restoration objectives for that site. It is recognized that more than one entry may be required to achieve long-term objectives. Treatment plans should indicate how long-term objectives will ultimately be achieved.

Table D. Stand/Site Level Tree Retention Best Management Practices for East Kootenay Ungulate Winter Range.

Habitat Type	Intertree Spacing	Tree Layer	Diameter	Target Number ¹⁰	Preferred Height	Layer 1 Tree Characteristics
Open Range	Range 3-500 m (Avg. 22.4m)	1a 1b 2 3 4	>=30 cm dbh >=12.5 cm dbh >7.5-<12.5 cm dbh 1.3 m tall to < 7.5 cm dbh <1.3 m tall	} 5 } 5 10 0	} >=15 m } >5m-10m >1.3m-5m	Retain large crowned veteran trees, and standing dead trees where available.
Open Forest	Range 3-18 m ¹¹ (Avg. 8.8m)	1a 1b 2 3 4	>=30 cm dbh >=12.5 cm dbh >7.5-<12.5 cm dbh 1.3 m tall to < 7.5 cm dbh <1.3 m tall	} 30 } 50 70 0	} >=15 m } >5m-10m >1.3m-5m	Retain large-crowned veteran trees, and standing dead trees where available. Retain tall well-formed trees for future harvesting opportunity.
Managed Forest (Dry)	Range 2-9 m (Avg. 4.4)	1a 1b 2 3 4	>=30 cm dbh >=12.5 cm dbh >7.5-<12.5 cm dbh 1.3 m tall to < 7.5 cm dbh <1.3 m tall	} } 300 400 500 600	} >=15 m } >5m-10m >1.3m-5m	Multi-layered stocking standards apply as described in the Nelson Forest Region, Establishment to Free-Growing guidebook.
Managed Forest (Transitional)	Normal Practices Apply	N/A	Normal Practices Apply	Normal Practices Apply	Normal Practices Apply	Retain large-crowned veteran trees, and standing dead trees where available.
Managed Forest (Mesic)						
Managed Forest (Moist)						
Managed Forest (Wet)						
Riparian, Deciduous and Shrub Lands	Variable	N/A	Promote rejuvenation of deciduous trees and shrubs with scattered wildlife trees where available.	N/A	N/A	Retain large-crowned veteran trees, and standing dead trees where available.
Avalanche Tracks Applies to mod. to high quality tracks only.	N/A	N/A	Prefer greater than 30cm dbh as indicator of crown mass to intercept snow.	N/A	>=15m height	Retain large cover trees along the edges of avalanche tracks.
Alpine/ Subalpine	N/A	N/A		N/A		
Alpine Grasslands	N/A	N/A		N/A		

¹⁰ Surveys: Open Range estimated to have stocking within the prescribed levels may be surveyed using “walkthrough method” but inventory information must be gathered. Open Range over prescribed levels, and Open Forest, should be surveyed using multilayer plot tally, 5.64m radius (1/100ha) plots distributed on uniform 100x100m grid, with optional prism sweep for layer one trees, and estimated heights. Countable height for maximum density will be 1.0cm. Further details may be obtained from the Ministry of Forests.

¹¹ It is recommended that no more than 2 well-spaced trees be retained within 3m of each other at a time. Uniform spacing maximizes timber production; irregular spacing increases forage production.

Table E. Stand/Site Level Forage Best Management Practices for East Kootenay Ungulate Winter Range.

Habitat Type	Forage Management	Cover Tree Distribution	Treatments	Range Practices
Open Range	Promote healthy climax grassland community.	Vary from small clusters to scattered individual trees. Retain some cover adjacent to high elevation grasslands.	Burn periodically to reduce encroachment and enhance preferred forage. Sustained noxious weed control is required to restore grassland communities. Focus restoration treatments on priority areas where range restoration will achieve maximum benefits. Seed roads and landings with native seed if available to discourage noxious weed invasion and restore forage productivity.	Range stewardship plans and range use plans must be consistent with regulations and should set grazing rotations that maintain health and vigour of climax grasses, and leave late season growth for winter use by ungulates.
Open Forest	Promote healthy climax shrubs, forbs, and grasses.	Some variability is acceptable but tree distribution should ensure all trees can achieve merchantable characteristics in a few decades to facilitate re-entry. Irregular tree distribution will increase forage production.	Focus restoration treatments on priority areas where range restoration will achieve maximum benefits. Slashing to eliminate excess regeneration and poor quality stems is encouraged. Follow up burns may be necessary to eliminate excess regeneration and rejuvenate grass and shrub species such as Saskatoon and ceanothus. Treat noxious weeds to discourage invasion. Seed roads and landings with native seed if available to discourage noxious weed invasion and restore forage productivity.	Range stewardship plans and range use plans must be consistent with regulations and should set grazing rotations that maintain health and vigour of climax grasses, and leave late season growth for winter use by ungulates.
Managed Forest (Dry)	Where considered compatible with regeneration objectives, promote grass and shrub species.	Irregular cover edges along openings are preferred by most ungulates. Use varied wildlife tree retention configurations with patches and scattered single trees. Fd, and Sx are preferred cover tree species. Retain cover along ridges and knolls, adjacent to forage areas, and near riparian zones and seeps where possible.	Juvenile spacing helps to extend forage production. Irregular spacing helps to extend forage production. Slashing decadent shrub species helps to rejuvenate them. Treat noxious weeds to reduce invasion. Cut some deciduous stems to promote suckering.	Range stewardship plans and range use plans must be consistent with regulations and should set grazing rotations that maintain health and vigour of climax grasses, and leave late season growth for winter use by ungulates.
Managed Forest (Transitional)				
Managed Forest (Mesic)				
Managed Forest (Moist)				
Managed Forest (Wet)				
Riparian, Deciduous, Shrublands	Promote dogwood, willow and other ungulate forage species.	Retain or promote stands and scattered clumps of coniferous trees among and adjacent to deciduous and shrub dominated vegetation types. Favour Sx, Cw and Act.	Some coniferous removal, particularly Pl, from riparian habitat is acceptable to promote shrub production.	Maintain natural or create artificial barriers to avoid disruption of riparian habitats by livestock. Select watering sites with minimal soil and vegetation sensitivity.
Avalanche Tracks	Maintained by natural processes	Retain wildlife tree patches and other cover reserves adjacent to avalanche tracks.	On high and moderate rated avalanche tracks, retain forest within track complexes and 50m of cover outside of complexes. Retain 100m of cover adjacent to both sides of isolated tracks.	N/A
Alpine/ Subalpine	N/A	N/A	N/A	N/A
Alpine Grasslands	N/A	N/A	N/A	N/A

Table F. Recommended Landscape Level Site Series Management Objectives for East Kootenay Ungulate Winter Range.

Suggested minimum management unit size is 2 hectares. The split in MSdk 03,01,04,05 is based on MSdk area used by elk and mule deer.

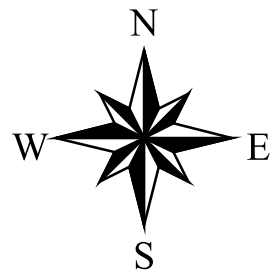
BEC Subzone Variant	4 Steps Dryer/ Poorer	3 Steps Dryer/ Poorer	2 Steps Dryer/ Poorer		1 Step Dryer/ Poorer	Zonal	1 Step Wetter/ Richer	2 Steps Wetter/ Richer	3 Steps Wetter/ Richer	4 Steps Wetter/ Richer	5 Steps Wetter/ Richer
PPdh2			02a		02b	01	03	04	Wetland/ Riparian		
IDFdm2, un			02		03	01 W, &N<1000m	01 C, &N>1000m	04	05	06	07
IDFdm2a (un2)		02	03 Fd*	03 *	04	01	05	06	07		
MSdk		02	03 Fd*	03 *	04 elk, deer	01 elk, deer	05 elk, deer	06	07		
				03 *	04 moose	01 moose	05 moose				
ICHdw		Rock/ Talus	02		01a	01b	03	04	Wetland/ Riparian		
ICHdm			02	03* Fd*	03 Non-Fd	01	04	05	Wetland/ Riparian		
ICHmk1	Rock/ Talus	02	03		04	01	05	06	07	08	
ESSFdm1		Rock/ Talus	02		03/04	01	05	06	Wetland/ Riparian		
ESSFdm2		Rock/ Talus	02		03	01	04	05	Wetland/ Riparian		
ESSFdk	Rock/ Talus	02	03		04	01	05	06	07		
ICHmw1	Rock/ Talus	02	03		04	01	05	06	07		
ESSFmm 1	Rock/ Talus	02	03		04	01	05	06	07		
ESSFwm		Rock/ Talus	02		03	01	04	Wetland/ Riparian			
ICHwk1			02		04	01	05	06	07	08	09
ICHvk1		02	03		04	01	05	06	Wetland/ Riparian		
ESSFwc2	02	03	04		05	01	06	07	08	09	Wetland/ Riparian
ESSFvc		Rock/ Talus	02		03	01	04	05	06		

C=Cool aspects, N=Neutral aspects, W=Warm aspects, Fd=Douglas-fir leading stands. Numbers refer to the site series in each variant.

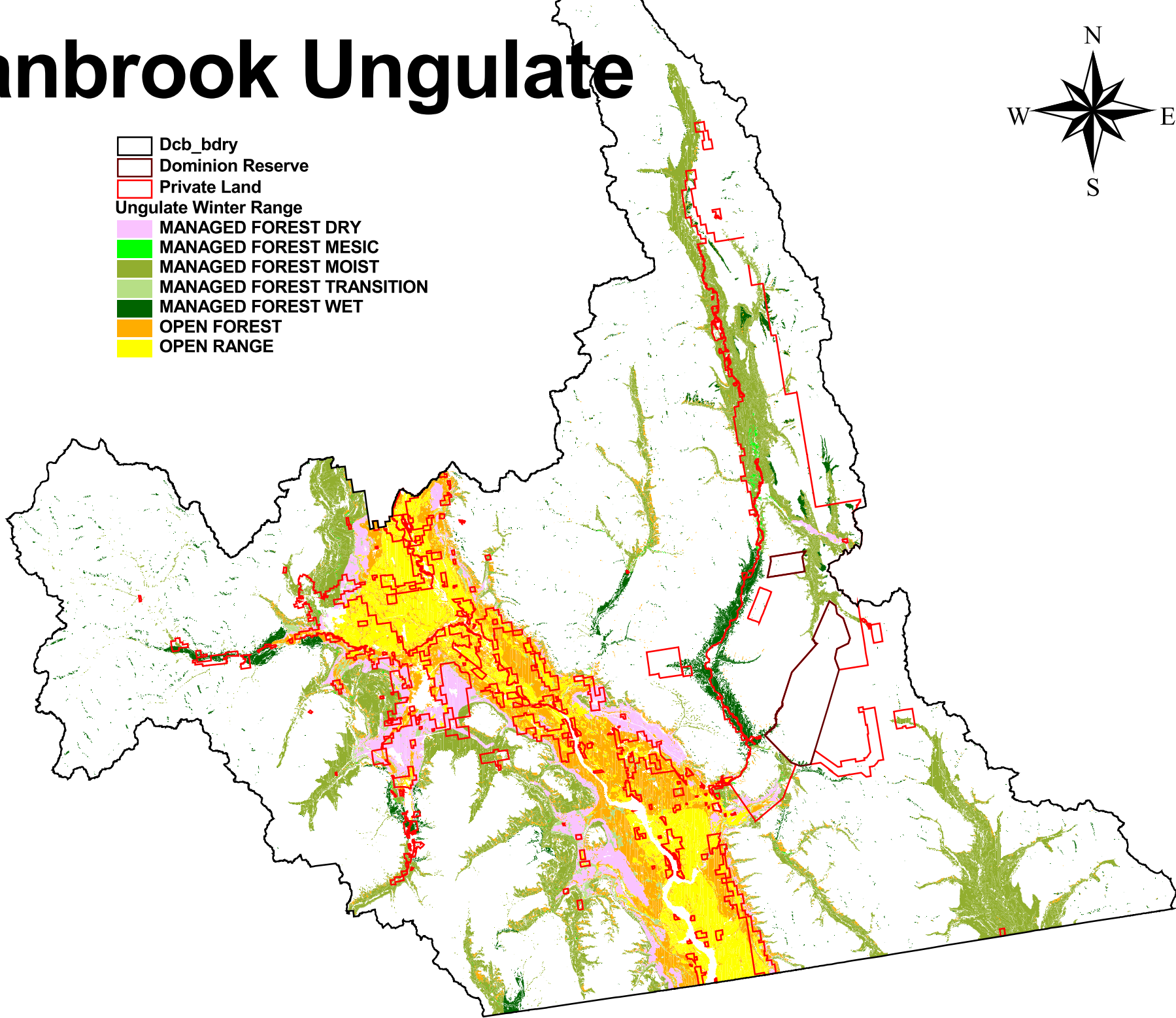
* Manage as Open Forest where stands have more than 150 stems/ha of Douglas-fir over 30cm dbh at time of harvest. If less, manage as Managed Forest.

Habitat Type	Open Range	Open Forest	Managed Forest Dry	Managed Forest Transitional	Managed. Forest Mesic	Managed Forest Moist	Managed Forest Wet	Shrublands
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Cranbrook Ungulate



-  Dcb_bdry
-  Dominion Reserve
-  Private Land
- Ungulate Winter Range**
-  MANAGED FOREST DRY
-  MANAGED FOREST MESIC
-  MANAGED FOREST MOIST
-  MANAGED FOREST TRANSITION
-  MANAGED FOREST WET
-  OPEN FOREST
-  OPEN RANGE



Appendix 9.0 Water Inventory and Water Allocation Strategy

i) Water Inventory:

Water Licensing

- There are 277 water licenses within the SRMMP and resource evaluation areas.
- 160 of these are in the plan area or on streams originating in the plan area.
- The number of licensed streams in or originating in the plan area is 89.
- The 160 water licenses associated with the plan area are approximately distributed as follows:
 - Domestic 95
 - Waterworks 6
 - Enterprise 6
 - Irrigation 36
 - Stock watering 8
 - Land improvement 1
 - Coal washing 1
 - Power residential 2
 - Watering 1
 - Conservation 2
- The 117 water licenses on streams outside of the plan area but still within the resource evaluation area are approximately distributed as follows:
 - Domestic 17
 - Enterprise 3
 - Waterworks 1
 - Irrigation 8
 - Fire protection 1
 - Power 1
 - Watering 1
 - Various industrial mining purposes 81

Community Watersheds

There are 4 community watersheds (designated under the Forest Practices Code) in the plan area and none in the evaluation area. These are:

- Boivin Creek – 5864 ha.
- Cummings Creek – 12,287 ha.
- Fairy Creek – 2369 ha.
- Boardman Creek – 215 ha.

Completed Watershed Assessments

There have been 2 watershed assessments completed in the plan area:

- Bighorn Creek
- Cabin Creek

Alluvial Fan Hazard Areas

There are 9 hazard areas which have been mapped by Water, Land and Air Protection. Three of these are in the resource evaluation area. The 6 hazard areas within the plan area are on Boivin Creek, Brule Creek, Cummings Creek and Burton Creek. Only Burton Creek is not a community or domestic watershed and therefore without some sort of forestry assessment.

ii) Water Allocation Strategy:

A Water Allocation Strategy will be developed for the Plan area that:

- Enables greater efficiency in water licensing and regulation decisions under the *Water Act* and reduces conflict around water use decisions
- Addresses instream flows for fish, fish habitat and aquatic ecosystems. Consideration will be given to retaining a minimum base flow of 10% of mean annual discharge or a more appropriate measurement based on further analysis and local conditions
- Enhances economic opportunities by identifying where water is available for licensing
- Addresses water conservation opportunities and opportunities to “return water to the stream” where existing licensing threatens base flows
- Compiles a complete inventory of water licensing in the plan area which can be manipulated by a variety of parameters
- Identifies major issues by contacting fisheries, RDEK, Health etc.
- Applies a categorization system which includes social and environmental factors and creates categories of stream
- Develops water licensing “rules” for each stream category

APPENDIX 16.0 Public Review Summary Report

I. Introduction

The public review draft (the “draft plan”) of the Southern Rocky Mountain Management Plan (the “SRMMP”) was released to the public February 17, 2003. The draft plan was made available to the public through the SRMMP website¹, at three open houses held February 24, 25 and 26 in Cranbrook, Fernie and Elkford, respectively, and for viewing at the Cranbrook office of the Ministry of Sustainable Resource Management. The public review period concluded on April 15, 2003.

A number of public consultation initiatives had been undertaken over the previous 15 months, as part of the development of the draft plan. These are summarized in the introduction and appendices to the SRMMP and elsewhere on the SRMMP website.

The Recreation Management Strategy (RMS) was run as a separate process to the SRMMP, but where the RMS project area overlaps the SRMMP area the results were incorporated as section 7.1 in the draft SRMMP. The RMS process utilized a stakeholder table, which negotiated draft access zonations for recreation. Previous opportunities had been provided to the table members to review draft RMS maps, but this was the first opportunity for the general public to comment on these maps.

In all over 300 written submissions on the draft SRMMP were received during the review period. They were submitted in a variety of forms, including:

- comment sheets completed and submitted at one of the three open houses
- comment sheets completed and mailed at a later date
- website comments link
- emails
- letters
- faxes

The submissions covered a broad spectrum of interests and opinions, and covered most of the topics in the draft SRMMP. They included input from individuals, organizations, corporations and local governments. Those who provided submissions had strong and genuine feelings about resource management and land use in the southern Rocky Mountains.

A major submission from First Nations was not treated as part of the public input and is being reviewed and considered separately. This reflects the special status of First Nations in the process.

Submissions from other government agencies were also received before and during the public review period, but they are not included in this synopsis of public comments.

¹ <http://srmwww.gov.bc.ca/kor/srmmp/srmmp.htm>

II. Handling of comments

The SRMMP project team compiled, collated and summarized all of the 300+ submissions. In summarizing the submissions, and the individual comments contained within them, there was no attempt to be statistical. Individual comments were compiled and grouped into topic areas (most of these topics show up in this synopsis as alphabetically-arranged headings). Every comment was indexed to the submission(s) in which it was contained.

All comments were given consideration for possible revisions to the draft plan. In so doing, we classified the individual comments into five categories. Some categories could not be considered for possible plan revisions. These included comments which were vague, or which provided us with an opinion but no indication of how to address the concern, along with those which were beyond the scope and/or defined limits of the planning process. These comments were all discussed by the project time, but ultimately no direct action could be taken on them, except in some cases to highlight them as issues for government. A record of the discussion was noted on many of these comments.

All other comments (i.e., those which could be considered for potential revisions) were discussed by Project Team members, and, where appropriate, a change to the wording of the draft plan was made. The rationales for our decisions with respect to the individual comments were noted throughout.

The purpose of this document is to provide a brief synopsis of all the comments we received. It does not reflect every submission, nor the actions related to the comments. Those who would like to look at the actual submissions and related information are requested to contact the Ministry of Sustainable Resource Management at (250) 489-8540 or through the SRMMP website to arrange a viewing.

III. Synopsis of comments by topic (arranged alphabetically)

i. BALANCE (see also SUSTAINABILITY)

The question of how well the draft SRMMP achieved a balance was one of the more contentious areas of input. Some felt that the original priorities of the Southern Rocky Mountain Conservation Area had been subordinated to an economic development priority. Others were pleased to see a change in emphasis from conservation to balanced and sustainable development. While some felt that balance had been achieved, there were others who did not. Among those who felt a balance had not been achieved some felt the draft was biased toward economic development, while others felt that conservation was favoured.

We heard from several people that the economic value of keeping the landscape in its wild state should not be forgotten. We were also told of the importance of conducting carrying capacity studies and considering cumulative impacts. Some others pointed out that wildlife, industry and recreation co-exist successfully in the Elk valley. There was

one comment concerned that the Special Resource Management zones from the East Kootenay Land Use Plan did not appear in the SRMMP.

Some respondents from industrial sectors were concerned over the relative number of pages in the draft for various resource values, suggesting that the importance of industry was not being recognized. Conversely, some comments reflected a concern that the conservation chapter was not in a more prominent location in the draft plan.

ii. BOUNDARIES

There continued to be some concern over the fact that parts of the Elk and Bull River drainages were omitted from the plan, especially considering that the Recreation Management Strategy (RMS) for the east side of the former Cranbrook Forest District included those areas. On the other hand, some respondents preferred to wait until implementation of the final SRMMP, and an assessment of plan performance, before expanding the plan area into the remainder of these drainages.

iii. CONNECTIVITY

There was both praise and criticism of the draft SRMMP's new "matrix" approach to connectivity. Some felt that the method would not meet the stated intent. Identified weaknesses included over-emphasis on avalanche tracks and a contention that fragmentation would not be halted. Others, however, were pleased to see the demise of previous broad corridors in favour of site-specific ecosystem attributes and features.

There was a common concern expressed for restricting motorized recreation access, structures and tenures in connectivity zones. Some wanted to extend access restrictions to industrial activity as well. The importance of a corridor of "safe passage" for wildlife between the Flathead and Banff was raised by some. Therefore, research showing that some animals do not cross Highway 3 was highlighted as a serious concern needing attention, although some respondents expressed scepticism over these findings. Movement of species between Canada and the US, along the Flathead corridor, was also identified as being important.

iv. CONSERVATION (GENERAL)

There were many comments emphasizing the important need for the plan to do a good job of protecting environmental values. These included identification of the need to make conservation values the highest priority, to employ the precautionary principle and to preserve wildlife in a natural state for future generations.

There was considerable support for the conservation provisions in the draft plan, some stating the plan provided better management (than previous). However, there were some criticisms that the draft plan did not do a good enough job of protecting wildlife, and/or that additional measures were needed, sometimes in specific areas like Landscape Unit

(LU) C18 in the Flathead. Comments from the US expressed concern that the draft plan did not adequately address potential impacts to the Flathead region in Montana.

There was some doubt expressed that wildlife populations are actually threatened, and the point was made that multiple use of the backcountry has worked well.

v. FIRST NATIONS

As noted above, the submission from First Nations on the public review draft was not considered as public input and is not referred to here.

Public comments concerning First Nations issues were relatively few, but included the recommendation that steps be taken to address outstanding First Nations concerns with the planning process.

vi. FORESTRY

The need for forestry activities to address environmental values (riparian, biodiversity, core habitats, water, ungulate winter range, connectivity, etc.) was identified in many submissions.

Several perceived weaknesses were identified with the forestry provisions of the draft plan. The fact that the Issues section of Chapter B.4.0 contained only one issue was one deficiency pointed out; additional issues were identified, including problem forest types, pine beetle, overstocked types and others. Additions to the intent statements, including setting reasonable targets and maintaining Annual Allowable Cut, were also suggested. Doubt was expressed that the draft plan optimized or provided for economic development. The need to complete the socio-economic analysis (SEA) was indicated as a prerequisite to completion of the final plan.

Others felt that the impacts of forestry were not dealt with adequately in the draft plan or that development was taking precedence over sustainability.

The timber Enhanced Resource Development Zone (ERDZ) provisions received some support, but a lack of clarity in the implementation of ERDZs, along with the perception that the proposed ERDZs would be ineffectual, were pointed out. Another perceived weakness was a lack of clarity as to what constitutes a healthy forest sector.

vii. GUIDE-OUTFITTING

We received suggestions that the status of guide-outfitting be enhanced in the draft plan. For example, some respondents specified that guide-outfitting should be given the “same rights” as mining and logging (i.e., equivalent level of certainty, and recognition of the value of the industry), that mining and logging need to be required to “coexist” with guiding, and also that guide-outfitting should not be grouped as a recreational tourism activity.

Needs identified for this sector included undisturbed wilderness, healthy wildlife populations and exclusivity of tenure. Limitation on motorized access was a critical issue. Concern over issuance of other Crown land tenures which overlap territories was expressed.

We heard both opposition to, and support for, the concept of not allowing guide-outfitting to expand in LU C23. Some respondents were unhappy that guides are able to access non-motorized areas by vehicle to supply their camps.

viii. HUNTING AND FISHING

Several people took exception to the reference in the draft plan concerning the social non-acceptance of hunting. A reference to increasing competition between resident and non-resident hunters in the draft plan was also disputed.

Angling-guide pressure was raised as a potential threat to the fisheries resource and the sport itself, especially on the Elk River.

ix. IMPLEMENTATION

The importance of effective plan implementation, and the need for appropriate monitoring and enforcement, were widely recognized. However, there were concerns expressed that the draft plan did not provide clear indications as to how objectives would be implemented.

The need for the final plan to be able to incorporate and adapt to new information was also identified. A related issue, plan amendment, was also raised: the SRMMP should be revisited (e.g. every five years or at request of other ministries). A process for variances, without invoking major amendment processes, was also requested.

x. INDUSTRIAL ACCESS

While some respondents felt that an industrial access plan was needed, for environmental benefit, others were concerned about the possible implications to industry, and wanted clarification as to what such a plan would entail. There was one response in favour of maintaining or expanding access in general, and another felt that permitting processes already deal adequately with industrial access management.

Statements in the draft plan which referred to increasing or uncontrolled industrial access (as a potential impact on conservation and tourism values, for example) were strongly questioned, and identified as being biased. Improvements to riparian guidelines were suggested, because it was felt that road or crossing restrictions, as written, would not always have been the best for the environment (see also RIPARIAN).

Road reclamation and deactivation, along with access controls, were identified in several submissions as potential methods to limit road densities and impacts. Some people felt these are strictly industry responsibilities.

xi. MAPPING AND DATA

The quality (lack of resolution) of the .jpg maps on the website was criticized. Some felt the maps, in general, were too complex for the lay person, or that the material presented at the open houses was overwhelming.

The need to be collecting new data over time, so that when the plan is revisited the best information will be available, was identified.

One industrial user indicated that the maps will be incorporated into company planning.

A specific concern was raised over use of mineral potential mapping, which was described as outdated and flawed.

Several people found mapping errors and pointed them out to us.

xii. MISCELLANEOUS ISSUES RAISED:

- need for a BC-Montana cooperation agreement on the Flathead
- perceived inadequacy of the consideration given to US interests in the plan
- recognition of the importance of resource industries and integrated management
- undesirability of allowing the threat of international boycotts and funded publicity campaigns to drive the plan
- need to avoid statements that bind adjacent private landholders to the plan
- need to provide the comparative costs of tenure for various activities
- need to provide a history of the plan area

xiii. OLD AND MATURE FOREST

The need for protection of old growth forest areas was identified. Provisions of the plan were both praised and criticized. Specifically, some were confused about the process for approving access through an old-growth management area (OGMA), while another comment did not support the overlap of OGMA's with riparian areas.

One commenter felt that the basal area requirement for mature stands needs to be variable.

xiv. PARKS

A number of respondents expressed support for a National Park in the Flathead. It was suggested that only a park would provide adequate protection for the east side of the

Flathead drainage in BC. Others expressed their opposition to a National Park, and included statements like “we have enough parks” and “when does park creation stop?”

xv. PROCESS

There was a divergence of opinion on whether or not the planning process had been open, transparent and fair. Some felt that public engagement had not been adequate, while others expressed appreciation for the opportunities to participate in the process.

Advice to MSRM, in relation to the planning process, included:

- legislate the plan
- reject anecdotal information
- ensure there is broad public and community support
- don’t give in to “anti-use” groups
- include potential economic impacts as well as benefits
- put draft plan out for another 60-day review (for SEA and other outstanding issues)
- provide better information about what happens after public review
- include current environmental policies and laws (as opposed to intent statements)
- state clear government position on the National Park proposal, the Trans Canada Trail and other issues
- provide a variance protocol for forest development
- identify areas outside the plan area where there are sensitive habitats and there is a need for cooperation

xvi. RANGE

There was concern expressed that this relatively small industry was being given priority over conservation in the plan area. A concern was expressed that livestock grazing in the alpine is undesirable.

Most other range-related comments dealt with the interaction of forestry and range, in particular a desire to ensure that conflicts between the two sectors are minimized. For example, it was noted that some range issues, like potential grazing expansion onto Crown land, could have impacts on the forestry sector.

One specific recommendation was received to carry out a major range enhancement program in the Bull River.

xvii. RECREATION MANAGEMENT STRATEGY

This was the third opportunity to review the draft Recreation Management Strategy (RMS) maps for stakeholders at our “Cranbrook east” workshop table, but the first opportunity for the general public to make comments. Nevertheless, most of the comments came from people who had participated in the process, with only 10 new

members of the general public making comments. Several trends were identified in the comments:

- The majority of comments were a restatement of concerns expressed earlier where the individual or group did not support our previous recommendations.
- The majority of the concerns were from motorized users
- There were slightly more comments related to summer use than to winter use
- Some mapping errors were noted in the comments
- Several people recommended small changes which were of low consequence to other interests
- Many continued to suggest changes that were beyond the mandate of the RMS process
- There was strong support for commercial recreation users to be treated the same as the general public

While many comments received expressed general support for the draft RMS maps and strategy, many other people were not happy with this section of the SRMMP. The largest area of dissatisfaction was in relation to limitations on motorized use, both summer and winter. However, much of this concern related to the inability of the RMS process to address the Access Management Areas legislated by the Ministry of Water, Land and Air Protection for wildlife management purposes. The second most contentious area was the closing of the southern passes to Alberta to motorized use; however, this is consistent with much public opinion and consistent with Alberta's access plans, with the exception of one pass being open on the Alberta side in the summer.

xviii. RIPARIAN

We received some positive comments for the riparian sections of the draft plan, in particular the road restrictions in the Flathead enhanced riparian zone. There was a question raised as to who will be responsible for reclaiming roads in the riparian, and where the money will come from. The ability to re-establish old river crossings as temporary crossings was requested. One respondent pointed out that the riparian management provisions were inconsistent with the Forest Practices Code (many S4, S5 and S6 streams in the plan area appeared to require reserve zones).

xix. SETTLEMENT

Some respondents took issue with the claim that settlements in the area are growing. The decision to not permit settlement in the Flathead drainage was lauded.

The relationship to private land was noted, specifically the fact that population pressures impact private land, whose management has implications for Crown lands. There was some concern that any Crown lands made available for future settlement must be affordable.

xx. SOCIO-ECONOMIC AND ENVIRONMENTAL ANALYSIS (SEEA)

Some felt that the draft plan couldn't be properly reviewed in absence of a completed SEEA; this translated to a request for a second review period before the plan is approved.

We heard that the SEEA base cases need to better account for some of the positive impacts of coal mining on the economy and the environment. One respondent felt that the base cases should be part of the draft plan, and not as stand-alone documents.

xxi. SUBSURFACE RESOURCES

We received comments expressing concern that mining and oil and gas appear to take precedence over other values. It was requested that the draft plan's conservation objectives be a legal obligation and/or a requirement for exploration and development activities. Some respondents requested an outright ban on these activities in parts or all of the plan area.

On the other hand, the subsurface resource provisions were a source of cautious optimism in some cases. It was pointed out that the objectives address some of the long-standing concerns of the mining sector and imply a government commitment to sustaining the industry. The need to recognize that subsurface resource exploration often has seasonal requirements, along with a request for flexibility in other resource objectives, was pointed out by some. Maintaining access to specific coal deposits was a concern to some respondents. We received a recommendation to broaden our scope to include industrial mineral opportunities. Lastly, we were told that the bulk of the conservation objectives in the draft plan can be accommodated in a major resource company's development plans, although there was a request for more detail on assessments needed for approval.

xxii. SUSTAINABILITY (*see also* BALANCE)

Most comments aimed at sustainability issues tended to take a negative perspective, specifically that the draft plan did not adequately ensure sustainability of natural values. The overall goal of facilitating sustainable economic development was not considered to be appropriate by some respondents. The Ministry of Sustainable Resource Management's draft sustainability principles were criticized, because it was felt they are focused only on economic sustainability. However, one respondent felt that the final plan will serve as a good starting point for sustainable management.

xxiii. TOURISM

There was reasonable support for the tourism provisions in the draft plan. The need to emphasize quality of experience (over quantity of users) was expressed by some people. Some felt that tourism based on the natural environment will provide the long-term economic foundation in the plan area. However, motorized restrictions in the RMS were felt by some respondents to be detrimental to tourism.

On the other hand, some felt that provisions for growth in tourism are unwarranted, and/or are potentially detrimental to other activities.

xxiv. TRANS CANADA TRAIL (TCT)

The only TCT-related statement in the draft SRMMP (page 15) arguably attracted more attention than any other single provision. Most of the respondents felt the statement was inappropriate, and requested that it be changed. Some of these expressed support for the upper Elk valley route, the one currently registered with the TCT Foundation. However, there was also some support for the statement as worded in the draft.

xxv. TRAPPING

As with hunting, comments concerning negative social perceptions of trapping were described as inappropriate, as were negative statements about harvesting pressures on wildlife populations and lack of selective harvesting. On the other hand, we heard the view that any increases in trapping activity would be detrimental to the wildlife resource.

xxvi. UNGULATES AND UNGULATE WINTER RANGE (UWR)

Most of the comments on ungulates and UWR pertained to the interaction of moose and snowmobiles. In particular, the protection of moose was not considered adequate explanation for snowmobile restrictions in the RMS.

Impacts of forest harvesting activities on UWR were felt, by some, to be overstated in the draft plan, and the validity of the seasonal restrictions (best management practices) for forestry was questioned.

We were also advised to look after food sources for ungulates, and to develop a strategy to reduce highway and railway mortality.

xxvii. VISUALS

Based on two specific submissions, visual management outside of the front-country is not supported. One respondent supported the provision that approved mining activities may exceed Visual Quality Objectives.

xxviii. WATER

There was some concern expressed about the draft plan's ability to protect aquatic systems. With respect to domestic water systems there was also concern that the plan is not clear on where responsibility falls for aspects such as maintenance and contingency. Divergence of the Best Management Practices from the Higher Level Plan was noted, along with some specific concerns about statements in the draft plan which ascribed watershed damage to industrial users.

xxix. WIDE-RANGING CARNIVORES

The impact of motorized access on grizzly bears was the most common concern of our respondents. Restrictions on motorized activities were generally the favoured approach, although there was some scepticism about this approach, including a specific allegation that the annotated bibliography in Appendix 24.1 is biased against motorized users. As with connectivity, there were also suggestions to limit structures or tenures in grizzly bear habitat, or ensure that structures or camps are ecologically sensitive.

IV. CONCLUSION

If there was one common theme contained in the submissions it was a respect for the land and its resources. Differences lay in how best to achieve a sustainable future for the economy, environment and social fabric in this important area. “Balance” is never going to be easy to achieve, but the information, constructive criticism and advice provided to us in the public review phase, and indeed throughout all the stages of consultation, has helped us significantly.

The project team would like to thank all those who provided input. Your review of the draft SRMMP is much appreciated. It is important to us that all who wanted to comment on the public review draft of the SRMMP took the opportunity to do so. Feedback from a wide spectrum of interested individuals has helped us in assessing our efforts and in ultimately achieving a balanced product.

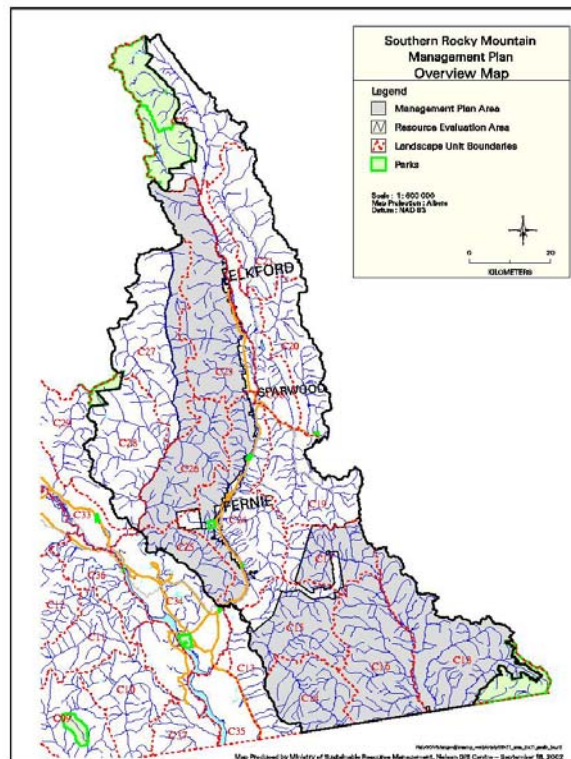
Appendix 17.0 – Recreation Management Strategy (“RMS”)

17.1 RMS Summary

This summary provides background information relative to the development of the recreation management direction presented in Section 7.1 of the Southern Rocky Mountains Management Plan (SRMMP).

RMS Planning Area

The RMS Planning Area covers Landscape Units C14-28 and C38 and corresponds to the SRMMP “Resource Evaluation Area”



Summary of the Planning Process and Process Timelines

Background

- Modelled after the Golden Backcountry Recreation Access Plan (GBRAP)
- Best available information used and timelines reduced from Golden model
- Consultative decision making process striving for overall agreement, not consensus
- Established a multi-stakeholder table to provide input
- Recommendations to government from process will be based on best information available and with defensible justification
- Transparent and open process

- Builds on first phase of the “District Recreation Access Plan” (DRAP), an internal government mapping process done by resource line ministry staff with minimal public input. An atlas at a scale of 1:250,000 was compiled of all the existing land resource values pertinent to recreation interests. Information was presented as a series of approximately 20 transparent overlays accompanied by Value Statements for each Landscape Unit in the Nelson Forest Region. The first phase of DRAP did not produce any zonations or management direction.
- Process ran concurrently with Southern Rocky Mountain Management Planning process (SRMMP) and encompassed an area larger than the SRMMP area, ie. an area equivalent to the “Resource Evaluation Area” of the SRMMP. Recommendations from the RMS process to be incorporated into, and implemented by, the SRMMP

RMS Planning Team

- Kevin Weaver, Regional Tourism Manager, Ministry of Sustainable Resource Management (MSRM) – Team leader
- Steve Flett, Tourism Planner, MSRM
- Gord McAdams, Tourism Planner, MSRM

Technical Support

- Sharon Ferguson, Regional Administrative Assistant, MSRM
- Kelly Lode, Administrative Support, MSRM
- Per Wallenius, GIS Data Management, MSRM
- Regional GIS MSRM staff
- Margaret Bakelaar, Planning Section Head, MSRM

Process

- Potential stakeholders advised of process November 2001 through direct contact by phone, email or through public advertisements in local newspapers
- Focused on representation from groups that had a local presence
- Public Open Houses held in Fernie and Cranbrook December 12 & 13, 2001. Base information maps provided and staff were available to answer questions and discuss concerns. A sign-in sheet established the initial stakeholder list for future communication
- Meetings were scheduled with local interest groups to develop the sector representation for the stakeholder table
- Municipal Councils, Regional District Directors, Economic Development Commissions and Chambers of Commerce were encouraged to participate
- Workshops to discuss recreation management by landscape unit began in February and continued to April 2002. Maps and a note taker equipped with a computer, projector and screen were made available at all workshops. Voting on issues was avoided. Shortly after each workshop, stakeholders were sent copies of notes and these were reviewed as a first agenda item at the next meeting.
- Steps to produce Draft Zoning Maps included:
 - Review Value Statements and Resource Maps from District Recreation Access Plan
 - Note existing legal designations
 - Review “Present Use” maps
 - Review Comments and Map Notations from RMS Workshops

- Rough in zoning maps (winter and summer) from known information
- Address areas of obvious imbalance where feasible
- Confirm compliance with Kootenay Boundary Land Use Plan Implementation Strategy
- Check for compatibility with adjacent Landscape Units
- Check against key resource values (note inconsistencies and compromises)
- Check compatibility with other jurisdictions (USA, Alberta, Parks, Private Land)
- Email maps to stakeholders and post them on RMS website
- RMS Planning Team met with the Interagency Liaison Group (IALG) to discuss Draft Maps
- Comments were solicited on the Draft Maps (119 comments were received from 14 sector groups), a summary was sent to stakeholders and the IALG, and changes were made to maps where appropriate
- A final workshop was held to review the changes to the Draft Maps and the final Draft Maps were provided to the SRMMP project team for inclusion into Plan Section 7.1

Landscape Unit Designations and Recommendations resulting from the consultation process

LANDSCAPE UNIT C14 – WIGWAM RIVER

Location:

The Wigwam River LU is located in the south-west corner of the plan area, bounded by Inverted Ridge on the east and the heights of the Galton Range to the west. LU 14 encompasses the upper to mid reaches of the Wigwam River. Primary physical attributes are rugged scenic mountains, alpine and sub-alpine with few basins and lakes, meandering river and riparian meadow complexes. The unit is currently very remote with road development limited to the main valley bottom and through Galton Pass at the south-eastern corner. Other road accesses are restricted to industrial development activities.

Recreational Facilities and General Use Patterns:

Of the 23 backcountry recreation activities considered in the Recreation Management Strategy (RMS), 17 presently occur in this landscape unit. The Ministry of Forests currently manages two Recreation Sites and access trails at Snowshoe and Baldy Lakes. The valley bottom road provides access for snowmobiling, hiking, hunting, fishing and wildlife viewing. No formal campsites exist in the valley bottom but camping does take place adjacent to the road. This unit receives low to moderate recreational use, primarily for fishing, hiking, hunting, snowmobiling and limited ski touring. Commercial guide outfitting operations are active within the valley, otherwise no tenured commercial recreation operations currently exist in the unit. Wildlife values are high. There is extensive ungulate winter range along the river and the remoteness of the landscape optimizes the suitability for wildlife. Current users value the high wilderness values/ remoteness of the unit for the recreation experience that it provides.

Desired Future Condition:

The Wigwam River Landscape Unit (LU) will be managed for a moderate range of public and commercial recreation opportunities. As most of the area is not presently roaded, the unit will be provide significant opportunities for non-motorized recreation. Existing motorized use will continue to take place on the east side road (year round) and the Galton/Rabbit Pass (summer only). Motorized summer use will occur on road surfaces and limited areas for camping adjacent to the surface (not in meadows or forest).Current winter motorized use of the east side road will continue while industrial accesses will remain unavailable

for public use. Lower elevations of the unit are important winter range, which will place some restrictions on use. Existing guide outfitter structures are an acceptable use, however throughout the unit permanent structures will be scarce to maintain and conserve the remote wilderness values of the area.

RMS Zoning Recommendations:

Summer:

- RA2 (seasonal access) on the existing east side road and Galton Pass road.
- RA1 (non-motorized access) throughout the remainder of the area.
- RH1 (no landings desired)
- RM1 (no development)

Winter:

- RA2 (seasonal access) on the existing east side road.
- RA1 (non-motorized access) throughout the remainder of the area.
- RH1 (no landings desired)
- RM1 (no development)

LANDSCAPE UNIT C15 – LODGEPOLE – BIGHORN

Location:

The Lodgepole-Bighorn LU is bounded by the Galton Range on the west, the Flathead Ridge on the north, Inverted Ridge on the south and the ridge running between Harvey and Cabin Passes on the east. All main drainages that flow into the Wigwam River are within this unit. This unit is approximately 44,000 hectares of which almost 41,000 is Crown land. There are neither population centres nor highways throughout the area. Major forest access roads traverse the unit: Wigwam, Bighorn and Lodgepole Creek roads.

Recreation Facilities and General Use Patterns:

Of the 23 outdoor recreation activities considered in the Recreation Management Strategy (RMS) 17 presently occur within this LU. No commercial recreation tenures exist in the unit, however tenured guided hunting and angling does take place. This LU contains major access corridors and specific areas with extensive road networks. The unit provides two major through routes to the Flathead valley as well as providing destination areas for both snowmobile and ski touring activities. Use patterns have been established over time and overlapping non compatible activities are limited. A snowmobile cabin at Cabin Pass serves as a destination for winter use. Ski tourers utilize areas south of the pass while snowmobilers use areas north of the pass. Alpine ridges and basins in the central portions of the unit are popular with both summer and winter non-motorized users. Access Management Areas (AMA's) cover an extensive area in the Wigwam Flats and north of lower Lodgepole Creek. Motorized access is constrained in this AMA.

Desired Future Condition:

The Lodgepole-Bighorn LU will be managed for a range of public recreational opportunities. Balance and integration of existing and potential recreational use will be the goal. This unit will see a variety of seasonal uses based upon separation of non compatible activities. Existing motorized use will generally continue in the winter while constraints will apply in ungulate winter range and alpine basins and ridges. Most of the area will be available for snowmobiling with a few key locations catering to ski tourers.

Summer access will be non-motorized throughout most of the unit. Major forest roads providing through routes will be open for motorized activities with constraints on some minor access roads.

RMS Zoning Recommendations:

Summer:

- RA2 (seasonal access) on existing road network north of Cabin Pass, road through Wigwam Flats and minor roads in Bean/Pioneer Creeks and South Lodgepole Creek.
- RA3 (unrestricted motorized access) on Lodgepole, Wigwam and Bighorn forest roads.
- RA1 (non motorized access) throughout the remainder of the area.
- RH1 (no landings desired)
- RM2 (limited development)

Winter:

- RA1 (non motorized access) on existing AMA's, identified ungulate winter range, alpine ridges and basins north of Bighorn Creek and south of Lodgepole Creek and the ridge and slopes northwest of Cabin pass.
- RA2 (seasonal access) throughout the remainder of the areas.
- RA3 (unrestricted motorized access) on main forest roads in Lodgepole, Bighorn and Wigwam Creeks.
- RH1 (no landings desired)
- RM2 (limited development) continuation of authorized structures.

LANDSCAPE UNIT C16 – WEST FLATHEAD

Location:

The West Flathead Landscape Unit extends from the international boundary to the height of land north of Shepp Creek and from the Flathead River on the east and along Coudry and Inverted Ridges to Cabin and Harvey Passes on the west. This unit contains approximately 54,000 hectares nearly all of which is Crown land. There are no population centres in the unit or highways through it. An extensive network of roads is spread across the unit and a major forest road follows the Flathead River. Main through routes utilize Cabin and Harvey Creek valleys. The unit is comprised of a major river valley, rugged mountainous terrain, riparian meadows and subalpine lakes.

Recreational Facilities and General Use Patterns:

Of the 23 outdoor recreation activities considered in the RMS, 17 currently occur in this landscape unit. The Ministry of Forests currently manages 5 Recreation Sites in the Flathead valley and 1 site at Frozen Lake. Due to the existence of extensive industrial road systems spread across the unit, far ranging summer and winter motorized activities are the norm for much of the area.. Harvey and Kisoo Pass areas and the alpine basins in the Shepp Creek drainage are favoured locations for winter ski touring and summer hiking/camping activities. Some overlap of incompatible uses currently exists in these areas in the winter as snowmobile use is also a popular activity in these locations. Summer use is less contentious as the Shepp Creek basins are generally not road accessible. The Flathead River is popular for river related recreation activities. This unit contains a high density of roaded areas and due to this the question of social incompatibility is of high import to all users. Many areas are currently available to motorized use but due to both social and environmental concerns regarding potential impacts, there is a critical need to determine

what specific roads should be considered for closure. *This review should be undertaken as part of the Southern Rocky Mountains Management Plan phase II process.*

The unit also has guided hunting and angling operations spread throughout but no tenured commercial recreation operations. Wildlife values are high and centre on the ungulate winter range along the Couldry, Flathead, Harvey and Howell valleys and upland portions of the Harvey Creek valley.

Desired Future Condition:

The West Flathead Landscape Unit will be managed for a wide range of recreational opportunities. As much of the area is currently roaded, there will be significant areas where motorized activities will occur in winter. Ungulate winter ranges will be areas of highest constraint. During the winter most of the area will be available for snowmobiling with a few key locations catering to ski tourers. Locations near Harvey Pass and Shepp Creek will be subject to local agreements that would see them available for snowmobile use after mid March. Summer motorized use will be constrained in some areas. Existing main roads and some minor roads that access areas with high road densities will be available with seasonal restrictions. As this unit is well removed from communities and highways, any facility development should be transitory in nature. Existing authorized structures are accepted but further infrastructure will be limited to address winter warmup/ emergency use.

RMS Zoning Recommendations:

Summer:

- RA3 (unrestricted motorized access) Flathead R. road, Harvey Cr. road, Cabin Cr. road and Couldrey Cr. road
- RA2 (seasonal access) Howell Cr. access,
- RA2 (seasonal access) in areas of high road densities: Couldrey Creek, north and south of Cabin Creek, Twentynine Mile Creek and upper Howell/Kisoo Pass
- RA1 (non motorized access) all remaining areas.
- RH1 (no landings desired)
- RM1 (no development)

Winter:

- RA3 (unrestricted motorized access) Flathead R. road, Harvey Cr. road, Cabin Cr. road and Couldrey Cr. road
- RA2.2 (snowmobiles after mid March) Shepp Cr. south to Harvey Cr. and Fuel Cr. south to Howell Cr,
- RA1 (non motorized access) all identified ungulate winter range
- RH1 (no landings desired)
- RM2 limited development) existing authorized structures and emergency shelters only

LANDSCAPE UNIT C17 – UPPER FLATHEAD

Location:

The Upper Flathead Landscape Unit extends from the Alberta border to the height of land bounding the upper reaches of the Flathead River on the west and from Flathead Ridge and McLatchie drainage on the south to the height of land at McEvoy Creek and east to the Alberta border. This unit contains 32,190 hectares of which all except approximately 3,000 is Crown land. The main access in the area is the main

forestry Flathead R. road with areas of extensive road networks in McLatchie and Squaw and Pincher Creek drainages. Secondary roads extend into McEvoy Creek as well as into passes in Pollack and Pincher Creeks (North Kootenay Pass). The headwaters of the Flathead River valley are largely unroaded. The unit is comprised of a major river valley with extensive riparian meadow areas, rugged mountainous terrain and alpine ridges.

Recreation Facilities and General Use Patterns:

Of the 23 outdoor recreation opportunities considered in the RMS, 17 presently occur in this unit. There are no developed recreational facilities within the area, however tenured guide-outfitting takes place throughout. Public use is largely local with increasing use by Alberta residents for motorized summer and winter activities. Access through North Kootenay Pass and Pollack Creek is escalating rapidly with pressure of Alberta users. All road systems and a gasline R/W on the western side of the unit receive intensive use both summer and winter. Extensive riparian areas and meadows in the upper end of the valley are features that are desirable but subject to impacts. Wildlife values are high and unmanaged use can impact ungulates in both seasons. The upper reach of the Flathead River is largely unroaded but will be subject to industrial development in the mid term. Users suggest that all new industrial access should be closed to public use when active and closed/rehabilitated upon completion of activities. Current summer use of McEvoy road is causing erosion and other concerns but continues to be a popular route. This unit is one of the most intensively used snowmobile areas with limited non-motorized use.

Desired Future Condition:

The Upper Flathead LU will be managed for a seasonal range of public and commercial uses. In the winter there will be significant areas where motorized activities will occur. Ungulate winter ranges will be areas of highest constraint. Summer use will be primarily non-motorized with access corridors through the unit with portions of the existing road system available with seasonal constraints. Routes through the two passes will be non-motorized summer and winter to encourage access by non locals through existing communities and along existing access routes. As this unit is removed from population centres, the area is not well suited for facility development. Development shall be very limited and low impact in nature.

RMS Zoning recommendations:

Summer:

- RA3 (unrestricted motorized access) on main Flathead Road and McLatchie Creek road.
- RA2 (seasonal access) road to north west of Mt. Corrigan connecting to Squaw Creek., gasline R/W and upper McEvoy Creek and lower Pincher Creek.
- RA1 (non-motorized access) the remainder of the unit.
- RH1 (no landings desired)
- RM1 (no development)

Winter:

- RA3 (unrestricted motorized access) on main Flathead road and McLatchie Creek road.
- RA1 (non-motorized access) on all identified ungulate winter range.
- RA2 (seasonal access) McEvoy road through ungulate winter range and the remainder of the unit.
- RH1 (no landings desired)
- RM2 (limited development) existing authorized structures.

LANDSCAPE UNIT C18 – EAST FLATHEAD

Location:

The East Flathead Landscape Unit encompasses the area east of the Flathead River to the Alberta border from the international boundary north to St Eloi Brook. This area contains approximately 71,000 hectares of Crown land with minor private lands. The major access routes are the main industrial Flathead River road and secondary roads in Kishenina, Sage, Middlepass, Commerce and Cato Creeks. Extensive road networks exist in all the above drainages as well as in the main Flathead R. valley. The unit is comprised of rugged mountainous terrain, mountain passes, a major river valley, riparian meadows, meandering rivers, alpine ridge systems and alpine basins and lakes.

Recreational Facilities and General Use Patterns:

Of the 23 outdoor recreation opportunities considered in the RMS, 17 currently occur in this landscape unit. The Ministry of Forests currently manages 2 Recreation Sites in the lower Flathead valley. Akamina-Kishenina Provincial Park occupies the south-east corner of the unit, encompassing a series of basins and alpine ridges but limited valley bottom terrain. This LU is one of the most remote of all units in the planning area and that character is reflected in its use. Other than existing guide outfitting tenures there are no commercial recreation tenures in this landscape unit. Due to the existence of extensive industrial road networks throughout the unit, summer and winter motorized use generally takes place in the main river valley and the majority of the side drainages along most roads. Winter snowmobile users value the unit as a destination trail riding area with some opportunities for activities in cutblocks. Summer use is associated with access to the Flathead River, ATV travel throughout the unit and non motorized activities throughout the undeveloped portions of the unit. Some overlap of incompatible uses currently exists in the summer and is focussed on ATV use in many alpine areas. Both summer and winter use by Albertans is increasing due to passes that permit access from the east. This influx of out of province users has raised economic and environmental concerns by many local users. Some sentiment exists for the closure of all passes to direct non-local users through adjacent communities to enhance economic benefits to those communities. Many areas are currently available to motorized use but a critical need exists to determine what specific roads should be considered for restrictions. This unit has wildlife values for Moose habitat, other ungulates, Grizzly bears and other mammals. Current use patterns may be problematic in terms of habitat needs and effects of recreational use on wildlife.

Desired Future Condition:

The East Flathead Landscape Unit will be managed for a range of recreation opportunities with emphasis on retaining the remote character of the area. As much of the area is currently roaded, there will continue to be significant areas where motorized activities in both summer and winter will occur. However, restrictions will be required to protect wildlife and environmental values and motorized activities will be limited to specific access corridors. Passes to Alberta will be available for non motorized use and out of province motorized users will be directed to other access points outside this unit..

As this area will retain its remote character, facility development shall be limited to existing authorized structures. Development of other infrastructure is not recommended.

RMS Zoning Recommendations:

Summer:

- RA3 (unrestricted motorized access) on the main industrial Flathead R. road to 94 km.

- RA2 (seasonal access) on portions (not to passes) of the Proctor, Kishenina, Sage, Commerce, Middlepass and Cato Creek roads.
- RA1 (non motorized access) throughout the remainder of the unit.
- RH1 (no landings desired)
- RM1 (no development)

Winter:

- RA3 (unrestricted motorized access) on the main industrial Flathead R. road to 94 km.
- RA2 (seasonal access) on portions (not to passes) of the Proctor, Kishenina, Sage, Commerce, Middlepass and Cato Creek roads.
- RA1 (non motorized access) throughout the remainder of the unit.
- RH1 (no landings desired)
- RM1 (no development)

LANDSCAPE UNIT 23 – WEST ELK

Location:

The West Elk Landscape Unit extends generally from Sparwood in the south to Elkford in the north. The eastern boundary is the Elk River and the western boundary is the height of land to the west of the Elk River. The size of this unit is 64,371 ha. most of which is crown land. Highway 43 from Sparwood to Elkford runs through the unit (mostly on private land). Major tributaries of the Elk River within this unit include Bingay Creek, Crossing Creek, Boivin Creek, Weigert Creek, Brule Creek and Cummins Creek. The resident population generally resides in the narrow strip of land between the highway and the river and in the communities of Sparwood and Elkford.

Recreation Facilities and General Use Patterns:

Of the 23 backcountry outdoor recreation activities considered in the Recreation Management Strategy (RMS), 20 presently occur in the West Elk landscape unit with only cat skiing, motorized boating and commercial river rafting not present. Present use is primarily local and the dead end nature of highway 43 restricts tourist development potential somewhat. Tenured commercial recreation includes angling, guide outfitting and one licensed snowmobiling operation but it is suspected that other untenured commercial recreation businesses also use this area. Vehicle restrictions are in place either under the Wildlife Act (Access Management Areas) or the Forest Practices Code in Bingay Creek, Weigert Creek and Brule Creek. In addition the community of Elkford supports vehicle restrictions in Boivin Creek.

Desired Future Condition:

The West Elk Unit will be managed for a variety of public and commercial recreation opportunities. Efforts will be made to balance and integrate where possible the types of opportunities to offer “something for everyone”. On crown land, in the summer, motorized recreation will be focused in Weigert, Cummins and lower Brule Creeks and in Crossing Creek which links through to the Bull River valley. Non motorized recreation will be concentrated in upper Brule Creek and where compatible with community watershed objectives, in Boivin Creek. In the winter motorized use will be most popular in the Crossing Creek area, including off road areas, in Weigert Creek, and Cummins Creek valley except on identified ungulate winter range. Non motorized use will be concentrated in the Brule Creek valley and Hornaday Pass area with some use where compatible with community watershed objectives, in Boivin Creek. Both public and

commercial recreation will be mostly day use with accommodation and services offered in the local communities.

RMS Zoning Recommendations:

Summer:

- RA3 (unrestricted motorized) on highway 43, up Weigert Creek and up Crossing Creek
- RA2 (seasonal motorized) up Cummins Creek and lower Brule Creek
- RA1 (non motorized) throughout the rest of the area
- RH1 (no landings desired)
- RM2 (limited development) in specific areas for existing legal structures
- RM1 (no development) for the rest of the area

Winter:

- RA3 (unrestricted motorized) on highway 43, up Weigert Creek and up Crossing Creek
- RA2.1 (snowmobiles only) in the entire Bingay and Weigert valleys as per the AMAs.
- RA1 (non motorized) in the Boivin and Brule valleys and on identified ungulate winter range
- RA2 (seasonal motorized) on the rest of the area

LANDSCAPE UNIT 24 – LOWER ELK

Location:

The Lower Elk Landscape Unit extends from Elko in the south to Sparwood in the north with the Elk River running through the length of the unit and the east and west heights of land forming the other borders. The total area of this unit is 70,573 ha. Approximately 75% of this unit is private land. Highway 3 runs through the unit near the Elk River. Fernie, Hosmer, Sparwood and Natal are the population centres within this unit.

Recreation Facilities and General Use Patterns:

Of the 23 backcountry outdoor recreation activities considered in the Recreation Management Strategy (RMS), 21 presently occur in the Lower Elk area. There is no licensed guide outfitter operating within this unit and motor boating being the only common recreational activity that doesn't presently occur. Most of the developed recreational facilities between Cranbrook and the Alberta border are concentrated in this area including Mount Fernie ski resort, a commercial cat skiing operation, commercial snowmobiling, commercial river rafting, commercial fish guiding, and guide outfitting. Most motorized and non motorized recreational activities are popular in season with late spring being the only period when backcountry recreation use is diminished. The percentage of locals who recreate in the area is rated as high to very high. Use has increased significantly in recent years primarily from near market tourists. Unorganized recreational uses have the potential to impact the environment, primarily on wintering ungulates, grizzly bears and domestic watersheds. In addition non compatible recreational activities are increasingly in competition in specific areas but there does not seem to be a significant concern with recreational crowding (social capacity impact) except in very specific popular areas at the present time.

Desired Future Condition:

The Lower Elk area will be managed for a wide range of public and commercial recreation opportunities. Efforts will be made to balance and integrate where possible the types of recreation to offer variety. In keeping with the more urban nature of this unit the less primitive; more developed facilities will be common. Development pressures will be greatest near the highway corridor, near existing settlements and

in the most attractive remote “niche” sites. Due to the proximity of the main highway 3 corridor and the areas attractiveness, tourism is expected to increase. As well, the local population centres are expected to grow with many people choosing to move to the area for a lifestyle which includes a quality environment and readily accessible backcountry recreation opportunities. Maintaining a high quality environment and experience will require ongoing planning and community involvement. Local communities have expressed a desire to further develop the economic potential of backcountry recreation by catering to locals and promoting town based accommodation and services for tourists. Wilderness lodges should not dominate or exclude existing recreation use and will be less common than town based tourist facilities.

RMS Zoning Recommendations:

Summer:

- RA3 (unrestricted motorized access) on the highway, Hartley Creek, McCool Creek and Lladnar Creek
- RA2 (seasonal motorized access) on crown land below the powerline on the west side of the valley parallel to the highway and the top end of Lladnar Creek
- RA1 on the rest of the unit
- RH2 (specified landing sites)
- RM3 (high development and use)

Winter:

- RA3 (unrestricted motorized access) on the highway, Hartley Creek, McCool Creek and Lladnar Creek
- RA2.2 (snowmobiles allowed after mid March) Fairy Creek to Hartley Creek and in the Lizard Range.
- RA1 (non motorized access) on identified ungulate winter range
- RA2 (seasonal motorized access) on the rest of the unit

LANDSCAPE UNIT C25 – SAND CREEK

Location:

The Sand Creek Landscape Unit extends from Elko in the southeast to the Bull River in the west and generally comprises the visible southwest facing slopes above the northern portion of the Koocanusa reservoir on the Kootenay River. Highway 3 runs between this landscape unit and the reservoir. This area is approximately 19,000 ha., nearly all of which is Crown Land. There are no population centres within this area or highways through the area. There are relatively few roads within the area. Forestry roads extend up Little Sand Creek through to Sand Creek and its tributaries McDermid Creek, Whimster Creek and Caithness Creek.

Recreation Facilities and General Use Patterns:

Of the 23 backcountry outdoor recreation activities considered in the Recreation Management Strategy (RMS), 20 presently occur in this landscape unit with only the water based activities being absent. Though admittedly use in many types of activities is light. There are few developed recreational facilities in the area. Commercial recreation is limited to untended snowmobiling, guide outfitting and one cat ski operation. Public recreational use is near year round with peaks in the fall for hunting and in the winter for snowmobiling and ski touring. Public use is primarily local with the exception of hunting which draws

hunters from more distant centres mostly within BC. Wildlife values are very high and unmanaged recreation use can have an impact primarily on ungulates during the winter. There is some competition amongst non compatible recreational activities but local agreements seem to be resolving most of the potential conflicts. Over use is not considered to be a major problem at the present time.

Desired future Condition:

The Sand Creek Landscape Unit will be managed for a wide range of public and commercial recreation opportunities. As much of the area is presently not roaded, there will be significant areas where non motorized activities will occur in the summer. Existing roads will generally be open for motorized activities including a loop road between Sand Creek and Little Sand Creek. During the winter most of the area will be available for snowmobiling with a few key sites catering to ski touring enthusiasts. As this landscape unit is removed from population centres and the highway, the area will not be the most desirable for facility development except in “niche” sites. Except for hunting which will continue to be a more attractive draw, public recreation will mostly be from nearby communities. The area is locally known for high value ski touring with one existing commercial cat ski operation and informal heli access ski touring. Commercial recreation will generally be based in the nearby communities. Accommodation and services will be in these towns with day trips into this area for a variety of recreational experiences. Ongoing planning and management of recreational use with strong, local involvement will minimize environmental and social conflicts in the area

RMS Zoning Recommendations:

Summer:

- RA2 (seasonal motorized access) on the forestry roads up Sand Creek, Little Sand Creek, McDermid Creek , Whimster Creek and Caithness Creek.
- RA2 (seasonal motorized access) in the Caithness valley and in the area below Sand Creek and Little Sand Creek.
- RA1 (non motorized access) throughout the rest of the area RH2 (specified landing sites).
- RM2 (limited development).

Winter:

- RA2.2 (snowmobiles allowed after mid March) on areas of local agreement between snowmobiling and ski touring groups in the heights of land south of Sand Creek, south of McDermid Creek and south of Lizard Creek
- RA1 (non motorized access) on identified ungulate winter range
- RA2 (seasonal motorized access) throughout the rest
- RH2 (specified landing sites)
- RM2 (limited development)

LANDSCAPE UNIT C26 – IRON – SULPHUR

Location:

The Iron-Sulphur Landscape Unit extends north up the Bull River to Sulphur Creek, east up Sulphur Creek to Hartley Pass, south along the height of land to Mount Fernie and southwest along the height of land to the Bull River. This area is approximately 39,000 ha., nearly all of which is Crown Land. There are no

population centres within this area or highways through the area. There are relatively few roads within the area. A mainline forestry road extends up The Bull River with side roads up Iron Creek and Sulphur Creek.

Recreation Facilities and General Use Patterns:

Of the 23 backcountry outdoor recreation activities considered in the Recreation Management Strategy (RMS), 21 presently occur in this landscape unit with only downhill skiing and motor boating being absent, though admittedly use in many types of activities is light. There are few no developed recreational facilities in the area. Commercial recreation is limited to tenured snowmobiling and guide outfitting. Public recreational use is near year round with peaks in the fall for hunting and in the winter for snowmobiling and ski touring. Public use is primarily local with the exception of hunting which draws hunters from more distant centres mostly within BC. Wildlife values are very high and unmanaged recreation use can have an impact primarily on ungulates during the winter. There is some competition amongst non compatible recreational activities but local agreements seem to be resolving most of the potential conflicts south of Hartley Pass. Over use is not considered to be a major problem at the present time.

Desired future Condition:

The Iron-Sulphur Landscape Unit will be managed for a wide range of public and commercial recreation opportunities. As much of the area is presently not roaded, there will be significant areas where non motorized activities will occur in the summer. Existing roads will generally be open for motorized activities including a road up Sulphur Creek which connects through Hartley Pass to the Elk River near Fernie. During the winter most of the area will be available for snowmobiling with a few key sites catering to ski touring enthusiasts. The Hartley Pass area is popular for snowmobiling. As this landscape unit is removed from population centres and the highway, the area is not well suited for facility development. Except for hunting which will continue to be a more attractive draw, public recreation will mostly be from nearby communities. The lower elevations of this unit are very important for ungulate winter range which will place some restrictions on recreation use. Ongoing planning and management of recreational use with strong, local involvement will minimize environmental and social conflicts in the area

RMS Zoning Recommendations:

Summer:

- RA3 (unrestricted motorized access) on the Bull River road and Sulphur Creek road
- RA2 (seasonal motorized access) on the Iron Creek road
- RA2 (seasonal motorized access) in the Hartley Pass area
- RA1 (non motorized access) throughout the rest of the area
- RH2 (specified landing sites) in the ridge area in the eastern portion of the unit
- RH1 (no landings desired) in most of the area
- RM2 (limited development) in defined areas below 5000 ft
- RM1 (no development) in the remainder of the area

Winter:

- RA3 (unrestricted motorized access) on the Bull River road and the Sulphur Creek road
- RA2.2 (snowmobiles allowed after mid March) on areas of local agreement between snowmobiling and ski touring groups in the heights of land south of Hartley Pass
- RA1 (non motorized access) on identified ungulate winter range
- RA2 (seasonal motorized access) throughout the rest of the unit.
- RH1 (no landings desired)

- RM2 (limited development) in defined areas below 5000 ft.
- RM1 (no development) throughout the rest of the area

LANDSCAPE UNIT C27 – UPPER BULL

Location:

The Upper Bull Landscape Unit extends from the confluence of Sulphur Creek north to the headwaters of the Bull River and includes all the side drainages, the main tributary to the upper Bull River being Quinn Creek (aka. Queen Creek). This unit is approximately 62,388 ha. There are no permanent residents within this unit. A main Forestry road runs parallel to the river with secondary roads up Quinn Creek and five smaller creeks. The area is remote and largely unroaded.

Recreation Facilities and General Use Patterns:

Of the 23 backcountry outdoor recreation activities considered in the Recreation Management Strategy (RMS), 19 presently occur in this landscape unit with boating and mechanized skiing being absent. There are no developed recreation facilities except for the guide outfitters camps. There is one tenured commercial snowmobile operation and probably several other untenured commercial recreation that use the area. Public recreation is primarily local, relatively light and dispersed with the exception of hunting which has a wider appeal and provincial significance. Parts of this unit are very important for ungulate winter range which will place some restrictions on recreation use. Ongoing planning and management of recreational use with strong, local involvement will minimize environmental and social conflicts in the area.

Desired Future Condition:

The Upper Bull River will be managed for a wide range of public and commercial opportunities. As much of the area is presently not roaded, there will be significant areas where non motorized activities will occur in the summer. Existing roads will generally be open for motorized activities including a road up an unnamed creek in the north which links to Crossing Creek and the Elk River valley. Almost the entire unit will be available for snowmobiling except identified ungulate winter ranges and Norboe Creek which is unroaded and a popular area for hiking and ski touring through Hornaday Pass. Over use is not considered to be a problem at the present time.

RMS Zoning Recommendations:

Summer:

- RA3 (unrestricted motorized access) on the main road up the Bull River and the road east to Crossing Creek.
- RA2 (seasonal motorized access) on Quinn Creek and four other western side valleys
- RA1 (non motorized access) on the rest of the unit
- RH1 (no landings desired)
- RM1 (no development) in the Norboe valley
- RM2 (limited development) in the rest of the unit

Winter:

- RA3 (unrestricted motorized access) on the main road up the Bull River and the road east to Crossing Creek.
- RA2 (seasonal motorized access) over most of the unit

- RA1 (non motorized access) on identified ungulate winter range and in the Norboe valley
- RH1 (no landings desired)
- RM2 (limited development) below 5000 feet
- RM1(no development) above 5000 feet and in the Norboe valley

4.0 A Summary of Key Global Issues:

Global issues is the term we used for concerns that we were unable to address at our stakeholder table and generally fall into four categories:

1. not specific enough to the area being discussed
2. policy direction required
3. beyond the jurisdiction of party involved
4. future or ongoing actions required

Although the following Global Issues are largely beyond the scope of this project, the stakeholder table considered the issues constraints to the effectiveness of any recreation planning process.

1. Enforcement:

Probably the most universal concern from the table affecting the success of the plan. Inadequate enforcement, which extends from informing users by handing out maps through to ticketing offenders, was considered to be the most significant constraint to effective plan implementation.

2. Untenured Commercial Recreation Businesses and Recreation Cabins:

Untenured businesses and the lack of commitment by government to bring them in line was identified as a significant issue. Untenured operators have been freely advertising and operating wherever they choose unencumbered by license fees, management plans, quotas and designated operating areas. The current situation was seen to be detrimental to public enjoyment, the environment and business interests.

3. Legislative Tools:

At this point it is unclear under which legislation these plans will be implemented. Previously three different government Acts were used to manage access: Ministry of Forests (section 105 of the Forest Practices Code), Ministry of Environment (Wildlife Act) and Lands Act. There is a need for increased clarity and consistency in how access is regulated especially in light of the change in ministries and their mandates

4. Plan updates:

The plan must remain current to be effective. A strong commitment is needed to develop and maintain the appropriate body and process to monitor, amend and update the plan on a regular basis.

5. Angling Guides:

The method of issuing these licences was identified as a major cause of concern. Since the licences are not area specific, some areas may receive more pressure because they are more productive and more easily accessed. Quality of experience and management of the resource may be compromised by the “first come; first served” attitude. There are over 150 licensed guides regularly using the Elk River; the allocation and management of angling guide licences in BC. should be addressed.

5.0 List of Participants

Aurora Training Consultants Cokato Association	Fernie Chapter, EDO
Corbin Snowmobile/ATV	Fernie Mountain Bike Club
Corbin Wilderness Group	Fernie Rod & Gun Club
Corbin Wildlife Society	Fernie Snowmobile Association
District of Elkford	Fernie Cave Hunters
District of Sparwood	Galloway Lumber
E. Kootenay Residents Land Use Coalition	Geology Consulting
East Kootenay Snowmobile Tours	Hornaday Wilderness Society
East Kootenay Wildlife Assoc. (EKWA)	Island Lake Lodge
East Kootenay Sled Tours	Kootenay Backcountry Horsemen
East Kootenay Environmental Society	Kootenay Angling Guide Association
Southern Rockies Cross Country Ski Club	Kootenay Livestock Association
Elk Valley ATV Club	Line Creek Mining Ltd.
Elk Valley Bighorn Outfitters	Lost Creek Angling
Elk Valley Coalition	Ministry of Forests Mountain Meadow Ranch
Elk Valley Mountaineers	South Rockies Cross Country Ski Club
Elk Valley Trappers Association	Southern Guides & Outfitters Association
Elkford Chamber of Commerce	Sparwood Fish & Wildlife Assoc.
Elkford Nordic Ski Club	Sparwood Snowmobile Club
Elkford Recreation Development Society	Tembec Industries Ltd.
Elkford Rod & Gun Club	Trails BC - Rocky Mtn Region
Elkford Snowmobile Club	Waldo Stock Breeders
Elkview Coal	Windwalker Safari Canada
Elk Valley Ski Touring Association	
Fernie Mountain Bikes	

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C13/ C34	T555/T560 T490 Galton PAS Unit 40	1993 Best PAS Areas	<p>PAS Value: The Galton Range is an enhancement to the Wigwam River (Unit 18) that connects to winter ranges in the Rocky Mountain Trench. This unit also possesses high cultural values.</p> <p>Diversity: Connects Wigwam River to Sheep Mountain/Wigwam Flats winter ranges, and over the Galton Range via Donald, Raymond, Maguire and Scherf Creeks to the Rocky Mountain Trench. Provides important summer and intermediate range for Rocky Mountain Trench. Provides important summer and intermediate range for bighorn sheep and mule deer.</p> <p>Viability: Area is 9815.0 ha. This unit is only viable as an addition to the Wigwam River Unit 18.</p> <p>Naturalness in 1993: Less than 25% disturbed.</p>	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 40.
C13/ C34	T555/T560 & T490	Agriculture	Grazing: Noxious weeds	Need to be addressed	Commercial Hunting and Fishing Focus Group session. March 27, 2002.
C13	RMZ C-I04	Agriculture	Grazing	Maintain foraging opportunities for wildlife by allocating no domestic livestock tenures in the unit.	KBLUP IS: Appendix 3, Page 22
C34	RMZ C-I05	Agriculture	Grazing	Maintain opportunities for increased or improved agricultural activity particularly within the Jaffray Polygon.	KBLUP-IS: Appendix 3, Page 24
C13/ C34	T555/T560 & T490 CORE polygon 1-1	Agriculture	Grazing	<p><u>Polygon Notes:</u></p> <p>-Grazing is acceptable only in existing units.</p> <p>-Potential for increased agricultural activity. Intent is to pursue the possibility (CORE, East Kootenay Regional Table, Volume 3, Part B Management Guidelines, Agriculture Notes, AG2).</p> <p>Ecosystems Sector concerned that any expansion of crop production or grazing may result in negative impacts on carnivores and ungulates.</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information, and T1+T2 Guidelines.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<u>T1 Guideline-Grazing tenures</u>	
C13	C13, C14, C15	Agriculture	Low range values. Range agreement: One grazing permit for guide outfitter horses overlaps with LU C14 + C15. Total 51 AUMs attributable to LU C13, C14, C15. Most of AUMs used in LU C14. Very high ungulate values.		Cranbrook Forest District Recreation Access Plan. March, 2000. LU C13.
C13	T555 + T560 are in the Wigwam Range Unit	Agriculture	Wigwam Range Agreement Holders: GT: Rocky Mtn Lodge- 173 AUMs GT: Steve Leuenberger- 90 AUMs	GT indicates that the Range Agreement Area matches the G/O territory. Wigwam Range Unit covers LU C14, part of C15, part of C24 and the northern tip of C13 (T555 and T560).	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C34	T490 is in the Waldo Range Unit	Agriculture	Waldo Range Agreement Holders: Jack Cutts- 792 AUMs	Jack Cutts Ranch is owned by Nature Trust of B.C. and managed by Wildlife branch.	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C34	T490 Sheep Mountain WMA	Agriculture	Reduce agriculture/wildlife conflict	By establishing a secure environment for wildlife with the preferred habitat mix of forage and cover to encourage reduced overwintering ungulate use of private ranches and farms.	Sheep Mountain WMA Management Plan: page 15.
C34	T490 Sheep Mountain WMA	Agriculture	There are no privately owned agricultural operations within the proposed WMA area. The physical constraints of agricultural soil capability and lack of water prohibit the establishment of any intensive agricultural operation. No demand is anticipated.	Note: Jack Cutts Ranch was acquired for wildlife management purposes by the Nature Trust of B.C. in 1985. Nature Trust leases the 364 ha parcel to Wildlife Branch for intensive wildlife habitat management. Jack Cutts has a life tenancy on the home and surrounding 5 acres, and continues cattle ranching.	Sheep Mountain WMA Management Plan: page 8, 16, 18.
C34	T490 Sheep Mountain WMA	Agriculture	Crown grazing to a level of 250 AUMs (currently associated with Cutts Ranch) will be continued in accordance with the Management Plan; however consistent with government policy a guarantee of annual forage availability is not forthcoming. In cooperation with the user BCE would determine livestock numbers and time of use.	Grazing permit would be administered via the Range Act. No long term "new opportunities" will be available on the area, but shorter term (i.e. 3-5 years) opportunities will be available over time as implementation of the management plan progresses. Permitted grazing will be subject to annual rotations, degree and patterns of use and availability of water and forage.	Sheep Mountain WMA Management Plan: page 17.
C34	T490 Sheep Mountain	Agriculture-Water	Except for the Elk River which is deeply incised on the border of the proposed WMA, no permanent water bodies exist. Pumping from the Elk River	Scarcity and distribution dictates that any periodic availability of water must be diligently conserved. Maintenance and management of the one licensed spring will be continued to facilitate livestock	Sheep Mountain WMA Management Plan: page 9, 16.

**Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002**

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	WMA		<p>requires an immediate vertical lift in excess of 145 m, which is not economically feasible.</p> <p>One small developed and operated spring on Wildlife Branch property (65 ha purchased for wildlife management purposes in 1962). Spring is licensed to WLAP, and is maintained and operated for livestock watering.</p> <p>Domestic water is currently trucked in.</p>	distribution. If any new sources of water are discovered they will be protected and/or developed to improve livestock distribution and range rotations.	
C13/ C34	T555/T560 T490 CORE polygon 1-1	Agriculture	Livestock grazing	<u>Non-Motorized Sector Comments</u> : concerned with regard to the expansion of cattle grazing in this unit; however whole heartedly supports coordinated resource management plans and the work of the East Kootenay Trench Agriculture/ Wildlife Committee.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information.
C13	T555/T560 RMZ CI04	Access Management	Maintain the existing access management program in the Wigwam Flats-Mount Broadwood area.		KBLUP IS: Appendix 3, Page 22
C34	RMZ C-I05	Access Management	Ensure the range of objectives and strategies are integrated throughout the unit.	All proposals for new road development or expansion will be evaluated through an enhanced referral process or special measures if development is imminent.	KBLUP-IS: Appendix 3, Page 24
C34	T490 Sheep Mountain Wildlife Management Area	Access Management	High capability habitat particularly important for overwintering ungulates.	Currently a legislated access management plan in place over the proposed WMA. This plan restricts the use of motorized vehicles to designated roads. It's purpose is to prevent habitat degradation and the spread of noxious weeds and to eliminate harassment and stress to wildlife during the critical winter period. Ample parking opportunities are available.	Sheep Mountain WMA Management Plan: page 15.
C13	T555/T560 RMZ CI04	Recreation	Maintain a range of recreation opportunities from roaded resource land to semi-primitive non-motorized		KBLUP IS: Appendix 3, Page 22
C34	RMZ C-I05	Recreation	Maintain a range of recreation opportunities from natural to semi primitive non motorized.	No new permanent road access within 500m of the river. Temporary roads are to be deactivated on conclusion of resource development.	KBLUP-IS: Appendix 3, Page 24
C34	T490 Sheep Mountain Wildlife	Recreation	Sheep Mountain is used intensively by the recreating public for big game hunting, wildlife viewing, and as an access for angling on the Elk River.	Recreational activities such as hunting, wildlife viewing, hiking, nature study, cross country skiing, and access for fishing on the Elk River will continue. Commercial infrastructure for recreational activities will not be permitted.	Sheep Mountain WMA Management Plan: page 6, 15.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Management Area				
C13/C34	T555/T560 T490 CORE polygon 1-1	Recreation- Commercial Tourism	2 outfitter areas and base lodges	Polygon Notes-low to moderate commercial tourism is acceptable. <u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1 Guideline.
C13/C34	T555/T560 T490	Recreation- Front Country Visuals	T555/T560 & T490 are in Class 1 Scenic Corridor	Located at the boundary of Class 1 & 2 Scenic Corridors.	KBLUP IS: Chapter 3.8, Pages 52-54
C13/C34	T555/T560 T490	Recreation- Backcountry Recreation	Backcountry River Corridor	Backcountry recreation as per ROS	KBLUP IS Chapter 3.9, Page 54-57
C13/C34	T555/T560 T490 CORE polygon 1-1	Recreation- Visuals		<u>T1 Guideline:</u> -Smoke management guidelines -Visual Quality Objectives guidelines (implying restrictions on timber volume)	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1 Guideline.
C13/C34	T555/T560 T490 CORE polygon 1-1	Recreation- Tourism Visuals	High value near Elko mill	<u>T1 Guideline:</u> -Management of high tourism value viewscales for some enhanced analysis and landscape design (implying no change in timber volume).	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1 Guideline.
C13/C34	T555/T560 T490 CORE polygon 1-1	Recreation- Sense of Solitude	Sense of solitude	<u>T1 Guideline:</u> -Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1 Guideline.
C13/C34	T555/T560 T490 Galton PAS Unit 40	Cultural Heritage	Important traditional use area for the Ktunaxa. No recorded information, but high probability of archaeological evidence, especially at the south end.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
					Areas Team (RPAT). November, 1993. Unit 40.
C13/ C34	T555/T560 T490 CORE polygon 1-1	Heritage + Culture	First nations traditional use area especially for fishing, hunting. High heritage values near Elko mill (polygon notes)	<p><u>T2 Guideline:</u> Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required.</p> <p>Access: Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas.</p> <p>Facilities: Restrictions on construction of facilities within contextual areas. In sensitive areas, no development permitted. Temporary site protection may be required. Preservation and reuse of related heritage sites may be permitted under controlled conditions.</p> <p>Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted.</p> <p>Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T2 Guideline.
C13	T555	Watershed	Class 2 Domestic Watershed		KBLUP IS: Chapter 3.7 Pages 30-52
C34	RMZ C-I05 T385, T410, T415, T405, T450, T445, T455,T442, T490, T475	Watershed	Class 1 Domestic Watershed		KBLUP-IS: Chapter 3.7, pages 30-52

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C34	T490 Sheep Mountain WMA	Water	Except for the Elk River which is deeply incised on the border of the proposed WMA, no permanent water bodies exist. Pumping from the Elk River requires an immediate vertical lift in excess of 145 m, which is not economically feasible. Domestic water is currently trucked in.	Scarcity and distribution dictates that any periodic availability of water must be diligently conserved. Maintenance and management of the one licensed spring will be continued to facilitate livestock distribution. If any new sources of water are discovered they will be protected and/or developed to improve livestock distribution and range rotations. Due to instability most of the banks of the Elk River will be managed by a "leave alone" policy.	Sheep Mountain WMA Management Plan: page 16.
C13/ C34	T555/T560 T490	Biodiversity – Rare and Endangered Species	Prairie Falcon- Red listed (threatened or endangered) Habitat: breed in steep escarpments and rocky cliffs associated with large, dry grasslands or sagebrush steppes. Possible breeding distribution: Columbia and Kootenay river valleys.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 6.
C13/ C34	T555/T560 T490	Biodiversity – Rare and Endangered Species	Sharp-tailed Grouse- Blue listed (vulnerable) Habitat: ground nesters found in open lowlands with grasslands and shrub-steppes vegetation types. Seek cover in adjacent riparian and deciduous woodlands during winter. Possible breeding distribution: Columbia and Kootenay river valleys.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 6.
C13/ C34	T555/T560 T490	Biodiversity – Rare and Endangered Species	Fisher - Blue listed (vulnerable) Habitat: dense, late seral coniferous or mixed wood. Distribution: may currently occupy the southeast corner of B.C. in low densities, and at high elevation. Historical range includes the west and southeast portions of the Cranbrook Forest District.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 11.
C13/ C34	T555/T560 T490	Biodiversity – Rare and Endangered Species	Badger (Taxidea taxus) - Red listed (threatened or endangered) Habitat: non-forest and open Douglas-fir. Distribution: occur in the southern half of the Cranbrook Forest District, in the Kootenay River Drainage and in the Elk Valley.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 12.
C13/	T555/T560	Biodiversity –	Pinewood Peavine- Red listed (threatened or		Listed Vertebrate and Vascular

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C34	T490	Rare and Endangered Species	endangered) Habitat: dry sites in steppe vegetation and lower montane zone. Distribution: Rare in S.E. B.C. known only from Elko.		Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 18.
C13/ C34	T555/T560 T490	Biodiversity	Wigwam Flats/Sheep Mountain provide critical winter wildlife habitat.	Fire maintained ecosystem management should be continued.	Commercial Hunting and Fishing, and Recreational Hunting and Fishing Focus Group sessions. March 27, 2002.
C13	T555/T560 C-I04	Biodiversity	1. Retain forest and rangeland ecological elements and processes, including species richness, distribution and diversity at moderate risk. 2. Retain attributes for old growth dependent species. 3. Ensure habitat requirements for red and blue listed species are achieved.	1.1 Priorities for implementation of Fire Maintained Ecosystem Guidelines (Chapter 3.10) exist in Wigwam Flats. 1.2 Maintain existing access management program in the Wigwam Flats-Mount Broadwood area. 3.1 Tailed Frog should be designated as an identified wildlife species under the FPC.	KBLUP IS: Appendix 3, Page 22
C34	RMZ C-I05	Biodiversity	1. Retain grassland and forest ecological elements and processes. 2. Maintain regional connectivity corridor for the north-south connection within the East Kootenay Trench, and east-west between SRMZ units C-S06 and C-S07. 3. Ensure that habitat requirements for red and blue listed species and regionally significant species are achieved.	1.1 Maintain existing access management program on Sheep Mountain. Initiate access management and road/trail deactivation and rehabilitation in accordance with the access management guidelines (Chapter 3, section 3.12). 1.2 New or existing CTP's to concentrate intensive management in the most suitable sites within the permit area. 1.3 Complete the third year of the Enhancement Area Identification Project funded by the CBFWCP. 2.1 Apply the connectivity guidelines as per Ch 3.3. 2.2 Human settlement plans, including OCP should address regional connectivity. 3.1 Address Sharp-Tailed Grouse, Coeur d'Alene Salamander, chipmunks, pocket gophers, bats and turtles	KBLUP-IS: Appendix 3, Page 25
C13/ C34	T555/T560 T490	Biodiversity	Part of the Border Ranges Ecosection (mountainous terrain).	<u>T1 Guideline:</u> - Interior Fish-Forestry Guidelines / Riparian and Streamside	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	CORE polygon 1-1		Extremely high wildlife and biodiversity values with site specific habitat management prescriptions and guidelines (ie T2) to be developed and implemented at subregional and local level as per Policy 6 (special emphasis on Sheep Mtn). This guideline is not limited to 10% of the landbase for Guideline D&H.	Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	Information + T1 Guideline.
C13/ C34	T555/T560 T490 CORE polygon 1-1	Biodiversity- Old Growth	Old growth remnants to provide mature forest cover and habitat and connectivity for populations from the Wigwam to Mount Broadwood -T2 Guideline. Elsewhere in polygon-T1 Guideline.	<u>T2 Guideline:</u> -Significant retention of old growth across the landscape. -FENs with major old growth component; corridors and riparian dominantly old growth; wide corridors. <u>T1 Guideline:</u> -FENs / interior fish-forestry guidelines / wildlife guidelines / regional wildlife habitat guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1/T2 Guidelines.
C13/ C34	T555/T560 T490 CORE polygon 1-1	Biodiversity- Natural Grasslands	Sheep Mtn remnant grasslands. Extremely high wildlife and biodiversity values. Site specific habitat management prescriptions and guidelines (ie T2) to be developed and implemented at subregional and local level as per Policy 6 (special emphasis on Sheep Mtn). This guideline is not limited to 10% of the landbase for Guideline D&H. WMA proposed for Sheep Mtn but not agreed to by the table.	<u>T2 Guideline:</u> -Riparian protection (eg by range riders, by pre-locating salt and fencing). -Cattle watering controls. -Consumption controls on all grazing species to protect grassland habitats (including sage, aspen, etc). -Range utility and condition monitoring; positive trend toward good/excellent condition required. -Weed control and rehabilitation programs (no exotic seeding on specific grasslands; knapweed control acceptable).	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T2 Guideline.
C34	RMZ C-I05	Biodiversity	Low Biodiversity Emphasis		KBLUP-IS: Chapter 3.2, page 3-6; Appendix 3 - Appendix C
C34	RMZ C-I05	Biodiversity	All or a portion of LU is important for regional connectivity		KBLUP-IS: Chapter 3.3, pages 6-8
C34	RMZ C-I05	Biodiversity	Fire Maintained Ecosystem Guidelines apply.		KBLUP-IS: Chapter 3.10, pages 58-65
C34	T490 Sheep Mountain Wildlife	Wildlife- Vegetation Management	Very high capability wildlife area particularly in terms of over wintering for elk, mule deer, white tailed deer and bighorn sheep.	The management objective for the WMA is to manipulate the various plant communities to at least maintain or preferably to increase, the carrying capacity of the forage base. This must be achieved by maintaining or creating the desired mix, size and juxtaposition of	Sheep Mountain WMA Management Plan: page 10.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Management Area			forage and cover areas. A range of types and age classes of forest cover will be managed to provide the necessary snow relief, thermal and visual cover for the specific wildlife species. Forage enhancement will in most areas be geared to provide preferred natural vegetation for the species present in their respective habitat types and terrain. Target plant species will include saskatoon, red osier dogwood, rose, choke cherry, Oregon grape, kinnikinnick, Douglas-fir, bluebunch wheatgrass, Idaho fescue and some minor seeding of a domestic hard grass species.	
C34	T490 Sheep Mountain Wildlife Management Area	Wildlife-Hunting Regulation	Very high capability wildlife area particularly in terms of over wintering for elk, mule deer, white tailed deer and bighorn sheep.	Wildlife populations will be managed at levels commensurate with habitat carrying capacity. Wildlife populations will continue to be managed by general and/or selective hunting regulations designed to maintain the desired sex ratios and age class structures in wild ungulates and large carnivores (i.e. cougar and black bear). This regime will also optimize recreational hunting opportunities.	Sheep Mountain WMA Management Plan: page 15.
C34	T490 Sheep Mountain Wildlife Management Area	Wildlife – Rare and Endangered Species	Yellow Badger Columbian sharptailed grouse Golden eagle Osprey Red tailed hawk	All management activities will be designed to maintain the necessary habitat requirements of rare and endangered species present in the proposed WMA.	Sheep Mountain WMA Management Plan: page 10.
C34	T490 Sheep Mountain Wildlife Management Area	Wildlife – Other Species	Species which are important in predator/prey relationships (e.g. Columbia ground squirrel) or otherwise contributing to biodiversity and wildlife viewing opportunities will be managed and/or protected.	All management activities will be designed to maintain the necessary habitat requirements of desirable species present in the proposed WMA.	Sheep Mountain WMA Management Plan: page 10.
C34	T490 Sheep Mountain Wildlife Management Area	Ungulates	Steep bluffs along the Elk River are critical sheep habitat.	Due to instability most of the banks of the Elk River will be managed by a “leave alone” policy.	Sheep Mountain WMA Management Plan: page 16.
C13/ C34	T555/T560 T490 Mt.	Ungulates – Bighorn sheep and	Mt. Broadwood/Wigwam Wildlife Range Complex is critical elk and sheep winter and spring habitat, designated for Intensive Wildlife Management	Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas:	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Broadwood/ Wigwam Wildlife Range Complex	Elk	<p>(Category 1). Biophysical Units:</p> <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. <p>This Range Complex is located in LU: C24, C15, C13/34 (Sheep Mtn); 3 known mineral licks occur within C15 and 2 known licks are in close proximity to the boundary between C15 and C13 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>-Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted).</p>	and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.
C13	T555/T560 RMZ C-I04	Ungulates	Maintain abundances of elk, mule deer, moose, Rocky Mtn Bighorn, and Rocky Mtn Goats within the sustainable carrying capacity of their habitat.	No domestic livestock tenures are to be allocated in this unit.	KBLUP IS: Appendix 3, page 12
C34	RMZ C-I05	Ungulates	Maintain the abundance of regionally significant elk, moose, mule deer, white-tailed deer and Rocky Mountain Bighorn Sheep.	Complete the Rocky Mountain Trench Elk and Mule Deer Inventory Project to assess the effects of forest in-growth on forage quality and quantity.	KBLUP-IS: Appendix 3, Page 26
C13	RMZ C-I04	Ungulates	Ungulate Winter Range (MWE, ESMW)		KBLUP-IS: Chapter 3.5, pages 17-24
C34	RMZ C-I05	Ungulates	Ungulate Winter Range (EMW, EWM, MWE, ESMW, SEMW)		KBLUP-IS: Chapter 3.5, pages 17-24.
C13/ C34	T555/T560 T490 CORE polygon 1-1	Ungulates	Major ungulate winter range at Wigwam Flats and Flathead Ridge	<p><u>T2 Guideline applies to ungulate winter range within T555, T560, T490:</u></p> <p>-Manage for optimal mix of thermal cover, snow interception and browse production (habitat adjacency key). -Appropriate mix of silvicultural systems and treatments to maintain habitats.</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T2 Guideline.
C13/ C34	T555/T560 T490 CORE polygon 1-1	Wide ranging carnivores	Flathead Ridge and denning areas – T2 Guideline	<p><u>T2 Guideline:</u></p> <p>-Seasonal feeding and breeding habitats protected; -Conservation of seasonal feeding and breeding areas; silvicultural treatments to favour food production; -Road densities minimal and access management coordinated to</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1/T2 Guidelines.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				avoid conflicts with habitat use. -Minimal human habitation and no sanitary landfills. -Predator control only under special circumstances. -Special grazing management to protect carnivore values. <u>T1Guideline:</u> Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations	
C34	RMZ C-I05	Carnivores	Maintain or enhance existing wolf and cougar populations.	Maintain sufficient prey habitat.	KBLUP-IS: Appendix 3, Page 26
C13/ C34	T555/T560 T490 CORE polygon 1-1	Fisheries	Wigwam is a very important fishery. T2 guidelines apply to all major streams.	<u>T2 Guideline:</u> -Minimal human-caused sedimentation. -Protection of streamside and riparian habitats; no roads in riparian without special permission, however, stream crossing normally acceptable. -Management for large organic debris. -Watershed sensitivity and ECA analysis prior to development. -Protection of spawning and rearing habitat. -Reclamation and hydrologic stabilisation where necessary. -Assume level one guidelines in place where level two's are applied.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T2 Guideline.
C13	T555/T560 RMZ C-I04	Fisheries	1. Maintain wild stocks and habitat for Bull Trout. 2. Maintain wild stocks and habitat for Cutthroat and Bull Trout in the Wigwam River.	1.1 Wigwam River is a priority area for WRP assessment/projects. 2.1 Explore possible use of access management to limit harvest.	KBLUP IS Appendix 3, page 23
C34	RMZ C-I05	Fisheries	Maintain wild fish stocks and habitats for Cutthroat and Bull Trout in the Wigwam River.	1. Assess fish populations and habitat. 2. Review habitat conservation and current management strategies. 3. Explore use of access management to limit harvest.	KBLUP-IS: Appendix 3, Page 28
C34	T490 Sheep Mountain Wildlife Management Area	Fisheries	There are no waterbodies on the upland potion of the Sheep Mountain area. The Elk River which borders the area on the east and south sides is a highly important cutthroat trout fishery. It also supports a spawning run of Dolly Varden to the Wigwam River. Since flooding, Kokanee that have proliferated in the Libby Reservoir also use the Elk		Sheep Mountain WMA Management Plan: page 6.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			River.		
C34	T490 Sheep Mountain Wildlife Management Area	Forestry	Since proposed WMA has low to very low forest capability forest land and high to very high ungulate winter range, forestry management objectives will be primarily for wildlife enhancement.	Forest management practices will be designed to establish and maintain over time a healthy mosaic of mixed age classes and species mix. The goal is to provide an ongoing regime of thermal cover, visual cover, and snow relief in proportion to population targets, foraging areas and movement corridors. Management techniques will include selective logging, spacing, prescribed burning and periodic Christmas tree harvesting where opportunities and demand arise.	Sheep Mountain WMA Management Plan: page 10.
C13/ C34	T555/T560 T490 CORE polygon 1-1	Mining	"Lodgepole Creek is required for infrastructure and transportation corridor for coal deposits located within the ____? and the known Sage and Cabin Creek deposits, as well as any undiscovered deposits located in polygon 1-2."	<u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1 Guideline.
C13/ C34	T555/T560 T490 CORE polygon 1-1	Oil and Gas	High oil and gas potential in polygon 1-1 Wigwam-Lodgepole (LU C15 + PC T555+560).		CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information.
C13/ C34	T555/T560 T490 CORE polygon 1-1	Unacceptable Uses	Settlement and General Industrial/Commercial Uses are not acceptable uses.		CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information.
C14	Wigwam PAS Unit 18	1993 Best PAS Areas	<p>Priority ranking: One.</p> <p>PAS Value: The Wigwam River is a core area which supports productive riparian habitat, old growth, alpine grassland and a regionally significant fishery.</p> <p>Diversity: Provides extensive riparian habitat, including old growth. Supports grizzly bear, bighorn sheep, elk and moose populations; internationally significant for wolf populations. Area is significant in the ecosection as a bull trout spawning stream for the Libby Reservoir (Lake Koocanusa) and for resident and migratory cutthroat trout.</p>	1993 recommended Priority One area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultureal Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 18.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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			<p>Viability: This unit is large enough (29,280.0 ha), and encompasses sufficient of the watershed to be viable.</p> <p>Naturalness in 1993: Less than 25% disturbed. The area is largely natural except for the one road accessing the main Wigwam River valley.</p>		
C14	CORE polygon 1-5, 1-12	Protected area proposal	Core area: riparian; OG; alpine grassland; regionally significant fishery; grizzly bear; bighorn sheep; elk; moose; internationally significant wolf population; important first nations traditional use; less than 25% disturbed; connects with Montana’s Ten Lakes Wilderness Study Area (CORE Polygon 1-5b, 1-12b Priority 1 Protected Area. Global/Ecosystem Sectors Comments located in black binder under CORE tab).	Proposal result: Not designated Protected, rather Special Management where intent is to conserve special values identified, while allowing compatible human use and development, including extractive industrial activity, at a high quality management level. Resource development is subject to specific management regulations, guidelines and mitigation (CORE, Designations).	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5, 1-12 Sector Comments with Records of Information.
C14	RMZ C-S06	Agriculture	Grazing	Maintain foraging opportunities for wildlife with no domestic livestock tenures allocated within the unit.	KBLUP IS: Appendix 3, Page 12
C14	CORE polygon 1-5, 1-12	Agriculture	Grazing	<u>T1 Guideline:</u> Grazing tenures	CORE 1994 East Kootenay Land Use Plan. Polygon 1-5a + 1-12a Records of Information, and T1 Guideline.
C14	C13, C14, C15	Agriculture	Low range values. Range agreement: One grazing permit for guide outfitter horses overlaps with LU C14 + C15. Total 51 AUMs attributable to LU C13, C14, C15. Most of AUMs used in LU C14. Very high ungulate values.		Cranbrook Forest District Recreation Access Plan (DRAP), March, 2000. LU C14.
C14	Wigwam Range Unit	Agriculture	Wigwam Range Agreement Holders: GT: Rocky Mountain Lodge (1978) Ltd.- 173 AUMs GT: Steve Leuenberger - 90 AUMs	GT indicates that the Range Agreement Area matches the G/O territory. Wigwam Range Unit covers LU C14, C15, part of C24 and the northern tip of C13 (i.e. T555 and T560).	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C14	Wigwam	Access Management	Generally the less roads, the better, especially off main trunk roads.	Roads should be as small as possible and deactivated following use.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C14	RMZ C-S06	Access Management	Integrate range of objectives and strategies as related to proposed development access.	All proposals for new road development or expansion will be evaluated through an enhanced referral process (see Access Mgmt Guidelines- Section 3.12), or special measures if development is imminent.	KBLUP IS App 3, P 11
C14	RMZ C-S06	Recreation	Maintain a range of recreation opportunities toward the semi-primitive end of the ROS.	<ol style="list-style-type: none"> 1. Roaded areas to be managed for semi-primitive motorized recreation. Road deactivation, rehabilitation and access restrictions after development. 2. Manage the Wigwam River as a Backcountry River Corridor (see Backcountry Recreation Guidelines, Section 3.9). Apply for non-motorized use restriction through Transport Canada. 3. No permanent road access within 500m of the Wigwam River unless it is less environmentally damaging to construct the road within this 500m C447 zone. 4. Once new roads that are constructed for resource development within 500m of the Wigwam River are no longer necessary for ongoing resource management, they should be deactivated. 	KBLUP IS App 3, P 11
C14		Recreation	Backcountry Recreation Management as per the ROS system		KBLUP IS: Chapter 3.9, pages 54-57
C14	CORE polygon 1-5, 1-12	Recreation-Commercial Tourism	Outfitter base camp in area.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5a +1-12a Records of Information + T1 Guideline.
C14	CORE polygon 1-5, 1-12	Recreation-Visuals		<u>T1 Guideline:</u> -Smoke management guidelines -Visual Quality Objectives guidelines (implying restrictions on timber volume)	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5+ 1-12 Record of Information + T1 Guideline.
C14	CORE polygon 1-5, 1-12	Recreation-Tourism Visuals		<u>T1 Guideline:</u> -Management of high tourism value viewsapes for some enhanced analysis and landscape design (implying no change in timber volume).	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5+ 1-12 Record of Information + T1 Guideline.
C14	CORE	Recreation-	Sense of solitude	<u>T2 Guideline:</u>	CORE 1994 East Kootenay Land

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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	polygon 1-5, 1-12	Sense of Solitude		-Local agreement preferred. -Sensitivity to Solitude experiences. -Enhanced management related to timing, seasonality, mode and distribution of mechanized access/activities, recognize existing and potential future use for tenure holders and consider mechanized recreational users.	Use Plan, Polygon 1-5+ 1-12 Record of Information + T2 Guideline.
C14	Wigwam	Heritage	Important traditional use area for Ktunaxa First Nations.		Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C14	Wigwam	Cultural Heritage	Important traditional use area for the Ktunaxa. No recorded information, but high probability of archaeological evidence, especially at the south end.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultureal Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 18.
C14	CORE polygon 1-5, 1-12	Heritage + Culture	Important traditional use area for Ktunaxa First Nations.	<u>T2 Guideline:</u> Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required. Access: Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas. Facilities: Restrictions on construction of facilities within contextual areas. In sensitive areas, no development permitted. Temporary site	CORE 1994 East Kootenay Land Use Plan, Polygon 1-12 Record of Information + T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<p>protection may be required. Preservation and reuse of related heritage sites may be permitted under controlled conditions.</p> <p>Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted.</p> <p>Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).</p>	
C14		Biodiversity – Rare and Endangered Species	Williamson’s Sapsucker- Red listed (threatened or endangered) Habitat: Western Larch, Douglas-fir, Ponderosa Pine forests. Nests built in cavities excavated in large (>30cm dbh) live or dead coniferous trees. Distribution: only in southern Interior B.C.. The sub-species nataliae is very rare, but was sighted in the Flathead area.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 9.
C14		Biodiversity – Rare and Endangered Species	Fisher - Blue listed (vulnerable) Habitat: dense, late seral coniferous or mixed wood. Distribution: may currently occupy the southeast corner of B.C. in low densities, and at high elevation. Historical range includes the west and southeast portions of the Cranbrook Forest District.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 11.
C14		Biodiversity – Rare and Endangered Species	Badger (Taxidea taxus) - Red listed (threatened or endangered) Habitat: non-forest and open Douglas-fir. Distribution: occur in the southern half of the Cranbrook Forest District, in the Kootenay River Drainage and in the Elk Valley.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 12.
C14	RMZ C-S06	Biodiversity-General	Maintain regional connectivity between the Flathead drainage and the Ten Lakes Wilderness Area in the USA, north to Wigwam Flats and the Mt Broadwood winter range to contribute to ecosystem representation (BRR-Msdk, Essfdk) and to serve as habitat linkage for the seasonal migration of grizzly and black bears, wolves and ungulates.	Apply the connectivity guidelinges within the regional connectivity corridor as indicated in KBLUP IS, Section 3.3.	KBLUP IS App 3, P 11

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C14	CORE polygon 1-5, 1-12	Biodiversity-General	Part of the Border Ranges Ecosection. Unroaded portion of the Wigwam drainage. Area burned in the 1930's, many areas have not recovered. Some remnant old growth in high basins. Generally west side has steep valleys; east side has low mountains and ridges. There is an important riparian zone along the Wigwam River. Very important fishery and wildlife area.	<u>T2 Guideline:</u> -Enhanced FENs; riparian protection; wide corridors; significant OG protection; -Landscape habitat mosaic is diverse in stand, age classes, types, structures and composition. -Rare and unique habitats and species protected. -Providing habitat for regional inter-protected area linkage corridors and buffers is a part of management objectives for area. -Minimize expansion of settlement or industrial/commercial use -Restoration/rehabilitation of disturbed sites	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5 + 1-12 Record of Information + T2 Guideline.
C14		Biodiversity Emphasis	High Biodiversity Emphasis	FPC Biodiversity Guidebook Guidelines	KBLUP IS: Chapter 3.2, page 3-6; Appendix 3 - Appendix C
C14		Biodiversity-Connectivity	All or a portion of LU is important for regional connectivity	FPC Biodiversity Guidebook Guidelines, FPC Identified Wildlife Guidebook	KBLUP IS: Chapter 3.3, pages 6-8
C14	CORE polygon 1-5, 1-12	Biodiversity – Natural Grasslands	Natural Grasslands	<u>T2 Guideline:</u> -Riparian protection (eg by range riders, by pre-locating salt and fencing). -Cattle watering controls. -Consumption controls on all grazing species to protect grassland habitats (including sage, aspen, etc). -Range utility and condition monitoring; positive trend toward good/excellent condition required. -Weed control and rehabilitation programs (no exotic seeding on specific grasslands; knapweed control acceptable).	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5 + 1-12 Record of Information + T2 Guideline.
C14		Ungulates	Maintain grazing opportunities for wildlife.	1. through fire maintained ecosystem burning. Note Galton sheep corridors are growing in. 2. by removing livestock.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C14	Upper Wigwam Wildlife Range Complex	Ungulates – Elk	Upper Wigwam Wildlife Range Complex is elk winter and spring habitat designated for Active Wildlife Management (Category 2). Biophysical Units: <ul style="list-style-type: none"> Class 2 – elk, moose, goat winter winter habitat. Class 3 – all ungulate species winter habitat. Class 3 – all ungulate species summer range 	Wildlife management would be given equal consideration in specific areas. A combination of the following general management and enhancement techniques would be actively pursued in an iterated resource management strategy: -Logging which could benefit/complement wildlife; -Integrated silvicultural practices; -Exploration/mining reclamation;	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-3.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			This Range Complex is located in LU C15 and C14 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).	-Access planning; -Impact management activities negotiated through the Mine Development Review Process.	
C14	RMZ C-S06	Ungulates	Maintain abundances of elk, mule deer, white-tailed deer, moose, Rocky Mtn Bighorn, and Rocky Mtn Goats within the sustainable carrying capacity of their habitat.	1. Ensure seasonal foraging opportunities through application of the biodiversity emphasis under the FPC 2. No domestic livestock tenures are to be allocated in this unit.	KBLUP IS App 3, P 12
C14		Ungulates	Ungulate Winter Range (E, XE)		KBLUP IS: Chapter 3.5, pages 17-24.
C14	CORE polygon 1-5, 1-12	Ungulates	Ungulate Winter Range	<u>T2 Guideline:</u> -Manage for optimal mix of thermal cover, snow interception and browse production (habitat adjacency key). -Appropriate mix of silvicultural systems and treatments to maintain habitats.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5 + 1-12 Record of Information + T2 Guideline.
C 14	RMZ C-S06	Wide ranging carnivores	1. Maintain sufficient seasonal habitat to retain grizzly bear populations. 2. Ensure existing wolf and cougar populations are maintained or enhanced.	1.1 Initiate an inventory project to identify critical habitat, foraging areas and denning sites. 1.2 Complete the Wigwam River/Lodgepole Creek/Leach Creek complex Grizzly Bear Inventory Project. 2.1 Maintain sufficient prey habitat.	KBLUP IS App 3, P 12
C14		Wide ranging carnivores	Riparian areas along the Wigwam River are critical Grizzly Bear habitat in spring.	No road construction should be permitted in the Wigwam riparian areas.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C14		Wide ranging carnivores	Priority 2 Grizzly Bear Habitat		KBLUP IS: Chapter 3.4, pages 8-17
C14		Wide ranging carnivores	Value: security. Watersheds adjacent to the Flathead provide important habitat and security for carnivores that enhance the value of the Flathead (p 39). Carnivore conservation principle (2): provide security from excessive mortality with networks of core reserves and other precautionary measures.	<ul style="list-style-type: none"> Provide a network of seasonal or permanent security zones throughout the transboundary Flathead basin and elsewhere in the new 'Southern Rocky Mountain Conservation Area'. <p>Consideration of focal species' key habitats will be used to guide the strategic identification and delineation of security zones.</p>	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains</u> . 2001, p45.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C14	CORE polygon 1-5, 1-12	Wide ranging carnivores	Wigwam west side (polygon 1-12), T1 Guideline applies. Wigwam east side (polygon 1-5), T2 Guideline applies.	<u>T1 Guideline:</u> Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations <u>T2 Guideline:</u> -Seasonal feeding and breeding habitats protected; -Conservation of seasonal feeding and breeding areas; silvicultural treatments to favour food production; -Road densities minimal and access management coordinated to avoid conflicts with habitat use. -Minimal human habitation and no sanitary landfills. -Predator control only under special circumstances. -Special grazing management to protect carnivore values.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5 + 1-12 Record of Information + T1/T2 Guidelines.
C14	Wigwam	Fisheries	All species.	Habitat management strategies should address entire fishery and not just bull trout. Present management may be compromising other species.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C14	RMZ C-S06	Fisheries	Maintain wild fish stocks and habitat for regionally significant Bull Trout as well as Cutthroat Trout.	Wigwam River watershed should be a priority area for WRP assessments / projects. Possible use of access management to limit harvest.	KBLUP IS App.3, P 12
C14	CORE polygon 1-5, 1-12	Fisheries	Regionally significant fishery. Riparian area along both sides of Wigwam River should be managed according to T2 guidelines.	<u>T2 Guideline:</u> -Minimal human-caused sedimentation. -Protection of streamside and riparian habitats; no roads in riparian without special permission, however, stream crossing normally acceptable. -Management for large organic debris. -Watershed sensitivity and ECA analysis prior to development. -Protection of spawning and rearing habitat. -Reclamation and hydrologic stabilization where necessary. -Assume level one guidelines in place where level two's are applied.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5 + 1-12 Record of Information + T2 Guideline.
C14	CORE polygon 1-5, 1-12	Mining		<u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5 + 1-12 Record of Information + T1 Guideline.

**Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002**

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				Resources Act / other related regulations and guidelines	
C14	CORE polygon 1-5, 1-12	Oil + Gas	High oil and gas potential on Wigwam east side (polygon 1-5).	Logging activity restricted but mineral and oil and gas exploration are acceptable (similar to Height of the Rockies Wilderness Area).	CORE 1994 East Kootenay Land Use Plan, Polygon 1-5 Record of Information
C14	CORE polygon 1-5, 1-12	Acceptable / Unacceptable Uses	-Settlement; and General Industrial/Commercial uses are not acceptable. -Motorized recreation, tourism, timber, energy, mineral, oil and gas are subject to site specific restrictions. -Logging activity restricted but mineral and oil and gas exploration are acceptable (similar to Height of the Rockies Wilderness Area).		CORE 1994 East Kootenay Land Use Plan, Polygon 1-5+ 1-12 Record of Information + T2 Guideline.
C14-Adja cent	Montana: Kootenai National Forest: Ten Lakes Contiguous Area (MA 8)	Agriculture	Area is located on the east side of the Wigwam River along the periphery of the Ten Lakes Montana Wilderness Study Act Area. It is recommended for Congressional Wilderness designation. Goals are to retain the wilderness values; allow natural ecological processes to continue; maintain primitive recreation opportunities; and provide habitat to contribute to the recovery of the grizzly bear.	1. There are no existing allotments for grazing domestic livestock and none are permitted. 2. Recreational pack stock grazing is permitted. If popular areas are overused or damaged, pack stock grazing will be discontinued on those sites.	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 8, Page III-26, 28. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.
C14-Adja cent	Montana: Kootenai National Forest: Ten Lakes Contiguous Area (MA 8)	Access	Area is located on the east side of the Wigwam River along the periphery of the Ten Lakes Montana Wilderness Study Act Area. It is recommended for Congressional Wilderness designation. Goals are to retain the wilderness values; allow natural ecological processes to continue; maintain primitive recreation opportunities; and provide habitat to contribute to the recovery of the grizzly bear.	1. No road construction is permitted. 2. New trails may be constructed except when in conflict with “grizzly situations 1 or 2” Grizzly management situation 1 is high quality habitat; management situation 2 is movement area between high quality habitat areas (Flathead National Forest Management Plan, Page II-7).	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 8, Page III-26, 29. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.
C14-Adja cent	Montana: Kootenai National Forest: Ten Lakes	Recreation-VQO, ROS and general recreation	Area is located on the east side of the Wigwam River along the periphery of the Ten Lakes Montana Wilderness Study Act Area. It is recommended for Congressional Wilderness designation. Goals are to retain the wilderness values; allow natural	1. VQO-preservation. 2. ROS-mainly primitive. 3. Roadless non-motorized forms of recreation (horseback riding and hiking) will be accommodated and managed. 4. Over-used sites will be monitored, and if resource damage occurs	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 8, Page III-26,

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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	Contiguous Area (MA 8)		ecological processes to continue; maintain primitive recreation opportunities; and provide habitat to contribute to the recovery of the grizzly bear.	the sites will be restricted or closed and rehabilitated. 5. Educational signs and brochures will be provided on 'no trace camping' and bear awareness. 6. Permanent facilities for guide outfitters will not be permitted.	27. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.
C14-Adja cent	Montana: Kootenai National Forest: Ten Lakes Contiguous Area (MA 8)	Recreation-snowmobile use	Area is located on the east side of the Wigwam River along the periphery of the Ten Lakes Montana Wilderness Study Act Area. It is recommended for Congressional Wilderness designation. Goals are to retain the wilderness values; allow natural ecological processes to continue; maintain primitive recreation opportunities; and provide habitat to contribute to the recovery of the grizzly bear.	Snowmobile use is presently permitted in portions of the Ten Lakes Contiguous Area. That use may continue unless it is determined to conflict with grizzly management or other wildlife standards. It is assumed that snowmobile use will be prohibited on all areas which are designated as Wilderness by Congress. No motorized use is permitted in the remainder of this Management Area.	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 8, Page III-27, 28. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.
C14-Adja cent	Montana: Kootenai National Forest: Ten Lakes Contiguous Area (MA 8)	Fish and Wildlife	Area is located on the east side of the Wigwam River along the periphery of the Ten Lakes Montana Wilderness Study Act Area. It is recommended for Congressional Wilderness designation. Goals are to retain the wilderness values; allow natural ecological processes to continue; maintain primitive recreation opportunities; and provide habitat to contribute to the recovery of the grizzly bear.	1. Habitat enhancement through burning may occur especially on winter range areas. 2. Areas of mature timber and old growth are considered to be part of the old growth habitat on the Forest. Before using prescribed fire in an old growth area, the amount of old growth will be determined for the major drainage affected, and not allowed to fall below the designated minimum (usually 10%). 3. Stocking of lakes with indigenous fish is permitted except the program may be cancelled for selected lakes if sites adjacent to those lakes become overused. 4. Isolated enclaves of pure strain trout species will be identified and preserved.	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 8, Page III-27, 28. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.
C14-Adja cent	Montana: Kootenai National Forest: Ten Lakes Recommend ed Wilderness Area (MA 9)	Agriculture	Area is located on the east side of the Wigwam River and encompasses the Ten Lakes Montana Wilderness Study Act Area and surrounding lands. Only the Wilderness Study Area is recommended for Congressional Wilderness designation, however the entire area of MA9 is managed in accordance with the Montana Wilderness Study Act. The goals are to retain the wilderness values; allow natural ecological processes to continue; maintain primitive recreation opportunities; and provide habitat to contribute to the recovery of the grizzly bear.	1. There are no existing allotments for grazing domestic livestock and none are permitted. 2. Recreational pack stock grazing is permitted. If popular areas are overused or damaged, pack stock grazing will be discontinued on those sites.	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 9, Page III-32, 34. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.

**Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002**

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C14- Adja cent	Montana: Kootenai National Forest: Ten Lakes Recommend ed Wilderness Area (MA 9)	Access	Area is located on the east side of the Wigwam River and encompasses the Ten Lakes Montana Wilderness Study Act Area and surrounding lands. Only the Wilderness Study Area is recommended for Congressional Wilderness designation, however the entire area of MA9 is managed in accordance with the Montana Wilderness Study Act. The goals are to retain the wilderness values; allow natural ecological processes to continue; maintain primitive recreation opportunities; and provide habitat to contribute to the recovery of the grizzly bear.	1. No road construction is permitted. 2. New trails may be constructed except when in conflict with "Grizzly Situations 1 or 2". Grizzly management situation 1 is high quality habitat; management situation 2 is movement area between high quality habitat (Flathead National Forest Management Plan, Page II-7).	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 9, Page III-32, 34. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.
C14- Adja cent	Montana: Kootenai National Forest: Ten Lakes Recommend ed Wilderness Area (MA 9)	Recreation- VQO, ROS and general recreation	Area is located on the east side of the Wigwam River and encompasses the Ten Lakes Montana Wilderness Study Act Area and surrounding lands. Only the Wilderness Study Area is recommended for Congressional Wilderness designation, however the entire area of MA9 is managed in accordance with the Montana Wilderness Study Act. The goals are to retain the wilderness values; allow natural ecological processes to continue; maintain primitive recreation opportunities; and provide habitat to contribute to the recovery of the grizzly bear.	1. VQO-preservation. 2. ROS-mainly primitive. 3. Roadless non-motorized forms of recreation (horseback riding and hiking) will be accommodated and managed. 4. Over-used sites will be monitored, and if resource damage occurs the sites will be restricted or closed and rehabilitated. 5. Educational signs and brochures will be provided on 'no trace camping' and bear awareness. 6. Permanent facilities for guide outfitters will not be permitted.	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 9, Page III-32, 33. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.
C14- Adja cent	Montana: Kootenai National Forest: Ten Lakes Recommend ed Wilderness Area (MA 9)	Recreation- snowmobile use	Area is located on the east side of the Wigwam River and encompasses the Ten Lakes Montana Wilderness Study Act Area and surrounding lands. Only the Wilderness Study Area is recommended for Congressional Wilderness designation, however the entire area of MA9 is managed in accordance with the Montana Wilderness Study Act. The goals are to retain the wilderness values; allow natural ecological processes to continue; maintain primitive recreation opportunities; and provide habitat to contribute to the recovery of the grizzly bear.	Snowmobile use is presently permitted in portions of the Ten Lakes Contiguous Area. That use may continue unless it is determined to conflict with grizzly management or other wildlife standards. It is assumed that snowmobile use will be prohibited on all areas which are designated as Wilderness by Congress. No motorized use is permitted in the remainder of this Management Area.	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 9, Page III-32, 33. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.
C14- Adja cent	Montana: Kootenai National	Fish and Wildlife	Area is located on the east side of the Wigwam River and encompasses the Ten Lakes Montana Wilderness Study Act Area and surrounding lands.	1. Habitat enhancement through burning may occur especially on winter range areas. 2. Areas of mature timber and old growth are considered to be part	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Forest: Ten Lakes Recommended Wilderness Area (MA 9)		<p>Only the Wilderness Study Area is recommended for Congressional Wilderness designation, however the entire area of MA9 is managed in accordance with the Montana Wilderness Study Act. The goals are to retain the wilderness values; allow natural ecological processes to continue; maintain primitive recreation opportunities; and provide habitat to contribute to the recovery of the grizzly bear.</p> <p>Values: High quality winter range for elk and deer. Past caribou sign in the Ten Lakes area indicates a few animals may be present intermittently, however no resident caribou population exists.</p>	<p>of the old growth habitat on the Forest. Before using prescribed fire in an old growth area, the amount of old growth will be determined for the major drainage affected, and not allowed to fall below the designated minimum (usually 10%).</p> <p>3. Stocking of lakes with indigenous fish is permitted except the program may be cancelled for selected lakes if sites adjacent to those lakes become overused.</p> <p>4. Isolated enclaves of pure strain trout species will be identified and preserved.</p>	<p>Department of Agriculture. 1987 Management Area 9, Page III-32, 34.</p> <p>Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.</p>
C14-Adja cent	Montana: Kootenai National Forest: Management Area 12 (MA 12)	Agriculture	Area is located east of the Ten Lakes Recommended Wilderness Area and is at elevations generally at or above 4000', and contains inclusions of moist or wet habitat types. Most species of big game use this Management Area from late spring through late fall. The goal is to maintain or enhance non winter big-game habitat and produce a programmed yield of timber. Major species include black bear, grizzly bear, elk, moose, white tailed deer, and mule deer.	<p>1. Grazing of domestic livestock is permitted unless it is detrimental to the big game or timber goals of this Management Area.</p> <p>2. Fencing may be constructed to control livestock provided there is no conflict with the big game goals of this Management Area.</p>	<p>Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 12, Page III-48, 49.</p> <p>Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.</p>
C14-Adja cent	Montana: Kootenai National Forest: Management Area 12 (MA 12)	Access	Area is located east of the Ten Lakes Recommended Wilderness Area and is at elevations generally at or above 4000', and contains inclusions of moist or wet habitat types. Most species of big game use this Management Area from late spring through late fall. The goal is to maintain or enhance non- winter big-game habitat and produce a programmed yield of timber. Major species include black bear, grizzly bear, elk, moose, white tailed deer, and mule deer.	<p>1. Road densities will be the minimum necessary to accomplish the timber harvest goals of this Management Area, and construction to minimum standards will be emphasized.</p> <p>2. Roads open to the public will not exceed an average density of ¾ mile per square mile within the contiguous MA.</p> <p>3. Local roads will normally be closed.</p> <p>4. Road locations will avoid key summer range habitat elements (e.g. wallows, wet meadows), unless there is no reasonable alternative.</p> <p>5. Maintain a buffer of at least one sight-distance around key habitat features.</p> <p>6. Temporary roads will be closed, drained and revegetated.</p> <p>7. This MA is classified as a transportation or utility corridor</p>	<p>Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 12, Page III-48, 51.</p> <p>Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.</p>

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				avoidance area on grizzly situations 1 and 2. 8. When seeding areas adjacent to open roads in grizzly situation 1 and 2, do not use any component (such as clover) which may attract grizzly bears.	
C14-Adja cent	Montana: Kootenai National Forest: Management Area 12 (MA 12)	Recreation-Off-road vehicle use, VQO, ROS	Area is located east of the Ten Lakes Recommended Wilderness Area and is at elevations generally at or above 4000', and contains inclusions of moist or wet habitat types. Most species of big game use this Management Area from late spring through late fall. The goal is to maintain or enhance non winter big-game habitat and produce a programmed yield of timber. Major species include black bear, grizzly bear, elk, moose, white tailed deer, and mule deer.	1. Off-road vehicle use will be regulated, including permanent or seasonal use restrictions where off-road vehicle use conflicts with big game. 2. VQO is maximum modification in areas of low visual significance, moderate in areas of moderate visual significance and partial retention in areas of high visual significance, unless infeasible when attempting to meet the goals of the MA. 3. ROS is predominantly roaded- natural with some semi- primitive motorized and rural opportunities.	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 12, Page III-48. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.
C14-Adja cent	Montana: Kootenai National Forest: Management Area 12 (MA 12)	Fish and Wildlife	Area is located east of the Ten Lakes Recommended Wilderness Area and is at elevations generally at or above 4000', and contains inclusions of moist or wet habitat types. Most species of big game use this Management Area from late spring through late fall. The goal is to maintain or enhance non winter big-game habitat and produce a programmed yield of timber. Major species include black bear, grizzly bear, elk, moose, white tailed deer, and mule deer.	1. Manage to provide habitat diversity including cover and forage areas in a ratio appropriate for black bear, grizzly bear, elk, moose, white tailed deer, and mule deer. Results of the Montana Elk Logging Study and related guidelines are incorporated in and are considered as additional direction for this MA. 2. Grizzly habitat will be managed according to Grizzly Mgmt Situation Guidelines. 3. Cavity management according to Cavity Habitat Mgmt Guidelines. 4. Provide direct habitat improvement as needed. Projects include pot-hole construction, prescribed fire, hardwood plantings in riparian areas, seeding of road cuts and fills with grasses and legumes. 5. Maximize edge effect within economical timber harvest constraints, by shaping timber harvest units and maintain movement corridors of at least two sight distances between openings. When the edge is maximized, the shape becomes more important than the size of the units, but generally the unit sizes should not exceed: elk and mule deer- 40 acres or less; moose and whitetail deer-20 acres. 6. Key habitat components (wallows, wet meadows, bogs, etc.) will be avoided when constructing roads. As they are identified those key components will be mapped and managed as riparian areas.	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 12, Page III-48, 49. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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C14-Adja cent	Montana: Kootenai National Forest: Management Area 12 (MA 12)	Timber	Area is located east of the Ten Lakes Recommended Wilderness Area and is at elevations generally at or above 4000', and contains inclusions of moist or wet habitat types. Most species of big game use this Management Area from late spring through late fall. The goal is to maintain or enhance non winter big-game habitat and produce a programmed yield of timber. Major species include black bear, grizzly bear, elk, moose, white tailed deer, and mule deer.	This MA is suitable for timber production. Timber harvest will be coordinated with big-game requirements. Emphasize natural regeneration and activity scheduling which reduces the frequency of entries. New units will not be harvested until adjacent units provide suitable hiding cover. Favor even-aged harvest systems. Precommercial thinning is expected in this MA outside of Grizzly Situation 1 & 2 lands to meet the programmed timber harvest goals. Precommercial thinning may occur within Grizzly Situation 1&2 where it does not conflict with grizzly management goals. Provide for full stocking levels after timber harvest for diversity, big-game cover needs, and timber production. On slopes over 30% favor broadcast burning over the use of mechanical means of site preparation. Catastrophic events such as fire, windstorm, disease, or insects, especially the periodic infestations of the mountain pine beetle in mature lodgepole pine, may create situations where harvest is desirable. In such cases, a short-term reduction in the VQO is permitted.	Kootenai National Forest Forest Plan–Volume 1. Northern Region Forest Service. U.S. Department of Agriculture. 1987 Management Area 12, Page III-48, 49. Forest wide objectives on Page II-3 to 11 and standards on page II-20 to 33 apply to this MA.
C15	Wigwam PAS Unit 18	1993 Best PAS Areas	<p>PAS Value: The Wigwam River is a core area which supports productive riparian habitat, old growth, alpine grassland and a regionally significant fishery.</p> <p>Diversity: Provides extensive riparian habitat, including old growth. Supports grizzly bear, bighorn sheep, elk and moose populations; internationally significant for wolf populations. Area is significant in the ecosection as a bull trout spawning stream for the Libby Reservoir (Lake Koocanusa) and for resident and migratory cutthroat trout.</p> <p>Viability: This unit is large enough (29,280.0 ha), and encompasses sufficient of the watershed to be viable.</p> <p>Naturalness in 1993: Less than 25% disturbed. The</p>	1993 recommended Priority One area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultureal Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 18.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			area is largely natural except for the one road accessing the main Wigwam River valley.		
C15	Bighorn PAS Unit 43	1993 Best PAS Areas	<p>PAS Value: This Unit is an enhancement to the Wigwam River Unit 18 and provides regionally significant fisheries habitat.</p> <p>Diversity: Regionally significant as the most important bull trout and cutthroat trout spawning stream for the Libby reservoir. It also supports bighorn sheep, grizzly bear, elk and mule deer.</p> <p>Viability: Sufficient size to be considered viable (17491.0 ha), however the unit is much more viable as an addition to the Wigwam River Unit 18.</p> <p>Naturalness in 1993: Less than 25% disturbed by roads and logging.</p>	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultureal Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 43.
C15	RMZ C-I04	Agriculture	Grazing	Maintain foraging opportunities for wildlife with no domestic livestock tenures allocated within the unit.	KBLUP IS: Appendix 3, Page 22
C15		Agriculture	Low range values. Range agreements: Three grazing permits for guide outfitter horses which overlap LU C13, C14, C15. Total 51 AUMs attributable to LU C13-C17 + C24. 80 AUMs attributable to LU C15. 165 AUMs total.		Cranbrook Forest District Recreation Access Plan (DRAP), March, 2000. LU C15.
C15	Wigwam Range Unit	Agriculture	Wigwam Range Agreement Holders: GT: Rocky Mountain Lodge (1978) Ltd.- 173 AUMs GT: Steve Leuenberger - 90 AUMs	GT indicates that the Range Agreement Area matches the G/O territory. Wigwam Range Unit covers LU C14, part of C15, part of C24 and the northern tip of C13 (i.e. T555 and T560).	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C15	CORE polygon 1-1	Agriculture	Grazing “Crop production on (Crown land) allowed? In 1994, the only ranch belonged to Wildlife Branch”	<p><u>Polygon Notes</u> (provide conflicting management direction):</p> <p>1. Potential for increased agricultural activity. Intent is to pursue the possibility (CORE, East Kootenay Regional Table, Volume 3, Part B Management Guidelines, Agriculture Notes, AG2).</p> <p>2. Grazing is acceptable only in existing units. Ecosystems Sector concerned that any expansion of crop production or grazing may result in negative impacts on carnivores and</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information, and T1 Guidelines.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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				<p>ungulates. (Refer to Sector Comments with Record of Information). Outdoor Recreation Non-Motorized Sector concerned re: expansion of cattle grazing in this unit, however whole heartedly supports CRMPs and the work of the EK Trench Agriculture/ Wildlife Committee.</p> <p><u>T1 Guideline</u>-Grazing tenures</p>	
C15		Access Management	Access issues on the Dominion Government Coal Block.	Block should be included in Plan for the purpose of addressing access issues.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C15	RMZ C-I04	Access Management		Maintain the existing access management program in the Wigwam Flats - Mount Broadwood area.	KBLUP IS: Appendix 3, Page 22
C15	RMZ C-I04	Recreation	Maintain a range of recreation opportunities from roaded resource land to semi-primitive non-motorized.		KBLUP IS: Appendix 3, Page 22
C15		Recreation	Backcountry recreation management	as per ROS system	KBLUP IS: Ch 3.9, p54-57
C15	CORE polygon 1-1	Recreation-Commercial Tourism	2 outfitter areas and base lodges	<p><u>Polygon Notes</u>-low to moderate commercial tourism is acceptable.</p> <p><u>T1 Guideline</u>:</p> <ul style="list-style-type: none"> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed thru tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction. 	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1 Guideline.
C15	W050, W055	Recreation-Visuals	Class 1 scenic corridor	<p>1. In most visible foreground and important mid ground, visible disturbance may be discernible but should not be evident.</p> <p>2. In less prominent foreground, most mid ground and important background, visible disturbance should remain subordinate.</p> <p>3. In most background areas and less important mid ground areas, landscape alterations may be visually apparent, but should be designed to blend into the landscape in form and colour.</p>	KBLUP IS: Ch 3.8, p 52-54
C15	CORE polygon 1-1	Recreation-Visuals		<p><u>T1 Guideline</u>:</p> <ul style="list-style-type: none"> -Smoke management guidelines -Visual Quality Objectives guidelines (implying restrictions on timber 	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) <i>(Document, date, section and/or pages)</i>
				volume)	
C15	CORE polygon 1-1	Recreation-Tourism Visuals	High value near Elko mill	<u>T1 Guideline:</u> -Management of high tourism value viewscales for some enhanced analysis and landscape design (implying no change in timber volume).	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1 Guideline.
C15	CORE polygon 1-1	Recreation-Sense of Solitude	Sense of solitude	<u>T1 Guideline:</u> -Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1 Guideline.
C15	Wigwam	Cultural Heritage	Important traditional use area for the Ktunaxa. No recorded information, but high probability of archaeological evidence, especially at the south end.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultureal Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 18.
C15	CORE polygon 1-1	Heritage + Culture	First nations traditional use area especially for fishing, hunting. High heritage values near Elko mill.	<u>T2 Guideline:</u> Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required. Access: Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas. Facilities: Restrictions on construction of facilities within contextual areas. In sensitive areas, no development permitted. Temporary site	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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				<p>protection may be required. Preservation and reuse of related heritage sites may be permitted under controlled conditions.</p> <p>Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted.</p> <p>Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).</p>	
C15		Biodiversity – Rare and Endangered Species	Fisher - Blue listed (vulnerable) Habitat: dense, late seral coniferous or mixed wood. Distribution: may currently occupy the southeast corner of B.C. in low densities, and at high elevation. Historical range includes the west and southeast portions of the Cranbrook Forest District.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 11.
C15		Biodiversity – Rare and Endangered Species	Badger (Taxidea taxus) - Red listed (threatened or endangered) Habitat: non-forest and open Douglas-fir. Distribution: occur in the southern half of the Cranbrook Forest District, in the Kootenay River Drainage and in the Elk Valley.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 12.
C15	CORE polygon 1-1	Biodiversity – General	Part of the Border Ranges Ecosection (mountainous terrain). Polygon 1-1 includes roaded portions of Lodgepole and Wigwam drainages.		CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information.
C15	RMZ C-I04	Biodiversity - General	<ol style="list-style-type: none"> 1. Retain forest and rangeland ecological elements and processes at a moderate risk. 2. Retain attributes for old growth dependent species and fur-bearers. 3. Ensure habitat requirements for red and blue listed species are achieved. 	<ol style="list-style-type: none"> 1. Wigwam Flats are a priority for the implementation of the Fire Maintained Ecosystem Restoration Guidelines (Ch. 3.10). 2. Spruce / Balsam stands in the tributaries of Lodgepole Creek and Ram Creek are a priority for establishing OGMA's. 3. The Tailed Frog should be designated as an identified wildlife species under the FPC. Initiate inventory project. 	KBLUP IS: Appendix 3, Page 22
C15		Biodiversity	Biodiversity Emphasis Option	Medium	KBLUP IS: Ch 3.2 p3-6, A3- AC CORE (94) Polygon 1-1 Record
C15	CORE polygon 1-1	Biodiversity: General	North-south connectivity from east Wigwam to Mt Bradford.	T1 Guideline: Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Wildlife Tree Guidelines / Specific plans	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information and T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				for red/blue listed species management	
C15		Biodiversity: Old Growth	Lodgepole Creek/Wigwam River Old Growth	Stands to remain intact until OGMA's for the LU are established. These stands should be a part of the OGMA for the LU.	KBLUP IS: MOU between MOF/MOE re:instructions for preparation of 1998 FDP's, Pg2.
C15	CORE polygon 1-1	Biodiversity: Old Growth	Old growth remnants to provide mature forest cover and habitat and connectivity for populations from the Wigwam to Mt. Broadwood-T2 guideline. Elsewhere T1	<u>T2 Guideline:</u> -Significant retention of old growth across landscape. -FENs with major OG component; corridors and riparian dominantly OG; wide corridors. <u>T1 Guideline:</u> FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1/T2 Guidelines.
C15		Biodiversity: Connectivity	All or portion of LU is important for regional connectivity.	Refer to results of March 12 connectivity workshop (otherwise-KBLUP IS Ch 3.3.2)	KBLUP IS: Ch 3.3, p 6-8
C15	W045, W050,W095	Biodiversity: NDT4	Fire maintained ecosystems	Refer to KBLUP IS management guidelines Ch 3.10.2, p60-64	KBLUP IS: Ch 3.10.2, p58-64
C15	CORE polygon 1-1	Biodiversity-natural grasslands	Sheep Mtn remnant grasslands. Extremely high wildlife and biodiversity values. Site specific habitat management prescriptions and guidelines (ie T2) to be developed and implemented at subregional and local level as per Policy 6 (special emphasis on Sheep Mtn). This guideline is not limited to 10% of the landbase for Guideline D&H. WMA proposed for Sheep Mtn but not agreed to by the table.	<u>T2 Guideline:</u> -Riparian protection (eg by range riders, by pre-locating salt and fencing). -Cattle watering controls. -Consumption controls on all grazing species to protect grassland habitats (including sage, aspen, etc). -Range utility and condition monitoring; positive trend toward good/excellent condition required. -Weed control and rehabilitation programs (no exotic seeding on specific grasslands; knapweed control acceptable).	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T2 Guideline.
C15	Mt. Broadwood/Wigwam Wildlife Range Complex	Ungulates – Bighorn sheep and Elk	Mt. Broadwood/Wigwam Wildlife Range Complex is critical elk and sheep winter and spring habitat, designated for Intensive Wildlife Management (Category 1). Biophysical Units: <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. 	Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas: -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment;	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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			This Range Complex is located in LU: C24, C15, C13/34 (Sheep Mtn); 3 known mineral licks occur within C15 and 2 known licks are in close proximity to the boundary between C15 and C13 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).	-Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted).	
C15	Upper Wigwam Wildlife Range Complex	Ungulates – Elk	Upper Wigwam Wildlife Range Complex is elk winter and spring habitat designated for Active Wildlife Management (Category 2). Biophysical Units: <ul style="list-style-type: none"> Class 2 – elk, moose, goat winter winter habitat. Class 3 – all ungulate species winter habitat. Class 3 – all ungulate species summer range This Range Complex is located in LU C15 and C14 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).	Wildlife management would be given equal consideration in specific areas. A combination of the following general management and enhancement techniques would be actively pursued in an iterated resource management strategy: -Logging which could benefit/complement wildlife; -Integrated silvicultural practices; -Exploration/mining reclamation; -Access planning; -Impact management activities negotiated through the Mine Development Review Process.	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-3.
C15	RMZ C-I04	Ungulates	Maintain abundance of elk, mule deer, Rocky Mountain Goats and Rocky Mountain Bighorn sheep.	Maintain foraging opportunities for wildlife. No domestic livestock tenures to be issued within the unit.	KBLUP IS: Appendix 3, Page 22
C15		Ungulates	Ungulate winter range (X, ESMW, XE)	Operational guidelines KBLUP IS Ch 3.5.2, p20-24	KBLUP IS Ch 3.5 p17-24
C15	CORE polygon 1-1	Ungulates	Major ungulate winter range at Wigwam Flats and Flathead Ridge	<u>T2 Guideline</u> applies to ungulate winter range are within LU 15: -Manage for optimal mix of thermal cover, snow interception and browse production (habitat adjacency key). -Appropriate mix of silvicultural systems and treatments to maintain habitats.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T2 Guideline.
C15		Wide ranging carnivores	Priority 2 Grizzly Bear habitat	Operational guidelines KBLUP IS Ch 3.4.2, p10-17	KBLUP IS Ch 3.4 p 8-17
C15	CORE polygon 1-1	Wide ranging carnivores	Flathead Ridge and denning areas – T2	<u>T2 Guideline</u> : -Seasonal feeding and breeding habitats protected; -Conservation of seasonal feeding and breeding areas; silvicultural treatments to favour food production; -Road densities minimal and access management coordinated to	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1/T2 Guidelines.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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				avoid conflicts with habitat use. -Minimal human habitation and no sanitary landfills. -Predator control only under special circumstances. -Special grazing management to protect carnivore values. <u>T1Guideline:</u> Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations	
C15	RMZ C-I04	Fisheries	1. Maintain wild stocks and habitat for Bull Trout. 2. Maintain wild fish stocks and habitat for Cutthroat and Bull Trout in the Wigwam River	1. River is a priority area for WRP assessments / projects. 2. Explore possible use of access management to limit harvest.	KBLUP IS: Appendix 3, Page 23
C15	CORE polygon 1-1	Fisheries	Wigwam is a very important fishery. T2 guidelines apply to all major streams.	<u>T2 Guideline:</u> -Minimal human-caused sedimentation. -Protection of streamside and riparian habitats; no roads in riparian without special permission, however, stream crossing normally acceptable. -Management for large organic debris. -Watershed sensitivity and ECA analysis prior to development. -Protection of spawning and rearing habitat. -Reclamation and hydrologic stabilization where necessary. -Assume level one guidelines in place where level two's are applied.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T2 Guideline.
C15	CORE polygon 1-1	Coal Mining	1. Crowsnest coalfield <ul style="list-style-type: none"> Medium and high value coal lands are located northeast of Windfall Mountain in LU C15. The high value, exposed coal bearing lands of the Crowsnest coalfield include three areas: Fernie block (73,333 ha) (located in LU C17, C19, C24, C38); Corbin area (962 ha) and Tent Mountain area (1,603 ha) (located in C19) (p7). 2. Flathead coalfield <ul style="list-style-type: none"> Medium and high value coal lands are located in the area east of Mount Doupe to Cabin Pass in LU C15. 	Definitions: <ul style="list-style-type: none"> High value coal lands include the area from the outcrop of the coal bearing strata to its inferred depth limit (p1). Medium value coal land is a corridor for mining related activities and infrastructure, surrounding the exposed coal bearing strata (high value coal lands) (p1). 	Morris, Bob. Resource Estimate: East Kootenay Coalfields, 1994. Pages 1, 4, 7; Fig. 5: E.K. Coal Fields Location Map; and Fig. 7: Coal Value Lands Map. Refer to Black Binder, Coal tab for maps.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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			<ul style="list-style-type: none"> The high value lands of the Flathead coalfield are four widely dispersed blocks including: Sage Creek area (1,154 ha), Cabin Creek area (577 ha) and Harvey Creek area (962 ha), all located in LU C16. Lillyburt area (1,090 ha), in the vicinity of Flathead townsite, is located in LU C17 (p7). 		
C15	CORE polygon 1-1	Mining	Lodgepole Creek is required for infrastructure and transportation corridor for coal deposits located within the ____? and the known Sage and Cabin Creek deposits as well as any undiscovered deposits located in polygon 1-2.	<u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information + T1 Guideline.
C15	CORE polygon 1-1	Oil and Gas	High oil and gas potential in polygon 1-1 Wigwam-Lodgepole		CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information.
C15	CORE polygon 1-1	Unacceptable Uses	Settlement and General Industrial/Commercial Uses are not acceptable uses.		CORE 1994 East Kootenay Land Use Plan, Polygon 1-1 Record of Information.
C16	Flathead PAS Unit 26	1993 Best PAS Areas	<p>Area encompasses the drainage of the Flathead River north of the Canada/USA border, excluding the Howell and Cabin Creek drainages.</p> <p>PAS Value: This area is internationally significant for shared bull trout, grizzly bear and wolf populations with Montana. It includes the largest contiguous stand of old growth lodgepole pine and is internationally important as the Canadian extension of the Flathead River (a designated "Wild and Scenic River" in Montana).</p> <p>Diversity: Provides productive riparian areas along the wide floodplain of the Flathead River, including the largest contiguous stands of old growth lodgepole pine. Supports black bear, moose, elk, white tailed deer and cougar in a complex</p>	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 26.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			<p>predator/prey relationship. Connects to Glacier N.P..</p> <p>Viability: This unit is of sufficient size (56,134 ha), and watershed completeness to be viable, particularly in connection to Glacier National Park.</p> <p>Naturalness in 1993: Less than 25% disturbed by roads, logging and oil and gas development.</p>		
C16	RMZ C-S05, C-I04	Agriculture	Grazing	Maintain foraging opportunities for wildlife with no domestic livestock tenures allocated within the unit.	KBLUP IS: Appendix 3, Page 10 and Page 22
C16		Agriculture	Low range values. Range agreements: One grazing permit for guide outfitter horses which overlaps LU C15 for a total of 72 AUMs. 15 AUMs attributable to C16.	No grazing permitted except for guide outfitter horses.	Cranbrook Forest District Recreation Access Plan (DRAP), March, 2000. LU C16.
C16	Flathead Range Unit	Agriculture	Flathead Range Agreement Holders: GT: David Eider - 73 AUMs GT: Harry Leuenberger - 54 AUMs	GT indicates that the Range Agreement Area matches the G/O territory. Flathead Range Unit includes LU C16, C17 and C18.	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C16	CORE polygon 1-2, 1-3, 1-11	Agriculture	Grazing	<p>Potential for increased agricultural activity. Intent is to pursue the possibility (CORE, East Kootenay Regional Table, Volume 3, Part B Management Guidelines, Agriculture Notes, AG2).</p> <p>Ecosystems Sector concerned re: grazing because of internationally significant bear and wolf populations. Any expansion may result in negative impacts on carnivores and ungulates. Outdoor Recreation Non-Motorized Sector concerned re: expansion of cattle grazing in this unit, however whole heartedly supports CRMPs and the work of the EK Trench Agriculture/ Wildlife Committee. (Refer to Sector Comments with Record of Information).</p> <p>T1 Guideline-Grazing tenures</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2, 1-3, 1-11 Records of Information.
C16		Access Management	Flathead International border crossing	Border crossing should remain closed.	Commercial Hunting & Fishing, and Forestry Focus Group sessions. March, 2002.
C16	RMZ C-S05	Access	Ensure range of objectives and strategies are	All proposals for new road development or expansions will be	KBLUP IS: Appendix 3, Page 9

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
		Management	integrated within the upper Flathead River and McEvoy Creek area, particularly as they relate to access for proposed development.	evaluated through either: <ul style="list-style-type: none"> an enhanced referral process as described in the Access Mgmt Guidelines (Ch 3.12), or special measures which, because of imminent development, require immediate attention. 	
C16	RMZ C-S05 & C-I04	Recreation	Maintain range of recreation opportunities from roaded resource land to semi-primitive non-motorized (C-S05 & C-I04).	<ol style="list-style-type: none"> Motorized use restrictions may be required to maintain semi-primitive character (C-S05). Manage the Flathead river as a Backcountry River Corridor consistent with the Backcountry Recreation Guidelines (Table 1.2). Apply for non-motorized use restriction through Transport Canada (C-S05). 	KBLUP IS: Appendix 3, Page 9 and Page 22
C16		Recreation	Backcountry recreation as per ROS system		KBLUP IS: Chapter 3.9, Pg 54-57.
C16	CORE polygon 1-2 Flathead-west side	Recreation-Commercial Tourism	Two guide/outfitter areas and base camps. Backcountry horse trails in Upper Howell Ck. High wildlife values.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2 Record of Information + T1 Guideline.
C16	CORE polygon 1-3 Flathead river corridor	Recreation-Commercial Tourism	-Area is used by two to three guide/outfitters. Very important area for grizzly bear, wolf, white tail deer, moose and elk. Ungulate winter range. -River: supports Bull trout; is used for rafting; and is a 'wild and scenic' river on US side of border, and is the major source of water for Flathead Lake.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information + T1 Guideline.
C16	CORE polygon 1-11 Harvey Creek	Recreation-Commercial Tourism		<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-11 Record of Information + T1 Guideline.
C16	CORE polygon 1-2	Recreation	Backcountry ski touring in Upper Lodgepole, McLatchie and Harvey Creeks. TransCanada Trail following Cabin Creek.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2 Record of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	
C16	CORE polygon 1-2, 1-3, 1-11	Recreation-Visuals-tourism + general		<u>T1 Guideline:</u> -Management of high tourism value viewscapes for some enhanced analysis and landscape design (implying no change in timber volume). -Smoke management guidelines -Visual Quality Objectives guidelines apply (implying restrictions on timber volume)	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2; 1-3; 1-11 Record of Information + T1 Guideline.
C16	CORE polygon 1-2, 1-3, 1-11	Recreation-Sense of Solitude	Sense of Solitude	<u>T1 Guideline:</u> -Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2; 1-3; 1-11 Record of Information + T1 Guideline.
C16	Flathead PAS Unit 26	Cultural Heritage	Regionally representative of oil exploration and international relations themes and contains regionally significant Flathead customs site.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Culturel Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 26.
C16	CORE polygon 1-2, 1-3, 1-11	Cultural Heritage		<u>T2 Guideline:</u> Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required. Access: Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2; 1-3; 1-11 Record of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<p>minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas.</p> <p>Facilities: Restrictions on construction of facilities within contextual areas. In sensitive areas, no development permitted. Temporary site protection may be required. Preservation and reuse of related heritage sites may be permitted under controlled conditions.</p> <p>Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted.</p> <p>Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).</p>	
C16	F105	Watershed	Class 1 Domestic Watershed		KBLUP IS: Ch 3.7, Page 30-52.
C16	Flathead River drainage	Biodiversity – Rare and Endangered Species	Mottled Sculpin – Blue list (vulnerable) Habitat: Wide range of stream sizes with cool clear water. Distribution: Flathead River drainage. It is suggested that the population found in the Flathead River would be the only true population of Mottled Sculpin in B.C.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 2.
C16	West Flathead River	Biodiversity – Rare and Endangered Species	Tailed Frog – Red list (threatened or endangered) Habitat: fast, small, permanent forest streams with clear, cold water (ESSF). Distribution: west Flathead River drainage.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 3.
C16	Couldrey Creek	Biodiversity- Rare and Endangered Species	Tailed frog habitat at Couldrey Creek	Is in danger and needs to be addressed.	Commercial Hunting & Fishing Focus Group session. March 27, 2002.
C16	South area of LU	Biodiversity – Rare and Endangered Species	Williamson’s Sapsucker- Red listed (threatened or endangered) Habitat: Western Larch, Douglas-fir, Ponderosa Pine forests. Nests built in cavities excavated in		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			large (>30cm dbh) live or dead coniferous trees. Distribution: only in southern Interior B.C.. The sub-species nataliae is very rare, but was sighted in the Flathead area.		Management Plan Area. March, 2002. Page 9.
C16		Biodiversity – Rare and Endangered Species	Southern Red Backed Vole - Blue listed (vulnerable) Habitat: Cool, moist, older forests. Distribution: In B.C. recorded only from the southeast corner of Cranbrook Forest District.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 11.
C16		Biodiversity – Rare and Endangered Species	Fisher - Blue listed (vulnerable) Habitat: dense, late seral coniferous or mixed wood. Distribution: may currently occupy the southeast corner of B.C. in low densities, and at high elevation. Historical range includes the west and southeast portions of the Cranbrook Forest District.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 11.
C16		Biodiversity – Rare and Endangered Species	Badger (Taxidea taxus) - Red listed (threatened or endangered) Habitat: non-forest and open Douglas-fir. Distribution: occur in the southern half of the Cranbrook Forest District, in the Kootenay River Drainage and in the Elk Valley.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 12.
C16		Biodiversity – Rare and Endangered Species	Large-flowered Brickellia- Red listed (threatened or endangered) Habitat: Eroded slopes and rocky banks. Montane. Distribution: Rare in S.E. B.C.. Known only from Flathead Valley.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 17.
C16		Biodiversity Emphasis	Medium		KBLUP IS: Chapter 3.2, Page 3-6; Appendix 3, Appendix C.
C16	RMZ C-I04	Biodiversity-General	1. Retain forest and rangeland ecological elements and processes, including species richness, distribution and diversity at moderate risk. 2. Retain attributes for old growth dependent species and fur bearers as well as critical habitat	2.1 In establishing priorities for OGMA's, consider spruce and balsam in the tributaries of Lodgepole and Ram Creeks.	KBLUP IS: Appendix 3, Page 22

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			for ecosystem representatives. 3. Ensure habitat requirements for red and blue listed species are achieved.	3.1 Initiate an inventory project for the Tailed Frog. 3.2 The Tailed Frog should be designated as identified wildlife species under the FPC.	
C16	CORE polygon 1-2 Flathead – west side	Biodiversity - General	Designated land use: Integrated. Low mountains and ridges with mostly pine dominated forest stands. Part of the Border Ranges Ecosection. Manage for north-south and east-west connectivity from Waterton/Glacier/Akamina system to Mt Broadwood/Elk Valley and Wigwam systems. Critical to retain this connectivity between large core areas for internationally significant wolf populations.	<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2 Record of Information + T1 Guideline.
C16	RMZ C-S05	Biodiversity-General	1. Maintain regional connectivity to ensure the north-south connection between the Elk Valley and the U.S. -to contribute to ecosystem representation (BRR-MSdk), -to serve as habitat linkage for the seasonal migration of grizzly bears, wolves, ungulates and R & E species, and- to support Akamina-Kishinena Park. 2. Ensure habitat requirementst for red and blue listed, and regionally significant species are achieved.	1.1 Apply the connectivity guidelines within the regional connectivity corridor as indicated in Chapter 3.3. (note: Ch 3.3 Pages 6-8, identifies none of this unit as being important for regional connectivity) 2.1 Designate Rocky Mtn Red Tailed Frog, Least Chipmunk, Southern Red-Backed Vole and the Tailed Frog as identified wildlife under the FPC. 2.2 The rare plant communities in the Proctor Lake area should be designated as a Sensitive Area under the FPC.	KBLUP IS: Appendix 3, Page 9
C16		Biodiversity-Connectivity	None of this unit is identified as being important for regional connectivity. <i>How about the Flathead River?</i>		KBLUP IS: Chapter 3.3, Pages 6-8.
C16	CORE polygon 1-3 - Flathead river corridor	Biodiversity - General	-Land use designation: Special Management. -Part of the Border Ranges and Crown of the Continent Ecosections. -Flathead river valley and riparian zone running north-south. No permanent human occupation. A major movement corridor for carnivores and supports a large grizzly population. Bull trout and wolf populations are management concerns. -Priority area for Total Resource Plan	<u>T2 Guideline:</u> -Enhanced FENs; riparian protection; wide corridors; significant OG protection; -Landscape habitat mosaic is diverse in stand, age classes, types, structures and composition. -Rare and unique habitats and species protected. -Providing habitat for regional inter-protected area linkage corridors and buffers is a part of management objectives for area. -Minimize expansion of settlement or industrial/commercial use	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information + T2 Guideline.

**Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002**

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			-Priority for gov't to give immediate consideration to wide ranging carnivores, ungulate winter range, fisheries and general biodiversity.	-Restoration/rehabilitation of disturbed sites	
C16	CORE polygon 1-11 Harvey Ck	Biodiversity- General	Land use designation: Dedicated Low emphasis biodiversity.	<u>T2 Guideline:</u> -Enhanced FENs; riparian protection; wide corridors; significant OG protection; -Landscape habitat mosaic is diverse in stand, age classes, types, structures and composition. -Rare and unique habitats and species protected. -Providing habitat for regional inter-protected area linkage corridors and buffers is a part of management objectives for area. -Minimize expansion of settlement or industrial/commercial use -Restoration/rehabilitation of disturbed sites	CORE 1994 East Kootenay Land Use Plan, Polygon 1-11 Record of Information + T2 Guideline.
C16	CORE polygon 1-2	Biodiversity – Old Growth	Remnant old growth. Important to manage remaining old growth for thermal cover, snow interception and fur-bearer habitat.	<u>T1 Guideline:</u> FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2 Record of Information + T1 Guideline.
C16	CORE polygon 1-3 + 1-11	Biodiversity- Old Growth		<u>T1 Guideline:</u> FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 + 1-11 Record of Information + T1 Guideline.
C16	CORE polygon 1-2, 1-3, 1-11	Biodiversity – Natural grasslands	Limited to small areas of NDT5-alpine tundra and subalpine parkland	<u>T1 Guideline:</u> Weed control / Maintenance of riparian habitats / Grazing management guidelines/ Off-road vehicle control / Monitoring of range condition and trend in terms of domestic and wildlife grazers	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2; 1-3; 1-11 Records of Information, T1 Guideline + Natural Disturbance Type mapping.
C16	Flathead Range Complex	Ungulates – Elk	Flathead Wildlife Range Complex is elk winter and spring habitat designated for Active Wildlife Management (Category 2). Biophysical Units: <ul style="list-style-type: none"> • Class 2 – elk, moose, goat winter winter habitat. • Class 3 – all ungulate species winter habitat. • Class 3 – all ungulate species summer range <p>This Range Complex is located in LU: C16 and C18.</p>	Wildlife management would be given equal consideration in specific areas. A combination of the following general management and enhancement techniques would be actively pursued in an iterated resource management strategy: -Logging which could benefit/complement wildlife; -Integrated silvicultural practices; -Exploration/mining reclamation; -Access planning; -Impact management activities negotiated through the Mine Development Review Process.	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-3.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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			5 known mineral licks are located in C16 and 4 known mineral licks are located in C18 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).		
C16	Flathead Range Complex	Ungulates – Elk	<p>Flathead Wildlife Range Complex is elk winter and spring habitat designated for Active Wildlife Management (Category 2).</p> <p>Biophysical Units:</p> <ul style="list-style-type: none"> • Class 2 – elk, moose, goat winter winter habitat. • Class 3 – all ungulate species winter habitat. • Class 3 – all ungulate species summer range <p>This Range Complex is located in LU: C16 and C18; 5 known mineral licks are located in C16 and 4 known licks are located in C18 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>Wildlife management would be given equal consideration in specific areas.</p> <p>A combination of the following general management and enhancement techniques would be actively pursued in an iterated resource management strategy:</p> <ul style="list-style-type: none"> -Logging which could benefit/complement wildlife; -Integrated silvicultural practices; -Exploration/mining reclamation; -Access planning; -Impact management activities negotiated through the Mine Development Review Process. 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-3.
C16	RMZ C-I04	Ungulates	1. Maintain abundance of elk, mule deer, Rocky Mountain Goats and Bighorn Sheep within the sustainable carrying capacity of their habitat.	<p>1.1 Maintain foraging opportunities for wildlife with no domestic livestock tenures allocated within the unit.</p> <p>1.2 The mineral lick in McClatchie Creek should be designated as a Sensitive Area under the FPC.</p>	KBLUP IS: Appendix 3, Page 22
C16	RMZ C-S05	Ungulates	1. Maintain abundance of elk, mule deer, Rocky Mountain Goats and Bighorn Sheep within the sustainable carrying capacity of their habitat.	<p>1.1 Maintain suitable summer habitat for mule and white-tailed deer within this unit through application of the biodiversity emphasis under FPC</p> <p>1.2 No domestic livestock tenures to be allocated in this unit.</p>	KBLUP IS: Appendix 3, Page 10
C16		Ungulates	Ungulate Winter Range (XE)		KBLUP IS: Ch 3.5, Pages 17-24
C16	CORE polygon 1-2, 1-3, 1-11	Ungulates	Important ungulate winter range, particularly polygon 1-3 Flathead river corridor.	<p><u>T2 Guideline applies to ungulate winter range throughout LU 16:</u></p> <ul style="list-style-type: none"> -Manage for optimal mix of thermal cover, snow interception and browse production (habitat adjacency key). -Appropriate mix of silvicultural systems and treatments to maintain habitats. 	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2; 1-3; 1-11 Records of Information, T2 Guideline.
C16		Wide ranging carnivores	Priority 1 Grizzly Bear Habitat		KBLUP IS: Ch 3.4, Pages 8-17

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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C16	CORE polygon 1-2	Wide ranging carnivores	1-2 Important wildlife value;	T1 Guideline: Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2 Record of Information, T1 Guideline.
C16	RMZ C-S05	Wide ranging carnivores	1. Maintain regionally significant grizzly bear habitat and grizzly bear population. 2. Ensure the regionally significant wolf populations are maintained or enhanced.	1.1 Maintain high productivity berry patches by: -introducing controlled fires; and - using no herbicides in high productivity berry patch areas. 1.2 Complete the Flathead River Drainage Grizzly Bear Inventory Project. 2.1 Maintain sufficient prey habitat and therefore adequate prey populations. 2.2 Continue cooperative wolf management with the U.S. gov't.	KBLUP IS: Appendix 3, Page 10
C16	CORE polygon 1-3, 1-11	Wide ranging carnivores	A major movement corridor for carnivores. Supports internationally significant grizzly and wolf populations*. *see Global/Ecosystem Sectors description of polygon 1-3 values in black binder under CORE tab.	T2 Guideline: -Seasonal feeding and breeding habitats protected; -Conservation of seasonal feeding and breeding areas; silvicultural treatments to favour food production; -Road densities minimal and access management coordinated to avoid conflicts with habitat use. -Minimal human habitation and no sanitary landfills. -Predator control only under special circumstances. -Special grazing management to protect carnivore values.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information, T2 Guideline.
C16		Wide ranging carnivores	Unique community of carnivore species resides in the transboundary Flathead that appears unmatched in North America for its variety, completeness, use of valley bottom lands, and density of species which are rare elsewhere.	<ul style="list-style-type: none"> All of the carnivore species cross over the international border, making it critical that the Flathead River Basin be managed as one integral, ecological unit. Implement the carnivore conservation principles. 	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains</u> . 2001, p36.
C16		Wide ranging carnivores	Value: habitat and prey population management. Carnivore conservation principle (1): maintain food resources with management of habitat and prey populations.	<ul style="list-style-type: none"> Maintain the shelter and forage value of mature and old-growth conifers along the Flathead River for ungulates in winter. Manage for higher levels of ungulate populations over time by setting conservative quotas for ungulate harvest, especially after harsh winters. Maintain foraging opportunities for bears in riparian sites, avalanche chutes and burned areas by providing adequate cover and security. Maintain productive habitat of dense (>5000 stems/ha), young 	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains</u> . 2001, p39-40.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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				<p>lodgepole pine and spruce for snowshoe hare and lynx by delaying thinning or leaving un-thinned patches across the cutting unit.</p> <ul style="list-style-type: none"> Retain remaining stands of old-growth spruce in the commercial forests of the transboundary Flathead as important habitat for martens. Montana's Flathead National Forest Plan specifies retention of all remaining old-growth stands (Amendment 21). British Columbia should establish similar direction for remnant stands of old-growth spruce. 	
C16	<p>From the road paralleling the west side of the Flathead River eastward through C18.</p> <p>All</p>	Wide ranging carnivores	<p>Value: security.</p> <p>Carnivore conservation principle (2): provide security from excessive mortality with networks of core reserves and other precautionary measures.</p>	<ul style="list-style-type: none"> Provide a permanent, year-round core reserve for carnivores in the upper Flathead River in British Columbia. Core reserve to extend from the road paralleling the west side of the Flathead River eastward to the Continental Divide and from the international border north to about Tombstone Mountain (north of Middlepass Creek) (Fig. 15, p44). Core reserve would contribute significantly to vital protection provided by the adjoining Waterton Lakes National Park in Alberta and Glacier National Park in Montana. Provide a network of seasonal or permanent security zones throughout the transboundary Flathead basin and elsewhere in the new 'Southern Rocky Mountain Conservation Area'. Consideration of focal species' key habitats will be used to guide the strategic identification and delineation of security zones (p 45). 	<p>J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains</u>. 2001, p42-45.</p>
C16	RMZ C-I04 & C-S05	Fisheries	<ol style="list-style-type: none"> Maintain wild stocks and habitat for spawning, rearing and overwintering Bull Trout. Rebuild wild fish stocks and habitats for Cutthroat and Bull Trout in the Flathead River. 	<ol style="list-style-type: none"> 1.1 Principle tributaries should be priority areas for WRP assessments / projects. 2.1 Restore fish habitat and identify strategies to offset impacts of resource development. 2.2 Cooperate with the State of Montana on monitoring stock status of Bull Trout. 2.3 Assess current status of fish populations and fish habitat. 2.4 Review current management strategies. 	KBLUP IS: Appendix 3, Page 10 & 23
C16	CORE polygons 1-2, 1-3, 1-11	Fisheries	Polygon 1-2 Flathead- west side: Cabin, Howell, Cauldrey Creeks are internationally significant Bull trout spawning creeks for the Flathead system.	<p>T2 Guideline:</p> <ul style="list-style-type: none"> -Minimal human-caused sedimentation. -Protection of streamside and riparian habitats; no roads in riparian 	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2; 1-3; 1-11 Records of Information, T2

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			Polygon 1-3 Flathead river corridor: Flathead river supports bull trout, cutthroat trout and whitefish.	without special permission, however, stream crossing normally acceptable. -Management for large organic debris. -Watershed sensitivity and ECA analysis prior to development. -Protection of spawning and rearing habitat. -Reclamation and hydrologic stabilization where necessary. -Assume level one guidelines in place where level two's are applied.	Guideline.
C16	CORE polygon 1-1	Coal Mining	1. Flathead coalfield <ul style="list-style-type: none"> • Medium and high value coal lands are located throughout LU C16 except in the southwest from Couldrey Ridge to Mount Hefty. • The high value lands (exposed coal bearing strata) of the Flathead coalfield are four widely dispersed blocks including: Sage Creek area (1,154 ha), Cabin Creek area (577 ha) and Harvey Creek area (962 ha) (p7) located in LU C16. Sage and Cabin Creek areas' coal values were not identified with enhanced resource development zonation in CORE or KBLUP. Lillyburt area (1,090 ha) (p7), in the vicinity of Flathead townsite, is located in LU C17. 2. Crowsnest coalfield <ul style="list-style-type: none"> • Medium and high value coal lands are located from LU C16 north boundary northward. • The high value lands of the Fernie block lay along the west side of LU C16's north boundary, and extend north through LU C17, C19, C24 and C38. The Fernie block high value lands area is 73,333 ha (p7). • The high value lands of Corbin area (962 ha) and Tent Mountain area (1,603 ha) (p7) are located in LU C19. 	Definitions: <ul style="list-style-type: none"> • High value coal lands include the area from the outcrop of the coal bearing strata to its inferred depth limit (p1). • Medium value coal land is a corridor for mining related activities and infrastructure, surrounding the exposed coal bearing strata (high value coal lands) (p1). 	Morris, Bob. Resource Estimate: East Kootenay Coalfields, 1994. Pages 1, 4, 7; Fig. 5: E.K. Coal Fields Location Map; and Fig. 7: Coal Value Lands Map. Refer to Black Binder, Coal tab for maps.
C16		Mining	Sage Creek Coal Project	Is not supported	Commercial Hunting & Fishing Focus Group session, March 27, 2002.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C16	CORE polygon 1-2	Mining	High value coal deposits at Sage and Cabin Creeks: potential for additional deposits in vicinity. Coal sector proposes that these deposits along with associated infrastructure and transportation corridors be designated as Dedicated. The same recommendation applies to any undiscovered deposits. Concern expressed by global energy and ecosystem sectors.	Land use designation: Integrated T1 Guideline: Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 1-2 Record of Information + T1 Guideline.
C16	CORE polygon 1-3	Mining	Coal deposits at Harvey Creek	Land use designation: Special Management -Provide road access through west side of polygon 1-3 to Harvey Creek. (If this deposit were developed, there would be a need to develop a haul road through the Lodgepole River drainage.) -Mining activities will maintain a 1km buffer from the Flathead River. T1 Guideline: Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information + T1 Guideline.
C16	RMZ C-E04	Mining	Coal deposits at Harvey Creek	Priority management emphasis is on the coal resources and their exploration, development and production. Guidelines for Coal ERDZ are only provided for C-E01 (Fording area: LU C20, 21, 22, 23, 38). Specific guidelines have not been developed for C-E02 to C-E04.	KBLUP IS: Ch 3.14, Pages 78-79
C16	CORE polygon 1-11 (KBLUP: Coal-ERDZ C-E04)	Mining	Coal deposits at Harvey Creek	Land use designation: Dedicated -Provide road access through west side of polygon 1-3 to Harvey Creek. (If this deposit were developed, there would be a need to develop a haul road through the Lodgepole River drainage.) -Mining activities will maintain a 1km buffer from the Flathead River. T1 Guideline: Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal	CORE 1994 East Kootenay Land Use Plan, Polygon 1-11 Record of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	
C16	CORE polygon 1-2, 1-3, 1-11	Oil and Gas	High oil and gas potential throughout.		CORE 1994 East Kootenay Land Use Plan, Polygon 1-2; 1-3; 1-11 Records of Information.
C16	CORE polygon 1-2, 1-3, 1-11	Unacceptable Uses	Polygon 1-3 + 1-11: Settlement and General Industrial/Commercial Uses are not acceptable uses. Polygon 1-2: Settlement is not an acceptable use, but General Industrial/Commercial Uses are acceptable.		CORE 1994 East Kootenay Land Use Plan, Polygon 1-2; 1-3; 1-11 Records of Information.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Agriculture (Range)	Noxious Weeds.	Inventory, map and complete an activity schedule for five significant noxious weed plant communities during the first planning period (spotted knapweed, dalmation toadflax, leafy spurge, goatweed, and whitetop)	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-8.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Agriculture	Grazing Management	GM-1: Modify grazing practices that retard or prevent attainment of riparian management objectives or are likely to adversely effect inland native fish. Suspend grazing if adjusting practices is not effective in meeting riparian management objectives. GM-2: Locate livestock handling and/or management facilities outside of riparian habitat conservation areas. Relocate or close facilities where these objectives cannot be met. GM-3: Limit livestock trailing, bedding, watering, salting, loading, and other handling efforts to those areas and times that would not retard or prevent attainment of riparian management objectives or adversely affect inland native fish. GM-4: Adjust wild horse and burro management to avoid impacts that prevent attainment of management objectives or adversely affect inland native fish. <ul style="list-style-type: none"> Additional guidelines are outlined on pages II-46 and II-47. 	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-30.
C16-Adja	Montana: Flathead	Agriculture	Grazing	<ul style="list-style-type: none"> Domestic livestock grazing is not compatible. Grazing permits will not be issued.. 	Flathead National Forest Forest Plan. Northern Region

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
cent	National Forest: MA 11				Forest Service. U.S. Department of Agriculture. August 2001. Page III-43 to III-51.
C16-Adja cent	Montana: Flathead National Forest: MA 12	Agriculture	Grazing and riparian areas.	If a conflict occurs between riparian values and livestock use, it must be resolved by permittee action and co-operation. If the conflict cannot be resolved or mitigated, livestock numbers will be reduced or allotment closed. Range improvements may be constructed for resource protection and to mitigate major conflicts with adjacent private or public interest.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page III-57.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Access Management	Access.	Develop and implement a road management program, with road use restrictions and closures, that is responsive to resource protection needs and public concerns.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-5.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Recreation	A range of quality recreation opportunities.	Provide a range of quality outdoor recreation opportunities within a forest environment that can be developed for visitor use and satisfaction. Provide a range of quality recreation opportunities including motorized and non-motorized, in an undeveloped forest environment. RM-2: Adjust dispersed and developed recreation practices that retard or prevent attainment of riparian management objectives or adversely affect inland native fish. Where adjustment measures such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures are not effective in meeting riparian management objectives and avoiding adverse effects on inland native fish, eliminate the practice or occupancy.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-5 and II-31.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide	Recreation	Visuals.	Visual resource analysis will be part of the planning process for specific areas of the forest. Through the use of proper design and scheduling of activities, potential impacts on the visual resource will be dispersed and not concentrated within an area or travel corridor within a short time frame.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-22.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Management Direction			Special concerns due to catastrophic events will be handled on a case by case basis.	
C16- Adja cent	Montana: Flathead National Forest: MA 11	Recreation	Recreational use of important grizzly bear areas	<ul style="list-style-type: none">• Maintain and enhance grizzly bear habitat by implementing appropriate management and investment activities and controlling public access• Non-motorized recreational opportunities will be provided at current levels, but will not be encouraged and may be restricted if conflicts between recreationists and grizzly bear occur.• Management of other resources must be compatible with the grizzly bear management objectives.• Provide for security from human conflict through year-round closures of all newly constructed roads and closures of existing roads and trails as necessary to maintain the security of the area. Monitor and manage all human activity in the area.• Signage of grizzly bear useage• Trails may be closed if necessary.• New roads will be closed to public use except for snowmobiles in the winter.• Motorized access restrictions from April 1 to November 30 to all roads except Trail Creek and the lower portion of Thoma Creek roads to provide security for grizzly bears.• Access to Frozen Lake will be from the Kootenai National Forest.• Maintain at the maximum, a road density at the 1981 level.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page III-43 to III-51.
C16- Adja cent	Montana: Flathead National Forest: MA 11	Recreation	Recreational use of riparian areas	<ul style="list-style-type: none">• Generally, trails will not be constructed in riparian areas except as needed to cross the area.• Existing trails should be relocated outside of riparian areas if there are erosion problems that cannot be mitigated.• Off-road vehicle use, except by snowmobiles, is generally incompatible except on roads or trails.• New roads will generally not be built within one-half mile of lakes.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page III-55 and III-58.
C16- Adja cent	Montana: Flathead National Forest: Forest-wide	Wilderness	Wilderness.	Intensify management of the Forest's three Wildernesses and the Flathead Wild and Scenic River System to ensure resource protection while providing quality recreation opportunities.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-5.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Management Direction				
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Cultural Heritage	Cultural heritage.	<p>Meet all legal requirements each year. During the first decade, nominate significant cultural sites to the National Register of Historic Places.</p> <ul style="list-style-type: none"> Cultural resource inventories will be conducted on all ground-disturbing projects. Known, significant cultural resource sites will be protected from inadvertent or intentional damage or destruction. Protective measures may include: <ul style="list-style-type: none"> Fences or gates Posting warning signs about antiquities law Protection of site locational information Law enforcement measures such as patrolling and investigation of antiquities violations. An effort will be made to co-ordinate cultural resource issues and concerns with appropriate native American groups and other agencies. 	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-12, II-23, II-24, and II-25.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Watershed - and Fisheries	High water quality	<p>Maintain high quality water which meets or exceeds State and Federal water quality standards, to protect migratory and resident fisheries, water-based recreation opportunities and public water supplies.</p> <p>Maintain soil productivity and minimize erosion.</p>	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-4 and II-55.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Watershed	Riparian values- maintain water quality.	<p>Maintain or restore water quality to a degree that provides for stable and productive riparian and aquatic ecosystems.</p> <p>A watershed cumulative effects feasibility analysis for projects involving significant vegetation removal is required prior to implementation.</p> <p>In flood plains and wetlands any activity must adhere to the requirements of executive orders EO11988 (reduce the risk of floods) and EO11990 (minimize damage to or loss of wetlands and</p>	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-6 and II-50.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<p>preserve and enhance the natural and beneficial values of wetlands).</p> <p>Additional requirements for road design and building; bridges, culverts and other drainage structures; road maintenance; timber harvest; site preparation; trails; picnic areas, campgrounds and packer camps; and community water supplies are outlined on pages II-53 and II-54.</p>	
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Watershed	Riparian values – maintain natural stream processes.	Maintain or restore stream channel integrity channel processes, and the sediment regime (including the element of timing, volume, and character of sediment input and transport) under which the riparian and aquatic ecosystems developed.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-6.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Watershed	Riparian values – maintain or restore natural in-stream flows.	Maintain or restore in-stream flows to support healthy riparian and aquatic habitats, the stability and effective function of stream channels, and the ability to route flood discharges.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II- 6.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Watershed	Riparian values – maintain or restore natural water table function.	Maintain or restore natural timing and variability of the water table elevation in meadows and wetlands.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-6.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Watershed	Riparian values – riparian vegetation.	<p>Maintain or restore the diversity and productivity of native and desired non-native plant communities in riparian zones. Riparian vegetation will provide the following:</p> <ul style="list-style-type: none"> • An amount and distribution of large woody debris characteristic of natural aquatic and riparian ecosystems. • Adequate summer and winter thermal regulation within 	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-6 II-13 and II-14.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<p>the riparian and aquatic zones</p> <ul style="list-style-type: none">Stability to stream-banks to levels that help to achieve rates of surface erosion, bank erosion, and channel migration characteristics of those under which the communities developed. <p>Standard widths for Riparian Habitat Conservation Areas:</p> <ul style="list-style-type: none">Category 1 (fish bearing streams) distance equal to the height of 2 site potential trees or 300 feet slope distance, whichever is greatest, on both sides of the creek.Category2 (permanently flowing, non-fish bearing streams) distance equal to the height of 1 site potential tree or 150 feet slope distance, whichever is greatest, on both sides of the creek.Category 3 (ponds, lakes, reservoirs and wetlands greater than 1 acre) distance equal to the height of 1 site potential tree or 150 feet slope distance, whichever is greatest, on both sides of the water-body.Category 4 (seasonally flowing or intermittent streams, wetlands less than 1 acre, landslides and landslide-prone areas). For priority watersheds: distance equal to the height of 1 site potential tree or 100 feet slope distance, whichever is greatest, on both sides of the creek. For non-priority watersheds: distance equal to the height of 1/2 site potential tree or 50 feet slope distance, whichever is greatest, on both sides of the creek.	
C16- Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Biodiversity	Viability of native species.	Ensure that the Forest Service actions do not contribute to the loss of viability of native species.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-5.
C16- Adja	Montana: Flathead	Biodiversity	Ecological reserves.	A number of “research natural areas are established. The objective is to maintain their natural condition and features for non-	Flathead National Forest Forest Plan. Northern Region

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
cent	National Forest: Forest-wide Management Direction			manipulative research and baseline comparisons, public education and conservation of biological diversity. A number of “botanical special interest areas” are established. The objective is to protect unusual or uncommon botanical values, for purposes of conservation, scientific research and public enjoyment.	Forest Service. U.S. Department of Agriculture. August 2001. Page II-14 and II-15.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Biodiversity	Rare Plants.	Adverse impacts to sensitive plants o their habitats should be avoided. If impacts cannot be avoided, the significance of potential adverse effects on the population or its habitat within the area of concern and on the species as a whole will be analysed. Project decisions will not result in loss of species viability or create significant trends towards federal listing. Plant species of possible concern are listed on page II-45 and II-46 (27 plant species).	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-14 and II-15.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Biodiversity	Threatened and Endangered Species <ul style="list-style-type: none"> water howellia 	Provide sufficient habitat to promote the recovery of threatened and endangered species and conserve the ecosystems upon which they depend. <ul style="list-style-type: none"> Water Howellia Riparian Management Objectives <ul style="list-style-type: none"> No measurable increase in maximum water temperature LWD > 20 pieces per mile, >12 inch diameter, >35 foot length. Banks >80% stable Lower Bank Angle - >75% of banks with <90 degree angle Width/Depth Ratio of <10 (mean wetted width divided by mean depth) Variable objectives for pool frequency (depends on wetted width of stream) Retain a forested buffer of a minimum width of 300 feet from the margins of ponds that provide Howellia habitat (occupied and unoccupied) No herbicide use 	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-4 and 8 and 12; and II-26 and II-46.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide	Biodiversity	Maintain old growth forests.	Maintain and recruit old growth forests to an amount and distribution that is within the 75% range around the median of the historical range of variability. Where current conditions are below this amount, actively manage to recruit additional old growth. <ul style="list-style-type: none"> Prescribe landscape treatments that protect old growth forests 	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-5 and II-9.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Management Direction			<p>from disturbances that threaten old growth composition and structure. Treatment within existing old growth may be appropriate where current insect and disease conditions pose a major and immediate threat to other stands.</p> <ul style="list-style-type: none"> Where fuel conditions and potential fire regimes have been significantly affected by fire exclusion and timber management, manage landscape fuel conditions (amounts and spatial arrangement) to restore the historical fire regime and reduce the risk of undesirable fire events. Emphasize this objective in areas where wildlands interface with urban and rural areas of private property. 	
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Biodiversity	Species associated with dead and defective tree habitat.	<p>Maintain appropriate tree species composition, size, and density of dead and defective trees and down logs.</p> <ul style="list-style-type: none"> Maintain a density of snags to requirements specified on page II-48. Maintain coarse woody debris to requirements specified on page II-48 and 49, 	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-8.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Biodiversity	Species associated with old growth forests.	Maintain ecological processes and provide for natural patch size distribution. Manage landscape patterns to develop larger old growth patch sizes where needed to satisfy wildlife habitat requirements.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-8.
C16-Adja cent	Montana: Flathead National Forest: (MA 11)	Biodiversity	Old growth distribution.	<p>Ensure proper distribution and quantity of old-growth habitat for each watershed.</p> <p>Thermal and hiding cover will be provided by old growth. The continued maintenance of these cover types will facilitate use of the riparian areas as travel corridors.</p>	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page III-53.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide	Biodiversity	Desired future landscape patterns and processes.	Improve local knowledge of native succession and disturbance regimes, and resulting landscape dynamics. Apply this knowledge in developing desired future landscape patterns and ecological processes for individual landscapes and watersheds.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-5 and II-9.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Management Direction			<ul style="list-style-type: none"> Maintain or restore landscape composition, structure and patterns to a condition similar to that expected under natural disturbance and succession regimes. 	
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Biodiversity	Forest matrix.	Provide sufficient retention of forest structure (large diameter live trees, snags and coarse woody debris) to provide for wildlife movement through the matrix surrounding old growth forests.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-8.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Biodiversity	Riparian values – viability of riparian-dependent communities.	Maintain or restore the habitat necessary to support populations of well-distributed native and desired non-native plant, vertebrate, and invertebrate populations that contribute to the viability of riparian-dependent communities.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-6.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Wildlife General	Threatened and Endangered Species <ul style="list-style-type: none"> bald eagle peregrine falcon 	Provide sufficient habitat to promote the recovery of threatened and endangered species and conserve the ecosystems upon which they depend. <ul style="list-style-type: none"> Bald Eagle Nest Management Plan required for each known territory. Peregrine Falcon Nest Management Plan required for each known territory. For sensitive species (common loon, harlequin duck, flamulated owl, boreal owl, black-backed woodpecker, western big-eared bat, northern bog lemming, lynx, wolverine, fisher) develop Species Conservation Strategies.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-4 and 8 and 12; and II-26.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Wildlife General	Sensitive species: <ul style="list-style-type: none"> common loon harlequin duck flamulated owl boreal owl black-backed woodpecker western big-eared bat 	For sensitive species develop Species Conservation Strategies.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-4 and 8 and 12; and II-26.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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			<ul style="list-style-type: none"> • northern bog lemming • lynx • wolverine • fisher 		
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Ungulates - Big Game	Hunting, fishing and viewing opportunities.	Provide appropriate habitat and access to maintain desired hunting, fishing and viewing opportunities, in co-ordination with the Montana Department of Fish, Wildlife and Parks.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-5.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Carnivores	Threatened and Endangered Species: <ul style="list-style-type: none"> • grizzly bear • gray wolf 	Provide sufficient habitat to promote the recovery of threatened and endangered species and conserve the ecosystems upon which they depend.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-4.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Carnivores	Grizzly Bear	<ul style="list-style-type: none"> • Ensure occupancy by reproducing females and limit mortality to achieve recovery goals in the recovery plan. • Provide habitat conditions adequate to provide for a successfully reproducing adult female in all BMU sub-units. • Within 10 years, security core areas are 68% to 100% • Within 10 years, total motorized access is less than 19% of the MS-1 (management situation 1= the high quality grizzly habitat) and MS-2 (management situation 2 = the movement areas between high quality habitat) with density greater than 2 miles per square mile. • Within 5 years, BMU sub-units having less than 60% security core area will provide at least 60%. • Within 5 years, BMU sub-units having total motorized access exceeding the current forest average of 24% with density > 2 miles per square mile will be brought to no more than 24% in MS –1 and MS-2 • Within 5 years, open motorized access is less than 19% of the 	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-7 and II-8, and II-39 and II-40.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<p>MS-1 and MS-2 with density greater than 1 mile per square mile.</p> <ul style="list-style-type: none">• Establish an active public information and education program that explains goals and objectives of grizzly bear management and steps required to recover the population.• Carcasses of wildlife, livestock or other attractants along highways, roads and trails will be removed a distance of ¼ of a mile from the roadway or otherwise made unavailable to bears. Removal should occur within 24 hours.• Contract and permits will include a clause providing for the cancellation, suspension, or temporary cessation of activities if such is needed to resolve a grizzly / human conflict. Permits for temporary on-site facilities will require that camps be located to avoid seasonally important bear habitats and contain the grizzly bear clauses developed to prevent people / bear conflict.• Measures will be taken regarding human and domestic stock food storage and garbage disposal in grizzly bear habitat.• Human access will be managed to meet grizzly bear recovery goals. Closures, no net increase in density of open motorized access routes or total motorized access routes.• Feeding of bears prohibited• Areas with a history of grizzly bear / human encounters or with important seasonal use by bears may be closed to human use.• No net decrease in the size or amount of core areas that provide security.• See additional guidelines pages II-40 to II-42 for timber management, fire management, range management, recreation management, minerals and special uses.	
C16-Adja cent	Montana: Flathead National Forest: (MA 11)	Carnivores	Grizzly Bear	<ul style="list-style-type: none">• Maintain and enhance grizzly bear habitat by implementing appropriate management and investment activities and controlling public access• Manage for a habitat of approximately 40 percent security cove and about 60 percent open, with good geographic distributions of the following habitat components:<ul style="list-style-type: none">• Burns, meadows, riparian areas, ridge-tops, shrubfields, side-hill parks, scree/talus, timber.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page III-43 to III-51.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<ul style="list-style-type: none">• Non-motorized recreational opportunities will be provided at current levels, but will not be encouraged and may be restricted if conflicts between recreationists and grizzly bear occur.• Management of other resources must be compatible with the grizzly bear management objectives.• Manage adjacent grizzly bear foraging areas only when previously cut unit sustains adequate hiding cover.• Provide a full range of habitat improvement practices including prescribed fire, shrub planting and timber harvest• Manage riparian areas to optimize grizzly travel, security and forage production.• Provide for security from human conflict through year-round closures of all newly constructed roads and closures of existing roads and trails as necessary to maintain the security of the area. Monitor and manage all human activity in the area.• Provide and maintain hiding cover over at least 70 percent of the area.• Signage of grizzly bear useage• Trails may be closed if necessary.• Domestic livestock grazing is not compatible. Grazing permits will not be issued.• Timber harvest may proceed, but grizzly bear habitat needs will dictate the amount, seasonal timing of harvest, silviculture systems, logging methods, reforestation and stand improvement practices used.• Road design and location will be responsive to grizzly bear habitat management needs.• New roads will be local, low standard roads.	
C16- Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Carnivores	Gray Wolf	<ul style="list-style-type: none">• Logging activities should not be conducted in or near the following areas at certain times of the year:<ul style="list-style-type: none">• Known or highly suspected den sites or rendezvous sites (March 15 to July 1)• Ungulate calving / fawning areas (May 1 to July 15)• Ungulate winter ranges (December 1 to April 15)• Maintain an active public information and education program	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-4 and II-44. Note: Recovery Plan not available

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				addressing wolf recovery and management. <ul style="list-style-type: none"> See additional wolf habitat management direction in the "Recovery Plan (Unbound Appendix PP)" 	– contact Flathead National Forest for a copy.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Fisheries	Riparian values – unique genetic fish stocks.	Maintain or restore riparian and aquatic habitats necessary to foster the unique genetic fish stocks that evolved within the specific geo-climatic region.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-6.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Fisheries	Threatened and Endangered Species: <ul style="list-style-type: none"> bull trout 	Provide sufficient habitat to promote the recovery of threatened and endangered species and conserve the ecosystems upon which they depend. Management standards for streams with westslope cutthroat trout: <ul style="list-style-type: none"> management activities in riparian zones will be designed to provide at least 40 recruitable trees (greater than 10 inch DBH) per 1000 feet of stream per 30 year period for pool formation and in-stream cover. Stream canopy shading will be maintained so that maximum summer water temperatures do not exceed 17 degrees centigrade for moare than 4 hours a day nor more tan 14 days a year. Fish habitat will be protected by controlling sediment sources and/or limiting management activities. 	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-27.
C16-Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Timber	Sustainable timber supply for local industry.	Provide a predictable and sustainable supply of timber products that is responsive to local industry and economies, consistent with other Forest management goals, objectives and standards.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-5.
C16-Adja cent	Montana: Flathead National Forest:	Timber	Timber harvest in important Grizzly Bear areas.	<ul style="list-style-type: none"> Maintain and enhance grizzly bear habitat by implementing appropriate management and investment activities and controlling public access Manage for a habitat of approximately 40 percent security cove 	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	(MA 11)			<p>and about 60 percent open, with good geographic distributions of the following habitat components:</p> <ul style="list-style-type: none">• Burns, meadows, riparian areas, ridge-tops, shrubfields, side-hill parks, scree/talus, timber.• Management of other resources must be compatible with the grizzly bear management objectives.• Manage adjacent grizzly bear foraging areas only when previously cut unit sustains adequate hiding cover.• Provide a full range of habitat improvement practices including prescribed fire, shrub planting and timber harvest• Manage riparian areas to optimize grizzly travel, security and forage production.• Provide for security from human conflict through year-round closures of all newly constructed roads and closures of existing roads and trails as necessary to maintain the security of the area. Monitor and manage all human activity in the area.• Provide and maintain hiding cover over at least 70 percent of the area.• Timber harvest may proceed, but grizzly bear habitat needs will dictate the amount, seasonal timing of harvest, silviculture systems, logging methods, reforestation and stand improvement practices used.	III-43 to III-51.
C16- Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Mining / Oil and Gas	Minerals and energy resources.	Facilitate exploration for, and the orderly and efficient development of, minerals and energy resources, recognizing the need for balanced multiple-use management.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-5.
C16- Adja cent	Montana: Flathead National Forest: MA 11	Mining / Oil and Gas	Minerals and energy resources.	<ul style="list-style-type: none">• The forest service proposes to withdraw the unleased portions of this area from all forms of mineral entry for both locatable and leaseable minerals. The purpose of this withdrawal is to permit more time to study the effects of man's activities on grizzly bear.• Where oil and gas leasing decisions have already been made, general guidelines are as follows:	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page III-48 and III-49.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<ul style="list-style-type: none">No seismic activity, new road construction or drilling above 5,800 feet between October 1, and April 30, to protect denning grizzly bears.No seismic activity, new road construction, or dirlling in flood plain and riparian areas during the primary bear-use periods (April 1 to July 1, and October 1 to November 30).In order to provide bear and wolf security areas, drilling, road construction, and other exploration activity should not occur simultaneously with timber sale activity in adjoining third order drainages.	
C16- Adja cent	Montana: Flathead National Forest: Forest-wide Management Direction	Unacceptable Uses	Unacceptable uses.	<ul style="list-style-type: none">Topsoil removal will not be allowed.Occupancy trespass will not be allowed.No new summer homesites will be allowed.No permanent living facilities will be allowed.	Flathead National Forest Forest Plan. Northern Region Forest Service. U.S. Department of Agriculture. August 2001. Page II-57 and II-58, and III-49.
C17	Flathead PAS Unit 26	1993 Best PAS Areas	<p>Area encompasses the drainage of the Flathead River north of the Canada/USA border, excluding the Howell and Cabin Creek drainages.</p> <p>PAS Value: This area is internationally significant for shared bull trout, grizzly bear and wolf populations with Montana. It includes the largest contiguous stand of old growth lodgepole pine and is internationally important as the Canadian extension of the Flathead River (a designated “Wild and Scenic River” in Montana).</p> <p>Diversity: Provides productive riparian areas along the wide floodplain of the Flathead River, including the largest contiguous stands of old growth lodgepole pine. Supports black bear, moose, elk, white tailed deer and cougar in a complex predator/prey relationship. Connects to Glacier N.P..</p>	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultureal Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 26.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			<p>Viability: This unit is of sufficient size (56,134 ha), and watershed completeness to be viable, particularly in connection to Glacier National Park.</p> <p>Naturalness in 1993: Less than 25% disturbed by roads, logging and oil and gas development.</p>		
C17	RMZ C-S05, C-I04	Agriculture	Grazing	Maintain foraging opportunities for wildlife with no domestic livestock tenures allocated within the unit.	KBLUP IS: Appendix 3, Page 10 and Page 22
C17		Agriculture		No grazing permitted except for guide outfitter horses.	Cranbrook Forest District Recreation Access Plan (DRAP), March, 2000. LU C17.
C17	Flathead Range Unit	Agriculture	Flathead Range Agreement Holders: GT: David Eider - 73 AUMs GT: Harry Leuenberger - 54 AUMs	GT indicates that the Range Agreement Area matches the G/O territory. Flathead Range Unit includes LU C16, C17 and C18.	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C17	CORE polygons 1-3, 2-3, 2-4	Agriculture	Grazing	<p>Potential for increased agricultural activity. Intent is to pursue the possibility (CORE, East Kootenay Regional Table, Volume 3, Part B Management Guidelines, Agriculture Notes, AG2).</p> <p>Ecosystems Sector concerned re: grazing because of internationally significant bear and wolf populations. Any expansion may result in negative impacts on carnivores and ungulates. Outdoor Recreation Non-Motorized Sector concerned re: expansion of cattle grazing in this unit, however whole heartedly supports CRMPs and the work of the EK Trench Agriculture/ Wildlife Committee. (Refer to Sector Comments with Record of Information).</p> <p><u>T1 Guideline</u>-Grazing tenures</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-3, 2-4 Records of Information.
C17	RMZ C-S05 C-I04	Access Management	Ensure the range of objectives and strategies are integrated within the upper Flathead River and McEvoy Creek area, particularly as they relate to access for proposed development.	<p>All proposals for new road development or expansions will be evaluated through either:</p> <p>a) an enhanced referral process as described in the Access Management Guidelines, Chapter 3.12 or</p> <p>b) special measures which, because of imminent development, require immediate attention.</p>	KBLUP IS: Appendix 3, Page 9

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C17	F120; F185; F190	Recreation	1. Maintain a range of recreation opportunities from roaded resource land to semi-primitive non-motorized.	1.1 Motorized use restrictions may be required. 1.2 Manage the Flathead River as a Backcountry River Corridor consistent with Table 1.2. Apply for non-motorized use restriction through Transport Canada.	KBLUP IS: Appendix 3, Page 9
C17	RMZ C-I04	Recreation	Maintain a range of recreation opportunities from roaded resource land to semi-primitive non-motorized		KBLUP IS: Appendix 3, Page 22
C17		Recreation		Backcountry recreation management as per ROS system	KBLUP IS: Chapter 3.9, Page 54-57
C17	CORE polygon 1-3	Recreation-Commercial Tourism	-Area is used by two to three guide/outfitters. Very important area for grizzly bear, wolf, white tail deer, moose and elk. Ungulate winter range. -River: supports Bull trout; is used for rafting; and is a 'wild and scenic' river on US side of border, and is the major source of water for Flathead Lake.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information + T1 Guideline.
C17	CORE polygon 2-3	Recreation-Commercial Tourism	Andy Good plateau: important cave complex requiring special management.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information + T1 Guideline.
C17	CORE polygon 2-4	Recreation-Commercial Tourism	Important area for outfitter.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-4 Record of Information + T1 Guideline.
C17	CORE polygon 1-3, 2-3, 2-4	Recreation-Visuals-tourism + general		<u>T1 Guideline:</u> -Management of high tourism value viewsapes for some enhanced analysis and landscape design (implying no change in timber volume). -Smoke management guidelines -Visual Quality Objectives guidelines apply (implying restrictions on timber volume)	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-3, 2-4 Records of Information + T1 Guideline.
C17	CORE	Recreation-	Sense of Solitude	<u>T1 Guideline:</u>	CORE 1994 East Kootenay Land

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) <i>(Document, date, section and/or pages)</i>
	polygon 1-3, 2-3	Sense of Solitude	Polygon 2-3 – Andy Good plateau cave complex requires special management.	-Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.	Use Plan, Polygon 1-3, 2-3 Records of Information + T1 Guideline.
C17	CORE polygon 2-4	Recreation- Sense of Solitude	Sense of solitude- last unroaded portion of the Flathead system. Rugged landscape; breathtaking views; alpine meadows. Undisturbed wilderness. Summer/fall use for hunting and hiking. (Refer to Black binder, CORE tab, polygon 2-4, Sector Comments)	<u>T2 Guideline:</u> -Local agreement preferred. -Sensitivity to Solitude experiences. -Enhanced management related to timing, seasonality, mode and distribution of mechanized access/activities, recognize existing and potential future use for tenure holders and consider mechanized recreational users.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-4 Record of Information + T2 Guideline.
C17	Flathead PAS Unit 26	Cultural Heritage	Regionally representative of oil exploration and international relations themes and contains regionally significant Flathead customs site.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Culturel Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 26.
C17	CORE polygon 1-3, 2-4	Cultural Heritage		<u>T2 Guideline:</u> Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required. Access: Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas. Facilities: Restrictions on construction of facilities within contextual areas. In	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-4 Records of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<p>sensitive areas, no development permitted. Temporary site protection may be required. Preservation and reuse of related heritage sites may be permitted under controlled conditions.</p> <p>Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted.</p> <p>Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).</p>	
C17	CORE polygon 2-3	Cultural Heritage		<p><u>T1 Guideline:</u> Planning: ID cultural heritage resource (see FPC); Development without preparation of cultural heritage impact assessment. Access: restrictions unlikely. Directional signage to cultural/heritage sites permitted. Signage re: visitor behaviour and to ID site as significant cultural/heritage feature desired. Land trades possible to create access across private lands. Facilities: Major construction permitted at cultural heritage resource sites. Buffering not required. Adaptive reuse of appropriate heritage structures without restriction. Activities: restrictions unlikely. Resource extraction or harvesting unlikely to be restricted for cultural heritage values. Environmental protection opportunities for special exemption from mining reclamation.</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information + T1 Guideline.
C17	Flathead River drainage	Biodiversity – Rare and Endangered Species	Mottled Sculpin – Blue listed (vulnerable) Habitat: a wide range of stream sizes with cool and clear water. Distribution: Flathead River drainage. It is suggested that the population found in the Flathead River would be the only true population of Mottled Sculpin in B.C.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 2.
C17	West	Biodiversity –	Tailed Frog – Red list (threatened or endangered)		Listed Vertebrate and Vascular

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Flathead River	Rare and Endangered Species	Habitat: fast, small, permanent forest streams with clear, cold water (ESSF). Distribution: west Flathead River drainage.		Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 3.
C17		Biodiversity – Rare and Endangered Species	Fisher - Blue listed (vulnerable) Habitat: dense, late seral coniferous or mixed wood. Distribution: may currently occupy the southeast corner of B.C. in low densities, and at high elevation. Historical range includes the west and southeast portions of the Cranbrook Forest District.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 11.
C17		Biodiversity – Rare and Endangered Species	Badger (Taxidea taxus) - Red listed (threatened or endangered) Habitat: non-forest and open Douglas-fir. Distribution: occur in the southern half of the Cranbrook Forest District, in the Kootenay River Drainage and in the Elk Valley.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 12.
C17		Biodiversity Emphasis	MSdk- Medium Biodiversity Emphasis. All other biogeoclimatic subzones- High Biodiversity Emphasis.		KBLUP IS: Chapter 3.2, Page 3-6; Appendix 3 - Appendix C
C17	RMZ C-I04	Biodiversity - General	1. Retain forest and rangeland ecological elements and processes at a moderate risk. 2. Retain attributes for old growth dependent species and fur bearers. 3. Ensure habitat requirements for red and blue listed species are achieved.	3.1 Tailed Frog should be designated as an identified wildlife species under the FPC.	KBLUP IS: Appendix 3, Page 22
C17	CORE polygon 2-3	Biodiversity - General	Designated land use: Integrated.	<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information + T1 Guideline.
C17		Biodiversity – Connectivity	All or a portion of LU is important for regional connectivity.		KBLUP IS: Chapter 3.3, Page 6-8
C17	F120, F185, F190	Biodiversity-Connectivity	North-south connectivity is important.	Maintain regional connectivity to ensure the north-south connection between the Elk Valley and the United States.	KBLUP IS: Appendix 3, Page 9

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
		Species	Rocky Mountain Red Tailed Frog, Least Chipmunk, Southern Red Backed Vole and the Tailed Frog	Designate Rocky Mountain Red Tailed Frog, Least Chipmunk, Southern Red Backed Vole and the Tailed Frog as identified wildlife under the FPC.	
C17	CORE polygon 1-3, 2-4- Upper Flathead Basin and River Corridor	Biodiversity - General	1. Land use designation: Polygon 1-3: Special Management; Polygon 2-4: Not agreed on: proposed Protected/Special/Integrated/Dedicated. 2. Part of the Border Ranges Ecosection. 3. 2-4 is the only low elevation area in the drainage that is unroaded. 3. Flathead river valley and riparian zone running north-south. No permanent human occupation. A major movement corridor for carnivores and supports a large grizzly population. Bull trout and wolf populations are management concerns. -Priority area for Total Resource Plan -Priority for gov't to give immediate consideration to wide ranging carnivores, ungulate winter range, fisheries and general biodiversity.	<u>T2 Guideline:</u> -Enhanced FENs; riparian protection; wide corridors; significant OG protection; -Landscape habitat mosaic is diverse in stand, age classes, types, structures and composition. -Rare and unique habitats and species protected. -Providing habitat for regional inter-protected area linkage corridors and buffers is a part of management objectives for area. -Minimize expansion of settlement or industrial/commercial use -Restoration/rehabilitation of disturbed sites	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-4 Records of Information + T2 Guideline.
C17	CORE polygon 1-3, 2-4	Biodiversity-Old Growth	Polygon 2-4 has remnant stands and very high multi-sector values.	<u>T1 Guideline:</u> FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-4 Records of Information + T1 Guideline.
C17	CORE polygon 2-3	Biodiversity-Old Growth		<u>T2 Guideline:</u> Significant retention of old growth across the landscape. FEN's with major old growth component. Corridors and riparian dominantly old growth. Wide corridors.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information + T2 Guideline.
C17	CORE polygon 1-3, 2-3, 2-4	Biodiversity – Natural grasslands	Limited to small areas of NDT5-alpine tundra and subalpine parkland	<u>T1 Guideline:</u> Weed control / Maintenance of riparian habitats / Grazing management guidelines/ Off-road vehicle control / Monitoring of range condition and trend in terms of domestic and wildlife grazers	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-3, 2-4 Records of Information, T1 Guideline + Natural Disturbance Type mapping.
C17	RMZ C-I04	Ungulates	1. Maintain abundance of elk, mule deer, Rocky Mountain Goats and Rocky Mountain Big Horn Sheep by maintaining foraging opportunities for wildlife.	1.1 No domestic livestock tenures to be issued within the unit.	KBLUP IS: Appendix 3, Page 22

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			2. Mineral lick in McLatchie Creek.	2.1 Mineral lick in McLatchie Creek should be designated as a sensitive area under the FPC.	
C17	F120, F185, F190	Ungulates	1. Maintain abundance of mule deer, white tailed deer, elk and moose.	1.1 No domestic livestock tenures to be issued within the unit.	KBLUP IS: Appendix 3, Page 9
C17	F120, F135, F170, F185	Ungulates	Ungulate winter ranges (XE)		KBLUP IS: Chapter 3.5, Page 17-24
C17	CORE polygon 1-3	Ungulates	Flathead river corridor is an important ungulate winter range.	<u>T2 Guideline applies to ungulate winter range throughout the unit:</u> -Manage for optimal mix of thermal cover, snow interception and browse production (habitat adjacency key). -Approximate mix of silvicultural systems and treatments to maintain habitats.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information, T2 Guideline.
C17	CORE polygon 2-3, 2-4	Ungulates		<u>T1 Guideline applies to ungulate winter range throughout the unit:</u> Wildlife harvesting guidelines; TSA harvesting guidelines; Specific referrals on the ground.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3, 2-4 Record of Information, T1 Guideline.
C17	F120, F185, F190	Wide ranging carnivores	1. Maintain regionally significant grizzly bear habitat and grizzly bear population. 2. Maintain regionally significant wolf populations.	1.1 Maintain high productivity berry patches using controlled fire. Herbicides are not to be used in high productivity berry patch areas.	KBLUP IS: Appendix 3, Page 10
C17		Wide ranging carnivores	Priority 1 (and some Priority 2) Grizzly Bear Habitat		KBLUP IS: Chapter 3.4, Page 8-17
C17	CORE polygon 2-3	Wide ranging carnivores	Important wildlife values	<u>T1 Guideline:</u> Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information, T1 Guideline.
C17	CORE polygon 1-3, 2-4	Wide ranging carnivores	Polygon 1-3: Major movement corridor for carnivores. Supports internationally significant grizzly and wolf populations*. *see Global/Ecosystem Sectors description of polygon 1-3 values in black binder under CORE tab.	<u>T2 Guideline:</u> -Seasonal feeding and breeding habitats protected; -Conservation of seasonal feeding and breeding areas; silvicultural treatments to favour food production; -Road densities minimal and access management coordinated to avoid conflicts with habitat use. -Minimal human habitation and no sanitary landfills. -Predator control only under special circumstances. -Special grazing management to protect carnivore values.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3; 2-4 Records of Information, T2 Guideline.
C17		Wide ranging carnivores	Value: Unique community of carnivore species resides in the transboundary Flathead that appears unmatched in North America for its variety,	<ul style="list-style-type: none"> All of the carnivore species cross over the international border, making it critical that the Flathead River Basin be managed as one integral, ecological unit. 	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for</u>

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			completeness, use of valley bottom lands, and density of species which are rare elsewhere.	<ul style="list-style-type: none"> Implement the carnivore conservation principles. 	<u>Carnivores in the Rocky Mountains</u> . 2001, p36.
C17		Wide ranging carnivores	Value: habitat and prey population management. Carnivore conservation principle (1): maintain food resources with management of habitat and prey populations.	<ul style="list-style-type: none"> Maintain the shelter and forage value of mature and old-growth conifers along the Flathead River for ungulates in winter. Manage for higher levels of ungulate populations over time by setting conservative quotas for ungulate harvest, especially after harsh winters. Maintain foraging opportunities for bears in riparian sites, avalanche chutes and burned areas by providing adequate cover and security. Maintain productive habitat of dense (>5000 stems/ha), young lodgepole pine and spruce for snowshoe hare and lynx by delaying thinning or leaving un-thinned patches across the cutting unit. Retain remaining stands of old-growth spruce in the commercial forests of the transboundary Flathead as important habitat for martens. Montana's Flathead National Forest Plan specifies retention of all remaining old-growth stands (Amendment 21). British Columbia should establish similar direction for remnant stands of old-growth spruce. 	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains</u> . 2001, p39-40.
C17		Wide ranging carnivores	Value: security. Carnivore conservation principle (2): provide security from excessive mortality with networks of core reserves and other precautionary measures.	<ul style="list-style-type: none"> Provide a network of seasonal or permanent security zones throughout the transboundary Flathead basin and elsewhere in the new 'Southern Rocky Mountain Conservation Area'. Consideration of focal species' key habitats will be used to guide the strategic identification and delineation of security zones. 	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains</u> . 2001, p45.
C17	RMZ C-S05 Planning cells F120, F185, F190	Fisheries	Maintain wild fish stocks and habitat for spawning, rearing and over wintering of Bull Trout. Rebuild wild fish stocks and habitats.	Principle tributaries should be priority areas for WRP assessments/projects.	KBLUP IS: Appendix 3, Page 10
C17	CORE polygons 1-3, 2-4	Fisheries	Polygon 1-3: Bull Trout in Flathead River. Polygon 2-4: Important fisheries values especially potential spawning for Bull Trout.	<u>T2 Guideline:</u> -Minimal human-caused sedimentation. -Protection of streamside and riparian habitats; no roads in riparian without special permission, however, stream crossing normally acceptable. -Management for large organic debris.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-4(a) Records of Information, T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				-Watershed sensitivity and ECA analysis prior to development. -Protection of spawning and rearing habitat. -Reclamation and hydrologic stabilization where necessary. -Assume level one guidelines in place where level two's are applied.	
C17	CORE polygon 2-3	Fisheries		<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Maintenance of spawning and rearing habitat	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information, T1 Guideline.
C17	CORE polygon 1-1	Coal Mining	Medium and high value coal lands are located throughout LU C17 except along the west slopes of the Continental Divide. 1. Flathead coalfield <ul style="list-style-type: none"> The high value lands (exposed coal bearing strata) of the Flathead coalfield are four widely dispersed blocks. Lillyburt area* (1,090 ha) (p7), in the vicinity of Flathead townsite, is located in LU C17. Harvey Creek area is located on the boundary of LU C16, C17 and C18. Sage Creek area and Cabin Creek area are in LU C16. 2. Crowsnest coalfield <ul style="list-style-type: none"> The high value lands of the Fernie block lay along the west half of LU C17, and extend north through C19, C24 and C38. The Fernie block high value lands area is 73,333 ha (p7), which is mainly on private land. The high value lands of Corbin area (962 ha) and Tent Mountain area (1,603 ha) (p7) are located in LU C19. 	Definitions: <ul style="list-style-type: none"> High value coal lands include the area from the outcrop of the coal bearing strata to its inferred depth limit (p1). Medium value coal land is a corridor for mining related activities and infrastructure, surrounding the exposed coal bearing strata (high value coal lands) (p1). *Note: The Lillyburt area may be on Shell private land which would explain why it was not identified as high value for coal in KBLUP or CORE.	Morris, Bob. Resource Estimate: East Kootenay Coalfields, 1994. Pages 1, 4, 7; Fig. 5: E.K. Coal Fields Location Map; and Fig. 7: Coal Value Lands Map. Refer to Black Binder, Coal tab for maps.
C17	CORE polygons 1-3, 2-3, 2-4	Mining	Polygon 2-3: Integrated. Corbin (Byron Ck) coal mine in LU 19 is mostly on private land. Coal subcrop and associated infrastructure and transportation corridor located on Crown land to be designated as Dedicated. Coal leases on south slope of Tent Mtn and infrastructure and transportation corridor to be designated Dedicated.	<u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-3, 2-4 Records of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) <i>(Document, date, section and/or pages)</i>
C17	CORE polygons 1-3, 2-3, 2-4	Oil & Gas	1-3 Special Management: Recognize high value of oil and gas.		CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information
C17	CORE polygon 1-3, 2-3, 2-4	Unacceptable Uses	Settlement and General Industrial/Commercial Uses are not acceptable uses.		CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-3, 2-4 Records of Information.
C17	Flathead townsite	Private	Flathead townsite is private and should be distinguished as private on the SRMMP map.		Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C17	CORE polygon 2-2, 2-5	Private/Federal lands	Shell-Elkview-Dominion block A major block of private land. The north portion (Wheeler area) belongs to Elkview Mining; the south and east portions belong to Shell Canada. The unit includes two "Dominion" blocks owned by the federal Crown.	Recommend multi-stakeholder discussion on biodiversity issues relating to large blocks of private land.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-2, 2-5 Records of Information.
C18	Akamina Kishinena Recreation Area PAS Unit 1	1993 Best PAS Areas	Diversity: In conjunction with the two adjacent existing protected areas, there is high diversity for grizzly bear, wolves and bull trout. Viability: This unit is viable due to its adjacency to Glacier National Park and Waterton National Park. Area: 10,915.0 ha	1993 recommended Priority One area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 1.
C18	CORE polygon 1-6	Akamina Kishinena protected area	PAS Unit 1 –additional information from CORE Features: Several rare species found only here in the province of B.C.. Existing values/activities: 1. Good timber values. The lower drainage has been developed and one pass completed. 2. Several mining claims in the lower portion of the drainage. 3. High oil/gas potential.	Designation - Protected	CORE 1994 East Kootenay Land Use Plan, Polygon 1-6 Record of Information.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			4. Important area for guide outfitter. 5. Important recreational, historic, cultural, and native traditional values in the area.		
C18	CORE polygon 1-6(a)	Akamina Kishinena bottomlands	Note: Polygon 1-6(a) is the Akamina bottomlands north of present day Akamina Kishinena Provincial Park. CORE did not develop a Record of Information for polygon 1-6(a); the polygon exists on the map only.		
C18	Sage Creek PAS Unit 23	1993 Best PAS Areas	<p>PAS Value: Sage Creek is an enhancement to Akamina Creek and the Flathead River. It is internationally significant for wolves, grizzly bear and bull trout, and connects Waterton National Park to Glacier National Park via the Flathead River.</p> <p>Diversity: Provides productive riparian areas along the floodplain of Sage Creek, including old growth. Internationally significant for shared bull trout, grizzly bear and wolf populations with Montana. Also supports black bear, moose, elk, white tailed deer and cougar in a complex predator/prey relationship. The area is important internationally as a major tributary to the North Fork of the Flathead River (designated as a Wild and Scenic River in Montana). It connects to Glacier National Park and the Akamina Kishinena unit.</p> <p>Viability: This unit is viable due to its size (34,914 ha), watershed completeness, and connection to Glacier National Park.</p> <p>Naturalness in 1993: Less than 25% disturbed by roads and logging.</p>	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 23.
C18	Flathead PAS Unit 26	1993 Best PAS Areas	Area encompasses the drainage of the Flathead River north of the Canada/USA border, excluding the	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) <i>(Document, date, section and/or pages)</i>
			<p>Howell and Cabin Creek drainages.</p> <p>PAS Value: This area is internationally significant for shared bull trout, grizzly bear and wolf populations with Montana. It includes the largest contiguous stand of old growth lodgepole pine and is internationally important as the Canadian extension of the Flathead River (a designated “Wild and Scenic River” in Montana).</p> <p>Diversity: Provides productive riparian areas along the wide floodplain of the Flathead River, including the largest contiguous stands of old growth lodgepole pine. Supports black bear, moose, elk, white tailed deer and cougar in a complex predator/prey relationship. Connects to Glacier National Park.</p> <p>Viability: This unit is of sufficient size (56,134 ha), and watershed completeness to be viable, particularly in connection to Glacier National Park.</p> <p>Naturalness in 1993: Less than 25% disturbed by roads, logging and oil and gas development.</p>		<p>within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 26.</p>
C18	RMZ C-S05, C-I03	Agriculture	Grazing	Maintain foraging opportunities for wildlife with no domestic livestock tenures allocated within the unit.	KBLUP IS: Appendix 3, Page 10 and Page 21
C18	C18, C19	Agriculture	Low range value. One grazing permit for guide outfitter horses for 58 AUMs in C18 + C19	No grazing permitted except for guide outfitter horses.	Cranbrook Forest District Recreation Access Plan (DRAP), March, 2000. LU C18 +C19
C18	Flathead Range Unit	Agriculture	Flathead Range Agreement Holders: GT: David Eider - 73 AUMs GT: Harry Leuenberger - 54 AUMs	GT indicates that the Range Agreement Area matches the G/O territory. Flathead Range Unit includes LU C16, C17 and C18.	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C18	CORE polygons 1-3, 1-4	Agriculture	Grazing	Potential for increased agricultural activity. Intent is to pursue the possibility (CORE, East Kootenay Regional Table, Volume 3, Part B Management Guidelines, Agriculture Notes, AG2).	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 1-4 Records of Information.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<p>Ecosystems Sector concerned re: grazing because of internationally significant bear and wolf populations. Any expansion may result in negative impacts on carnivores and ungulates. Outdoor Recreation Non-Motorized Sector concerned re: expansion of cattle grazing in this unit, however whole heartedly supports CRMPs and the work of the EK Trench Agriculture/ Wildlife Committee. (Refer to Sector Comments with Record of Information).</p> <p><u>T1 Guideline</u>-Grazing tenures</p>	
C18		Access Management	Critical wildlife habitat and roads.	Motorized access should be reduced.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C18	RMZ C-S05	Recreation	Maintain range of recreation opportunities from roaded resource land to semi-primitive non-motorized.	<ol style="list-style-type: none"> 1. Motorized use restrictions may be required to maintain semi-primitive character. 2. Manage the Flathead river as a Backcountry River Corridor consistent with the Backcountry Recreation Guidelines (Table 1.2). Apply for non-motorized use restriction through Transport Canada. 	KBLUP IS: Appendix 3, Page 9 and Chapter 3.9, Page 54-57
C18	CORE polygon 1-3	Recreation-Commercial Tourism	<p>-Area is used by two to three guide/outfitters. Very important area for grizzly bear, wolf, white tail deer, moose and elk. Ungulate winter range.</p> <p>-River: supports Bull trout; is used for rafting; and is a 'wild and scenic' river on US side of border, and is the major source of water for Flathead Lake.</p>	<p><u>T1 Guideline:</u></p> <p>-maintain traditional use access;</p> <p>-consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact);</p> <p>-consultation on potential alternatives through resource extraction.</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information + T1 Guideline.
C18	CORE polygon 1-4	Recreation-Commercial Tourism	<p>-Part of guide/outfitter area. High wildlife values throughout.</p> <p>-Most drainages are roaded, no settlement or private land.</p> <p>-Area to east in Alberta (West Castle) has been proposed as a wildlands recreation area associated with a potential expansion of the West Castle ski area.</p>	<p><u>T1 Guideline:</u></p> <p>-maintain traditional use access;</p> <p>-consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact);</p> <p>-consultation on potential alternatives through resource extraction.</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 1-4 Record of Information + T1 Guideline.
C18	CORE polygons 1-3,	Recreation – Visuals		<p><u>T1 Guideline:</u></p> <p>Tourism-Management of high tourism value viewsapes for some</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 1-4

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) <i>(Document, date, section and/or pages)</i>
	1-4			enhanced analysis and landscape design (implying no change in timber volume). General-Smoke management guidelines; -Visual Quality Objectives guidelines apply (implying restrictions on timber volume)	Records of Information + T1 Guideline.
C18	CORE polygon 1-3	Recreation-Sense of Solitude	Sense of Solitude	<u>T1 Guideline:</u> -Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information + T1 Guideline.
C18	CORE polygon 1-4	Recreation-Sense of Solitude	Sense of solitude	<u>T2 Guideline:</u> -Local agreement preferred. -Sensitivity to Solitude experiences. -Enhanced management related to timing, seasonality, mode and distribution of mechanized access/activities, recognize existing and potential future use for tenure holders and consider mechanized recreational users.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-4 Record of Information + T2 Guideline.
C18	Sage Creek PAS Unit 23	Cultural Heritage	Regionally representative of resource extraction themes: oil, gas, mineral exploration and timber harvesting. Contains nationally significant early oil drilling site and provincially significant post-1945 mineral extraction and processing site.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 23.
C18	Flathead PAS Unit 26	Cultural Heritage	Regionally representative of oil exploration and international relations themes and contains regionally significant Flathead customs site.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 26.
C18	CORE	Cultural		<u>T2 Guideline:</u>	CORE 1994 East Kootenay Land

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	polygon 1-3, 1-4	Heritage		<p>Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required.</p> <p>Access: Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas.</p> <p>Facilities: Restrictions on construction of facilities within contextual areas. In sensitive areas, no development permitted. Temporary site protection may be required. Preservation and reuse of related heritage sites may be permitted under controlled conditions.</p> <p>Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted.</p> <p>Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).</p>	Use Plan, Polygon 1-3, 1-4 Records of Information + T2 Guideline.
C18	F255	Watershed	Class 2 domestic watershed		KBLUP IS: Chapter 3.7, Pages 30-52
C18	Flathead River drainage	Biodiversity – Rare and Endangered Species	Mottled Sculpin – Blue listed (vulnerable) Habitat: a wide range of stream sizes with cool and clear water. They are also found in montane lakes with, in some cases, warmer water as high as 20 degrees celsius. Distribution: Flathead River drainage. It is suggested that the population found in the Flathead River would be the only true population of Mottled Sculpin in B.C.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 2.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C18	Akamina Pass	Biodiversity – Rare and Endangered Species	Least Chipmunk- – Blue listed (vulnerable) Habitat: Alpine and sub alpine. Distribution: Akamina Pass and Elkford area.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 10.
C18	Continental Divide area from U.S. border to Tombstone Mountain	Biodiversity – Rare and Endangered Species	Red Tailed Chipmunk - Red listed (threatened or endangered) Habitat: Coniferous forests near openings where shrubs are abundant. Distribution: known only from the southeast corner of the Cranbrook Forest District.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 10.
C18		Biodiversity – Rare and Endangered Species	Southern Red Backed Vole - Blue listed (vulnerable) Habitat: Cool, moist, older forests. Distribution: In B.C. recorded only from the southeast corner of Cranbrook Forest District.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 11.
C18		Biodiversity – Rare and Endangered Species	Fisher - Blue listed (vulnerable) Habitat: dense, late seral coniferous or mixed wood. Distribution: may currently occupy the southeast corner of B.C. in low densities, and at high elevation. Historical range includes the west and southeast portions of the Cranbrook Forest District.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 11.
C18		Biodiversity – Rare and Endangered Species	Badger (Taxidea taxus) - Red listed (threatened or endangered) Habitat: non-forest and open Douglas-fir. Distribution: occur in the southern half of the Cranbrook Forest District, in the Kootenay River Drainage and in the Elk Valley.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 12.
C18		Biodiversity – Rare and Endangered Species	Large-flowered Brickellia- Red listed (threatened or endangered) Habitat: Eroded slopes and rocky banks. Montane. Distribution: Rare in S.E. B.C.. Known only from Flathead Valley.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 17.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C18		Biodiversity – Rare and Endangered Species	Least Bladder Milk-vetch- Red listed (threatened or endangered) Habitat: Dry sites in steppe vegetation and lower montane zones. Distribution: Known only from a few collections in extreme S.E. B.C.. Some U.S. occurrence.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 17.
C18		Biodiversity – Rare and Endangered Species	Howell’s Quillwort- Red listed (threatened or endangered) Habitat: Submerged aquatic plant growing in clear nutrient poor lakes and ponds. Distribution: Limited in S.E. B.C. near Waterton Park.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 21.
C18	RMZ C-S05	Biodiversity - General	<ol style="list-style-type: none"> 1. Maintain regional connectivity corridor to ensure the north-south connection between the Elk valley into the U.S. to contribute to ecosystem representation (BRR-MSdk), to serve as habitat linkage for the seasonal migration of grizzly bears, wolves, ungulates and rare and endangered species and to support the Akamina-Kishinena Provincial Park. 2. Ensure habitat requirements for red and blue listed and regionally significant species are achieved. 	<p>1.1 Apply the connectivity guidelines within the regional connectivity corridor as indicated in Ch. 3.3.</p> <p>2.1 Designate Rocky Mountain red tailde frog, least chipmunk, southern red backed vole and the tailed frog as identified wildlife under the FPC.</p> <p>2.2 The rare plant communities in the Proctor Lake area should be designated as a Sensitive Area under the FPC.</p>	KBLUP IS: Appendix 3, Page 9
C18	CORE polygon 1-3	Biodiversity - General	<ul style="list-style-type: none"> -Land use designation: Special Management. -Part of the Border Ranges and Crown of the Continent Ecosections. -Flathead river valley and riparian zone running north-south. No permanent human occupation. A major movement corridor for carnivores and supports a large grizzly population. Bull trout and wolf populations are management concerns. -Priority area for Total Resource Plan -Priority for gov’t to give immediate consideration to wide ranging carnivores, ungulate winter range, 	<p><u>T2 Guideline:</u></p> <ul style="list-style-type: none"> -Enhanced FENs; riparian protection; wide corridors; significant OG protection; -Landscape habitat mosaic is diverse in stand, age classes, types, structures and composition. -Rare and unique habitats and species protected. -Providing habitat for regional inter-protected area linkage corridors and buffers is a part of management objectives for area. -Minimize expansion of settlement or industrial/commercial use -Restoration/rehabilitation of disturbed sites 	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information + T2 Guideline.

**Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002**

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			fisheries and general biodiversity.		
C18	RMZ C-I03	Biodiversity - General	1. Maintain regional connectivity corridor along the continental divide and between the Flathead watershed and Waterton and Glacier National Parks to contribute to ecosystem representation (Brr-MSdk). 2. Maintain integrity of alpine environments.	1.1 Apply the connectivity guidelines within the regional connectivity corridor as indicated in Ch. 3.3. 2.1 Address alpine habitat through access management, as required, in conformance with the Access Management Guidelines, Ch. 3.12	KBLUP IS: Appendix 3, Page 21
C18	CORE polygon 1-4	Biodiversity - General	-Land use designation: Integrated. Medium biodiversity emphasis. -Part of the Crown of the Continent Ecosection. -Drainages run down from Continental Divide. -High wildlife values throughout.	<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	CORE 1994 East Kootenay Land Use Plan, Polygon 1-4 Record of Information + T1 Guideline.
C18		Biodiversity-Emphasis	Medium Biodiversity Emphasis		KBLUP IS: Ch. 3.2, Page 3-6 Appendix 3 – Appendix C
C18		Biodiversity-Old Growth	All or portion of LU is important for regional connectivity.		KBLUP IS: Ch. 3.3, Page 6-8
C18	No Name Creek	Biodiversity – Old Growth	No Name Creek Old Growth Management Area	No Name Creek Old Growth Management Area to remain intact until OGMA's for the LU are established. These stands should be a part of the OGMA for the LU.	MOU between MOF and MOE re: Instructions for Preparation of 1998 FDP's, Page 2
C18	CORE polygon 1-3	Biodiversity – Old Growth		<u>T1 Guideline:</u> FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information + T1 Guideline.
C18	CORE polygon 1-4	Biodiversity-Old Growth	Remnant old growth. Important to manage remaining old growth for thermal cover, snow interception, and fur bearer habitat.	<u>T1 Guideline:</u> FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-4 Record of Information + T1 Guideline.
C18	CORE polygon 1-3, 1-4	Biodiversity – Natural grasslands	Limited to small areas of NDT5-alpine tundra and subalpine parkland	<u>T1 Guideline:</u> Weed control / Maintenance of riparian habitats / Grazing management guidelines/ Off-road vehicle control / Monitoring of range condition and trend in terms of domestic and wildlife grazers	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 1-4 Records of Information, T1 Guideline + Natural Disturbance Type mapping.
C18	Flathead Range Complex	Ungulates – Elk	Flathead Wildlife Range Complex is elk winter and spring habitat designated for Active Wildlife Management (Category 2).	Wildlife management would be given equal consideration in specific areas. A combination of the following general management and	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			<p>Biophysical Units:</p> <ul style="list-style-type: none"> Class 2 – elk, moose, goat winter winter habitat. Class 3 – all ungulate species winter habitat. Class 3 – all ungulate species summer range <p>This Range Complex is located in LU: C16 and C18; 5 known mineral licks are located in C16 and 4 known licks are located in C18 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>enhancement techniques would be actively pursued in an iterated resource management strategy:</p> <ul style="list-style-type: none"> -Logging which could benefit/complement wildlife; -Integrated silvicultural practices; -Exploration/mining reclamation; -Access planning; -Impact management activities negotiated through the Mine Development Review Process. 	<p>and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-3.</p>
C18		Ungulates	Ungulate Winter Range (XE, XWE)		KBLUP IS: Chapter 3.5, Pages 17-24
C18	RMZ C-S05	Ungulates	1. Maintain the abundance of mule and white tailed deer, elk and moose within the sustainable carrying capacity of their habitat.	<p>1.1 The mineral lick at Sage Creek should be designated as a Sensitive Area under the FPC.</p> <p>1.2 Maintain suitable summer habitat for mule and white-tailed deer within this unit through application of the biodiversity emphasis under the FPC.</p>	KBLUP IS: Appendix 3, Page 9
C18	CORE polygon 1-3	Ungulates	Very important white tailed deer, elk and moose winter range.	<p><u>T2 Guideline applies to ungulate winter range throughout LU 16:</u></p> <ul style="list-style-type: none"> -Manage for optimal mix of thermal cover, snow interception and browse production (habitat adjacency key). -Approximate mix of silvicultural systems and treatments to maintain habitats. 	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information, T2 Guideline.
C18	RMZ C-I03	Ungulates	1. Maintain the abundance of Rocky Mountain Goats, Rocky Mountain Bighorn Sheep, elk, moose and mule deer within the sustainable carrying capacity of their habitat.	<p>1.1 Maintain summer habitat and minimize wildlife displacement and habitat degradation by developing an access management plan to ensure compatible activity and uses in the area in accordance with the Access Mgmt Guidelines (Ch 3.12)</p> <p>1.2 Maintain forage opportunities for wildlife with no domestic livestock tenure allocated within the unit.</p>	KBLUP IS: Appendix 3, Page 21
C18	CORE polygon 1-4	Ungulates	Notable wildlife concerns in upper Sage Creek.	<p><u>T1 Guideline</u></p> <ul style="list-style-type: none"> -Wildlife harvesting guidelines / TSA harvesting guidelines / specific referrals on the ground. 	CORE 1994 East Kootenay Land Use Plan, Polygon 1-4 Record of Information, T1 Guideline.
C18		Wide ranging carnivores	Priority 1 Grizzly Bear Habitat		KBLUP IS: Ch 3.4, Page 8-17
C18	RMZ C-S05	Wide ranging	1. Maintain the regionally significant grizzly bear	1.1 Maintain high productivity berry patches by:	KBLUP IS: Appendix 3, Page 10

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
		carnivores	<p>habitat to retain the existing grizzly bear population.</p> <p>2. Ensure the regionally significant wolf populations are maintained or enhanced.</p>	<p>a) introducing controlled fires</p> <p>b) using no herbicides in high productivity berry patch areas.</p> <p>1.2 Complete the Flathead River Drainage Grizzly Bear Inventory Project.</p> <p>2.1 Maintain sufficient prey habitat and, therefore, adequate prey populations.</p> <p>2.2 Continue co-operative wolf management with the United States government.</p>	
C18	CORE polygon 1-3	Wide ranging carnivores	<p>A major movement corridor for carnivores. Supports internationally significant grizzly and wolf populations*.</p> <p>*see Global/Ecosystem Sectors description of polygon 1-3 values in black binder under CORE tab</p>	<p><u>T2 Guideline:</u></p> <ul style="list-style-type: none"> -Seasonal feeding and breeding habitats protected; -Conservation of seasonal feeding and breeding areas; silvicultural treatments to favour food production; -Road densities minimal and access management coordinated to avoid conflicts with habitat use. -Minimal human habitation and no sanitary landfills. -Predator control only under special circumstances. -Special grazing management to protect carnivore values. 	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3 Record of Information, T2 Guideline.
C18	CORE polygon 1-4	Wide ranging carnivores	Extremely important Grizzly Bear habitat.	<p><u>T2 Guideline:</u></p> <ul style="list-style-type: none"> -Seasonal feeding and breeding habitats protected; -Conservation of seasonal feeding and breeding areas; silvicultural treatments to favour food production; -Road densities minimal and access management coordinated to avoid conflicts with habitat use. -Minimal human habitation and no sanitary landfills. -Predator control only under special circumstances. -Special grazing management to protect carnivore values. 	CORE 1994 East Kootenay Land Use Plan, Polygon 1-4 Record of Information, T2 Guideline.
C18		Wide ranging carnivores	Value: Unique community of carnivore species resides in the transboundary Flathead that appears unmatched in North America for its variety, completeness, use of valley bottom lands, and density of species which are rare elsewhere.	<ul style="list-style-type: none"> • All of the carnivore species cross over the international border, making it critical that the Flathead River Basin be managed as one integral, ecological unit. • Implement the carnivore conservation principles. 	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains.</u> 2001, p36.
C18		Wide ranging carnivores	Value: habitat and prey population management. Carnivore conservation principle (1): maintain food resources with management of habitat and prey populations.	<ul style="list-style-type: none"> • Maintain the shelter and forage value of mature and old-growth conifers along the Flathead River for ungulates in winter. • Manage for higher levels of ungulate populations over time by setting conservative quotas for ungulate harvest, especially after 	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains.</u> 2001, p39-40.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<p>harsh winters.</p> <ul style="list-style-type: none"> Maintain foraging opportunities for bears in riparian sites, avalanche chutes and burned areas by providing adequate cover and security. Maintain productive habitat of dense (>5000 stems/ha), young lodgepole pine and spruce for snowshoe hare and lynx by delaying thinning or leaving un-thinned patches across the cutting unit. Retain remaining stands of old-growth spruce in the commercial forests of the transboundary Flathead as important habitat for martens. Montana’s Flathead National Forest Plan specifies retention of all remaining old-growth stands (Amendment 21). British Coubmia should establish similar direction for remnant stands of old-growth spruce. 	
C18	<p>All except north of Tombstone Mtn</p> <p>All</p>	Wide ranging carnivores	Value: security. Carnivore conservation principle (2): provide security from excessive mortality with networks of core reserves and other precautionary measures.	<ul style="list-style-type: none"> Provide a permanent, year-round core reserve for carnivores in the upper Flathead River in British Columbia. Core reserve to extend from the road paralleling the west side of the Flathead River eastward to the Continental Divide and from the international border north to about Tombstone Mountain (north of Middlepass Creek) (Fig. 15, p44). Core reserve would contribute significantly to vital protection provided by the adjoining Waterton Lakes National Park in Alberta and Glacier National Park in Montana. Provide a network of seasonal or permanent security zones throughout the transboundary Flathead basin and elsewhere in the new ‘Southern Rocky Mountain Conservation Area’. <p>Consideration of focal species’ key habitats will be used to guide the strategic identification and delineation of security zones (p45).</p>	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains.</u> 2001, p42-45.
C18	RMZ C-S05	Fisheries	<ol style="list-style-type: none"> Maintain wild fish stocks and habitat for spawning, rearing and overwintering Bull Trout. Rebuild wild fish stocks and habitats for Cutthroat and Bull Trout in the Flathead River. 	<ol style="list-style-type: none"> In establishing priorities for watershed assessments and for managing Bull Trout through application of the appropriate components of the FPC, consideration should be given to the principal tributaries within the unit. Restore fish habitat and identify strategies to offset impacts of resource development. Cooperate with Montana on monitoring stock status of Bull 	KBLUP IS: Appendix 3, Page 10

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				Trout. 2.3 Assess current status of fish populations and fish habitat. 2.4 Review current management strategies.	
C18	CORE polygon 1-3, 1-4	Fisheries	Flathead river supports bull trout, cutthroat trout and whitefish.	T2 Guideline: -Minimal human-caused sedimentation. -Protection of streamside and riparian habitats; no roads in riparian without special permission, however, stream crossing normally acceptable. -Management for large organic debris. -Watershed sensitivity and ECA analysis prior to development. -Protection of spawning and rearing habitat. -Reclamation and hydrologic stabilization where necessary. -Assume level one guidelines in place where level two's are applied.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 1-4 Records of Information, T2 Guideline.
C18	CORE polygon 1-1	Coal Mining	Flathead coalfield <ul style="list-style-type: none"> Medium value coal lands are located throughout west side of LU C18. The area not included in the coal lands is the area from the International border intersection with Starvation Creek, east to the Continental Divide; and the west slopes of the Continental Divide from the International border north to Hollebeke Mtn (in LU C17). The high value lands (exposed coal bearing strata) of the Flathead coalfield are four widely dispersed blocks including: Sage Creek area (1,154 ha) and Cabin Creek area (577 ha) located in LU C16, and Harvey Creek area (962 ha) located on the boundary of LU C16 and C18. Lillyburt area (1,090 ha), in the vicinity of Flathead townsite, is located in LU C17 (p7). 	Definitions: <ul style="list-style-type: none"> High value coal lands include the area from the outcrop of the coal bearing strata to its inferred depth limit (p1). Medium value coal land is a corridor for mining related activities and infrastructure, surrounding the exposed coal bearing strata (high value coal lands) (p1). 	Morris, Bob. Resource Estimate: East Kootenay Coalfields, 1994. Pages 1, 4, 7; Fig. 5: E.K. Coal Fields Location Map; and Fig. 7: Coal Value Lands Map. Refer to Black Binder, Coal tab for maps.
C18	CORE polygons 1-3, 1-4	Mining	Several mining claims in lower portion of Akamina drainage. Harvey Creek coal deposits in LU 16 identified as KBLUP Coal ERDZ- C-E04 and CORE polygon 1-11.	Mining activities will maintain a 1km buffer from the Flathead River. T1 Guideline: Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 1-4 Records of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				Resources Act / other related regulations and guidelines	
C18	CORE polygon 1-3, 1-4	Oil and Gas	High oil and gas potential throughout. Akamina Kishinena Prov. Pk-northeast boundary modified to remove existing oil and gas tenure. Boundary will be moved back if tenure lapses.		CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 1-4 Records of Information.
C18	CORE polygon 1-3, 1-4	Unacceptable Uses	Settlement and General Industrial/Commercial Uses are not acceptable uses.		CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 1-4 Records of Information.
C18-Adja cent	Alberta: Waterton Lakes National Park	Recreation-Commercial Tourism	Wildlife habitat. Concerned regarding commercial recreation llama trekking proposal and implications for indigenous wildlife.	National Parks do not permit llama use on the basis of scientific research by Dr. Stacey Tessarro, Federal Agriculture Center.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C19	RMZ C-I04	Agriculture	Grazing	Maintain foraging opportunities for wildlife with no domestic livestock tenures allocated within the unit.	KBLUP IS: Appendix 3, Page 22
C19		Agriculture	Low range value. One grazing permit for guide outfitter horses which overlaps with LU C18. 58 AUMs for LU C18 & C19.	No grazing permitted except for guide outfitter horses.	Cranbrook Forest District Recreation Access Plan (DRAP), March, 2000. LU C19.
C19	Corbin and Fernie Range Units	Agriculture	No range agreement holders in Corbin Range Unit. No guide outfitter range agreement holders in the Fernie Range Unit	Corbin Range Unit is exclusively in LU C19. Fernie Range Unit includes most of LU C24 & C19.	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C19	CORE polygons 2-3, 2-4	Agriculture	Grazing	<p>Potential for increased agricultural activity. Intent is to pursue the possibility (CORE, East Kootenay Regional Table, Volume 3, Part B Management Guidelines, Agriculture Notes, AG2).</p> <p>Outdoor Recreation Non-Motorized Sector concerned re: expansion of cattle grazing in this unit, however whole heartedly supports CRMPs and the work of the EK Trench Agriculture/ Wildlife Committee. (Refer to Sector Comments with Record of Information).</p> <p><u>T1 Guideline-Grazing tenures</u></p>	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3, 2-4 Records of Information.
C19	RMZ C-I04	Recreation	1. Maintain a range of recreation opportunities from roaded resource land to semi-primitive non-motorized	<p>1.1 Manage Ptolemy Plateau for semi primitive non-motorized recreation.</p> <p>1.2 Recommend Ptolemy Plateau be designated a Sensitive Area under the FPC.</p>	KBLUP IS: Appendix 3, Page 22

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			2. Maintain non-commercial public opportunities for backcountry recreation in the Ptolemy Plateau area.	1.3 Develop and implement a management plan for Ptolemy Plateau in cooperation with the Alberta Forest Service. 2.1 Ensure that CBR applications maintain or enhance non-commercial backcountry recreation opportunities.	
C19		Recreation		Backcountry recreation management as per ROS system	KBLUP IS: Chapter 3.9, Page 54-57
C19	CORE polygon 2-3	Recreation-Commercial Tourism	Andy Good plateau: important cave complex requiring special management.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information + T1 Guideline.
C19	CORE polygon 2-4	Recreation-Commercial Tourism	Important area for outfitter.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-4 Record of Information + T1 Guideline.
C19	E510, E520, E525	Recreation-Visuals	Class 1 Scenic Corridors		KBLUP IS: Chapter 3.8, Pages 52-54
C19	CORE polygon 2-3, 2-4	Recreation-Visuals-tourism + general		<u>T1 Guideline:</u> -Management of high tourism value viewsapes for some enhanced analysis and landscape design (implying no change in timber volume). -Smoke management guidelines -Visual Quality Objectives guidelines apply (implying restrictions on timber volume)	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-3, 2-4 Records of Information + T1 Guideline.
C19	CORE polygon 2-3	Recreation-Sense of Solitude	Andy Good plateau cave complex requires special management.	<u>T1 Guideline:</u> -Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.	CORE 1994 East Kootenay Land Use Plan, Polygon 1-3, 2-3 Records of Information + T1 Guideline.
C19	CORE polygon 2-4	Recreation-Sense of Solitude	Last unroaded portion of the Flathead system. Rugged landscape; breathtaking views; alpine meadows. Undisturbed wilderness. Summer/fall use	<u>T2 Guideline:</u> -Local agreement preferred. -Sensitivity to Solitude experiences.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-4 Record of Information + T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			for hunting and hiking. (Refer to Black binder, CORE tab, Polygon 2-4, Sector Comments)	-Enhanced management related to timing, seasonality, mode and distribution of mechanized access/activities, recognize existing and potential future use for tenure holders and consider mechanized recreational users.	
C19	CORE polygon 2-4	Cultural Heritage		<u>T2 Guideline:</u> Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required. Access: Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas. Facilities: Restrictions on construction of facilities within contextual areas. In sensitive areas, no development permitted. Temporary site protection may be required. Preservation and reuse of related heritage sites may be permitted under controlled conditions. Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted. Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).	CORE 1994 East Kootenay Land Use Plan, Polygon 2-4 Record of Information + T1 Guideline.
C19	CORE polygon 2-3	Cultural Heritage		<u>T1 Guideline:</u> Planning: ID cultural heritage resource (see FPC); Development without preparation of cultural heritage impact assessment. Access: restrictions unlikely.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				Directional signage to cultural/heritage sites permitted. Signage re: visitor behaviour and to ID site as significant cultural/heritage feature desired. Land trades possible to create access across private lands. Facilities: Major construction permitted at cultural heritage resource sites. Buffering not required. Adaptive reuse of appropriate heritage structures without restriction. Activities: restrictions unlikely. Resource extraction or harvesting unlikely to be restricted for cultural heritage values. Environmental protection opportunities for special exemption from mining reclamation.	
C19	E490	Watershed	Class 1 Domestic Watershed		KBLUP IS: Chapter 3.7, Page 30-52
C19		Biodiversity – Rare and Endangered Species	Fisher - Blue listed (vulnerable) Habitat: dense, late seral coniferous or mixed wood. Distribution: may currently occupy the southeast corner of B.C. in low densities, and at high elevation. Historical range includes the west and southeast portions of the Cranbrook Forest District.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 11.
C19		Biodiversity – Rare and Endangered Species	Badger (Taxidea taxus) - Red listed (threatened or endangered) Habitat: non-forest and open Douglas-fir. Distribution: occur in the southern half of the Cranbrook Forest District, in the Kootenay River Drainage and in the Elk Valley.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 12.
C19		Biodiversity Emphasis	Low Biodiversity Emphasis.		KBLUP IS: Chapter 3.2, Page 3-6; Appendix 3 - Appendix C
C19	RMZ C-I04	Biodiversity - General	1. Retain forest and rangeland ecological elements and processes at a moderate risk. 2. Retain attributes for old growth dependent species and fur bearers. 3. Ensure habitat requirements for red and blue listed species are achieved.	3.1 Tailed Frog should be designated as an identified wildlife species under the FPC.	KBLUP IS: Appendix 3, Page 22
C19	CORE polygon 2-3	Biodiversity - General	Designated land use: Integrated.	<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	Information + T1 Guideline.
C19		Biodiversity – Connectivity	All or a portion of LU is important for regional connectivity.		KBLUP IS: Chapter 3.3, Page 6-8
C19	CORE polygon 2-4	Biodiversity - General	1. Land use designation not agreed on. Proposed Protected/Special/Integrated/Dedicated. Very high multi-sector values. 2. Part of the Border Ranges Ecosection. 3. 2-4 is the only low elevation area in the drainage that is unroaded. 4. Extensive riparian areas along the river with meadows along the Flathead River and portions of McEvoy Creek.	<u>T2 Guideline:</u> -Enhanced FENs; riparian protection; wide corridors; significant OG protection; -Landscape habitat mosaic is diverse in stand, age classes, types, structures and composition. -Rare and unique habitats and species protected. -Providing habitat for regional inter-protected area linkage corridors and buffers is a part of management objectives for area. -Minimize expansion of settlement or industrial/commercial use -Restoration/rehabilitation of disturbed sites	CORE 1994 East Kootenay Land Use Plan, Polygon 2-4 Records of Information + T2 Guideline.
C19	CORE polygon 2-4	Biodiversity-Old Growth	Remnant stands	<u>T1 Guideline:</u> FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-4 Records of Information + T1 Guideline.
C19	CORE polygon 2-3	Biodiversity-Old Growth		<u>T2 Guideline:</u> Significant retention of old growth across the landscape. FEN's with major old growth component. Corridors and riparian dominantly old growth. Wide corridors.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information + T2 Guideline.
C19	CORE polygon 2-3, 2-4	Biodiversity – Natural grasslands	Limited to small areas of NDT5-alpine tundra and subalpine parkland	<u>T1 Guideline:</u> Weed control / Maintenance of riparian habitats / Grazing management guidelines/ Off-road vehicle control / Monitoring of range condition and trend in terms of domestic and wildlife grazers	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3, 2-4 Records of Information, T1 Guideline + Natural Disturbance Type mapping.
C19	Natal/Michel/Leach Wildlife Range Complex	Ungulates – Elk	Natal/Michel/Leach Wildlife Range Complex is critical elk winter and spring habitat, designated for Intensive Wildlife Management (Category 1). Biophysical Units: <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. 	Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas: -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing;	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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			This Range Complex is located in LU: C19, C20, C38; C19 contains 3 known mineral licks (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).	-Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted).	
C19	RMZ C-I04	Ungulates	1. Maintain abundance of elk, mule deer, Rocky Mountain Goats and Rocky Mountain Big Horn Sheep by maintaining foraging opportunities for wildlife.	1.1 No domestic livestock tenures to be issued within the unit.	KBLUP IS: Appendix 3, Page 22
C19		Ungulates	Ungulate winter ranges (EX)		KBLUP IS: Chapter 3.5, Page 17-24
C19	CORE polygon 2-3, 2-4	Ungulates		<u>T1 Guideline applies to ungulate winter range throughout the unit:</u> Wildlife harvesting guidelines; TSA harvesting guidelines; Specific referrals on the ground.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3, 2-4 Record of Information, T1 Guideline.
C19		Wide ranging carnivores	Priority 2 Grizzly Bear Habitat		KBLUP IS: Chapter 3.4, Page 8-17
C19	CORE polygon 2-3	Wide ranging carnivores	Important wildlife values	<u>T1 Guideline:</u> Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information, T1 Guideline.
C19	CORE polygon 2-4	Wide ranging carnivores		<u>T2 Guideline:</u> -Seasonal feeding and breeding habitats protected; -Conservation of seasonal feeding and breeding areas; silvicultural treatments to favour food production; -Road densities minimal and access management coordinated to avoid conflicts with habitat use. -Minimal human habitation and no sanitary landfills. -Predator control only under special circumstances. -Special grazing management to protect carnivore values.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-4 Records of Information, T2 Guideline.
C19	CORE polygon 2-3	Fisheries		<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Maintenance of spawning and rearing habitat	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3 Record of Information, T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C19	CORE polygon 1-1	Coal Mining	<p>Crowsnest coalfield</p> <ul style="list-style-type: none"> Medium and high value coal lands are located throughout LU C19 except for a narrow band along the west slopes of the Continental Divide. The high value, exposed coal bearing lands of the Crowsnest coalfield include three areas: Fernie block (73,333 ha) located in LU C17, C19, C24, C38; Corbin area (962 ha) located in C19; and Tent Mountain area (1,603 ha) (p7) located in C19 on private land. The high value lands of the Fernie block lay along the west half of LU C19. The area of the entire Fernie block high value lands is 73,333 ha (p7), which is mainly on private land. 	<p>Definitions:</p> <ul style="list-style-type: none"> High value coal lands include the area from the outcrop of the coal bearing strata to its inferred depth limit (p1). Medium value coal land is a corridor for mining related activities and infrastructure, surrounding the exposed coal bearing strata (high value coal lands) (p1). 	<p>Morris, Bob. Resource Estimate: East Kootenay Coalfields, 1994. Pages 1, 4, 7; Fig. 5: E.K. Coal Fields Location Map; and Fig. 7: Coal Value Lands Map.</p> <p>Refer to Black Binder, Coal tab for maps.</p>
C19	CORE polygons 2-3, 2-4	Coal Mining	Polygon 2-3: Integrated. Corbin (Byron Creek) coal mine in LU 19 is mostly on private land. Coal subcrop and associated infrastructure and transportation corridor located on Crown land to be designated as Dedicated. Coal leases on south slope of Tent Mountain and infrastructure and transportation corridor, to be designated Dedicated.	<p><u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 2-3, 2-4 Records of Information + T1 Guideline.
C19	RMZ C-E02	Coal Mining	CPR block south of Hosmer. Block of Provincial land surrounded by private Shell lands.	<p>Priority management emphasis is on the coal resources and their exploration, development and production.</p> <p>Guidelines for Coal ERDZ are only provided for C-E01 (Fording area: LU C20, 21, 22, 23, 38). Specific guidelines were not been developed for C-E02 to C-E04.</p>	KBLUP IS: Ch 3.14, Pages 78-79
C19	CORE polygon 2-9 (RMZ C-E02)	Coal Mining	CPR block.	<p>Values requiring enhanced management (T2 guidelines) include: Wide ranging carnivores; Fisheries; Biodiversity; Sense of Solitude and Heritage/Culture.</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 2-9 Record of Information.
C19	RMZ C-E03	Coal Mining	Corbin	<p>Priority management emphasis is on the coal resources and their exploration, development and production.</p> <p>Guidelines for Coal ERDZ are only provided for C-E01 (Fording area: LU C20, 21, 22, 23, 38). Specific guidelines have not been</p>	KBLUP IS: Ch 3.14, Pages 78-79

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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				developed for C-E02 to C-E04.	
C19	CORE polygon 2-6 (RMZ C-E03)	Coal Mining	CORE- No Record of Information providing management guidelines for this polygon.		CORE 1994 East Kootenay Land Use Plan, Polygon 2-6
C19	CORE polygon 2-2	Private/Feder al lands	Shell-Elkview-Dominion block A major block of private land. The north portion (Wheeler area) belongs to Elkview Mining; the south and east portions belong to Shell Canada. The unit includes two “Dominion” blocks owned by the federal Crown.	Recommend multi-stakeholder discussion on biodiversity issues relating to large blocks of private land.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-2, 2-5 Records of Information.
C19	CORE polygon 2-3, 2-4	Unacceptable Uses	Settlement and General Industrial/Commercial Uses are not acceptable uses.		CORE 1994 East Kootenay Land Use Plan, Polygon 2-3, 2-4 Records of Information.
C20	Fording Divide PAS Unit 53	1993 Best PAS Areas	Adjacent to the continental divide, extending south of Elk Lakes Provincial Park to the headwaters of Line Creek. PAS Value: The Fording Divide is an enhancement to Elk Lakes Provincial Park, Elk Lake Recreation Area and Height of the Rockies Wilderness Area. It connects habitat for nationally significant populations of bighorn sheep, mountain goat and grizzly bear to Kananaskis Country. Diversity: This unit connects to Height of the Rockies W.A. via Elk Lakes Provincial Park and Kananaskis Country. It provides alpine grassland/high elevation bighorn sheep winter range, and is nationally significant for bighorn sheep and mountain goat populations shared with Alberta. It encompasses riparian values and as the headwaters of the Elk River, is significant in the ecosection for bull and cutthroat and whitefish. It provides important grizzly bear habitat, including rutting areas. Viability: This unit is of sufficient size to be viable	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 53.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) <i>(Document, date, section and/or pages)</i>
			(49,044 ha), but because of its long, narrow shape, it should be considered as an addition to other protected areas. Naturalness in 1993: Less than 25% disturbed by roads and logging.		
C20		Agriculture	Moderate range values. Range agreements: One cattle grazing license and one grazing permit in LU C20 & C24. 400 AUMs attributable to LU C20		Cranbrook Forest District Recreation Access Plan. March, 2000. LU C20.
C20	Upper Elk and Alexander Creek Range Units	Agriculture	Upper Elk Range Agreement Holders: GT: Fontana Bighorn Outfitters- 184 AUMs GT: Nancy Davidson- 72 AUMs GT: Gino Busato 33 AUMs Alexander Creek Range Agreement Holders: Bryant- 303 AUMs	GT indicates that the Range Agreement Area matches the Guide Outfitting Territory. Upper Elk Range Unit includes LU C20 (part), C21, C22 (except Ht of the Rockies W.A., C23, C38. Alexander Creek Range Unit is fully within LU C20.	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C20	CORE polygon 3-2, 3-8	Agriculture		Outdoor Recreation non-motorized sector expresses concern with regard to expansion of cattle grazing in this unit, however whole heartedly supports CRMP's and the work of the EK Trench Agriculture/Wildlife Committee. (Refer to Sector Comments, Polygon 2-1 Record of Information). <u>T1 Guideline</u> -Grazing tenures	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2, 3-8 Records of Information + T1 Guideline.
C20	Fording Divide PAS Unit 53	Cultural Heritage	Regional to national significance for representation of pre-economic activities and native system. Contains lithic scatter sites with subsurface deposits.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 53.
C20		Biodiversity – Rare and Endangered	Badger (Taxidea taxus) - Red listed (threatened or endangered) Habitat: non-forest and open Douglas-fir.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
		Species	Distribution: occur in the southern half of the Cranbrook Forest District, in the Kootenay River Drainage and in the Elk Valley.		the Southern Rocky Mountain Management Plan Area. March, 2002. Page 12.
C20	Natal/Michel/Leach Wildlife Range Complex	Ungulates – Elk	<p>Natal/Michel/Leach Wildlife Range Complex is critical elk winter and spring habitat, designated for Intensive Wildlife Management (Category 1).</p> <p>Biophysical Units:</p> <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. <p>This Range Complex is located in LU: C19, C20, C38; C19 contains 3 known mineral licks (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas:</p> <ul style="list-style-type: none"> -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted). 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.
C20	East Side Wildlife Range Complex	Ungulates – Bighorn Sheep and Elk	<p>East Side Wildlife Range Complex is critical elk and bighorn sheep winter and spring habitat, designated for Intensive Wildlife Management (Category 1).</p> <p>Biophysical Units:</p> <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. <p>This Range Complex is located in LU: C20 and C21 and includes Sheep Mtn, Ewin, Todhunter, Chauncey, Eagle, Turnbull and Henretta; C21 contains 1 known mineral lick (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas:</p> <ul style="list-style-type: none"> -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted). 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C20			LU C20-22, 28 & 38 (SRMMP resource evaluation area) entry in this spreadsheet is not complete		
C21	Fording Divide PAS Unit 53	1993 Best PAS Areas	<p>Adjacent to the continental divide, extending south of Elk Lakes Provincial Park to the headwaters of Line Creek.</p> <p>PAS Value: The Fording Divide is an enhancement to Elk Lakes Provincial Park, Elk Lake Recreation Area and Height of the Rockies Wilderness Area. It connects habitat for nationally significant populations of bighorn sheep, mountain goat and grizzly bear to Kananaskis Country.</p> <p>Diversity: This unit connects to Height of the Rockies W.A. via Elk Lakes Provincial Park and Kananaskis Country. It provides alpine grassland/high elevation bighorn sheep winter range, and is nationally significant for bighorn sheep and mountain goat populations shared with Alberta. It encompasses riparian values and as the headwaters of the Elk River, is significant in the ecosection for bull and cutthroat and whitefish. It provides important grizzly bear habitat, including rutting areas.</p> <p>Viability: This unit is of sufficient size to be viable (49,044 ha), but because of its long, narrow shape, it should be considered as an addition to other protected areas.</p> <p>Naturalness in 1993: Less than 25% disturbed by roads and logging.</p>	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 53.
C21	Fording Divide PAS Unit 53	Cultural Heritage	Regional to national significance for representation of pre-economic activities and native system. Contains lithic scatter sites with subsurface deposits.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
					Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 53.
C21	Elkford east to Continental Divide	Biodiversity – Rare and Endangered Species	Least Chipmunk- – Blue listed (vulnerable) Habitat: Alpine and sub alpine. Distribution: Akamina Pass and Elkford area.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 10.
C21	East Side Wildlife Range Complex	Ungulates – Bighorn Sheep and Elk	<p>East Side Wildlife Range Complex is critical elk and bighorn sheep winter and spring habitat, designated for Intensive Wildlife Management (Category 1). Biophysical Units:</p> <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. <p>This Range Complex is located in LU: C20 and C21 and includes Sheep Mtn, Ewin, Todhunter, Chauncey, Eagle, Turnbull and Henretta; C21 contains 1 known mineral lick (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas:</p> <ul style="list-style-type: none"> -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted). 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.
C21	Upper Elk/ Greenhills/ Fording Wildlife Range Complex	Ungulates – Elk	<p>Upper Elk/Greenhills/ Fording Wildlife Range Complex is elk winter and spring habitat designated for Active Wildlife Management (Category 2). Biophysical Units:</p> <ul style="list-style-type: none"> Class 2 – elk, moose, goat winter winter habitat. Class 3 – all ungulate species winter habitat. Class 3 – all ungulate species summer range 	<p>Wildlife management would be given equal consideration in specific areas. A combination of the following general management and enhancement techniques would be actively pursued in an interated resource management strategy:</p> <ul style="list-style-type: none"> -Logging which could benefit/complement wildlife; -Integated silvicultural practices; -Exploration/mining reclamation; -Access planning; 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-3.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			<p>This Range Complex is located in LU: C21, C22, C23 and C38; 1 known mineral lick is located in C21 and 1 known lick is located in C22 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>-Impact management activities negotiated through the Mine Development Review Process.</p>	
C22	Fording Divide PAS Unit 53	1993 Best PAS Areas	<p>Adjacent to the continental divide, extending south of Elk Lakes Provincial Park to the headwaters of Line Creek.</p> <p>PAS Value: The Fording Divide is an enhancement to Elk Lakes Provincial Park, Elk Lake Recreation Area and Height of the Rockies Wilderness Area. It connects habitat for nationally significant populations of bighorn sheep, mountain goat and grizzly bear to Kananaskis Country.</p> <p>Diversity: This unit connects to Height of the Rockies W.A. via Elk Lakes Provincial Park and Kananaskis Country. It provides alpine grassland/high elevation bighorn sheep winter range, and is nationally significant for bighorn sheep and mountain goat populations shared with Alberta. It encompasses riparian values and as the headwaters of the Elk River, is significant in the ecosection for bull and cutthroat and whitefish. It provides important grizzly bear habitat, including rutting areas.</p> <p>Viability: This unit is of sufficient size to be viable (49,044 ha), but because of its long, narrow shape, it should be considered as an addition to other protected areas.</p> <p>Naturalness in 1993: Less than 25% disturbed by roads and logging.</p>	<p>1993 recommended Priority Two area for protection.</p>	<p>Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 53.</p>

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C22	Fording Divide PAS Unit 53	Cultural Heritage	Regional to national significance for representation of pre-economic activities and native system. Contains lithic scatter sites with subsurface deposits.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 53.
C22	West Side Wildlife Range Complex	Ungulates – Bighorn Sheep	<p>West Side Wildlife Range Complex is critical bighorn sheep winter and spring habitat, designated for Intensive Wildlife Management (Category 1). Biophysical Units:</p> <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. <p>This Range Complex is located in LU: C22 and C23 and includes Quarry, Forsyth, Crossing, Boivin and Brule; C22 contains 1 known mineral lick (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas:</p> <ul style="list-style-type: none"> -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted). 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.
C22	Upper Elk/ Greenhills/ Fording Wildlife Range Complex	Ungulates – Elk	<p>Upper Elk/Greenhills/ Fording Wildlife Range Complex is elk winter and spring habitat designated for Active Wildlife Management (Category 2). Biophysical Units:</p> <ul style="list-style-type: none"> Class 2 – elk, moose, goat winter winter habitat. Class 3 – all ungulate species winter habitat. Class 3 – all ungulate species summer range 	<p>Wildlife management would be given equal consideration in specific areas. A combination of the following general management and enhancement techniques would be actively pursued in an iterated resource management strategy:</p> <ul style="list-style-type: none"> -Logging which could benefit/complement wildlife; -Integated silvicultural practices; -Exploration/mining reclamation; -Access planning; -Impact management activities negotiated through the Mine 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-3.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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			This Range Complex is located in LU: C21, C22, C23 and C38; 1 known mineral lick is located in C21 and 1 known lick is located in C22 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).	Development Review Process.	
C23		Agriculture	Moderate range values: 3 grazing permits for a total 260 AUMs.		Cranbrook Forest District Recreation Access Plan. March, 2000. LU C23.
C23	Range Unit-Upper Elk (C21, C23, and part of C19, C20, C22, C38)	Agriculture	Upper Elk Range Agreement Holders: GT: Fontana Bighorn Outfitters-184 AUMs GT: Nancy Davidson- 72 AUMs GT: Gino Busato- 33 AUMs Ken Musil 124 AUMs	If marked with GT, the Range Agreement Area matches the Guide Outfitting Territory	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C23	CORE polygon 3-2, 3-3	Agriculture		Polygon 3-3 -Potential for increased agricultural activity. Intent is to pursue the possibility (CORE, East Kootenay Regional Table, Volume 3, Part B Management Guidelines, Agriculture Notes, AG2). Outdoor Recreation non-motorized sector expresses concern with regard to expansion of cattle grazing in this unit. Whole heartedly supports coordinated resource management plans. Polygon 3-2, 3-3: <u>T1 Guideline</u> -Grazing tenures	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2; 3-3 Records of Information + T1 Guideline.
C23	Cummings Creek	Access Management	District of Sparwood wants to promote recreational activity in the Wilson Creek (Cummings Creek) area to attract economic development.	Detailed planning is required to resolve motorized and non-motorized use conflicts.	Local Government Focus Group session, March 27, 2002.
C23		Access Management	Heavy industry on east side of Elk River has cumulative impacts on wildlife.	East side heavy industry should be considered when designating access on the west side of the river, and a more conservative approach in terms of wildlife, should be taken.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C23	Telford Creek Sulphur Creek	Access Management	Telford Creek to Sulphur Creek sheep habitat	Has existing high levels of motorized use which need to be addressed.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C23	RMZ C-E01: PC E195,	Access Management	In context of Coal ERDZ designation, ensure the range of objectives and strategies are integrated in	Proposals for new road development or expansions will be evaluated through either: an enhanced referral process as per Access	KBLUP IS: Appendix 3, Page 32

**Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002**

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	E210, E215		the Upper Fording area, particularly as related to access for proposed development.	Management Guidelines, Chapter 3.12; or special measures in cases requiring immediate attention due to imminent development.	
C23	RMZ C-S01	Recreation	1. Maintain recreation opportunities from roaded to semi-primitive non-motorized.	1.1 Manage access roads to MOF recreation sites and trails as roaded resource land setting (eg trailhead and recreation site at entrance to Height of the Rockies Provincial Park, and Weary Recreation Site). 1.2 Implement motorized use restrictions as required to maintain semi-primitive non-motorized character.	KBLUP IS: Appendix 3, Page 4
C23	RMZ C-E01: PC E195, E210, E215	Recreation	In context of Coal ERDZ designation, maintain recreation opportunities from roaded to semi primitive non- motorized	Manage the Elk River as a Backcountry River Corridor consistent with the Backcountry Recreation Guidelines.	KBLUP IS: Appendix 3, Page 32
C23	CORE polygon 3-2	Recreation	Polygon is defined by high value coal lands in the Upper Elk.	Recreational access, consistent with the safety and needs of the coal operations, will continue to be provided.	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2 Record of Information.
C23		Recreation	Backcountry Recreation Management as per ROS.		KBLUP IS: Ch. 3.9, Page 54-57
C23	CORE polygon 3-2; 3-3	Recreation- Commercial Tourism	High recreational value for wilderness and hunting interests in the Elk Valley. Possibility of highway 43 going through to Alberta in lower elevation at south end.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2; 3-3 Records of Information + T1 Guideline.
C23	PC E065	Recreation- Visuals	Class 1 Scenic Corridor		KBLUP IS: Ch. 3.8, Page 52-54
C23	RMZ C-S01	Recreation- Visuals	Class 3 Scenic Corridor		KBLUP IS: Ch. 3.8, Page 52-54
C23	CORE polygon 3-2; 3-3	Recreation- Visuals	Higher alpine areas; highway corridor	<u>T1 Guideline:</u> Tourism visuals-management of high tourism value viewsapes for some enhanced analysis and landscape design (implying no change in timber volume). General visuals-smoke management guidelines; -Visual Quality Objectives guidelines apply (implying restrictions on timber volume)	CORE 1994 East Kootenay Land Use Plan, Polygon 3-3 Records of Information + T1 Guideline.
C23	CORE polygon 3-2; 3-3	Recreation – Sense of Solitude	Polygon 3-3: Mt. Washburn extremely high karst-potential wilderness area; Horniday proposal; Area also proposed for wilderness status by local fish and wildlife group.	<u>T1 Guideline:</u> -Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2; 3-3 Records of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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C23	CORE polygon 3-2; 3-3	Cultural Heritage		<p><u>T2 Guideline:</u> Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required.</p> <p>Access: Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas.</p> <p>Facilities: Restrictions on construction of facilities within contextual areas. In sensitive areas, no development permitted. Temporary site protection may be required. Preservation and reuse of related heritage sites may be permitted under controlled conditions.</p> <p>Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted.</p> <p>Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2; 3-3 Records of Information + T2 Guideline.
C23	PC E105	Watershed	Class 1 Domestic Watershed		KBLUP IS: Ch. 3.7, Page 30-52
C23	PC: E175, E130, E105, E100, E095	Watershed	Class 1 Domestic Watershed		KBLUP IS: Ch. 3.7, Page 30-52
C23	PC: E160, E165, E170, E065, E070, E075, E080, E085, E090	Watershed	Elkford (Boivan Creek), Sparwood (Cummings Creek) Community Watersheds		KBLUP IS: Ch. 3.7, Page 30-52
C23		Biodiversity	High Biodiversity Emphasis		KBLUP IS: Ch. 3.2, Page 3-6

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

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		Emphasis			Appendix 3 - Appendix C
C23	RMZ C-S01	Biodiversity-General	1. Maintain regional connectivity between the Wigwam, Elk and Bull watersheds to the Height of the Rockies Provincial Park and Mount Assiniboine and Kootenay National Parks. 2. Retain attributes for old growth dependent species and fur bearers. 3. Maintain sufficient alpine habitat to sustain Ptarmigan at or above the current population levels.	1.1 Apply connectivity guidelines within the regional connectivity corridor as indicated in Ch 3.3. 2.1 Priority areas for OGMA establishment include the unit. 3.1 Address Ptarmigan habitat requirements through access management planning (consistent with Access Management Guidelines, Chapter 3.2.)	KBLUP IS: Appendix 3, Page 4
C23	Forsyth Creek	Biodiversity - Connectivity	Forsyth Creek corridor to Height of the Rockies is a bottleneck.	Connectivity northward requires LU C22 inclusion in the plan.	
C23		Biodiversity-Connectivity	All or portion of unit is important for connectivity.		KBLUP IS: Ch. 3.3, Page 6-8
C23	CORE polygon 3-3	Biodiversity – General	Part of the Border Ranges ecosection. Important wildlife habitat and travel corridors. Important link to Height of the Rockies – Elk Lakes system and each increases the other's long term viability. Unit sits between extensive coal development to east and intensive logging in Bull and White river drainages to the west. Special management designation is important for retaining integrity of inherent natural values, and mitigating impacts of surrounding industrial development (refer to CORE tab in black binder, Polygon 3-3 Sector Comments).	Note: Ecosystem Sector indicates this unit has strong overlap of all protected area criteria (values consist of high recreational; high cultural/heritage; high conservation). Special Management Designation is relative to connectivity requirements with adjacent units. Propose T2 for biodiversity. (Record of Information). <u>T1 Guideline however specified in unit Record of Information, Management Guidelines:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	CORE 1994 East Kootenay Land Use Plan, Polygon 3-3 Record of Information + T1 Guideline.
C23	RMZ C-E01: PC E195, E210, E215	Biodiversity – General	1. Maintain regional connectivity between SRMZ unit C-S01 and Elk Lakes Provincial Park 2. Maintain riparian zone attributes 3. Protect and enhance rangeland features 4. Retain attributes for old growth dependent species and fur bearers	1.1 Apply connectivity guidelines – Chapter 3.3 3.1 Define Desired Plant Communities (DPC) and means to achieve them. 3.2 Develop and implement an access management plan for road and trail deactivation within the context of Coal ERDZ designation 4.1 Complete the Elk Valley Riparian Assessment Project funded by CBFWCP to survey riparian habitat. Develop a riparian rehabilitation	KBLUP IS: Appendix 3, Page 32

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				plan.	
C23	CORE polygon 3-2	Biodiversity – General	Very high wildlife values. Fording River and it's tributaries have high value riparian, recreation and wildlife areas. Important sheep winter ranges. Unit defined by high value coal lands in Upper Elk Dedicated designation.	<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2 Record of Information + T1 Guideline.
C23	CORE polygon 3-2; 3-3	Biodiversity – Old Growth	Polygon 3-3: Remnant old growth	<u>T1 Guidelines:</u> Old growth dependent species FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2; 3-3 Records of Information + T1 Guideline.
C23	CORE polygon 3-2; 3-3	Biodiversity – Natural Grasslands	Polygon 3-2: Rocky Mtn Fescue – one rare occurrence Polygon 3-2, 3-3: Areas of NDT5-Alpine tundra and sub alpine parkland.	<u>T1 Guideline:</u> Weed control / Maintenance of riparian habitats / Grazing management guidelines/ Off-road vehicle control / Monitoring of range condition and trend in terms of domestic and wildlife grazers	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2; 3-4 Records of Information, T1 Guideline + Natural Disturbance Type mapping.
C23	Grave Prairie Wildlife Range Complex	Ungulates – Elk	Grave Prairie Wildlife Range Complex is critical elk winter and spring habitat, designated for Intensive Wildlife Management (Category 1). Biophysical Units: <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. This Range Complex is located in LU C38 and C23; C38 contains 2 known mineral licks (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).	Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas: -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted).	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.
C23	Upper Elk/Greenhills/ Fording Wildlife Range	Ungulates – Elk	Upper Elk/Greenhills/ Fording Wildlife Range Complex is elk winter and spring habitat designated for Active Wildlife Management (Category 2). Biophysical Units:	Wildlife management would be given equal consideration in specific areas. A combination of the following general management and enhancement techniques would be actively pursued in an iterated resource management strategy:	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13,

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Complex		<ul style="list-style-type: none"> Class 2 – elk, moose, goat winter winter habitat. Class 3 – all ungulate species winter habitat. Class 3 – all ungulate species summer range <p>This Range Complex is located in LU: C21, C22, C23 and C38; 1 known mineral lick is located in C21 and 1 known lick is located in C22 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<ul style="list-style-type: none"> -Logging which could benefit/complement wildlife; -Integrated silvicultural practices; -Exploration/mining reclamation; -Access planning; -Impact management activities negotiated through the Mine Development Review Process. 	and Appendix 1, Page 1-3.
C23	West Side Wildlife Range Complex	Ungulates – Bighorn Sheep	<p>West Side Wildlife Range Complex is critical bighorn sheep winter and spring habitat, designated for Intensive Wildlife Management (Category 1). Biophysical Units:</p> <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. <p>This Range Complex is located in LU: C22 and C23 and includes Quarry, Forsyth, Crossing, Boivin and Brule; C22 contains 1 known mineral lick (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas:</p> <ul style="list-style-type: none"> -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted). 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.
C23	RMZ C-S01	Ungulates	Ungulate Winter Range (S, EX, X)		KBLUP IS: Ch. 3.5, Page 17-24
C23	RMZ C-S01	Ungulates	<ol style="list-style-type: none"> Maintain abundance of mule deer, white-tailed deer, elk and moose within the sustainable carrying capacity of their habitat. Maintain abundance of regionally significant Rocky Mountain Bighorn Sheep and Rocky Mountain Goat populations in the alpine areas within the sustainable carrying capacity of their 	<ol style="list-style-type: none"> 1.1 Develop an access management plan that ensures compatible industrial and recreational activities. 2.1 Regulate ATV use in alpine areas and undertake zoning for recreation use. <p>2.2 Sulphur Creek mineral lick designated</p>	KBLUP IS: Appendix 3, Page 4

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			habitat.		
C23	RMZ C-E01: PC E195, E210, E215	Ungulates	Maintain abundance of elk, moose, mule deer, white tailed deer, Rocky Mountain Goats and Rocky Mountain Bighorn Sheep within the sustainable carrying capacity of their habitat.	Explore options for managing moose winter range on private lands within riparian habitats including: -conservation easements with private land owners; and -potential land purchase of class 1 winter range.	KBLUP IS: Appendix 3, Page 33
C23	CORE polygon 3-2, 3-3	Ungulates	Polygon 3-3: Ungulate Winter Range. Unit supports quality range for sheep and goats. Contains one of the few unroaded drainages in the Elk River system (Brule Creek-a rare north-south valley) and several of the headwaters of drainages which are undeveloped. Important for summer and fall use by moose, bear and deer. (Refer to black binder CORE tab. Polygon 3-3 Sector Comments). Polygon 3-2: Important sheep winter range	<u>T2 Guideline</u> applies to ungulate winter range throughout unit: -Manage for optimal mix of thermal cover, snow interception and browse production (habitat adjacency key). -Appropriate mix of silvicultural systems and treatments to maintain habitats.	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2, 3-3 Records of Information, T2 Guideline.
C23		Wide ranging carnivores	Grizzly bear values.		Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C23		Wide ranging carnivores	Priority 1 (and some Priority 2) Grizzly Bear Habitat		KBLUP IS: Ch 3.4, Pages 8-17
C23	RMZ C-S01	Wide ranging carnivores	1. Maintain sufficient habitat to ensure Grizzly Bear populations are maintained or enhanced. 2. Maintain sufficient habitat to ensure wolverine populations are maintained or enhanced. 3. Ensure the existing wolf populations are maintained or enhanced.	1.1 Develop and implement an avalanche chute habitat plan for grizzly bears in this unit. 1.2 Complete the Upper Elk River Grizzly Bear Inventory Project. 2.1 Information being generated through an inventory project in the Revelstoke/Golden areas to provide management opportunities. 3.1 Maintain sufficient prey habitat and populations.	KBLUP IS: Appendix 3, Page 4
C23	CORE polygon 3-3	Wide ranging carnivores	Supports high use migration routes; healthy populations of fur bearers; quality grizzly bear habitat; internationally significant migration route for recovering wolf population between protected areas in Montana to Canadian federal parks system to the north. (Refer to black binder CORE tab. Polygon 3-3 Sector Comments).	<u>T2 Guideline</u> : -Seasonal feeding and breeding habitats protected; -Conservation of seasonal feeding and breeding areas; silvicultural treatments to favour food production; -Road densities minimal and access management coordinated to avoid conflicts with habitat use. -Minimal human habitation and no sanitary landfills. -Predator control only under special circumstances. -Special grazing management to protect carnivore values.	CORE 1994 East Kootenay Land Use Plan, Polygon 3-3 Record of Information, T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C23	CORE polygon 3-2	Wide ranging carnivores	Concern for black bears	<u>T1 Guideline:</u> Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2 Record of Information, T1 Guideline.
C23	RMZ C-E01: PC E195, E210, E215	Fisheries	1. Maintain wild fish stocks and habitats for Cutthroat and Bull Trout in the Elk River	1.1 Review angling guide situation on Elk River to address overcrowding. 1.2 Review existing management and habitat conservation strategies. 1.3 Undertake an assessment of fish and fish habitat 1.4 Develop restoration plan for fish and fish habitat	KBLUP IS: Appendix 3, Page 33
C23	CORE polygon 3-3	Fisheries	Fisheries values in Cummins Creek	<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Maintenance of spawning and rearing habitat	CORE 1994 East Kootenay Land Use Plan, Polygon 3-3 Record of Information, T1 Guideline.
C23	CORE polygon 3-2	Fisheries	Fishery values in Alexander Creek and the Fording and Elk Rivers.	<u>T2 Guideline:</u> -Minimal human-caused sedimentation. -Protection of streamside and riparian habitats; no roads in riparian without special permission, however, stream crossing normally acceptable. -Management for large organic debris. -Watershed sensitivity and ECA analysis prior to development. -Protection of spawning and rearing habitat. -Reclamation and hydrologic stabilization where necessary. -Assume level one guidelines in place where level two's are applied.	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2 Record of Information, T2 Guideline.
C23	RMZ C-E01	Mining	Fording area	Priority management emphasis is on the coal resources and their exploration, development and production. Guidelines for C-E01 are provided according to topic i.e. access, recreation, biodiversity, ungulates and fisheries.	KBLUP IS: Ch 3.14, Pages 78-79
C23	CORE polygon 3-3	Mining	Extensive mineral tenures throughout. Kimberlite has been discovered.	<u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 3-3 Record of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) <i>(Document, date, section and/or pages)</i>
C23	CORE polygon 3-2	Mining	Unit defined by high value coal lands in the Upper Elk River valley. Includes major coal deposits. Two operating coal mines in the unit. Coal dedicated designation.	<u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 3-2 Record of Information + T1 Guideline. Note: For additional information refer to black binder, CORE tab. Polygon 3-2 Sector Comments.
C23	CORE polygon 3-3	Settlement/ Industrial- Commercial	Settlement and General Industrial/Commercial Uses are not acceptable uses.		CORE 1994 East Kootenay Land Use Plan, Polygon 3-3 Record of Information.
C23	CORE polygon 3-2	Unacceptable Uses	Settlement is not an acceptable use.		CORE 1994 East Kootenay Land Use Plan, Polygon 3-2 Record of Information.
C24	Iron/Lizard PAS Unit 48	1993 Best PAS Areas	<p>Area extends from valley floor to the alpine and includes all of the Lizard Range and the drainage of Iron Creek.</p> <p>PAS Value: Iron Creek and the Lizard Range is a strategically located core area that connects to the Bull River, the Elk River and Coyote Creek (via North Galbraith Creek and Top of the World Provincial Park). Further connections link to the Wigwam and Flathead Rivers.</p> <p>Diversity: Supports moose, elk, mule deer, white tailed deer, mountain goat (including wintering populations), and black and grizzly bears. Connects to Bull River and Elk River, and to Coyote Creek via North Galbraith Creek and TOW Prov. Pk.. Contributes to Bull River cutthroat trout fishery. Covered under a Wildlife Act Vehicular Access Hunting Closure.</p> <p>Viability: This unit is large enough (37,545 ha), and has a sufficiently complete watershed to be viable, particularly in conjunction with PAS Unit 17, North Galbraith Creek.</p>	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 48.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			Naturalness in 1993: Less than 25% disturbed by roads, a powerline and ski hill development.		
C24		Agriculture	Moderate range values. Range agreements: One cattle grazing license overlaps with LU C20; Three grazing permits for cattle; One grazing permit for guide outfitter horses overlaps with LU C15 + C17. Total 220 AUMs attributable to LU C24		Cranbrook Forest District Recreation Access Plan. March, 2000. LU C24.
C24	C24 is in the Fernie Range Unit; Spruce/Olsen Range Unit; and Wigwam Range Unit	Agriculture	Fernie Range Agreement Holders: Clifford Beese- 21 AUMs Les Bryant- 53 AUMs Terry Polacik- 34 AUMs Spruce/Olsen Range Agreement Holders: Les Bryant- 102 AUMs Lloyd Phillips- 137 AUMs	Fernie Range Unit includes: LU C15 (part), C19 (part), C24 (part) Spruce-Olsen Range Unit includes: LU C24 (part). South edge of LU C24 (west of the Elk River) extends into the Wigwam Range Unit.	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C24	CORE polygon 2-1, 2-9	Agriculture		Polygon 2-1- Potential for increased agricultural activity. Intent is to pursue the possibility (CORE, East Kootenay Regional Table, Volume 3, Part B Management Guidelines, Agriculture Notes, AG2). Outdoor Recreation non-motorized sector expresses concern with regard to expansion of cattle grazing in this unit, however whole heartedly supports CRMP's and the work of the EK Trench Agriculture/Wildlife Committee (Refer to Sector Comments, Polygon 2-1 Record of Information). Polygon 2-1, 2-9: <u>T1 Guideline</u> -Grazing tenures	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1, 2-9 Records of Information + T1 Guideline.
C24	Lladner Creek & Spruce Creek	Access Management	Mineral licks on the west side of the Elk River near Hosmer (Lladner and Spruce Creeks).	Access restrictions are required as off road vehicles are driving on the mineral licks.	Commercial Hunting & Fishing Focus Group session. March 27, 2002.
C24	Tunnel Creek	Recreation	Illegal cabin at Tunnel Creek is being used commercially.	Should be addressed.	Commercial Hunting & Fishing Focus Group session. March 27, 2002.
C24	Lower Elk River	Recreation	Washroom facilities are needed along the River due to heavy guided angling use.		Recreational Hunting & Fishing Focus Group session. March 27, 2002.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C24	Fernie Alpine Resort	Recreation	Sochers (spp?) Trail construction should not be allowed due to wildlife impacts resulting from potential heavy tourist use of the trail.		Recreational Hunting & Fishing Focus Group session. March 27, 2002.
C24	RMZ C-I01	Recreation	Maintain recreation opportunities from roaded to semi-primitive non-motorized.		KBLUP IS: Appendix 3, Page 16
C24	RMZ C-I01	Recreation-Commercial Tourism	Maintain and enhance opportunities for resorts and commercial backcountry recreation	As necessary provide for the expansion of Fernie and Sparwood ski areas, and for expansion of CBR activities at Island Lake Lodge. These actions will be subject to consideration of conservation values, municipal and regional planning, and the provincial land use charter and goals through a referral process.	KBLUP IS: Appendix 3, Page 16
C24	CORE polygon 2-1, 2-9	Recreation-Commercial Tourism	Polygon 2-1: Fernie Alpine Resort and Island Lake Lodge are in the unit. T1 guideline is conditional on future development of facilities and services with special recognition of priority tourism values.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1, 2-9 Record of Information + T1 Guideline.
C24		Recreation	Backcountry Recreation Management as per ROS.		KBLUP IS: Ch. 3.9, Page 54-57
C24	Various	Recreation-Visuals	Class 1 Scenic Corridor		KBLUP IS: Ch. 3.8, Page 52-54
C24	CORE polygon 2-1, 2-9	Recreation-Visuals	Polygon 2-1: Visuals: Island Lake Lodge, Fernie Alpine Resort, highway views Tourism Visuals : High cultural values – White Spruce Lumber, Hartley Pass	<u>T1 Guideline:</u> General Visuals-smoke management guidelines / Visual Quality Objectives guidelines apply (implying restrictions on timber volume). Tourism Visuals-management of high tourism value viewsapes for some enhanced analysis and landscape design (implying no change in timber volume).	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1, 2-9 Records of Information + T1 Guideline.
C24	CORE polygon 2-1	Recreation – Sense of Solitude		<u>T1 Guideline:</u> -Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1 Record of Information + T1 Guideline.
C24	CORE polygon 2-9	Recreation – Sense of Solitude		<u>T2 Guideline:</u> -Local agreement preferred. -Sensitivity to Solitude experiences. -Enhanced management related to timing, seasonality, mode and distribution of mechanized access/activities, recognize existing and potential future use for tenure holders and consider mechanized	CORE 1994 East Kootenay Land Use Plan, Polygon 2-9 Record of Information + T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				recreational users.	
C24	Iron/Lizard PAS Unit 48	Cultural Heritage	Represents a significant diversity of themes: oil and gas exploration, pre-contact native economic activities, native trail systems, rural development patterns and forestry. No recorded sites except for a regionally significant lithic scatter on northern boundary.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 48.
C24	CORE polygon 2-1	Cultural Heritage		<u>T1 Guideline:</u> Planning: ID cultural heritage resource (see FPC); Development without preparation of cultural heritage impact assessment. Access: restrictions unlikely. Directional signage to cultural/heritage sites permitted. Signage re: visitor behaviour and to ID site as significant cultural/heritage feature desired. Land trades possible to create access across private lands. Facilities: Major construction permitted at cultural heritage resource sites. Buffering not required. Adaptive reuse of appropriate heritage structures without restriction. Activities: restrictions unlikely. Resource extraction or harvesting unlikely to be restricted for cultural heritage values. Environmental protection opportunities for special exemption from mining reclamation.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1 Record of Information + T1 Guideline.
C24	CORE polygon 2-9	Cultural Heritage		<u>T2 Guideline:</u> Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-9 Record of Information + T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<p>Access: Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas.</p> <p>Facilities: Restrictions on construction of facilities within contextual areas. In sensitive areas, no development permitted. Temporary site protection may be required. Preservation and reuse of related heritage sites may be permitted under controlled conditions.</p> <p>Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted.</p> <p>Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).</p>	
C24	PC E005, E015, E565, E558, E026, E030, E035, E045, E060	Watershed	Class 1 Domestic Watershed		KBLUP IS: Ch. 3.7, Page 30-52
C24	PC: E005, E015, E558, E026, E035, E036, E045, E535	Watershed	Class 2 Domestic Watershed		KBLUP IS: Ch. 3.7, Page 30-52
C24	PC: E005, E040, E530, E531	Watershed	Class 3 Domestic Watershed		KBLUP IS: Ch. 3.7, Page 30-52
C24	PC: E015, E030	Watershed	Fernie (Fairy Creek), Fernie Alpine Resort (Boardman Creek) Community Watersheds		KBLUP IS: Ch. 3.7, Page 30-52
C24	South area of LU	Biodiversity – Rare and	Fisher - Blue listed (vulnerable) Habitat: dense, late seral coniferous or mixed wood.		Listed Vertebrate and Vascular Plant Species Occurring in the

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
		Endangered Species	Distribution: may currently occupy the southeast corner of B.C. in low densities, and at high elevation. Historical range includes the west and southeast portions of the Cranbrook Forest District.		Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 11.
C24	South area of LU	Biodiversity – Rare and Endangered Species	Badger (Taxidea taxus) - Red listed (threatened or endangered) Habitat: non-forest and open Douglas-fir. Distribution: occur in the southern half of the Cranbrook Forest District, in the Kootenay River Drainage and in the Elk Valley.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 12.
C24		Biodiversity	Riparian areas and connectivity corridors	Should be addressed	Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C24		Biodiversity Emphasis	Low Biodiversity Emphasis		KBLUP IS: Ch. 3.2, Page 3-6 Appendix 3 - Appendix C
C24		Biodiversity – Connectivity	All or portion of unit is important for regional connectivity		KBLUP IS: Ch. 3.3, Page 6-8
C24	CORE polygon 2-1	Biodiversity – General	The west slopes of the lower Elk valley above the towns of Fernie and Sparwood. Includes ICH (cedar hemlock) variants that have resulted from wet conditions along the Lizard Range. Part of the Border Ranges Ecosection.	<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1 Record of Information + T1 Guideline.
C24	RMZ C-I01:	Biodiversity – General	1. Maintain regional connectivity between the Wigwam and Top of the World Provincial Park and the Elk and Bull river watersheds (linking SRMZ units C-S01, CS02 and C-S06); to contribute to ecosystem representation (ICHmk1, ICHmw2); and serve as habitat linkage for the seasonal migration of ungulates.. 2. Maintain integrity of alpine environments	1.1 Apply connectivity guidelines within the regional connectivity corridor as per Chapter 3.3 2.2 through access management as per guidelines, Chapter 3.12	KBLUP IS: Appendix 3, Page 17
C24	CORE polygon 2-9	Biodiversity – General	Coal dedicated designation.	<u>T2 Guideline:</u> -Enhanced FENs; riparian protection; wide corridors; significant OG protection; -Landscape habitat mosaic is diverse in stand, age classes, types, structures and composition.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-9 Record of Information + T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				-Rare and unique habitats and species protected. -Providing habitat for regional inter-protected area linkage corridors and buffers is a part of management objectives for area. -Minimize expansion of settlement or industrial/commercial use -Restoration/rehabilitation of disturbed sites	
C24	RMZ C-E02	Biodiversity – General	1. Protect and enhance rangeland features 2. Retain attributes for old growth dependent species and fur bearers	1.1 Define Desired Plant Communities (DPC) and means to achieve. 1.2 Develop and implement an access management plan for road and trail deactivation within the context of Coal ERDZ designation 2.1 Complete the Elk Valley Riparian Assessment Project funded by CBFWCP to survey riparian habitat. Develop a riparian rehabilitation plan.	KBLUP IS: Appendix 3, Page 32
C24	Cedar Valley/Island Lake	Biodiversity – Old Growth	Cedar Valley/Island Lake privately owned old growth is highly valued by Elk Valley residents.	Plan should acknowledge the importance of this parcel of old growth. A mechanism is needed for the long term protection of old growth on private land.	Local Government Focus Group session. April 25, 2002.
C24	CORE polygon 2-1, 2-9	Biodiversity – Old Growth		<u>T1 Guidelines:</u> Old growth dependent species FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1, 2-9 Records of Information + T1 Guideline.
C24	RMZ C-I01	Biodiversity – Natural Grasslands		Fire Maintained Ecosystem Guidelines apply.	KBLUP IS: Chapter 3.10, Pages 58-65
C24	CORE polygon 2-1, 2-9	Biodiversity – Natural Grasslands	Areas of NDT5-Alpine tundra and sub alpine parkland.	<u>T1 Guideline:</u> Weed control / Maintenance of riparian habitats / Grazing management guidelines/ Off-road vehicle control / Monitoring of range condition and trend in terms of domestic and wildlife grazers	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1, 2-9 Records of Information, T1 Guideline + Natural Disturbance Type mapping.
C24	Lower Elk Wildlife Range Complex	Ungulates – Elk	Lower Elk Wildlife Range Complex is elk winter and spring habitat designated for Active Wildlife Management (Category 2). Biophysical Units: <ul style="list-style-type: none"> Class 2 – elk, moose, goat winter winter habitat. Class 3 – all ungulate species winter habitat. Class 3 – all ungulate species summer range 	Wildlife management would be given equal consideration in specific areas. A combination of the following general management and enhancement techniques would be actively pursued in an interated resource management strategy: -Logging which could benefit/complement wildlife; -Integrated silvicultural practices; -Exploration/mining reclamation; -Access planning;	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-3.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			This Range Complex is located in LU C24 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).	-Impact management activities negotiated through the Mine Development Review Process.	
C24	Mt. Broadwood/ Wigwam Wildlife Range Complex	Ungulates – Bighorn sheep and Elk	<p>Mt. Broadwood/Wigwam Wildlife Range Complex is critical elk and sheep winter and spring habitat, designated for Intensive Wildlife Management (Category 1).</p> <p>Biophysical Units:</p> <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. <p>This Range Complex is located in LU: C24, C15, C13/34 (Sheep Mtn); 3 known mineral licks occur within C15 and 2 known licks are in close proximity to the boundary between C15 and C13 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas:</p> <ul style="list-style-type: none"> -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted). 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.
C24	RMZ C-I01	Ungulates	Ungulate Winter Range (EX, EM, ESMV)		KBLUP IS: Ch. 3.5, Page 17-24
C24	RMZ C-I01	Ungulates	1. Maintain abundance of mule deer, white-tailed deer, elk, moose, Rocky Mountain Bighorn Sheep and Rocky Mountain Goats within the sustainable carrying capacity of their habitat.	<p>1.1 Maintain suitable summer and winter habitats and minimize wildlife displacement by developing an access management plan to ensure compatible industrial and recreational activities as per Access Management Guidelines, Chapter 3.12.</p> <p>1.2 Sustain early seral ungulate habitat by initiating controlled fires.</p> <p>1.3 Designate mineral lick at Sulphur Creek as a Sensitive Area under the FPC.</p>	KBLUP IS: Appendix 3, Page 17
C24	CORE polygon 2-1	Ungulates	Ungulate Winter Range	<p><u>T2 Guideline:</u></p> <ul style="list-style-type: none"> -Manage for optimal mix of thermal cover, snow interception and browse production (habitat adjacency key). -Appropriate mix of silvicultural systems and treatments to maintain habitats. 	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1 Record of Information, T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C24	RMZ C-E02	Ungulates	Maintain abundance of elk, moose, mule deer, white tailed deer, Rocky Mountain Goats and Rocky Mountain Bighorn Sheep within the sustainable carrying capacity of their habitat.	Explore options for managing moose winter range on private lands within riparian habitats including: -conservation easements with private land owners; and -potential land purchase of class 1 winter range.	KBLUP IS: Appendix 3, Page 33
C24	CORE polygon 2-9	Ungulates	Ungulate Winter Range	<u>T1 Guideline:</u> -Wildlife harvesting guidelines / TSA harvesting guidelines / specific referrals on the ground.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-9 Record of Information, T1 Guideline.
C24		Wide ranging carnivores	Priority 2 (and minor amounts of Priority 1) Grizzly Bear Habitat		KBLUP IS: Ch 3.4, Pages 8-17
C24	RMZ C-I01	Wide ranging carnivores	1. Maintain sufficient seasonal habitat to retain the existing Grizzly Bear population. 2. Ensure the existing wolf populations utilizing the Bull river drainage are maintained or enhanced.	1.1 Sustain high productivity berry patches by – initiating controlled fires; and using no herbicides in high productivity berry patches. 2.1 Maintain sufficient prey habitat and prey populations.	KBLUP IS: Appendix 3, Page 17
C24	CORE polygon 2-1	Wide ranging carnivores	Elk valley is an important link between Glacier/Flathead system and Kananaskis/Jasper system for wolves.	<u>T1 Guideline:</u> Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1 Record of Information, T1 Guideline.
C24	CORE polygon 2-9	Wide ranging carnivores		<u>T2 Guideline:</u> -Seasonal feeding and breeding habitats protected; -Conservation of seasonal feeding and breeding areas; silvicultural treatments to favour food production; -Road densities minimal and access management coordinated to avoid conflicts with habitat use. -Minimal human habitation and no sanitary landfills. -Predator control only under special circumstances. -Special grazing management to protect carnivore values.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-9 Record of Information, T2 Guideline.
C24	Headwaters of the Flathead and Morrissey Creek linkage with the Lizard Range and Lizard Creek valley	Wide ranging carnivores	Value: connectivity. Carnivore conservation principle (3): maintain regional connectivity with landscape linkages.	Identify and secure protection of key linkages for carnivores along Highway 3. 'Linkage- zone' model on four attributes of a landscape for grizzly bear: disturbance from human development; disturbance from roads and trails; value of hiding cover; and value of riparian habitats. Possible linkages (Fig 16, p47): 1.) between Elko and Fernie, connecting the headwaters of the Flathead and Morrissey Creek east to southeast of Hwy 3 to the	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains</u> . 2001, p46-48. Fig. 16 & 17.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	across Hwy 3.			Lizard Range and Lizard Creek valley to the west–northwest; 2.) between Hosmer and Sparwood, connecting several ridges just north of the headwaters of the Flathead to the important west side of the Elk Valley via Lladner and McCool Creeks.	
C24		Wide ranging carnivores	Value: security Carnivore conservation principle (2): provide security from excessive mortality with networks of core reserves and other precautionary measures. The Elk River area, particularly the western and northern sections provides important habitat and security for carnivores and likely serves as a crucial link in maintaining connectivity through the Rocky Mountains (The Transboundary Flathead, p 39).	<ul style="list-style-type: none"> Provide a network of seasonal or permanent security zones throughout the transboundary Flathead basin and elsewhere in the new ‘Southern Rocky Mountain Conservation Area’. Consideration of focal species’ key habitats will be used to guide the strategic identification and delineation of security zones.	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains.</u> 2001, p45.
C24	Elk River	Fisheries	Cutthroat trout and Elk River fishery at risk due to angling guide over use.	Address through changes to Fisheries regulations.	March/April Focus Group sessions: Commercial Hunting and Fishing; Recreational Hunting and Fishing; Local Government; and Tourism
C24	RMZ C-I01	Fisheries	Maintain wild fish stocks and habitats for Cutthroat and Bull Trout in the Elk River	1.1 Review angling guide situation on Elk River to address overcrowding. 1.2 Review existing management and habitat conservation strategies. 1.3 Undertake an assessment of fish and fish habitat Develop restoration plan for fish and fish habitat	KBLUP IS: Appendix 3, Page 17
C24	RMZ C-E02	Fisheries	Maintain wild fish stocks and habitats for Cutthroat and Bull Trout in the Elk River	1.5 Review angling guide situation on Elk River to address overcrowding. 1.6 Review existing management and habitat conservation strategies. 1.7 Undertake an assessment of fish and fish habitat 1.8 Develop restoration plan for fish and fish habitat	KBLUP IS: Appendix 3, Page 33
C24	CORE polygon 2-1, 2-9	Fisheries	Elk River	T2 Guideline: -Minimal human-caused sedimentation. -Protection of streamside and riparian habitats; no roads in riparian without special permission, however, stream crossing normally	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1, 2-9 Records of Information, T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				acceptable. -Management for large organic debris. -Watershed sensitivity and ECA analysis prior to development. -Protection of spawning and rearing habitat. -Reclamation and hydrologic stabilization where necessary. -Assume level one guidelines in place where level two's are applied.	
C24	CORE polygon 1-1	Coal Mining	Crowsnest coalfield <ul style="list-style-type: none"> • Medium and high value coal lands are located throughout the area east of the Elk River in LU C24. • The high value, exposed coal bearing lands of the Crowsnest coalfield include three areas: Fernie block (73,333 ha) located in LU C17, C19, C24, C38; Corbin area (962 ha) and Tent Mountain area (1,603 ha) (p7) located in C19. • The high value lands of the Fernie block lay along the east half of LU C24 on private land. 	Definitions: <ul style="list-style-type: none"> • High value coal lands include the area from the outcrop of the coal bearing strata to its inferred depth limit (p1). • Medium value coal land is a corridor for mining related activities and infrastructure, surrounding the exposed coal bearing strata (high value coal lands) (p1). 	Morris, Bob. Resource Estimate: East Kootenay Coalfields, 1994. Pages 1, 4, 7; Fig. 5: E.K. Coal Fields Location Map; and Fig. 7: Coal Value Lands Map. Refer to Black Binder, Coal tab for maps.
C24	RMZ C-E02	Mining	CPR block south of Hosmer. Block of Provincial land surrounded by private Shell lands.	Priority management emphasis is on the coal resources and their exploration, development and production. Guidelines for Coal ERDZ are only provided for C-E01 (Fording area: LU C20, 21, 22, 23, 38). Specific guidelines were not been developed for C-E02 to C-E04.	KBLUP IS: Ch 3.14, Pages 78-79
C24	CORE polygon 2-1, 2-9	Mining	Polygon 2-9 is Coal Dedicated CPR block.	<u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 2-1, 2-9 Records of Information + T1 Guideline.
C24	CORE polygon 2-9 (RMZ C-E02)	Coal Mining	CPR block.	Values requiring enhanced management (T2 guidelines) include: Wide ranging carnivores; Fisheries; Biodiversity; Sense of Solitude and Heritage/Culture.	CORE 1994 East Kootenay Land Use Plan, Polygon 2-9 Record of Information.
C24	CORE polygon 2-1	Unacceptable Uses	Settlement is not an acceptable use		CORE 1994 East Kootenay Land Use Plan, Polygon 2-1 Record of Information.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C24	CORE polygon 2-9	Unacceptable Uses	Settlement and General Industrial/Commercial are not acceptable uses.		CORE 1994 East Kootenay Land Use Plan, Polygon 2-9 Record of Information.
C25	Iron/Lizard PAS Unit 48	1993 Best PAS Areas	<p>Area extends from valley floor to the alpine and includes all of the Lizard Range and the drainage of Iron Creek.</p> <p>PAS Value: Iron Creek and the Lizard Range is a strategically located core area that connects to the Bull River, the Elk River and Coyote Creek (via North Galbraith Creek and Top of the World Provincial Park). Further connections link to the Wigwam and Flathead Rivers.</p> <p>Diversity: Supports moose, elk, mule deer, white tailed deer, mountain goat (including wintering populations), and black and grizzly bears. Connects to Bull River and Elk River, and to Coyote Creek via North Galbraith Creek and TOW Prov. Pk.. Contributes to Bull River cutthroat trout fishery. Covered under a Wildlife Act Vehicular Access Hunting Closure.</p> <p>Viability: This unit is large enough (37,545 ha), and has a sufficiently complete watershed to be viable, particularly in conjunction with PAS Unit 17, North Galbraith Creek.</p> <p>Naturalness in 1993: Less than 25% disturbed by roads, a powerline and ski hill development.</p>	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 48.
C25		Agriculture	Low range values. Range agreements: One cattle grazing license overlaps with LU C34; One grazing permit for guide outfitter horses overlaps with LU C26 Total 140 AUMs attributable to LU C25		Cranbrook Forest District Recreation Access Plan. March, 2000. LU C25.
C25		Agriculture	Burton North/Upper Sand Range Agreement	If marked with GT, the Range Agreement Area matches the Guide	Cranbrook Forest District Range

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			<p>Holders: South Country Enterprises 674 AUMs</p> <p>Bull River Range Agreement Holders: GT: Grizzly Basin Outfitters Ltd -63 AUMs CD Reay and Sons Ltd – marginal use along Bull R. GT: Vince Cocciolo - 69 AUMs GT: Bull River Outfitters Ltd - 88 AUMs</p>	<p>Outfitting Territory</p> <p>C25 extends into the Burton Lake, Upper Sand, Rosen, Pickering Hills and Bull River Range Units.</p>	<p>Unit Map and Range Agreement Holder information (refer to Range tab in black binder)</p>
C25	McDermid Creek & Goat Haven	Agriculture	<p>Livestock grazing is reported to be causing environmental damage to high elevation wildlife habitat at McDermid Creek and Goat Haven</p>		<p>Commercial Hunting and Fishing Focus Group session. March 27, 2002.</p>
C25	CORE polygon 19-1	Agriculture	<p>Agriculture sector notes relating to Unit 19-1:</p> <ol style="list-style-type: none"> 1. All existing range units have extremely high value to the cattle industry. Investments since 1975 include fencing, water developments, corrals, clearing, seeding. 2. Grazing systems to maintain/enhance plant community values and wildlife habitat in place 3. CRMP in place on most range units 4. EK Trench Agriculture/Wildlife Committee vegetation monitoring project began in 1992 to determine forage use and diet overlap of cattle and wildlife. <p>(Refer to CORE tab in black binder for Agriculture Sector notes relating to Units 19-1, 19-2, 19-3, 19-5 and 19-6).</p>	<p>Maintain current level of agricultural activity (CORE, East Kootenay Regional Table, Volume 3, Part B Management Guidelines, Agriculture Notes, AG 1)</p> <p>Outdoor Recreation non-motorized sector expresses concern with regard to expansion of cattle grazing in this unit, however whole heartedly supports CRMP's and the work of the EK Trench Agriculture/Wildlife Committee.</p> <p><u>T1 Guideline</u>-Grazing tenures</p>	<p>CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information + T1 Guideline.</p>
C25		Agriculture	<p>Domestic sheep</p>	<p>Threaten the native bighorn sheep population. No range permits should be issued for domestic sheep and the Elko ice cream stand should not be permitted to have them.</p>	<p>Commercial Hunting & Fishing Focus Group session. March 27, 2002.</p>
C25	Various	Access Management	<ol style="list-style-type: none"> 1. Mineral licks at Brewster Creek, Big Sand Creek, Whimster Creek 2. Critical habitat at Tunnel to Sand Creek; Sand Creek to Iron Creek; Thunder Lake 3. Sand Creek to Little Sand Creek 	<ol style="list-style-type: none"> 1. need protection from ATV/4WD use 2. need protection from ATV/4WD use 3. Sand Creek to Little Sand Creek should not be a circle route because of the areas importance for connectivity. Timing controls on 	<p>Commercial Hunting & Fishing Focus Group session. March 27, 2002.</p>

**Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002**

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			4. Mineral claim creates unwanted access.	ATV use suggested.	
C25	Sand Creek, McDermid Creek	Recreation	Huckleberry patches at Sand Creek, McDermid Creek	should not be commercialized because of the resulting conflicts with wildlife.	Commercial Hunting & Fishing Focus Group session. March 27, 2002.
C25	RMZ C-I01	Recreation	Maintain recreation opportunities from roaded to semi-primitive non-motorized.		KBLUP IS: Appendix 3, Page 16
C25	RMZ C-I01	Recreation-Commercial Tourism	Maintain and enhance opportunities for resorts and commercial backcountry recreation	As necessary provide for the expansion of Fernie and Sparwood ski areas, and for expansion of CBR activities at Island Lake Lodge. These actions will be subject to consideration of conservation values, municipal and regional planning, and the provincial land use charter and goals through a referral process.	KBLUP IS: Appendix 3, Page 16
C25	CORE polygon 19-1	Recreation-Commercial Tourism	Snow Much Fun Cat Skiing operation uses Little Sand Creek area	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information + T1 Guideline.
C25		Recreation	Backcountry Recreation Management as per ROS.		KBLUP IS: Ch. 3.9, Page 54-57
C25	Various	Recreation-Visuals	Class 1 Scenic Corridor		KBLUP IS: Ch. 3.8, Page 52-54
C25	CORE polygon 19-1	Recreation-Visuals	Tourism Visuals : Viewscapes from highway	<u>T1 Guideline:</u> <u>General Visuals</u> -smoke management guidelines / Visual Quality Objectives guidelines apply (implying restrictions on timber volume). <u>Tourism Visuals</u> -management of high tourism value viewscapes for some enhanced analysis and landscape design (implying no change in timber volume).	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information + T1 Guideline.
C25	CORE polygon 19-1	Recreation – Sense of Solitude		<u>T1 Guideline:</u> -Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information + T1 Guideline.
C25	Iron/Lizard PAS Unit 48	Cultural Heritage	Represents a significant diversity of themes: oil and gas exploration, pre-contact native economic activities, native trail systems, rural development		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			patterns and forestry. No recorded sites except for a regionally significant lithic scatter on northern boundary.		meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 48.
C25	CORE polygon 19-1	Cultural Heritage		<p><u>T1 Guideline:</u> Planning: ID cultural heritage resource (see FPC); Development without preparation of cultural heritage impact assessment. Access: restrictions unlikely. Directional signage to cultural/heritage sites permitted. Signage re: visitor behaviour and to ID site as significant cultural/heritage feature desired. Land trades possible to create access across private lands. Facilities: Major construction permitted at cultural heritage resource sites. Buffering not required. Adaptive reuse of appropriate heritage structures without restriction. Activities: restrictions unlikely. Resource extraction or harvesting unlikely to be restricted for cultural heritage values. Environmental protection opportunities for special exemption from mining reclamation.</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information + T1 Guideline.
C25	T505, T395	Watershed	Class 2 Domestic Watershed		KBLUP IS: Ch. 3.7, Page 30-52
C25	T505, T435	Watershed	Class 3 Domestic Watershed		KBLUP IS: Ch. 3.7, Page 30-52
C25	McDermid Gulch	Biodiversity	McDermid Gulch may be the “best” wildlife habitat in the plan area		Commercial Hunting & Fishing Focus Group session. March 27, 2002.
C25		Biodiversity Emphasis	Medium Biodiversity Emphasis		KBLUP IS: Ch. 3.2, Page 3-6 Appendix 3 - Appendix C
C25		Biodiversity – Connectivity	All or portion of unit is important for regional connectivity		KBLUP IS: Ch. 3.3, Page 6-8
C25	CORE polygon 19-1	Biodiversity – General	The face of the Rocky Mountains from the Bull to Elk River. Steep, rocky west facing slopes primarily.	<p><u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	Information + T1 Guideline.
C25	RMZ C-I01	Biodiversity – General	1. Maintain regional connectivity between the Wigwam and Top of the World Provincial Park and the Elk and Bull river watersheds (linking SRMZ units C-S01, CS02 and C-S06); to contribute to ecosystem representation (ICHmk1, ICHmw2); and serve as habitat linkage for the seasonal migration of ungulates.. 2. Maintain integrity of alpine environments	1.1 Apply connectivity guidelines within the regional connectivity corridor as per Chapter 3.3 2.1 through access management as per guidelines, Chapter 3.12	KBLUP IS: Appendix 3, Page 17
C25	RMZ C-I01	Biodiversity – Old Growth	Burton Creek south-west OGMA	Burton Creek south-west OGMA to remain intact until OGMA's for the unit are established. These stands should be a part of the OGMA for the LU.	MOU between MOF+MOE re: instructions for Preparation of 1998 FDP's, Page 2
C25	CORE polygon 19-1	Biodiversity – Old Growth		<u>T1 Guideline:</u> Old growth dependent species FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information + T1 Guideline.
C25	RMZ C-I01: T400, T425, T430, T530, T525, T505	Biodiversity – Natural Grasslands		Fire Maintained Ecosystem Guidelines apply.	KBLUP IS: Chapter 3.10, Pages 58-65
C25	CORE polygon 19-1	Biodiversity – Natural Grasslands	Areas of NDT5-Alpine tundra and sub alpine parkland.	<u>T1 Guideline:</u> Weed control / Maintenance of riparian habitats / Grazing management guidelines/ Off-road vehicle control / Monitoring of range condition and trend in terms of domestic and wildlife grazers	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1Record of Information, T1 Guideline + Natural Disturbance Type mapping.
C25	RMZ C-I01	Ungulates	Ungulate Winter Range (SEM, EMW)		KBLUP IS: Ch. 3.5, Page 17-24
C25	RMZ C-I01	Ungulates	1. Maintain abundance of mule deer, white-tailed deer, elk, moose, Rocky Mountain Bighorn Sheep and Rocky Mountain Goats within the sustainable carrying capacity of their habitat.	1.1 Maintain suitable summer and winter habitats and minimize wildlife displacement by developing an access management plan to ensure compatible industrial and recreational activities as per Access Management Guidelines, Chapter 3.12. 1.2 Sustain early seral ungulate habitat by initiating controlled fires.	KBLUP IS: Appendix 3, Page 17
C25	CORE polygon 19-1	Ungulates	Ungulate Winter Range	<u>T1 Guideline:</u> -Wildlife harvesting guidelines / TSA harvesting guidelines / specific referrals on the ground.	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information, T1 Guideline.
C25		Wide ranging	Priority 1 and Priority 2 Grizzly Bear Habitat		KBLUP IS: Ch 3.4, Pages 8-17

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
		carnivores			
C25	RMZ C-I01	Wide ranging carnivores	1. Maintain sufficient seasonal habitat to retain the existing Grizzly Bear population. 2. Ensure the existing wolf populations utilizing the Bull river drainage are maintained or enhanced.	1.1 Sustain high productivity berry patches by – initiating controlled fires; and - using no herbicides in high productivity berry patches. 2.1 Maintain sufficient prey habitat and prey populations.	KBLUP IS: Appendix 3, Page 17
C25	CORE polygon 19-1	Wide ranging carnivores		<u>T1 Guideline:</u> Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information, T1 Guideline.
C25	RMZ C-I01	Fisheries	Riparian zone attributes	Maintain riparian zone attributes associated with the Bull River and Sand Creek. High priority for appropriate management regimes for livestock and wildlife.	KBLUP IS: Appendix 3, Page 17
C25	CORE polygon 19-1	Fisheries		<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Maintenance of spawning and rearing habitat	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information, T1 Guideline.
C25	CORE polygon 19-1	Mining		<u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information + T1 Guideline.
C25	CORE polygon 19-1	Unacceptable Uses	None		CORE 1994 East Kootenay Land Use Plan, Polygon 19-1 Record of Information.
C26	Iron/Lizard PAS Unit 48	1993 Best PAS Areas	Area extends from valley floor to the alpine and includes all of the Lizard Range and the drainage of Iron Creek. PAS Value: Iron Creek and the Lizard Range is a strategically located core area that connects to the Bull River, the Elk River and Coyote Creek (via North Galbraith Creek and Top of the World Provincial Park). Further connections link to the Wigwam and Flathead Rivers.	1993 recommended Priority Two area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 48.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			<p>Diversity: Supports moose, elk, mule deer, white tailed deer, mountain goat (including wintering populations), and black and grizzly bears. Connects to Bull River and Elk River, and to Coyote Creek via North Galbraith Creek and TOW Prov. Pk.. Contributes to Bull River cutthroat trout fishery. Covered under a Wildlife Act Vehicular Access Hunting Closure.</p> <p>Viability: This unit is large enough (37,545 ha), and has a sufficiently complete watershed to be viable, particularly in conjunction with PAS Unit 17, North Galbraith Creek.</p> <p>Naturalness in 1993: Less than 25% disturbed by roads, a powerline and ski hill development.</p>		
C26	CORE polygon 4-2	Agriculture	<p>Agriculture sector notes relating to Unit 4-2:</p> <ol style="list-style-type: none">1. All existing range units have extremely high value to the cattle industry. Investments since 1975 include fencing, water developments, corrals, clearing, seeding.2. Grazing systems to maintain/enhance plant community values and wildlife habitat in place3. CRMP in place on most range units4. EK Trench Agriculture/Wildlife Committee vegetation monitoring project began in 1992 to determine forage use and diet overlap of cattle and wildlife. <p>(Refer to CORE tab in black binder for Agriculture Sector notes relating to Units 4-2, 4-6b, 4-7).</p>	<p>Maintain current level of agricultural activity (CORE Management Guidelines -Agriculture Notes-AG1).</p> <p>Outdoor Recreation non-motorized sector expresses concern with regard to expansion of cattle grazing in this unit, however whole heartedly supports CRMP's and the work of the EK Trench Agriculture/Wildlife Committee.</p> <p><u>T1 Guideline</u>-Grazing tenures</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information + T1 Guideline.
C26		Agriculture	<p>Moderate range values. Range agreements: One cattle grazing license overlaps with LU C28 & C34; Total 360 AUMs attributable to LU C26</p>		Cranbrook Forest District Recreation Access Plan. March, 2000. LU C26.
C26	Bull River	Agriculture	Bull River Range Agreement Holders:	If marked with GT, the Range Agreement Area matches the Guide	Cranbrook Forest District Range

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	Range Unit		GT: Grizzly Basin Outfitters Ltd -63 AUMs CD Reay and Sons Ltd – marginal use along Bull R. GT: Vince Cocciolo - 69 AUMs GT: Bull River Outfitters Ltd - 88 AUMs	Outfitting Territory Bull River Range Unit includes LU C25 (part), C26, C27, C28	Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C26	Various	Access Management	1. Sand Creek to Iron Creek connective corridor, critical for ungulates 2. Mineral lick at Sulphur Springs – Hartley pass 3. Dooley Creek 4. Huckleberry patches at Iron Creek	1. Needs protection from existing high levels of ATV/4WD use. 2. Needs protection from ATV/4WD use. 3. New road should be deactivated. 4. Should not be commercialized to avoid bear-human conflicts as well as access issues.	Commercial Hunting & Fishing Focus Group session. March 27, 2002.
C26	RMZ C-I01	Recreation	1. Maintain recreation opportunities from roaded to semi-primitive non-motorized.	1.1 Maintain existing road accessible campsites along the Bull River. 1.2 Manage the Bull River as a Backcountry River Corridor consistent with the Backcountry Recreation Guidelines (Chapter 3.9). Apply for non-motorized use restriction, upstream of the Aberfeldie Reservoir through Transport Canada 1.3 No permanent road access within 500m of the river unless it is less environmentally damaging to construct the road within this 500m zone. 1.4 New roads constructed for resource development and not needed for ongoing resource management are to be deactivated upon conclusion of resource development.	KBLUP IS: Appendix 3, Page 16
C26	CORE polygon 4-2	Recreation	Important unroaded wilderness area for local recreationalist. Used for hunting and back country skiing. High value river paddling on Bull River. High value karst and caving exploration in the high elevations of the Lizard Range.		CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information
C26	RMZ C-I01	Recreation- Commercial Tourism	Maintain and enhance opportunities for resorts and commercial backcountry recreation	As necessary provide for the expansion of Fernie and Sparwood ski areas, and for expansion of CBR activities at Island Lake Lodge. These actions will be subject to consideration of conservation values, municipal and regional planning, and the provincial land use charter and goals through a referral process.	KBLUP IS: Appendix 3, Page 16
C26	CORE polygon 4-2	Recreation- Commercial Tourism	Important guide outfitting area. Snow Much Fun Cat Skiing operation uses Little Sand Creek area. Island Lake Lodge.	<u>T1 Guideline:</u> -maintain traditional use access; -consultation and consensus on access issues (mining referrals would not normally be routed through tourism unless there was a	CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				substantial wilderness impact); -consultation on potential alternatives through resource extraction.	
C26		Recreation	Backcountry Recreation Management as per ROS.		KBLUP IS: Ch. 3.9, Page 54-57
C26	B290, B300, B340, B345, B350, B355	Recreation-Visuals	Class 1 Scenic Corridor		KBLUP IS: Ch. 3.8, Page 52-54
C26	CORE polygon 4-2	Recreation-Visuals	Recreation sites	<u>T1 Guidelines:</u> 1. General Visuals-smoke management guidelines / Visual Quality Objectives guidelines apply (implying restrictions on timber volume). 2. Tourism Visuals-management of high tourism value viewscales for some enhanced analysis and landscape design (implying no change in timber volume).	CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information + T1 Guidelines.
C26	CORE polygon 4-2	Recreation – Sense of Solitude	Recreation sites	<u>T1 Guideline:</u> -Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.	CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information + T1 Guideline.
C26	Iron/Lizard PAS Unit 48	Cultural Heritage	Represents a significant diversity of themes: oil and gas exploration, pre-contact native economic activities, native trail systems, rural development patterns and forestry. No recorded sites except for a regionally significant lithic scatter on northern boundary.		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 48.
C26	CORE polygon 4-2	Cultural Heritage		<u>T2 Guideline:</u> Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required. Access:	CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information + T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				<p>Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas.</p> <p>Facilities: Restrictions on construction of facilities within contextual areas. In sensitive areas, no development permitted. Temporary site protection may be required. Preservation and reuse of related heritage sites may be permitted under controlled conditions.</p> <p>Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted.</p> <p>Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).</p>	
C26		Biodiversity – Rare and Endangered Species	Suskdorf’s Broomrape- Red listed (threatened or endangered) Habitat: Parasite of Aster spp.. Grows in grass, shrubs of steppe and montane. Distribution: Rare in S.E. B.C.. Known only from Bull River.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 18.
C26		Biodiversity Emphasis	Medium Biodiversity Emphasis		KBLUP IS: Ch. 3.2, Page 3-6 Appendix 3 - Appendix C
C26		Biodiversity – Connectivity	All or portion of unit is important for regional connectivity		KBLUP IS: Ch. 3.3, Page 6-8
C26	CORE polygon 4-2	Biodiversity – General	-Drainages of the Bull River. -High mountain terrain, partly in the Border Ranges Ecosection and the Southern Continental Ranges Ecosection -Important biodiversity corridor north to south, connecting Flathead drainage via Elko area and Mt. Broadwood and Lodgepole/Wigwam drainage	T1 Guideline: Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C26	RMZ C-I01	Biodiversity – General	1. Maintain regional connectivity between the Wigwam and Top of the World Provincial Park to the Elk and Bull river watersheds (linking SRMZ units C-S01, CS02 and C-S06); to contribute to ecosystem representation (ICHmk1, ICHmw2); and serve as habitat linkage for the seasonal migration of ungulates. 2. Maintain integrity of alpine environments	1.1 Apply connectivity guidelines within the regional connectivity corridor as per Chapter 3.3 2.1 through access management as per guidelines, Chapter 3.12	KBLUP IS: Appendix 3, Page 17
C26	RMZ C-I01	Biodiversity – Old Growth	Retain attributes for old growth dependent species and fur bearers.	The Bull River watershed is a priority for OGMA establishment.	KBLUP IS: Appendix 3, Page 17
C26	CORE polygon 4-2	Biodiversity – Old Growth	Remnant old growth throughout unit with special attention to Oliver Creek	<u>T1 Guideline:</u> Old growth dependent species FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information + T1 Guideline.
C26	B355	Biodiversity – Natural Grasslands		Fire Maintained Ecosystem Guidelines apply.	KBLUP IS: Chapter 3.10, Pages 58-65
C26	CORE polygon 4-2	Biodiversity – Natural Grasslands	Areas of NDT5-Alpine tundra and sub alpine parkland.	<u>T1 Guideline:</u> Weed control / Maintenance of riparian habitats / Grazing management guidelines/ Off-road vehicle control / Monitoring of range condition and trend in terms of domestic and wildlife grazers	CORE 1994 East Kootenay Land Use Plan, Polygon 19-1Record of Information, T1 Guideline + Natural Disturbance Type mapping.
C26	RMZ C-I01	Ungulates	Ungulate Winter Range (SEMW, XEM, XE)		KBLUP IS: Ch. 3.5, Page 17-24
C26	RMZ C-I01	Ungulates	1. Maintain abundance of mule deer, white-tailed deer, elk, moose, Rocky Mountain Bighorn Sheep and Rocky Mountain Goats within the sustainable carrying capacity of their habitat.	1.1 Maintain suitable summer and winter habitats and minimize wildlife displacement by developing an access management plan to ensure compatible industrial and recreational activities as per Access Management Guidelines, Chapter 3.12. 1.2 Sustain early seral ungulate habitat by initiating controlled fires. 1.3 Establish the mineral lick at Sulpher Creek as a Sensitive Area under the FPC	KBLUP IS: Appendix 3, Page 17
C26	CORE polygon 4-2	Ungulates	Ungulate Winter Range Sheep at McDermett Creek and lower south west facing slopes of Iron Creek	<u>T1 Guideline:</u> -Wildlife harvesting guidelines / TSA harvesting guidelines / specific referrals on the ground.	CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information, T1 Guideline.
C26		Wide ranging carnivores	Priority 1 and Priority 2 Grizzly Bear Habitat		KBLUP IS: Ch 3.4, Pages 8-17

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C26	RMZ C-I01	Wide ranging carnivores	<ol style="list-style-type: none"> 1. Maintain sufficient seasonal habitat to retain the existing Grizzly Bear population. 2. Ensure the existing wolf populations utilizing the Bull river drainage are maintained or enhanced. 	<ol style="list-style-type: none"> 1.1 Sustain high productivity berry patches by – initiating controlled fires; and - using no herbicides in high productivity berry patches. 2.1 Maintain sufficient prey habitat and prey populations. 	KBLUP IS: Appendix 3, Page 17
C26	CORE polygon 4-2	Wide ranging carnivores		<u>T1 Guideline:</u> Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations	CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information, T1 Guideline.
C26		Wide ranging carnivores	Value: security. Watersheds adjacent to the Flathead provide important habitat and security for carnivores that enhance the value of the Flathead (p 39). Carnivore conservation principle (2): provide security from excessive mortality with networks of core reserves and other precautionary measures.	<ul style="list-style-type: none"> • Provide a network of seasonal or permanent security zones throughout the transboundary Flathead basin and elsewhere in the new ‘Southern Rocky Mountain Conservation Area’. Consideration of focal species’ key habitats will be used to guide the strategic identification and delineation of security zones.	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains.</u> 2001, p45.
C26	RMZ C-I01	Fisheries	<ol style="list-style-type: none"> 1. Maintain breeding and nesting opportunities for Harlequin Ducks on the Bull River 2. Bull River and Sand Creek riparian zone attributes 3. Maintain wild fish stocks and habitats for Cutthroat Trout in the Bull River 	<ol style="list-style-type: none"> 1.1 Initiate an inventory of breeding and nesting habitat needs. 2.1 Maintain riparian zone attributes associated with the Bull River and Sand Creek. High priority for appropriate management regimes for livestock and wildlife. 3.1 Assess fish populations and habitats and document the fishery 3.2 Review current management strategies 3.3 Though consultations with BC Hydro, ensure habitat impacts are minimized. 3.4 Explore regulation changes which could be used to limit overfishing. 	KBLUP IS: Appendix 3, Page 17
C26	CORE polygon 4-2	Fisheries		<u>T2 Guideline:</u> Excludes Sand Creek -Minimal human-caused sedimentation. -Protection of streamside and riparian habitats; no roads in riparian without special permission, however, stream crossing normally acceptable. -Management for large organic debris.	CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information, T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				-Watershed sensitivity and ECA analysis prior to development. -Protection of spawning and rearing habitat. -Reclamation and hydrologic stabilization where necessary. -Assume level one guidelines in place where level two's are applied.	
C26	CORE polygon 4-2	Mining	Mineral values in several areas	<u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines	CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information + T1 Guideline.
C26	CORE polygon 4-2	Unacceptable Uses	Settlement is not an acceptable use		CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information.
C27	CORE polygon 4-1	Agriculture		Potential for increased agricultural activity. Intent is to pursue the possibility (CORE, East Kootenay Regional Table, Volume 3, Part B Management Guidelines, Agriculture Notes, AG 2). Outdoor Recreation non-motorized sector expresses concern with regard to expansion of cattle grazing in this unit, however whole heartedly supports CRMP's and the work of the EK Trench Agriculture/Wildlife Committee (CORE, 4-1 Record of Information, Sector Comments). <u>T1 Guideline</u> -Grazing tenures	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information + T1 Guideline.
C27		Agriculture	Low range values. Range agreements: Three grazing permits for guide outfitter horses overlap LU C26 &C28; Total 180 AUMs attributable to LU C27		Cranbrook Forest District Recreation Access Plan. March, 2000. LU C27.
C27	Bull River Range Unit	Agriculture	Bull River Range Agreement Holders: GT: Grizzly Basin Outfitters Ltd -63 AUMs CD Reay and Sons Ltd – marginal use along Bull R. GT: Vince Cocciolo - 69 AUMs GT: Bull River Outfitters Ltd - 88 AUMs	If marked with GT, the Range Agreement Area matches the Guide Outfitting Territory Bull River Range Unit includes LU C25 (part), C26, C27, C28	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer black binder, Range tab)
C27	Crossing Creek	Access	Crossing Creek is high elevation Bighorn sheep winter and summer range.	Distinct population needs protection. Existing problem with ATV/snowmobile use. Must be designated an off-limit area and enforced.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C27	Various	Access	The following drainages are very important for connectivity: 1. Culver to Brule Creek for sheep; 2. Bull River to White River for elk; 2. Upper Bull River sheep crossing; 3. Martin Creek to the east side of the Rockies; 4. Brule – Boivan – Crossing Creek connectivity.	Access should be restricted accordingly.	Commercial Hunting & Fishing and Recreational Hunting & Fishing Focus Group sessions. March 27, 2002.
C27	CORE polygon 4-1	Proposed Protected Area		Outdoor Recreation Non-Motorized Sector proposes that the area south of Top of the World (Summer Lake and Bear Lake areas) be included in Polygon 4-6, Upper Galbraith and Protected with wheelchair access in mind.	CORE. 4-1 Record of Information Sector Comments
C27	Narboe Creek	Recreation	Narboe Creek MOF Recreation Trail	Should not be upgraded.	Recreational Hunting & Fishing Focus Group session. March 27, 2002.
C27	RMZ C-I01	Recreation	1. Maintain recreation opportunities from roaded to semi-primitive non-motorized.	1.1 Maintain existing road accessible campsites along the Bull River. 1.2 Manage the Bull River as a Backcountry River Corridor consistent with the Backcountry Recreation Guidelines (Chapter 3.9). Apply for non-motorized use restriction, upstream of the Aberfeldie Reservoir through Transport Canada 1.3 No permanent road access within 500m of the river unless it is less environmentally damaging to construct the road within this 500m zone. 1.4 New roads constructed for resource development and not needed for ongoing resource management are to be deactivated upon conclusion of resource development.	KBLUP IS: Appendix 3, Page 16
C27	CORE polygon 4-1	Recreation	High value river paddling on Bull River. Many existing recreation areas and trails. Important road access to accommodate technical climbing on Mt. Harrison.	No guidelines provided	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information
C27	RMZ C-I01	Recreation-Commercial Tourism	Maintain and enhance opportunities for resorts and commercial backcountry recreation.		KBLUP IS: Appendix 3, Page 16
C27	CORE polygon 4-1	Recreation-Commercial Tourism	Several guide outfitting areas and base camps. Important recreation values along Bull River for river paddling.	T1 Guideline: -maintain traditional use access; -consultation and consensus on access issues (mining referrals	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				would not normally be routed through tourism unless there was a substantial wilderness impact); -consultation on potential alternatives through resource extraction.	
C27		Recreation	Backcountry Recreation Management as per ROS.		KBLUP IS: Ch. 3.9, Page 54-57
C27	CORE polygon 4-1	Recreation-Visuals	<p>1. General Visuals: visual corridors for high value recreation trails and canoe/kayak routes. Special visual concerns for areas associated with recreation trails and rivers to be worked out at the local level of planning; visual corridor for lower Wildhorse river near Fort Steele (heritage values).</p> <p>2. Tourism Visuals : visual corridor for lower Wildhorse river near Fort Steele and Fisherville site.</p>	<p><u>T1 Guideline:</u> 1. General Visuals-smoke management guidelines / Visual Quality Objectives guidelines apply (implying restrictions on timber volume).</p> <p>2. Tourism Visuals-management of high tourism value viewscales for some enhanced analysis and landscape design (implying no change in timber volume).</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information + T1 Guideline.
C27	CORE polygon 4-1	Recreation – Sense of Solitude	High value kayak/canoeing in major rivers; high recreation values in Summer Lake area with special concern for handicapped access.	<p><u>T1 Guideline:</u> -Local agreement preferred. -Full range of mechanized and non-mechanized access/activities can be allowed.</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information + T1 Guideline.
C27	CORE polygon 4-1	Cultural Heritage		<p><u>T2 Guideline:</u> Planning: Public notification and/or review required within development planning process. In the case of highly sensitive or valued sites, extensive public review likely. Mitigation of impacts, protection of resources, and/or recovery of cultural heritage resource before development, may be required. Access: Based on local agreements. Guidelines regarding modes/routes of access and levels of use may be required in case of highly sensitive or valued sites. Fencing may be required. Directional signage may be restricted or not allowed. Some buffering from access routes to minimize vandalism. Sensitive sites to be well buffered. Roads to avoid contextual areas. Facilities: Restrictions on construction of facilities within contextual areas. In sensitive areas, no development permitted. Temporary site protection may be required. Preservation and reuse of related</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information + T2 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
				heritage sites may be permitted under controlled conditions. Activities High control level on use of fire and chemicals to protect cultural heritage sites. Activities and party size may be restricted. Establishment of a cultural heritage impact assessment process, including recognized cultural heritage advisors. Development plans to be referred to Community Heritage Commission (or equivalent).	
C27		Biodiversity – Rare and Endangered Species	Suskdorf’s Broomrape- Red listed (threatened or endangered) Habitat: Parasite of Aster spp.. Grows in grass, shrubs of steppe and montane. Distribution: Rare in S.E. B.C.. Known only from Bull River.		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 18.
C27		Biodiversity Emphasis	Medium Biodiversity Emphasis		KBLUP IS: Ch. 3.2, Page 3-6 Appendix 3 - Appendix C
C27	Various	Biodiversity - Connectivity	The following drainages are very important for connectivity: 1. Culver to Brule Creek for sheep; 2. Bull River to White River for elk; 5. Upper Bull River sheep crossing; 6. Martin Creek to the east side of the Rockies; 7. Brule – Boivan – Crossing Creek connectivity.		Commercial Hunting & Fishing and Recreational Hunting and Fishing Focus Group sessions, March 27, 2002.
C27		Biodiversity – Connectivity	All or portion of unit is important for regional connectivity		KBLUP IS: Ch. 3.3, Page 6-8
C27	CORE polygon 4-1	Biodiversity – General	Wildlife corridor should be maintained through Quinn Creek and Blackfoot Creek, down the White River and continuing north to the Height of the Rockies Wilderness Area. No settlement and very little private land in the unit. Global Ecosystems Sector notes importance of unit for connectivity and migration. Suggest access management and retention of cover to be achieved through T2 Guideline for Biodiversity (Refer to black binder, CORE tab, Sector Comments for Polygon 4-1).	<u>T1 Guideline:</u> Interior Fish-Forestry Guidelines / Riparian and Streamside Management Guidelines / Wildlife Tree Guidelines / Specific plans for red/blue listed species management	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information + T1 Guideline.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C27	RMZ C-I01	Biodiversity – General	1. Retain forest and grassland ecological elements and processes, including species richness, distribution, and diversity at a low risk. 2. Maintain regional connectivity between the Wigwam and Top of the World Provincial Park to the Elk and Bull river watersheds (linking SRMZ units C-S01, CS02 and C-S06); to contribute to ecosystem representation (ICHmk1, ICHmw2); and serve as habitat linkage for the seasonal migration of ungulates. 3. Maintain integrity of alpine environments	1.1 Quinn Creek should be designated as a Sensitive Area under the FPC. 2.1 Apply connectivity guidelines within the regional connectivity corridor as per Chapter 3.3 3.1 through access management as per guidelines, Chapter 3.12	KBLUP IS: Appendix 3, Page 17
C27	RMZ C-I01	Biodiversity – Old Growth	Retain attributes for old growth dependent species and fur bearers.	The Bull River watershed is a priority for OGMA establishment.	KBLUP IS: Appendix 3, Page 17
C27	RMZ C-I01	Biodiversity – Old Growth	Quinn Creek North, Quinn Creek South Old Growth Management Areas	Quinn Creek North & Quinn Creek South Old Growth Management Areas are to remain intact until OGMA's for the LU are established. These stands should be a part of the OGMA for the LU.	MOU between MOF and MOE re: Instructions for Preparation of 1998 FDP's, Page 2
C27	CORE polygon 4-1	Biodiversity – Old Growth	Remnant old growth	<u>T1 Guideline:</u> Old growth dependent species FENs / Interior Fish-Forestry-Wildlife Guidelines / Regional Wildlife Habitat Guidelines.	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information + T1 Guideline.
C27	CORE polygon 4-2	Biodiversity – Natural Grasslands	Areas of NDT5-Alpine tundra and sub alpine parkland.	<u>T1 Guideline:</u> Weed control / Maintenance of riparian habitats / Grazing management guidelines/ Off-road vehicle control / Monitoring of range condition and trend in terms of domestic and wildlife grazers	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1Record of Information, T1 Guideline + Natural Disturbance Type mapping.
C27	Crossing Creek	Ungulates	Crossing Creek is high elevation Bighorn sheep winter and summer range.	Distinct population needs protection. Existing problem with ATV/snowmobile use. Must be designated an off-limit area and enforced.	Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C27	RMZ C-I01	Ungulates	Ungulate Winter Range (X)		KBLUP IS: Ch. 3.5, Page 17-24
C27	RMZ C-I01	Ungulates	1. Maintain abundance of mule deer, white-tailed deer, elk, moose, Rocky Mountain Bighorn Sheep and Rocky Mountain Goats within the sustainable carrying capacity of their habitat.	1.1 Maintain suitable summer and winter habitats and minimize wildlife displacement by developing an access management plan to ensure compatible industrial and recreational activities as per Access Management Guidelines, Chapter 3.12. 7.1 Sustain early seral ungulate habitat by initiating controlled fires.	KBLUP IS: Appendix 3, Page 17
C27	CORE	Ungulates	Ungulate Winter Range	<u>T1 Guideline:</u>	CORE 1994 East Kootenay Land

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
	polygon 4-1			-Wildlife harvesting guidelines / TSA harvesting guidelines / specific referrals on the ground.	Use Plan, Polygon 4-1 Record of Information, T1 Guideline.
C27	Quinn Creek	Wide ranging carnivores	Quinn Creek is regionally significant, high quality Lynx habitat.		Commercial Hunting & Fishing Focus Group session, March 27, 2002.
C27		Wide ranging carnivores	Priority 2 (and minor amounts of Priority 1) Grizzly Bear Habitat		KBLUP IS: Ch 3.4, Pages 8-17
C27	RMZ C-I01	Wide ranging carnivores	1. Maintain sufficient seasonal habitat to retain the existing Grizzly Bear population. 2. Ensure the existing wolf populations utilizing the Bull river drainage, and the existing Lynx populations within draft LU 27 are maintained or enhanced.	1.1 Sustain high productivity berry patches by – initiating controlled fires; and - using no herbicides in high productivity berry patches. 2.1 Maintain sufficient prey habitat and therefore prey populations.	KBLUP IS: Appendix 3, Page 17
C27	CORE polygon 4-1	Wide ranging carnivores		<u>T1 Guideline:</u> Interior fish-forestry guidelines / FENs / Access control / Landfill regulations / Management of prey species / Maintenance of seasonal feeding and breeding areas / Harvesting regulations	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information, T1 Guideline.
C27	All (Bull)	Wide ranging carnivores	Value: security. Watersheds adjacent to the Flathead provide important habitat and security for carnivores that enhance the value of the Flathead (p 39). Carnivore conservation principle (2): provide security from excessive mortality with networks of core reserves and other precautionary measures.	<ul style="list-style-type: none"> Provide a network of seasonal or permanent security zones throughout the transboundary Flathead basin and elsewhere in the new ‘Southern Rocky Mountain Conservation Area’. <p>Consideration of focal species’ key habitats will be used to guide the strategic identification and delineation of security zones.</p>	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains.</u> 2001, p45.
C27	RMZ C-I01	Fisheries	1. Maintain breeding and nesting opportunities for Harlequin Ducks on the Bull River 2. Bull River and Sand Creek riparian zone attributes 3. Maintain wild fish stocks and habitats for Cutthroat Trout in the Bull River	1.1 Initiate an inventory of breeding and nesting habitat needs. 2.1 Maintain riparian zone attributes associated with the Bull River and Sand Creek. High priority for appropriate management regimes for livestock and wildlife. 3.1 Assess fish populations and habitats and document the fishery 3.2 Review current management strategies 3.3 Though consultations with BC Hydro, ensure habitat impacts are minimized. 3.4 Explore regulation changes which could be used to limit	KBLUP IS: Appendix 3, Page 17

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) <i>(Document, date, section and/or pages)</i>
				overfishing.	
C27	CORE polygon 4-1	Fisheries		<p>T2 Guideline applies except to the Wildhorse River. Wildhorse has high placer mining values – recommend streamside rehabilitation within this unit.</p> <p><u>T2 Guideline:</u> -Minimal human-caused sedimentation. -Protection of streamside and riparian habitats; no roads in riparian without special permission, however, stream crossing normally acceptable. -Management for large organic debris. -Watershed sensitivity and ECA analysis prior to development. -Protection of spawning and rearing habitat. -Reclamation and hydrologic stabilization where necessary. -Assume level one guidelines in place where level two's are applied.</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information, T1 Guideline.
C27	CORE polygon 4-1	Mining	Mineral values in several areas	<p><u>T1 Guideline:</u> Mines Act / Health, Safety and Reclamation Code / Mineral Tenure Act / Mine Development Assessment Act / Water Act / Fisheries Act / Forest Act / Guidelines for Mineral Exploration / Guidelines for Coal Exploration / Petroleum and Natural Gas Act / Geothermal Resources Act / other related regulations and guidelines</p>	CORE 1994 East Kootenay Land Use Plan, Polygon 4-1 Record of Information + T1 Guideline.
C27	CORE polygon 4-1	Unacceptable Uses	Settlement and General Industrial/Commercial are not acceptable uses		CORE 1994 East Kootenay Land Use Plan, Polygon 4-2 Record of Information.
C28	North Galbraith PAS Unit 17	1993 Best PAS Areas	<p>Drainage originating at the southeast corner of Top of the World Park and flowing south into the Bull River.</p> <p>PAS Value: North Galbraith Creek is a core area which connects to Top of the World Provincial Park and increases its viability. This unit possesses some of the highest cultural values in the region.</p> <p>Diversity: Connects via an existing protected area (TOW park) to Coyote Creek (Lussier River) drainage, to Iron Creek and to Elk River. Provides</p>	1993 recommended Priority One area for protection.	Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 17.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			<p>riparian habitat and important elk migration route along North Galbraith Creek. Contributes to the Bull River cutthroat trout fishery. Possesses extremely high cultural values.</p> <p>Viability: Although this is a relatively small area (10,824 ha), it has a complete watershed and is therefore viable.</p> <p>Naturalness in 1993: Less than 25% disturbed.</p>		
C28	Bull River Range Unit	Agriculture	<p>Bull River Range Agreement Holders:</p> <p>GT: Grizzly Basin Outfitters Ltd -63 AUMs</p> <p>CD Reay and Sons Ltd – marginal use along Bull R.</p> <p>GT: Vince Cocciolo - 69 AUMs</p> <p>GT: Bull River Outfitters Ltd - 88 AUMs</p>	<p>If marked with GT, the Range Agreement Area matches the Guide Outfitting Territory</p> <p>Bull River Range Unit includes LU C25 (part), C26, C27, C28</p>	Cranbrook Forest District Range Unit Map and Range Agreement Holder information (refer to Range tab in black binder)
C28	North Galbraith PAS Unit 17	Cultural Heritage	<p>Major pro-contact communication corridor to Top of the World Park, one of the most important cultural foci of the Ktunaxa for at least 8500 years. Nationally significant cultural landscape, maintaining natural integrity of vista from nationally significant cultural features in Top of the World Park. High probability of containing significant archaeological resources.</p>		Best P.A.S. Report. Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria. Prepared by Conservation, Recreation and Cultural Heritage Subgroups of the Kootenay Regional Protected Areas Team (RPAT). November, 1993. Unit 17.
C27		Biodiversity – Rare and Endangered Species	<p>Suskdorf’s Broomrape- Red listed (threatened or endangered)</p> <p>Habitat: Parasite of Aster spp.. Grows in grass, shrubs of steppe and montane.</p> <p>Distribution: Rare in S.E. B.C.. Known only from Bull River.</p>		Listed Vertebrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area. March, 2002. Page 18.
C28	All (Bull)	Wide ranging carnivores	<p>Value: security.</p> <p>Watersheds adjacent to the Flathead provide important habitat and security for carnivores that enhance the value of the Flathead (p 39).</p>	<ul style="list-style-type: none"> Provide a network of seasonal or permanent security zones throughout the transboundary Flathead basin and elsewhere in the new ‘Southern Rocky Mountain Conservation Area’. <p>Consideration of focal species’ key habitats will be used to guide the</p>	J.Weaver, <u>The Transboundary Flathead, British Columbia and Montana: A Critical Landscape for Carnivores in the Rocky Mountains.</u> 2001, p45.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
			Carnivore conservation principle (2): provide security from excessive mortality with networks of core reserves and other precautionary measures.	strategic identification and delineation of security zones.	
C38	Natal/Michel/Leach Wildlife Range Complex	Ungulates – Elk	<p>Natal/Michel/Leach Wildlife Range Complex is critical elk winter and spring habitat, designated for Intensive Wildlife Management (Category 1). Biophysical Units:</p> <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. <p>This Range Complex is located in LU: C19, C20, C38; C19 contains 3 known mineral licks (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas:</p> <ul style="list-style-type: none"> -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted). 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.
C38	Grave Prairie Wildlife Range Complex	Ungulates – Elk	<p>Grave Prairie Wildlife Range Complex is critical elk winter and spring habitat, designated for Intensive Wildlife Management (Category 1). Biophysical Units:</p> <ul style="list-style-type: none"> Class 1 - wildlife winter habitat (elk, sheep, moose, goat, mule deer). Class 2 – mule deer and sheep winter habitat known / suspected mineral licks. <p>This Range Complex is located in LU C38 and C23; C38 contains 2 known mineral licks (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>Wildlife management is recommended as the dominant use. A combination of the following general habitat enhancement activities would be intensively applied to these areas:</p> <ul style="list-style-type: none"> -Integrated local resource use planning; -Critical habitat identification and protection; -Exploration/mining reclamation; -Impact management activities negotiated under the Mine Development Review Process; -Logging, burning, grazing; -Herbicide, fertilizer treatment; -Slash/brush control, cultivation; -Access planning and management; -Collision mortality management (fencing, underpass, snow clearing); -Winter feeding (restricted). 	Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-2.

Southern Rocky Mountain Management Plan
Landscape Unit Summary June 18, 2002

LU #	Drainage (if applicable)	Topic	Key resource values	Management direction (existing or recommended)	Reference (Source) (Document, date, section and/or pages)
C38	Upper Elk/ Greenhills/ Fording Wildlife Range Complex	Ungulates – Elk	<p>Upper Elk/Greenhills/ Fording Wildlife Range Complex is elk winter and spring habitat designated for Active Wildlife Management (Category 2). Biophysical Units:</p> <ul style="list-style-type: none">• Class 2 – elk, moose, goat winter winter habitat.• Class 3 – all ungulate species winter habitat.• Class 3 – all ungulate species summer range <p>This Range Complex is located in LU: C21, C22, C23 and C38; 1 known mineral lick is located in C21 and 1 known lick is located in C22 (refer to Elk-Flathead Operational Wildlife Plan Map and Cross Reference in the LU Summary background information binder).</p>	<p>Wildlife management would be given equal consideration in specific areas. A combination of the following general management and enhancement techniques would be actively pursued in an interated resource management strategy:</p> <ul style="list-style-type: none">-Logging which could benefit/complement wildlife;-Integated silvicultural practices;-Exploration/mining reclamation;-Access planning;-Impact management activities negotiated through the Mine Development Review Process.	<p>Elk-Flathead Operational Wildlife Plan. Prepared Jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, MOE. December, 1987. Page 13, and Appendix 1, Page 1-3.</p>
C38	CORE polygon 1-1	Coal Mining	<ul style="list-style-type: none">• Medium and high value coal lands are located throughout the LU C38 except the area east of the Fording River at Fording Mountain.• In LU C38, the northernmost reaches of the high value, exposed coal bearing lands of the Crowsnest coalfield subside and the Elk Valley coalfield initiates.• The Elk Valley coal field stretches from Sheep Mountain and Alexander Creek to Elk Lakes Provincial Park.• In LU C38 the majority of the coal lands are on private land.	<p>Definitions:</p> <ul style="list-style-type: none">• High value coal lands include the area from the outcrop of the coal bearing strata to its inferred depth limit (p1).• Medium value coal land is a corridor for mining related activities and infrastructure, surrounding the exposed coal bearing strata (high value coal lands) (p1).	<p>Morris, Bob. Resource Estimate: East Kootenay Coalfields, 1994. Pages 1, 4, 7; Fig. 5: E.K. Coal Fields Location Map; and Fig. 7: Coal Value Lands Map.</p> <p>Refer to Black Binder, Coal tab for maps.</p>

Southern Rocky Mountain Management Plan

Landscape Unit Summary

June 18, 2002

Background Information and Cross Reference Tables

I. Background Information

The Southern Rocky Mountain Management Plan (SRMMP) Landscape Unit Summary documents landscape unit values and management direction from the sources listed in Section II below. In addition to the sources, this document describes the L.U. Summary:

- area (Section III);
- the Topic categories by landscape unit (Section IV);
- C.O.R.E. T1 and T2 guideline sets (Section V);
- background information on the Range Unit information (Section VI) and Listed Vertebrate and Vascular Plant Species (Section VII);
- landscape unit relationship to other land unit polygons in the SRMMP area. This is accomplished using three cross reference tables: Table 1. Landscape Unit / KBLUP / CORE Cross Reference; Table 2. Landscape Unit / Range Unit Cross Reference; and Table 3. Landscape Unit / Wildlife Range Complex Cross Reference (Section VIII).

II. Sources

Sources covered in the L.U. Summary include:

1. KBLUP-Implementation Strategy, 1997.
2. CORE: East Kootenay Regional Table. Land Unit Polygons Records of Information. Volume 3, 1994.
3. Best P.A.S. Report: Identification, Evaluation and Ranking of Areas within the Kootenay Region that meet the Protected Areas Strategy Goals and Criteria, 1993.
4. Flathead National Forest, Forest Plan, 2001 (Montana).
5. Kootenai National Forest, Forest Plan. Vol.1, 1987 (Montana).
6. The Transboundary Flathead: A Critical Landscape for Carnivores in the Rocky Mountains. John L. Weaver, Ph.D., Wildlife Conservation Society, 2001.
7. Cranbrook Forest District Recreation Access Plan, 2000.
8. Cranbrook Forest District Range Unit Mapping and District Range Officer information.
9. SRMMP Focus Group sessions site specific issues.
10. Sheep Mountain Wildlife Management Area Proposed Management Plan. Wildlife Branch, 1991.
11. Listed Vertbrate and Vascular Plant Species Occurring in the Cranbrook Forest District and in the SRMMP Area. Prepared for Ministry of Sustainable Resource Management by Isabelle Houde, M.Sc., R.P.Bio., 2002.
12. East Kootenay Coal Fields Resource Estimate. Prepared for the East Kootenay CORE Table, Coal Sector by R.J. Morris, M.Sc, P.Geo., 1994.
13. Elk-Flathead Operational Wildlife Management Plan. Prepared jointly by the Planning and Assessment Branch and Cranbrook Wildlife Branch, Ministry of Environment. December, 1987.

III. Area

Landscape units covered in the L.U. Summary are those in the SRMMP area and include: LU C13/34 - planning cells T555, T560 and T490, LU C14, C15, C16, C17, C18, C23, C24, C25, C26, and

C27. Entries have also been made for landscape units in the resource evaluation area surrounding the SRMMP area (LU C19-C22, C28, C38), however due to time and funding constraints, LU C20, C21, C22, C28 and C38 will not be completed at this time.

IV. Topic Categories

The main categories under the Topic heading for each landscape unit in the L.U. Summary are as follows:

- 1. 1993 Best P.A.S. Areas
- 2. Protected area proposal (C.O.R.E.)
- 3. Agriculture
- 4. Access Management
- 5. Recreation
- 6. Cultural Heritage
- 7. Watershed
- 8. Biodiversity-Rare and Endangered Species
- 9. Biodiversity
- 10. Wildlife
- 11. Ungulates
- 12. Wide Ranging Carnivores
- 13. Fisheries
- 14. Mining
- 15. Oil and Gas
- 16. Unacceptable Uses

V. C.O.R.E. Management Guidelines

C.O.R.E. Management Guidelines in the L.U. Summary are from the report, East Kootenay Regional Table: Land Unit Polygons- Record of Information. Volume 3. The T1 guideline set is a “list of 1994 guidelines, policies or processes that are applicable to values of moderate concern in a given area”. The T2 guideline set is a “potential list of management tools to address values of a high level of concern in a given area”. (E.K. Regional Table, Land Unit Polygons- ROI. Vol. 3).

VI. Range Unit Information

Range Units generally cover more than one landscape unit and do not necessarily follow topographical boundaries. A.U.M.’s quoted in the L.U. Summary are from the Cranbrook District Recreation Access Plan, 2000, and from discussion with Jodie Kekula, District Range Officer on March 15, 2002. The Range Officer information is the most current available. Note that the Range Officer A.U.M.’s are for the entire Range Unit as opposed to landscape unit. LU / Range Unit Cross Reference (Table 1 on page 6), indicates which landscape unit the Range Units extend within for the SRMMP area.

VII. Listed Vertebrate and Vascular Plant Species

Listed vertebrate and vascular plant species information in the L.U. Summary is from the report, Listed Vertebrate and Vascular Plant Species Occurring in Cranbrook Forest District and SRMMP Area (2002). Since distribution information for some species includes the entire SRMMP area, and for other species, occurrence has not been confirmed in the SRMMP area, the following approach has been used to incorporate the findings in the L.U. Summary.

1. For listed vertebrate species

- Listed vertebrate species are entered by relevant landscape unit where species distribution information identifies specific locations in the SRMMP area.
- Listed vertebrate species are listed below in the case that species distribution is throughout Cranbrook Forest District and therefore throughout the SRMMP area. These species are not entered in the L.U. Summary.

Westslope Cutthroat Trout – Blue listed (p 2);

Bull Trout– Blue listed (p 3) Note: Bull Trout do not occur in upper Bull River;

Grizzly Bear– Blue listed (p 11);

Wolverine– Blue listed (p 12);

Bighorn Sheep– Blue listed (p 13).

- Listed vertebrate species which should be noted are the **Sharp-tailed Grouse** and **Prairie Falcon**. Possible breeding distribution maps show that these species may use the Kootenay River Valley (p 6).

Sharp-tailed Grouse- Blue listed (p 6)

Sharp-tailed Grouse use may extend to open grasslands with adjacent deciduous cover habitats throughout the SRMMP area, however since this habitat type is concentrated in the Sheep Mountain/Wigwam Flats area, the Sharp tailed Grouse is entered in the L.U. Summary in LU C13/34: T555, T560, T490.

Prairie Falcon- Red listed (p 6)

Prairie Falcon use of the SRMMP area is unknown: nest sites were not recorded in Cranbrook Forest District (p 6). Prairie Falcon has been entered in LU C13/34: T555, T560, T490 because of potential habitat in the Elk River embankments.

Confirmation of distribution in the SRMMP area is needed in both cases.

2. For listed vascular plants species:

- Listed vascular plants species are entered in the L.U. Summary by landscape unit if they are known to occur in locations within the SRMMP area. Five red listed plants are identified as occurring in the SRMMP area and include:

Large-flowered Brickellia (p 17) in LU C16 &18;

Least Bladder Milk-vetch (p 17) in LU C18;

Pinewood Peavine (p 18) in LU C13/34 Sheep Mt/Wigwam Flats;

Suskdorf's Broomrape (p 18) in LUC26-28; and

Howell's Quillwort (p 21) in LUC18.

- Listed vascular plants species are not entered in the spreadsheet in the case that they are described as rare in southeastern B.C. and are not confirmed as occurring in Cranbrook Forest District or the SRMMP area.

For the complete list of rare species refer to the report pages 14-21.

- Listed vascular plants species which should be noted are **Hooker's Townsendia** and **Meadow Arnica**.

Distribution information describes the general vicinity of the SRMMP area, i.e. “known from several locations in S.E. B.C.” and “Rockies- only seven specimens found in B.C.”, respectively (p 20), however since specific locations are not identified, these two plants are noted here but are not entered in the LU Summary.

*All page number references in this section are to the report Listed Vertebrate and Vascular Plant Species in Cranbrook Forest District and SRMMP Area (2002).

VIII. Cross Reference Tables

Table 1: Landscape Unit / KBLUP / CORE Cross Reference

Landscape Unit	KBLUP-IS Resource Management Zone	CORE Polygon
13 (T555/T560) 34 (T490)	C-I04 C-I05	1-1 Integrated 1-1 Integrated
14	C-S06 C-S06	1-12 Special 1-5 Special
15	C-I04 C-S06 (W035, W120, W125, W130)	1-1 Integrated 1-1 Integrated
16	C-I04 C-S05 (F005, F037, F085, F090, F095,F105, F115) C-E04	1-2 Integrated 1-3 Special 1-11 Dedicated (Harvey)
17	C-S05 C-I04 C-I04 Private Private	1-3 Special (SE corner) 2-3 Integrated 2-4 Integrated 2-2 (Shell-Elkview-Dominion Block) 2-5 (Shell Lodgepole Blk)
18	C-S05 C-S05 C-S05 C-I03	1-3 Special 1-6(a) Special- no Record of Information 1-6 Protected (Ak-Kish) 1-4 Integrated
19	C-E02 CPR block C-E03 Private C-I04 C-I04	2-9 Dedicated 2-6 Dedicated-no Record 2-2 Private 2-3 Integrated 2-4 Integrated
23	C-S01	3-3 Special

	C-E01 Private	3-2 Dedicated Private
24	<i>C-I01</i> C-E02 Private east of Elk R.	2-1 Integrated 2-9 Dedicated Private
25	<i>C-I01</i>	4-2 Integrated
27	C-I01	4-1 Integrated

Table 2: Landscape Unit / Range Unit Cross Reference

Range Unit boundaries do not correspond to landscape unit boundaries. Table 1 specifies which Range Unit(s) extend into the stated landscape unit only.

Landscape Unit	Range Unit
13 (T555/T560)	Wigwam
34 (T490)	Waldo
14	Wigwam
15	Wigwam Fernie
16	Flathead
17	Flathead
18	Flathead
19	Corbin. No range agreement holders
23	Upper Elk
24	Wigwam Fernie Spruce Olsen
25	Burton North Upper Sand
27	Bull River

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Table 3: Landscape Unit / Wildlife Range Complex Cross Reference

Based on the Elk-Flathead Operational Wildlife Plan, Fig. 2, Page 12 and Fig 3, Page 13.

Landscape Unit	Elk-Flathead Operational Planning Unit	Wildlife Range Complex	Wildlife Management Designation
13 & 34 T555/T560 /T490	<i>Wigwam</i>	Mt. Broadwood/Wigwam Critical habitat for bighorn sheep and elk	Intensive
14	Wigwam	Upper Wigwam. Critical habitat for elk	Active
15	<i>Wigwam</i>	Mt. Broadwood/Wigwam Critical habitat for sheep and elk	Intensive
15	Wigwam	Upper Wigwam Critical habitat for elk	Active
16	Flathead	Flathead Critical habitat for elk	Active
17	<i>Flathead</i>	No Range Complex	Passive
18	Flathead	Flathead Critical habitat for elk	Active
19	Elk Valley	Natal/Michel/Leach Critical habitat for elk	Intensive
20	Elk Valley	Natal/Michel/Leach Critical habitat for elk	Intensive
20	Elk Valley	East Side Critical habitat for sheep and elk	Intensive
21	Elk Valley	East Side Critical habitat for sheep and elk	Intensive
21	Elk Valley	Upper Elk/Greenhills/Fording Critical habitat for elk	Active
22	Elk Valley	Upper Elk/Greenhills/Fording	Active

		Critical habitat for elk	
22	Elk Valley	West Side Critical habitat for bighorn sheep	Intensive
23	Elk Valley	West Side Critical habitat for bighorn sheep	Intensive
23	Elk Valley	Grave Prairie Critical habitat for elk	Intensive
23	Elk Valley	Upper Elk/Greenhills/Fording Critical habitat for elk	Active
24	Elk Valley	Lower Elk Critical habitat for elk	Active
24	<i>Wigwam</i>	Mt. Broadwood/Wigwam Critical habitat for sheep and elk	Intensive
38	Elk Valley	Natal/Michel/Leach Critical habitat for elk	Intensive
38	Elk Valley	Grave Prairie-elk critical habitat	Intensive

Table 3 Note:

Management activities associated with Intensive and Active Wildlife Management Designations are provided in L.U. Summary with the associated Wildlife Range Complexes. The management activities are excerpted from the Elk-Flathead Operational Wildlife Plan, Appendix 1, Pages 1-2 and 1-3.

APPENDIX 22.1 Management of Coal-bearing Lands

Coal-bearing lands in the East Kootenays are almost entirely within the integrated land base in the East Kootenay Land Use Plan (EKLUP). This includes a significant proportion of the higher-priority areas for future coal mining, which are within the Enhanced Resource Development Zone for Coal (ERDZ-C). However, the large majority of the ERDZ-C lands are not within the SRMMP area (note that all ERDZ-C lands are within the overall Resource Evaluation Area).

All coal-bearing lands in the SRMMP area, and also in the larger Resource Evaluation Area, will continue to be managed according to basic policy for subsurface resources, as specified in the EKLUP. In other words, all coal-bearing lands outside of protected areas are available for exploration and development, subject to the statutory approval mechanisms of the day. The intent is to provide certainty for investors and to protect and create jobs in mining.

As outlined in the EKLUP and the Kootenay-Boundary Land Use Plan Implementation Strategy (KBLUP-IS), the ERDZ-C designation represents a higher emphasis on the coal resources and a priority commitment to activities related to their development. The practical implementation of the ERDZ-C designation has not been adequately addressed to date, but may be dealt with during a future government-industry project. The intent of the project would be to deliver enhanced security, over and above the EKLUP policy and the general guidance provided by the KBLUP-IS (below), for the coal-mining industry and the Elk Valley communities.

In the meantime, those small coal-bearing areas which are in both the SRMMP and the ERDZ-C lands (see Map B.3.1.2) will be managed in a manner consistent with KBLUP-IS resource management objectives and guidelines. Specifically, it is recognized that in Coal ERDZ lands ecosystem function may be temporarily compromised, but that long-term environmental quality will be addressed through reclamation and mitigation, as determined by the permitting process.

APPENDIX 22.2 Mineral Two-zone System Brochure

The two-zone system for mineral exploration and mining in BC is reflected in Resource Objectives 3.1.1 and 3.1.2 of the SRMMP. The Ministries of Energy and Mines and Sustainable Resource Management published a brochure describing the two-zone system in 2003. The brochure provides background on the two-zone system and legislation and on their implications for land use planning and permitting. It may be found at the government website given below, or by contacting the offices of either ministry.

http://www.em.gov.bc.ca/Mining/Two-Zone/Two_Zone_Brochure.pdf

APPENDIX 22.3 Petroleum Resource Appraisal of the SRMMP Resource Evaluation Area

(M. Hayes, Ministry of Energy and Mines, 2003)

Summary:

- **Very high hydrocarbon resource potential.**
- **Potential oil resources of 88 million barrels of oil.**
- **Potential gas resources of 1.3 trillion cubic feet.**
- **High potential for coalbed methane**

Discussion:

The Southern Rocky Mountain Management Plan (SRMMP) resource evaluation area¹ in the southeast corner of BC is located over an area considered to hold prime natural gas and oil potential. Oil and gas seeps occur throughout the area and were the focus of wildcat drilling in the early 1900's. Currently there are 4 recognized gas pools in the area that represent up to 600 BCF of carbon dioxide (CO₂)-rich gas. A total of nine conventional hydrocarbon plays are identified within the SRMMP resource evaluation area. However, the area remains relatively unexplored. Since 1950, only 20 wells have been drilled in this area and significant potential remains.

The Kishenehn oil play makes up the bulk of the oil potential in the SRMMP resource evaluation area, contributing at least 64 million barrels (MMBO) to the overall oil resource potential. The play with the largest gas potential is the Waterton Rundle/Wabamun play. It is well defined in Alberta where several analog fields (Waterton, Pincher Creek, etc.) have been discovered with cumulative original gas in place (OGIP) reserves of more than 5 trillion cubic feet (TCF). Potential for this play within the confines of the SRMMP resource evaluation area is estimated to range from 280 BCF to 1.5 TCF. This large gas potential must be tempered with a reminder that a high percentage of CO₂ content is expected along some trends.

Hydrocarbon Plays of Southeastern British Columbia

PLAY GAS	TOTAL PLAY AREA ha	PLAY POTENTIAL 106m3	PLAY AREA IN BC ha	BC PLAY POTENTIAL		BC % OF PLAY
				106m3	BCF	
Waterton Colorado	3449092	27600	151744	1214.3	42.9	4.4%
Kishenehn gas	104589	17883	17540	2999.1	105.9	17.0%
Waterton Run./Wab.	3028589	531000	150448	26377.9	931.5	4.9%
MacDonald Paleo	390973	3423	46944	411.0	14.5	12.0%
Waterton Mann.	3207694	34000	144254	1529.0	54.0	4.5%
Fernie/Elk V. Meso.	214745	203	214745	203.0	7.2	100.0%

¹ The resource evaluation area includes the entire Elk, Bull, Wigwam and Flathead River watersheds and is larger than the SRMMP area. See Section B.1.1 for explanation.

Fernie/Elk V. Paleo.	186637	5142	186637	5142.0	181.6	100.0%
Rocky Mtn Trench	504985	849	131451	221.0	7.8	26.0%
B. Purcell immature	1985100	622	59681	18.7	0.7	3.0%
Total				38116.0	1346.1	

OIL	ha	106m3	ha	106m3	MMBO	%
Kishenehn oil	104589	78	13811	10.3	64.8	17.0%
Waterton Mann. oil	3207694	60.7	184958	3.5	22.0	4.5%
B. Purcell immature	1985100	4.5	61759	0.14	0.9	3.0%
Total				13.94	87.7	

Based on this table the SRMMP resource evaluation area has estimated potential oil resources of 88 MMBO and potential gas 1.3 TCF. Based on a \$3/mcf and \$28/bbl price the estimated value of the resource is \$240 million for oil and \$550 million for gas. (Assuming 50% of the resource is discovered and 20% of the oil and 85% of the gas are recovered). These numbers represent a potential value of the resource only. They are provided as a term of reference and do not include any land sale bonuses, rentals, economic spinoffs or other revenues that may accrue locally or provincially.

Coalbed Methane

The resource evaluation area contains the Elk Valley, Crowsnest and Flathead coalfields. The total resource in the three coalfields is estimated to be in excess of 50 billion tonnes of coal, and large areas underlain by coal have coalbed methane (CBM) potential.

Note, however, that most of these coal resources are outside the plan area. This is because almost all of the Elk Valley coalfield and the majority of the Crowsnest coalfield are not in the SRMMP area. All of the Flathead coalfield is within the SRMMP area, and only its coalbed methane potential is considered here.

Coal in the Flathead coalfield occurs in a number of outliers of the Mist Mountain Formation, the largest of which is the so-called Sage Creek Coal deposit on Cabin Creek. Geological studies estimate that the Flathead River valley may overlay some 4 billion tonnes of near-surface coal and up to 13 billion tonnes of deeply buried coal. The coal resource available for CBM exploration is about 1 billion tonnes with a potential CBM resource of 0.4 trillion cubic feet, or 11 billion cubic metres.

LU	BEO	BEC	FC INVENTORY CFLB HA	OLD GROWTH AGE	MIN. OLD GROWTH TARGET %	MINIMUM OLD GROWTH CFLB TARGET HA	TOTAL CFLB OGMAs DELINEATED HA	ADDITIONAL NON CFLB OGMAs DELINEATED HA	FC INVENTORY OLD CFLB NC HA	FC INVENTORY OLD THLB HA	FC INVENTORY TOTAL CFLB OLD HA	OGMAs DELINEATED IN FC INVENTORY CFLB OLD NC	OGMAs DELINEATED IN FC INVENTORY CFLB NC	OGMAs DELINEATE D IN FC INVENTORY OLD THLB	OGMAs DELINEATE D IN FC INVENTORY THLB	<i>LUPG Direction - Amount of THLB that Could be in OGMA's</i>	COMMENTS	Mature only target percent %	Mature only target (ha)	Mature seral spatial deployment (ha)
C14	H	MSdk	6802	>140	21	1428	1416	265	146	147	293	145	674	141	742	1282		18%	1,224	1125
	H	ESSFdk	11996	>140	21	2519	2534	10	1897	897	2794	1746	1889	564	645	622	Surplus old CFLB NC is PI leading stands	13%	1,559	1674
	H	ESSFdku	673	>140	21	141	144	4	230	2	232	127	143	1	1	0			2,784	2799
						4089	4094													
C15	H	IDFdm2	92	>250	19	17	9	0	0	0	0	0	6	0	3	17				
	H	MSdk	5213	>140	21	1095	1095	152	780	608	1388	709	777	302	318	315		18%	938	942
	H	ICHmk1	3359	>140	21	705	709	65	533	236	769	519	545	164	164	172		13%	437	438
	I	ESSFdk	8403	>140	14	1176	1184	33	2960	741	3701	1021	1024	160	160	0	THLB component is primarily in Celestial Creek. Very important area for grizzly habitat, wallows, and connectivity. Area very important for guide- outfitter		1,375	1380
	I	ESSFdku	451	>140	14	63	61	0	341	2	343	59	59	2	2	0				
	I	ESSFwm	2697	>250	9	243	249	7	26	0	26	0	244	0	5	217				
	I	ESSFwmu	727	>250	9	65	62	2	0	0	0	0	62	0	0	65				
						3365	3369													
C16	I	MSdk	12550	>140	14	1757	1756	1179	162	210	372	154	784	194	972	1595	OGMA designations will allow for required road crossing of the Flathead river, where economic/biological values warrant.			
	I	ESSFdk	20907	>140	14	2927	2559	126	3641	994	4635	2151	2278	250	281	0	Some THLB selected because of best old growth attributes, tailed frog habitat, a couple of key locations for connectivity as negotiated with FES (eg.Cabin Creek) and as per previous MoF/MoE agreements			
	I	ESSFdku	1019	>140	14	143	507	57	705	54	759	502	502	5	5	0				
						4827	4822													
C17	I	MSdk	1124	>140	14	157	165	65	85	159	244	58	101	52	64	72				
	I	ESSFdk	10885	>140	14	1524	1176	247	1094	753	1847	960	1086	90	90	430				
	I	ESSFdku	1933	>140	14	271	654	133	623	84	707	591	653	1	1	0				

LU	BEO	BEC	FC INVENTORY CFLB HA	OLD GROWTH AGE	MIN. OLD GROWTH TARGET %	MINIMUM OLD GROWTH CFLB TARGET HA	TOTAL CFLB OGMAs DELINEATED HA	ADDITIONAL NON CFLB OGMAs DELINEATED HA	FC INVENTORY OLD CFLB NC HA	FC INVENTORY OLD THLB HA	FC INVENTORY TOTAL CFLB OLD HA	OGMAs DELINEATED IN FC INVENTORY CFLB OLD NC	OGMAs DELINEATED IN FC INVENTORY CFLB NC	OGMAs DELINEATE D IN FC INVENTORY OLD THLB	OGMAs DELINEATE D IN FC INVENTORY THLB	<i>LUPG Direction - Amount of THLB that Could be in OGMA's</i>	COMMENTS	Mature only target percent %	Mature only target (ha)	Mature seral spatial deployment (ha)
						1952	1995													
C18	I	MSdk	20442	>140	14	2862	2857	593	673	1188	1861	396	971	746	1886	2189	Surplus old CFLB NC = Capturing of riparian habitats. Other old stands with not good attributes	12%	2,453	2478
	I	ESSFdk	19597	>140	14	2744	2751	42	6633	1306	7939	2596	2657	86	94	0	Surplus old CFLB NC = Capturing of riparian			
	I	ESSFdku	1291	>140	14	181	178	3	1019	0	1019	178	178	0	0	0				
						5786	5786													
C23	H	MSdk	12264	>140	14	1717	1537	55	552	683	1235	374	672	422	865	1165				
	H	ESSFdk	12630	>140	21	2652	2820	43	3821	406	4227	2671	2820	0	0	0	Young OGMA (recruitment) is part of larger patch which is an economically marginal area	13%	1,642	1656
	H	ESSFdku	2729	>140	21	573	602	18	1950	10	1960	571	599	3	3	0				
						4942	4959													
C24	H	MSdk	1438	>140	21	302	301	18	89	0	89	89	301	0	0	213				
	H	ESSFdk	608	>140	21	128	129	16	46	0	46	29	129	0	0	82				
	H	ESSFdku	199	>140	21	42	43	0	4	0	4	3	43	0	0	38				
	H	ESSFwm	2642	>250	13	343	354	22	75	0	75	42	354	0	0	268				
	H	ESSFwmu	794	>250	13	103	113	2	39	0	39	30	113	0	0	64				
	H	ICHmk1	9050	>140	21	1901	1928	82	207	52	259	135	1457	35	471	1694				
	H	IDFdm2	173	>250	19	33	37	0	0	0	0	0	31	0	6	33				
						2852	2905													
C25	I	MSdk	2001	>140	14	280	284	0	583	55	638	276	281	3	3	0				
	I	ESSFdk	1295	>140	14	181	190	0	460	68	528	187	190	0	0	0				
	I	ESSFdku	168	>140	14	24	8	0	37	3	40	8	8	0	0	0				
	I	ESSFwm	2628	>250	9	237	238	2	206	11	217	68	220	7	18	31				
	I	ESSFwmu	124	>250	9	11	18	0	3	0	3	0	18	0	0	8				
	I	ICHdm	3394	>250	14	475	476	3	157	23	180	136	362	23	114	318				
	I	IDFdm2	191	>250	13	25	8	0	0	0	0	0	8	0	0	25				
	I	IDFdm2a	296	>250	13	38	58	1	0	0	0	0	43	0	15	38				
						1271	1280													
C26	I	MSdk	2291	>140	14	321	323	2	42	105	147	42	111	103	212	279				
	I	ESSFdk	3970	>140	14	556	567	2	545	66	611	504	567	0	0	11				
	I	ESSFdku	590	>140	14	83	92	1	122	5	127	89	91	0	1	0				

LU	BEO	BEC	FC INVENTORY CFLB HA	OLD GROWTH AGE	MIN. OLD GROWTH TARGET %	MINIMUM OLD GROWTH CFLB TARGET HA	TOTAL CFLB OGMA's DELINEATED HA	ADDITIONAL NON CFLB OGMA's DELINEATED HA	FC INVENTORY OLD CFLB NC HA	FC INVENTORY OLD THLB HA	FC INVENTORY TOTAL CFLB OLD HA	OGMA's DELINEATED IN FC INVENTORY CFLB OLD NC	OGMA's DELINEATED IN FC INVENTORY CFLB NC	OGMA's DELINEATE D IN FC INVENTORY OLD THLB	OGMA's DELINEATE D IN FC INVENTORY THLB	LUPG <i>Direction - Amount of THLB that Could be in OGMA's</i>	COMMENTS	Mature only target percent %	Mature only target (ha)	Mature seral spatial deployment (ha)
	I	ESSFwm	4592	>250	9	413	416	3	100	0	100	25	355	0	61	313	THLB area is recruitment			
	I	ESSFwmu	418	>250	9	38	31	0	25	0	25	26	31	0	0	13				
	I	ICHmk1	10837	>140	14	1517	1518	25	641	143	784	641	1060	143	458	876				
	I	IDFdm2	128	>250	13	17	24	1	0	0	0	0	22	0	2	17				
						2944	2971													
C27	I	MSdk	8774	>140	14	1228	1214	6	184	94	278	167	738	93	476	1044				
	I	ESSFdk	15507	>140	14	2171	2239	4	2455	998	3453	1460	2058	153	181	0	THLB component is in scattered small areas of expanded riparian habitat, rare old growth stands, and economically marginal timber in difficult locations.			
	I	ESSFdku	1903	>140	14	266	278	0	934	259	1193	216	273	5	5	0				
						3666	3731													
															8324	13507				
					TOTAL	35694	35912													

APPENDIX 24.3: Wildlife Tree Retention Methodology

Wildlife tree retention (WTR) targets for the SRMMP area were determined by biogeoclimatic subzone based on interpolating Table A3.1 of the Landscape Unit Planning Guide (LUPG)¹ to the nearest tenth of a percent.

Using the data from the Cranbrook Timber Supply Area (Cranbrook TSA) Timber Supply Review 2 (TSR2) data file, the “*percent of the biogeoclimatic subzone within the landscape unit available for harvest*” was calculated by dividing the timber harvesting land base area by the provincial Crown forest land area.

Through previous work by the Ministry of Environment Forest Ecosystem Specialist and the Ministry of Forests District Planning Officer, a professional judgement call was made by Landscape Unit (LU) by biogeoclimatic subzone to determine a “recommended age break for determining harvested areas”. A further judgement call was then made as to the “estimated percent of harvested areas estimated to have been harvested without wildlife tree retention”. These judgement calls were based upon local field knowledge, general species composition, fire history, observations of past harvesting practices, and age class distribution data. The “*percent of the area available for harvesting in a landscape unit that has already been harvested without wildlife tree retention*” was then calculated (by LU by biogeoclimatic subzone) by first multiplying the provincial Crown forest land area less than the recommended age break for determining harvested areas by the percent estimated to have been harvested without wildlife tree retention and then dividing this number by the total provincial Crown land area.

Based on the calculated values for “*percent of the biogeoclimatic subzone within the landscape unit available for harvest*” and for “*percent of the area available for harvesting in a landscape unit that has already been harvested without wildlife tree retention*”, the wildlife tree retention targets were then calculated using an EXCEL algorithm developed by Hal MacLean (Ministry of Forests Timber Supply Analyst) to interpolate Table A3.1 from the LUPG.

Table A3.1 was used to determine wildlife tree retention targets because landscape level biodiversity objectives have already been set. These landscape level biodiversity objectives have been set through Objective 2 of the Kootenay Boundary Higher Level Plan Order and through the SRMMP process, which has further refined and clarified Objective 2 by spatially deploying old growth management areas (OGMA) and mature management areas (MMA) within the SRMMP area.

¹ Landscape Unit Planning Guide, Ministry of Forests and Ministry of Environment, Land & Parks, March 1999

Appendix 24.4 General Wildlife Conservation Considerations

Background

The SRMMP area is one of those increasingly rare areas that have retained a high degree of ecological integrity and processes. This phenomenon is generally attributed to the fact that much of the SRMMP area remains relatively remote and free of human habitation. As a consequence, the species diversity and populations of large mammals in the plan area remains among the highest on the continent.

Chapter B.9.0 as well as Appendices 7.0, 8.0, 24.2 and 24.4 all provide information on the species which reside in the SRMMP area, and Chapter B.9.0 presents the prescribed direction to manage those species and/or their habitats. Grizzly bear, Rocky Mountain Bighorn sheep, mountain goat and bull trout are often regarded as “feature species” of the plan area, and specific plan direction relates to them as well as to others. Section B.9.13 applies to species groups and habitat types not covered by other parts of Chapter B.9.0. Trans-boundary fish and wildlife populations and species at risk are also prime considerations in the SRMMP.

Discussion

The SRMMP represents an opportunity for communication and education relating to the fulfilment of conservation and provincial wildlife management goals and assuring that ecological integrity is sustained in a rapidly changing world.

Ecological integrity can be defined as a continuum of characteristics that a landscape should possess. These include ecosystem health, biodiversity, stability and sustainability through the maintenance of structural and functional components of the system in perpetuity (Noss, 1995).

The Canadian Parks Service (1997) has compiled a list of major stressors to ecological integrity. These include:

- destruction, loss and compaction of organic matter resulting in a decreased capability of a site to support existing vegetation, a potential increase in soil erosion and alteration of natural watercourses.
- decreased vegetation production and growth rates which adversely affect age and structure and often lead to changes in species diversity
- introduction of non-native species leading to changes in species composition
- displacement of wildlife from preferred high quality habitats
- landscape fragmentation due to human activity and development of facilities
- loss of habitat linkage or connectivity
- loss of suitable habitat
- loss of Montane habitats due to human development and fire control
- wildlife - human conflicts
- effects of human activities on water quality
- altered predator-prey relationships

Provincially, the overarching wildlife management goal is to maintain and enhance wildlife and wildlife habitats to ensure an abundant and self-sustaining wildlife resource. To accomplish this goal, the provincial wildlife program has a strategic goal to manage the province's resources for the benefit and enjoyment of British Columbians by maintaining an optimal balance among ecological, cultural, economic and recreational needs.

The following provincial wildlife management principles are intended to realize these overarching goals and they guided the writing of Chapter B.9.0 of the SRMMP:

Provincial Wildlife Program Strategic Goal (Managing Wildlife to 2001)

- To manage the province's wildlife resources for the benefit and enjoyment of British Columbians – by maintaining an optimal balance between ecological, cultural, economic and recreational needs.

Provincial Wildlife Goals

- to maintain and enhance wildlife and wildlife habitats to ensure an abundant and self-sustaining wildlife resource
- to maintain, enhance and promote opportunities for the public to appreciate, study and view natural landscapes, plant communities and wildlife in their natural habitats
- to maintain and promote recreational opportunities to hunt game species in their habitats
- to facilitate commercial uses of wildlife

Provincial Wildlife Management Principles

- to base wildlife management on sound and supportable biological and ecological principles
- to ensure that wildlife and wildlife habitat classification systems recognize both the current use and the inherent capability of various ecosystems
- to base management emphasis on the health of ecological systems and their inherent ability to support wildlife populations as opposed to the management of individual animals
- to encourage and accommodate a wide range of wildlife resource uses while ensuring that the viability of a species, population or habitat is not jeopardized
- to recognize the need for wildlife to share the environment with other users and where possible practice integrated use
- to reintroduce animals to their historic range where possible
- to focus management attention on indigenous wildlife species
- to ensure, through the standards established by the national Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and the provincial identified wildlife management strategy, the protection of threatened and endangered species

APPENDIX 24.4 GUIDE OUTFITTING IN THE EAST KOOTENAY



No one could summarize the history of guide outfitting in the East Kootenay better than Leo Rutledge. In his book "That Some May Follow" Leo states, " Outfitting began here in the 1800's. Beyond sternwheelers, pack trains were then the major mode of transport in the East Kootenay. Young men learned to break and pack horses and mules just as today's young people learn to drive a car. Packing was then simply a mode of

transport and wildlife was little more than a source of meat for natives, miners and early settlers. It was not until the first years of this century that people came to this valley for the express purpose of enjoying its wilderness, mountain meadows and wildlife. One of the first was William Hornaday, of the New York Zoological Park who made an extended hunting trip in the Upper Elk, Fording and Crossing Creek areas in 1905. In the following years, more and more hunters came into the valley that became known as "Little Africa." To cater to them, residents of the valley kept strings of equipped horses, which together with tents and other camp gear became known as their "outfit." The 1930's and 40's were the heydays of outfitting in the Kootenays. Hunters came in ever increasing numbers and many new outfitters, most of them trained by the older ones, got into the business and started exploring new areas, further and further from the main valley."

In 1948, to avoid further conflict over area of use, the established guide outfitters met to divide the territory among themselves and establish personal guiding areas upon which other guides could not infringe.

During the mid 1970's the administration of guide outfitters changed from the Conservation Officer Service to the wildlife management section of the Fish and Wildlife Branch. From this juncture in time to the late 1980's, further negotiations were conducted between the guide outfitters and representatives of the Fish and Wildlife Branch with the express intent of consolidating the smaller guiding territories into larger, more viable economic units (Ray Demarchi, pers.comm). Today the big game guiding industry continues to contribute to the diverse cultural fabric of the Kootenays and remains a stable and vibrant business interest that provides significant stimulus to provincial and local economies.

References

Rutledge, Leo. 1989. That Some May Follow. The History of Guide Outfitting in British Columbia. Guide Outfitters Association of British Columbia publication. Freisen Printers, Cloverdale, B.C. 28pp.

APPENDIX 24.4 RIPARIAN



Ecologically, “riparian” is often referred to as the area adjacent to streams, lakes and wetlands that is wet enough, or inundated frequently enough, to develop and support natural vegetation distinct from that of more freely drained upland sites (*Riparian Management Area Guidebook, 1995*). Riparian areas contain elements of both aquatic and terrestrial ecosystems which mutually influence each other and occur as transitions between aquatic and upland habitats (Knutson and Naef, 1997). Although limited in scale, riparian habitat is considered a rich and vital

resource that contributes to:

- a higher diversity and abundance of plants, fish and wildlife than any other habitat
- important fish spawning and wildlife breeding habitat, seasonal ranges and movement corridors
- water quality maintenance and flood control
- recreation and aesthetics

Riparian zones are of significant importance to a variety of wildlife species that forage, reproduce and migrate along valley bottoms. For example, the results of a recent study of bird density and diversity suggest that riparian areas are disproportionately important in maintaining avian diversity in conifer dominated forests of the Montane Spruce zone (Kinley and Newhouse, 1996).

Within the Southern Rocky Mountain Management Plan area the quality and availability of riparian habitat is also important for large mammals like wolves, moose, elk and white-tail deer. With respect to bears, habitat use research in the Flathead River watershed has revealed, that in relation to other habitats, riparian ecosystems receive an inordinate amount of use by grizzly and black bear particularly in the spring and autumn (McLellan and Hovey 2001). In fact, the level and duration of use in these low elevation riparian habitats by grizzly bear is unique in Southern Canada

In recognition of this value and to ensure that the viability of the riparian ecosystem corridor is maintained, an enhanced riparian management zone adjacent to the main Flathead River and several of its more significant tributaries has been delineated by grizzly bear research scientists.

References

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McLellan, B.N., and Hovey, F.W. 2001. Habitats selected by grizzly bear in a multiple use landscape. J. wildl. Manage. 65:92-99

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APPENDIX 24.4 UNGULATES OF SPECIAL SIGNIFICANCE IN THE PLAN AREA

Rocky Mountain Bighorn Sheep: A Blue Listed Ungulate Species:



Distribution and Habitat

Rocky Mountain bighorn sheep are predominately distributed along the Rocky Mountains in Alberta and British Columbia from the southern Peace River to the international border. Small populations have also been introduced to two sites in central British Columbia which are outside their normal area of occupation.

In British Columbia, they are distributed in localized populations along the Continental divide with the most continuous distribution area situated between the Kicking Horse River and the Canada – USA border.

Traditionally, in the south- east area of British Columbia, Rocky Mountain bighorn sheep range between low elevation winter habitat, situated in the Rocky Mountain trench and the high elevation alpine and sub-alpine grasslands in the summer season. Throughout their range, security habitat is important and consequently they gravitate to grassland habitats with steep, rugged escape terrain in close proximity.

Winter ranges are critical. Most are situated on steep southerly aspects that provide the maximum exposure to solar radiation. As a consequence foraging opportunities are enhanced and energy expenditure is reduced. Some localized populations also use high elevation windswept alpine grassland slopes during the winter.

Abundance

In 1996 the total population of Rocky Mountain bighorn sheep in British Columbia was estimated to be 2905 animals. Although the population now appears to have stabilized, it is still recovering from the heavy losses attributed to the catastrophic winters of 1995-96 and 1996-97. Recovery of the Rocky Mountain bighorn sheep population has also been compromised by continued disease related die-offs and significant predation effects.

Status

The Conservation Data Centre ranks species according to a number of criteria and then assigns them to a red, blue or yellow listing. A red or blue listing establishes endangered/threatened and sensitive/ vulnerable status respectively to a specific species while a yellow listing describes species not at risk.

Currently, Rocky Mountain bighorn sheep, in British Columbia, are classified as a blue listed species. Besides the low population numbers and limited recruitment potential, they are blue

listed because of the limitations of suitable habitat and the frequency of re-current epidemic epizootic related die-offs.

Rocky Mountain bighorn sheep have also been designated as an identified wildlife species, through the Forest Practices Code, and consequently warrant special management considerations. In this regard it is incumbent upon the Ministry of Forests (MOF) to demonstrate that forestry, range or public recreation activities do not impose a detrimental effect on identified wildlife species like Rocky Mountain bighorn sheep.

Commercial recreation, however, is not a component of the MOF mandate and consequently wildlife-related impacts accrued from commercial recreation activities must be addressed by Land and Water B.C. Inc.

Threats

The viability of Rocky Mountain bighorn sheep populations may be affected by:

- epizootic disease transmission from domestic livestock
- limited carrying capacity
- increased predation
- inter-specific competition for limited forage resources on shared winter ranges
- natural fragmentation or isolated herd distribution and the subsequent vulnerability to catastrophic events
- habitat loss accrued from forest encroachment, industrial and recreation activities
- increased potential for harassment and displacement from preferred habitat

Conservation Measures

Conservation efforts currently being conducted to maintain viable populations of Rocky Mountain bighorn sheep include improved domestic livestock grazing regimes, acquisition of important winter ranges, access planning, prescribed forage enhancement burning initiatives and the maintenance of a very conservative harvesting strategy.

Other management efforts may include the use of lungworm treatments, the provision of trace minerals and augmentation of the population through transplant introductions.

Mountain Goat: A Regionally Significant Ungulate Species:



Photo credit: Darcy Monchak

Distribution and Habitat

In North America, mountain goats occur in British Columbia, Alberta, Alaska, Washington, Idaho, Montana, the Yukon and Northwest Territories. Their distribution in British Columbia is extensive with populations occupying the steep, rocky mountainous terrain and sub-alpine and alpine habitats of the Cascade, Coast, Cassiar, Monashee, Selkirk, Purcell and Rocky Mountain ranges of the Cordilleran region in the province.

Mountain goat frequent alpine, sub-alpine and steep forested habitats and like other mountain ungulates, characteristically migrate between high and low elevations in response to climatic variation. During the summer season, mountain goat usually occupy or gravitate to alpine habitat in close proximity to escape terrain and, similar to Rocky Mountain bighorn sheep, migrate to low elevation or steep, exposed south and south-west aspects in the winter.

Abundance

In 1997, the B.C. Wildlife Branch estimated that approximately 49,000 mountain goat or two-thirds of the world's mountain goat population resided in British Columbia. Approximately one-fifth of this population exists in the Kootenay Region. The remaining one third is proportionally distributed in estimated amounts of 1,700 in Alberta, 1,500 in the Yukon, 1,500 in the North West Territories, 12,000 in Alaska, 5,000 in Washington, 2,800 in Idaho and 4,500 in Montana.

Status

The Conservation Data Centre ranks species according to a number of criteria and then assigns them to a red or blue list, which establishes endangered/threatened and sensitive/vulnerable status respectively to a specific species while a yellow listing describes species not at risk.

Currently, mountain goats in British Columbia are classified as a yellow listed species. However, mountain goats have also been designated as an identified wildlife species, through the Forest Practices Code, and consequently warrant special management considerations. In this regard it is incumbent upon the Ministry of Forests (MOF) to demonstrate that forestry, range or public recreation activities do not impose a detrimental effect on identified wildlife species like mountain goats.

Commercial recreation, however, is not a component of the Ministry of Forests (MOF) mandate and consequently wildlife-related impacts accrued from commercial recreation activities must be addressed by Land and Water B.C. Inc.

Population Management History

In 1949, the B.C. Game Branch annual report mentioned a decline in mountain goat populations along the Rocky Mountain Trench. Although a subsequent reduction in an individual's personal harvest quota of mountain goat ensued, the trend in population reduction continued. Further declines were subsequently noted in later B.C. Game Branch reports, however, seasonal hunting lengths remained liberal and there was no reduction of the number of mountain goat licences issued in the Province.

In the 1960's a massive over-harvest of mountain goats occurred in the Kootenay region. This was attributed to:

- a prevalent philosophy among wildlife biologists and administrators to maximize wildlife harvests
- a deficient management data base
- a deficient understanding of mountain goat vulnerability
- a proliferation of road development
- no access regulations

In a dramatic reaction to the consequences of over-harvesting, the mountain goat hunting season was closed between 1971 and 1977. Since 1978 a more rigorous and conservative management strategy has been implemented. This approach continues and is reflected in the recent 1997 reduction to approximately one-half the limited entry harvesting opportunities issued prior to this date. This action was precipitated in response to concerns raised from recent inventory and harvesting data reviews. Considering the dramatic decline in observed numbers generated from a 1998 inventory in the Purcell Mountains it is highly probable that further reductions will ensue.

Threats

Mountain goat populations may be adversely affected by:

- access continues to be relatively unregulated
- harassment and displacement potential remains high
- habitat values are not identified and protected
- predation issues are not addressed
- conservative harvesting strategies are not maintained

Conservation Measures

In conjunction with reduced harvesting quotas and habitat protection measures, efforts are being initiated to reduce adverse impacts on mountain goat populations through more stringent access management controls. In conjunction with these initiatives is the continued effort to accelerate population inventory. This information is required to establish an accurate measure of mountain goat numbers and distribution. Plans to initiate research projects designed to acquire more detailed knowledge of mountain goat physiology, habitat requirements and population dynamics are also being contemplated.

The completion of a comprehensive biophysical mapping initiative, which identifies mountain goat habitat and establishes an associated capability and suitability rating, is also being pursued.

APPENDIX 24.4 WIDE-RANGING CARNIVORES



The Southern Rocky Mountain Management Plan (SRMMP) area supports such large carnivores as grizzly and black bear, wolf, cougar, martin, wolverine and lynx.

Grizzly bear, perhaps the species with the highest international profile, exist in uniquely high numbers in the Flathead watershed. This high population density phenomenon is principally attributed to the fact that the Flathead is the only large, wide, flat-bottomed valley in southern Canada without human settlement. As a consequence of

inherent habitat diversity and the lack of intrusive impacts that often occur when communities are situated in grizzly bear habitat, grizzly bear in the Flathead River watershed have been able to utilize all habitats, regardless of location, and maintain behavioral patterns that have virtually disappeared in other interior areas of the Province (B. McLellan, pers.comm.).

The high density of bears and high reproductive rates of these bears in the Flathead has also contributed to the area's importance by maintaining source populations that help establish grizzly bear in areas adjacent to the Flathead watershed (B. McLellan, pers.comm.).

The importance of this area for other wide-ranging carnivores is supported by Dr. John Weaver's comment, that "a unique community of carnivore species resides in the trans-boundary Flathead region that appears unmatched in North America for its variety, completeness, use of valley bottom land and density of species which are rare elsewhere" (Weaver 2001).

The upper Elk River area also supports a high population of grizzly bear. This is likely due to the fact that much of the area in the upper reaches of the Elk River watershed is also unsettled and remote.

Grizzly Bear

Grizzly Bear are considered an "umbrella species" in biodiversity management. In essence, the theory supporting this concept is that by managing for the biology and ecology of grizzly bear, the probability of providing benefits to a large number of other biota and maintaining functional ecosystems is relatively good. However, regardless of this theory, it is recognized that many species other than grizzly bear reside in the SRMMP area and collectively they contribute to the area's overall biological diversity. The perplexing question then relates to why there is a continued focus on large mammals and large carnivores in particular. One explanation is that grizzly bear represent a wildlife value of regional and international significance. Another is clearly based on the human bias of regarding other large mammals, similar to us, as important. A more rationale reason relates to the extensive geographic scale of grizzly bear home ranges and the assumption that by maintaining functional ecosystem conditions suitable for grizzly bear and

other large carnivores, over large areas of the landscape, that by default, conditions for other species will be maintained. This “umbrella” concept, however, clearly has the potential for some species to collapse. Consequently, because of the shortcomings of the umbrella approach, other ecological attributes perhaps not vital to large carnivores but required by other indigenous and migratory species should be maintained in the SRMMP area (B. McLellan,pers.comm.).

Grizzly Bear Habitat

Grizzly Bear occurrences are well-documented in association with floodplains. In the Flathead and Wigwam river valleys, for example, floodplains are comprised of a complex mosaic of gravel bars, spruce/cottonwood stands, extensive willow/red-osier dogwood dominated sites, dense forb dominated sites, open-dry meadows and thickets of lodgepole pine, subalpine fir, spruce and Douglas fir (B. McLellan,pers.comm.). Floodplains are used intensively by both species of bears and in particular by grizzly bears during the spring and autumn (McLellan and Hovey 2001).

Grizzly Bear occurrences are also well-documented in association with broad landscapes of high elevation and complex terrain, with a high composition of alpine, avalanche tracks, burns and other open habitats (McLellan 1989; Waller and Mace 1998). Virtually all studies of bear habitat use in mountainous environments demonstrate the use of avalanche tracks, which provide important forage areas in the spring and to a lesser degree in summer and fall. Within avalanche tracks, Grizzly Bears select south aspects, and areas dominated by grasses and forbs with minimal shrub abundance. They avoid steep slopes but frequently use all elevational parts of avalanche tracks – upper start zones, tracks, and lower runout zones. These patterns are tied to feeding site selection, based on forage values and visual cover. Bed sites are frequently found both in forest adjacent to avalanche tracks (within 25 metres from the forest/avalanche edge) and directly within avalanche tracks (Ramcharita 2000).

A wide variety of human activities change the capacity of habitats to support Grizzly Bears. These include habitat alteration (eg. logging), habitat loss (eg. road building), and the impacts of killing (poaching and defence of life and property) due to increased access. With regard to logging, bears avoid avalanche tracks adjacent to cut-blocks due to removal of escape cover and loss of bed sites. Where bears have been seen to select areas close to logging roads that traverse avalanche tracks, the roads have had minimal traffic and have been close to high quality habitat (Zager 1980).

Avalanche Track Suitability Ratings for Grizzly Bear Habitat

Habitat suitability ratings (for spring/early summer foraging by Grizzly Bears) of avalanche paths were generated based on the amount of Upland Herb and Wetland Herb cover types within an avalanche path polygon following the preliminary ranking guidelines developed by Mowat (2000). Suitability rating guidelines for avalanche path habitats are currently being developed for the Kootenay Region by BC Environment (P. Holmes, pers. comm.), but were incomplete and so were not available for use in the SRMMP. However, the following interim criteria (Ferguson et.al.2001), which were developed in consultation with BC Environment (now the Ministry of Water, Land and Air Protection) and Invermere Forest District staff, pending

completion of the regional guidelines, were used to classify avalanche tracks within the SRMMP area.

- High suitability was assigned to avalanche paths with > 5 ha of Upland Herb + Wetland Herb classes, or where these vegetation classes comprised > 20% of the area of an avalanche path polygon.
- Moderate suitability was assigned to avalanche paths with 1 to 5 ha of Upland Herb + Wetland Herb classes, or where these vegetation classes comprised > 10% of the area of an avalanche path polygon.
- Low suitability was assigned to avalanche paths with < 1 ha of Upland Herb + Wetland Herb classes .
- Not rated was assigned to avalanche path polygons where > 50% of a polygon's area was unclassified due to lack of cover type data.

Provincial Grizzly Bear Conservation Strategy:

The rationale for developing a grizzly bear conservation strategy for British Columbia was based on the knowledge that, from a continental perspective, grizzly bear have declined to the point where the species is extinct in the southern and eastern segments of its range and is considered vulnerable or threatened in much of its remaining range.

Although British Columbia has a significant population of grizzly bear much of the existing habitat is considered threatened from increased human populations and the demand for land and resources. Consequently, nearly all grizzly bear ecosystems in British Columbia are at risk under current land use activities. The British Columbia Grizzly Bear Conservation Strategy was designed to help reverse this trend and, through implementation of the mandate of the strategy, to ensure the continued existence of grizzly bear and their habitats.

The goals and objectives of this Provincial strategy address the loss and alienation of grizzly bear habitat, interactions with humans and international considerations.

Goal 1

- to maintain in perpetuity the diversity and abundance of grizzly bear and the ecosystems on which they depend throughout British Columbia.

Objectives

- to increase the scientific knowledge base of grizzly bear and their habitats
- to maintain the genetic diversity of grizzly bear populations.

Goal 2

- to improve the management of grizzly bear and their interactions with humans

Objectives

- to modify incompatible human activities
- to improve the management and regulation of hunting

Goal 3

- to increase public knowledge and involvement

Objectives

- increase public knowledge of grizzly bear and their requirements
- increase public involvement in appropriate grizzly bear management strategies

Goal 4

- to increase international cooperation in management and research

Objective

- British Columbia to take a leading role in management and research of grizzly bear

SRMMP Grizzly Bear Conservation Strategy: *(This is confusing - were these methodologies applied to end up with Section 9.4? If yes, then should be written in that tense, if not then this probably shouldn't be here)*

To meet the conservation goals of ensuring the viability of large carnivore species both north and south of Highway #3 and enable movement across this potential fracture site, the SRMMP area could be (*OR WAS?*) delineated into three zones.

1. Source nodes
 - areas where high densities of large carnivores are found and where they reproduce well enough to provide a surplus of dispersing individuals
2. Fracture/sink area
 - areas where movements of large carnivores are often restricted by human settlement, transportation corridors and more animals are inevitably killed than produced
3. Matrix area
 - areas where reproduction and mortality are likely near equal

Conceptually, the source nodes should be managed for high densities of carnivores to encourage emigration. The matrix should be managed for maintaining moderate densities of carnivores, while the fracture should be managed to reduce the number of mortalities of large carnivores and to provide specific linkage areas across the fracture where animals can remain for long enough periods of time to feel secure and successfully disperse across the fracture.

The southern source nodes include the Flathead and Wigwam drainages. Both areas have no permanent human settlement and a relatively high diversity and density of large carnivores. The intent of the conservation strategy, in the southern nodes, is to maintain high densities and a surplus of these species through appropriate habitat and recreation management and conservative hunting and trapping regulations for more sensitive species such as grizzly bear and wolverine (B. McLellan. pers. comm.).

Wide Ranging Carnivore Management Principles: (doesn't belong here – should be in 9.4)

Grizzly Bear

- maintain normal grizzly bear behavioural patterns
- maintain optimum foraging opportunities for grizzly bear by ensuring landscape habitat linkage and connectivity (appendix) opportunities
- manage and conserve the suitability and functional integrity of riparian, avalanche and berry producing habitats for grizzly bear use
- maintain habitat effectiveness and security areas by reducing the potential for displacement of grizzly bear from preferred habitats
- retain adequate security cover

- maintain adequate prey species
- minimize bear and human encounters
- establish the three linkage zones, expressed in the Identification of Grizzly Bear Linkage Zones along the Highway 3 Corridor of Southeast British Columbia and Southwest Alberta (Apps, 1997), with the assistance of current private property owners and conservation organizations

Fisher protect the population of this species (should be in 9.4)

- maintain a dense and diverse prey source
- maintain sufficient amounts of mature forested habitat and coarse woody debris in known habitats
- maintain riparian areas with a natural distribution of older deciduous trees
- minimize human access in known use areas

Wolf maintain suitable habitat conditions and behaviour patterns (should be in 9.4)

- avoid displacement of wolves during critical denning period

Wolverine (should be in 9.4)

- protect critical habitats including denning sites
- protect species from human disturbance

Badger (should be in 9.4)

- protect the population of this species
- protect species from human disturbance
- maintain a dense and diverse prey source
- augment the population through translocation

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APPENDIX 24.4 - ACCESS AND WILDLIFE CONSERVATION

Introduction

Access management is one of the most significant issues affecting environmental stewardship and wildlife conservation in the Kootenay region. As competing access demands and recreational activities on Crown land increase in intensity the need to regulate and balance competing uses and interests becomes more imperative. Accordingly, integrated and comprehensive strategic access management planning processes which ensure the maintenance of a diversified, quality recreational experience, and a viable economic, social and environmental future are required. With respect to strategic land use planning, access management is an essential element in the facilitation of land use decisions which determine: appropriate and compatible recreation activities; appropriate tenure application locations; a methodology for reducing conflict and providing certainty; the establishment of a balanced deployment of recreation opportunities and the development of applicable management guidelines; the establishment of appropriate land-use zoning designations; and the recognition of sustaining environmental stewardship.

A principle problem, however, is that no comprehensive provincial or regional integrated strategic planning process which effectively addresses industrial, public, commercial or government access related issues through the development and implementation of explicit zoning, management criteria and applicable legislation, has yet been officially endorsed. As a consequence, land-use planning and resource allocation processes continue to remain controversial and unresolved.

Access Planning History in the East Kootenays

From the early 1960's, access management recommendations, based on wildlife conservation objectives, were primarily initiated by British Columbia Environment (BCE) wildlife or habitat management staff in response to resource development activities which had the potential to adversely affect wildlife and habitat-related interests.

If approved through an Order In Council (OIC), access management recommendations were implemented and enforced through the regulations in the Wildlife Act. The pertinent sections of the Wildlife Act which were used prior to 1997 included Section 110dd (Vehicle Access Hunting Closure), Section 77 (Road Closure) and Section 111b (Area Closure).

Traditionally, access planning focused on road access management. However, as this focus did not address wildlife conservation issues in a comprehensive ecological context, access planning evolved to a more proactive process where area-based determinations, commonly referred to as access management areas (AMA's), were established. Regardless of the form of regulation, the intent remained focused on wildlife species, populations and wildlife habitat protection and conservation.

Although access management regulations were developed and established with the intention of ensuring sustainable conservation management objectives and principles, they were often controversial and didn't engender complete support from all user group sectors. This problem

was primarily attributed to the perception that conservation-based regulatory access decisions were discriminatory and biased in favour of individuals or specific client groups. Unfortunately, at the time, no strategically comprehensive or integrated land-use or access planning forum, through which cumulative impact assessments, conservation, economic and social needs could be debated, was in existence, and consequently the full spectrum of access-related issues was not addressed. However, from BCE's perspective, the importance of maintaining access management decisions made to address wildlife conservation concerns remains relevant.

In 1985 the Ministry of Environment and Parks (MOE) completed the Elk-Flathead Strategic Environmental Management Plan, that subsequently resulted in the preparation and completion of a complementary Operational Wildlife Management Plan in 1986. An important element of this initiative related to access planning. The MOE considered access planning so important that they recommended "that an access management plan be prepared for the Elk and Flathead Valleys under the co-ordination of the Ministry of Forests". Unfortunately, the Elk-Flathead Strategic Environmental Management Plan was never implemented.

Access planning for the Elk and Flathead watersheds, however, was addressed through a process referred to as Coordinated Access Management Planning (CAMP). This operationally-oriented planning process attempted to incorporate public comment and address access-related conflicts in a public context. Although the management strategy, principles and direction expressed through CAMP were relevant, successful implementation and support of the plan never materialized, and consequently public and government expectations were never fulfilled. Perhaps the most significant factor which adversely influenced the success of this process was the lack of legislated backing which was required to ensure compliance with the CAMP's access management decisions. This process concluded in 1989.

By 1995 the access conflict among the recreating public, commercial recreation and wildlife conservation interests had manifested itself to a point where resolution of access-related issues needed to be addressed through the development of a public, proactive access management planning and implementation process.

In 1996 another access management process was initiated. This was precipitated through B.C. Environment's (BCE) response to a request by the Southern Guides and Outfitters to develop a strategic and operational access management plan for the south east area of the Kootenay Region. Participants at the initial meeting included representatives from the forest industry, big game guiding industry, BCE and Ministry of Forests (MOF). A collective decision was made to establish an access planning committee comprised of representatives from the ministries of Lands, Parks, Highways, Forests (Golden, Invermere, Cranbrook districts) Agriculture, Mines and Environment. Terms of Reference were developed which reflected the respective representative responsibilities, the committee responsibilities, the history of access planning, rationale, intent, access management planning principles and applicable legislation, to assist in the implementation of a potential plan.

Before proceeding further, the committee determined that it was necessary to establish Inter-Agency Management Committee (IAMC) support. A presentation was made to the IAMC and while the consensus reflected general support for the committee's access planning process,

IAMC decided that the process should be suspended until the broader, regional Kootenay Boundary Land Use Plan - Implementation Strategy (KBLUP-IS) process was completed. The access planning process was in fact suspended and was never resumed.

In 1997 the Kootenay Boundary Land Use Plan - Implementation Strategy (KBLUP-IS) was completed. With respect to access and conservation issues the KBLUP-IS consistently expressed the significance of access planning to successful implementation of the connectivity, grizzly bear, ungulate winter range, mountain caribou, recreation, regional and resource management zone objectives and strategies. In response to this direction, access planning initiatives were initiated by BCE and MOF personnel in the former Invermere and Golden Forest Districts in 1997 and 1999, respectively.

The process in the Golden Forest District, commonly referred to as the Golden Backcountry Recreation Access Plan (GBRAP), provides comprehensive recreational access zoning and management direction. The Ministry of Sustainable Resource Management is currently seeking government endorsement of this plan.

In late 2001 an access planning process similar to GBRAP, referred to as the Recreation Management Strategy (Section B 7.1.), was initiated by Ministry of Sustainable Resources Management staff in the eastern section of the Cranbrook Timber Supply Area (TSA). Expectations are that this process will extend to the remaining area of the TSA and other parts of the East Kootenays, beginning in 2003

Wildlife Conservation and Access Related Issues

In conjunction with the extensive industrial road access infrastructure, the opportunity to access relatively all areas of Crown land in pursuit of recreational activities has increased dramatically in the East Kootenay over the last two decades. Compounding the conventional motorized and non-motorized public recreational access issues directly related to road development and use is the rapidly expanding access demands by the commercial recreation sector. The most palpable result of this expansion of access and relatively unplanned and unregulated use is the increasing discord among public, commercial and environmental interests.

From a wildlife conservation and environmental perspective, the principle issues of concern related to access, road development and use are:

Aquatic habitat alteration:

Soil erosion, attributed to unregulated road use or road construction inevitably results in sedimentation which can reduce the availability of oxygen, increase water temperature and decrease the invertebrate population in aquatic habitats. Cumulatively these impacts result in decreased fish stocks.

Habitat loss:

Road and trail construction is significantly reducing the productive land base area contributing to suitable wildlife habitat resources.

Habitat destruction:

Excessive or unregulated off-road motorized use has the potential to adversely affect sensitive terrestrial vegetative ecosystems through the introduction of invasive weed species, physical destruction, soil compaction and erosion.

Wildlife loss:

A significant mortality factor directly related to road kills of mammals, reptiles, amphibians and birds is associated with vehicular use of roads. Compounding this problem are the documented cases of animals intentionally killed by indiscriminate use of recreational vehicles.

Harassment and displacement of wildlife:

Unregulated recreational access-related activity is a concern particularly when it impacts summer and winter ranges or habitats which are inhabited by species sensitive to intrusive motorized or intensive public pressure. Behavioural reactions range from trauma, which can culminate in increased energy expenditure, altered activity or patterns, such as avoidance of favourable forage and cover habitat, to separation from large protective groups. The cumulative effect usually results in a reduction of species diversity and populations.

Pollution:

Unregulated motorized recreational access use can contribute to noise, atmospheric and aquatic pollution. All have the potential of imposing detrimental effects on wildlife and fish species and populations.

Roads and habitat fragmentation:

Use of roads by humans may disrupt grizzly bear behaviour and social structure, reduce the availability of adjacent foraging habitats, and create barriers to movement (Archibald et al. 1987; McLellan and Shackleton 1988; McLellan 1990; Mace et al. 1996). Grizzly bear may be either temporarily or permanently displaced from habitats in close proximity to roads. Permanent displacement, of course, results in loss of habitat use while avoidance can be reflected in a variety of behavioural responses. Grizzly bear can simply avoid an area (Mattson et al. 1992) others will not enter as often as they would without disturbance and others may stay for short durations only (Olson and Gilbert 1994; Olson et al. 1997).

Road barriers:

Roads act as barriers to the movement of black and grizzly bear (1990; Mace and Waller 1997) and it appears that in some circumstances they can contribute to the separation of adjacent home ranges that would otherwise be expected to overlap (Mace and Waller 1997). Roads by themselves or acting cumulatively with other developments create “ecologically dead zones” which bears are reluctant to occupy or cross (Servheen 1994; Mace et al. 1996). Habitat effectiveness for bears is near zero in these areas

Related Access Management and Planning Processes**British Columbia:**

The Muskwa-Kechika Management Area in northeastern BC was developed through a consultative process and approved by an Order in Council in 1997. Two jurisdictions for the area

were determined. The jurisdiction and administration of the Muskwa-Kechika Area is implemented under the Environment and Land use Act. The other jurisdiction component of the area based plan is the Muskwa-Kechika Management Plan which identifies management objectives and is “implemented by all relevant government agencies through agency specific management activities, local strategic plans, resource development permits and Crown land and natural resource dispositions”.

The management intent for the area is to ensure the retention of wilderness characteristics and the maintenance of wildlife and habitat while accommodating resource development and use. The integration of management activities especially related to the planning, development and management of road access within the Muskwa-Kechika Area is central to achieving this intent.

Alberta:

The Castle River Access Management Plan in southwestern Alberta (adjacent to the SRMMP area) was completed and approved in 1992. It is a co-operative, consultative planning and management process designed to balance environmental protection with motorized and other recreational activities in the Castle River area. In conjunction with the preparation and development of winter and summer recreation activity maps, management recommendations for implementation education enforcement and engineering were established. The intent of the process was to provide a balanced solution to the issue of motorized recreation, establish a system for the management of motorized recreation, maintain ecological integrity, promote recreational responsibility and awareness and establish an avenue for public input with respect to appropriate recreational management.

Montana:

An interagency access management plan prepared for the southwest area of Montana was completed in 1987 and implemented in 1990. In essence, the purpose of the plan was to establish motorized control areas. The control areas were created with the intent of guiding and promoting motor vehicle users enjoyment and safety without damaging natural resources or precipitating conflict with other users.

The 1987 Kootenay National Forest Management Plan, which is partially adjacent to the SRMMP area, covers the Northwest section of Montana. The management goals and objectives of this plan reflect public issues and resource management concerns.

Idaho:

The consultative Colville National Forest Access Plan in northwest Idaho was completed by interdisciplinary resource teams in 1991. This plan focuses public attention on the overall road network and its impact on National Forest use. Important public concerns and issues include the need for roads, standards of new construction, the rationale for future access management practices and environmental protection. Implementation of the Colville National Forest Access Plan is conducted through the Colville National Forest Land and resource Management Plan.

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APPENDIX 24.7 - DEFINITIONS

Habitat Effectiveness

An analysis of habitat capability, current habitat suitability and human activities to determine the actual ability of an ecosystem to support a specific or suite of wildlife species

Fragmentation

Habitat fragmentation occurs when an area supporting the life/habitat needs of an organism is reduced in size and becomes isolated. In some cases, the resultant habitat “patch” is too small to meet all seasonal or life-stage requirements and consequently cannot support an individual or mating pair. In other cases, the resultant habitat “patch” is of sufficient size to meet these requirements, but is isolated from similar habitats; the individual, mating pair or population becomes isolated from other individuals and populations of its kind. Habitat fragmentation can result in localized extirpations which, when compounded, will significantly reduce long-term species viability.

Biodiversity

Biological diversity relates to the variety of life in an area and includes genetic diversity of populations, the number and type of species, the distribution and abundance of species communities and ecosystems and the natural processes that connect them. Essentially, there are three primary interdependent attributes of biological diversity: composition, structure and function.. Composition encompasses species and genetic diversity. Structure relates to the pattern of habitat within an ecosystem or landscape, while function involves ecological and evolutionary processes.

At the landscape level, factors that adversely affect biological diversity include habitat loss, habitat and ecosystem fragmentation, and alteration of natural succession and disturbance regimes.

Maintaining a wide diversity of living things has long been recognized as both the product, and the foundation, of a healthy and sustainable environment. Biodiversity is defined as the diversity of plants, animals and other living organisms in all their forms and levels of organization and includes the diversity of genes, species, ecosystems and the evolutionary and functional processes that link them. Current principles and assumptions of forest management recognize that the more managed forests emulate those established by natural disturbances, the greater the probability that biodiversity will be maintained (Norris et al. 1992; Booth et al. 1993; Rove, 1993; Grumbine 1994; Kaufmann et al. 1994; Pojar et al. 1994). This approach is also considered to compensate for incomplete knowledge and provide some insurance against future uncertainties.

During the development of the Forest Practices Code, best available science was distilled to ensure sustainable forest management. Biodiversity management under the Code was split into ‘coarse’ and ‘fine’ filter management. The ‘coarse filter’ level recognizes that the habitat needs of most forest species can be met by providing a variety of seral stages, patch size, and forest stand attributes and structures across a representative variety of ecosystems and landscapes. It also recognizes the importance of maintaining connectivity of ecosystems to ensure the dispersal and movement of forest organisms across the landscape; and that forested areas of sufficient size are required to maintain interior habitat conditions and to prevent the formation of excessive

‘edge’ habitat (Spies et al 1994). More specific ‘fine filter’ management prescriptions are required for individual species.

For ‘coarse level’ biodiversity management, the Forest Practices Code Biodiversity Guidebook (1995) provides landscape-level seral retention targets for biogeoclimatic units under different natural disturbance regimes. The targets were developed with a combination of scientific evidence and informed professional judgement and were designed to reduce impacts of forest management on biodiversity within targeted social and economic constraints.

It should be noted that scientific opinion is changing in relation to specific targets within this policy, although the broad concepts of managing by emulating natural disturbance regimes continue to be valid. Newer scientific research shows that targets and natural disturbance intervals may be severely under-estimated for wet ecosystems.

Ecosystem Based Management

This is a comprehensive management approach that involves working with others towards common goals, including sustainability of the ecosystem. It is a process that requires the integration of ecological considerations with economic and social factors. It also requires an understanding of the human and naturally induced stresses that affect the ecosystem and a recognition that the ecosystem is dynamic and subsequently is constantly changing.

Proper Functioning Condition

An example of proper functioning condition (PFC) could relate to riparian wetland areas which would be considered functional, “when adequate vegetation, landform or large woody debris is present to dissipate stream energy associated with high water-flows, thereby reducing erosion and improving water quality; filter sediment, capture bed-load and aid floodplain development; improve flood-water retention and ground water recharge; develop root masses that stabilise stream banks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration and temperature necessary for fish production, waterfowl breeding and other uses; and support greater biodiversity.

The functioning condition of riparian wetland areas is a result of interaction among geology, soil, water and vegetation” (U.S. Department of the Interior Bureau of Land Management 1998).

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