

# Endangered Boreal Forests:

Rocky Mountain  
Foothills of Alberta



## A publication of:



**CANADIAN  
PARKS AND  
WILDERNESS  
SOCIETY**  
Edmonton Chapter



**Federation of  
Alberta  
Naturalists**



Alberta Wilderness Association

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### For more information, contact:

**Canadian Parks and Wilderness Society- Edmonton Chapter**

P.O. Box 52031, Edmonton, AB., T6G 2T5

Ph: 780.432.0967 Fax: 780.439.4913

[www.cpaws-edmonton.org](http://www.cpaws-edmonton.org)

[info@cpaws-edmonton.org](mailto:info@cpaws-edmonton.org)

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### Supporting Organizations:

**GREENPEACE**



**FOREST ETHICS**



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## The Rocky Mountain Foothills Endangered Forests of Alberta

The Rocky Mountain Foothills are a unique part of Canada's Boreal Forest. They contain a wonderful diversity of ecosystems and an incredible variety of plant life, with forests of white spruce, black spruce, lodgepole pine, balsam, sub-alpine fir, aspen, birch, balsam poplar, mixedwood forests and wetland complexes. The foothills provide important wildlife winter range because winters are warmer there than in the adjacent Rocky Mountains. Woodland caribou, grizzly bear and wolverine roam widely in the relatively intact areas, and many birds arrive from the tropics in the summer to raise their young. These Endangered Forests represent the best of what remains in the highly fragmented forests of the Rocky Mountain Foothills of Alberta.



Terry Deamer

**A moratorium on new industrial activity within the Rocky Mountain Foothills Endangered Forests (map page 28) is required until a network of legislated protected areas is established. Designation of the protected areas must be based on ecological principles to ensure adequate size for wildlife habitat, regional representation of forest types, and ability to function as ecological benchmarks. The protected areas must also support the traditional rights of local aboriginal people.**

### What are Endangered Forests?

Some of our remaining forests are so valuable for their biological diversity, species habitat and wilderness that they must be protected from industrial development to ensure that their contribution to our global community can be maintained.

These forests are defined as 'Endangered' and represent the best of what's left of the world's forests. However, in many regions destructive industrial development, especially logging for everyday products, threatens these last remaining Endangered Forests.

### Endangered Forest Criteria:

- Ⓞ **Intact forests:** Relatively undisturbed forests where natural processes occur unimpeded. Examples include the forests of the Canadian and Russian Boreal, Amazon Basin, and Central Africa.
- Ⓞ **Forests with significant biological diversity values:** Highly species rich forests, for example, tropical and some temperate forest regions; forests with many endemic species, for example, the biodiversity hotspots; and rare forest types, for example, temperate rainforests.
- Ⓞ **Core habitat of focal conservation species:** Examples include mountain caribou in British

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Columbia, orangutans in Indonesia, high concentrations of endemic birds in the Amazon, wolves, caribou, grizzly bears, and wolverine in the boreal.

© **Remnant and restoration core forests in highly-altered and highly degraded ecosystems:** Examples include critical and remaining native forest habitats on the Cumberland Plateau in the southeastern United States, roadless areas in United States national forests, the southern Boreal, and many tropical forest regions.

## The Endangered Forest Campaign

Concern about the loss of natural forests throughout the world has led to the development of an international forum involving environmental groups and leaders in the wood products industry. In the past few years over 400 companies, including Home Depot, Lowe's, IKEA, and Staples have publicly announced their commitment to protect the world's intact, old-growth and/or Endangered Forests by not sourcing wood from those areas.



Terry Deamer

The Rocky Mountain Foothills is an endangered ecoregion in Alberta with less than 2% protected from industrial use (eg. forestry, petroleum extraction, agriculture). **The Rocky Mountain Foothills Endangered Forests identified in this booklet are the best of the remaining ecosystem based on intactness, remnant forests, existence of older forests and species of concern.** Their connection to the existing mountain protected areas of Banff and Jasper

National Parks and Willmore Wilderness Park increases their wildlife value. Protection of these Endangered Forests and improved forest management on the rest of the landbase (to the standard of Forest Stewardship Council certification) are necessary to maintain and enhance the biodiversity of this unique part of Canada's Boreal Forest.

## Overview of Alberta's Rocky Mountain Foothills

The Rocky Mountain Foothills, also known as part of the Eastern Slopes, lie to the east of the Rocky Mountains. This ecoregion is divided into the Upper Foothills, supporting nearly pure forests of spruce, pine and fir, and the Lower Foothills, characterized by the more diverse mixedwood forests of spruce, pine, fir and poplar.

Because this ecoregion is where the Boreal Forest meets the Rocky Mountains, it gives rise to a diverse topography and plant and animal species. Its natural diversity encourages significant recreation and tourism activities. This area is almost entirely public land reserved under the 1964 Forest Reserve Act for the conservation of forests and other

vegetation. Alberta government studies in the early 1990's identified Environmentally Significant Areas within the Foothills largely in terms of wildlife needs, however little has been done to protect these areas from industrial use.

Alberta conservationists have long been advocating the protection of the most ecologically significant areas of the Foothills, and this effort continues today with the designation of the region's Endangered Forests.

## Threats to the Rocky Mountain Foothills of Alberta

### Forest Industry

Logging removes old-growth habitat, fragments the forest, and removes organic material and nutrients. Site preparation, which often follows logging and includes plowing and mounding changes soil structure, and affects water quality and volumes. These activities plus the use of herbicides alters the natural forest succession, shifting the natural forest towards a tree plantation. Forestry roads cause harm to wildlife, carving up habitat into small patches, and providing motorized access for people, including hunters and poachers.

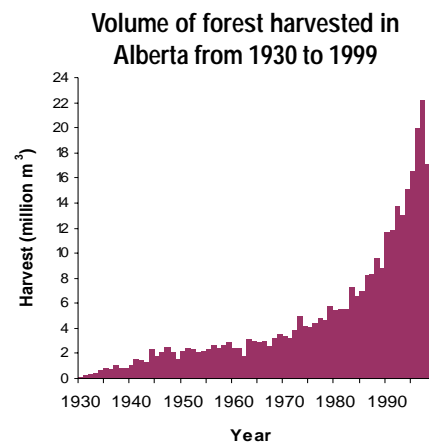
The Rocky Mountain Foothills have been almost completely allocated to the forest industry in tenures as long as 20 years. Companies with long-term tenure rights in the Rocky Mountain Foothills Endangered Forests are Weyerhaeuser, Ainsworth, International Paper (Weldwood and Sunpine), Canadian Forest Products (Canfor), Alberta Newsprint Company and Sundance.

Forest certification is an independent way of evaluating whether forests are being well-managed. Forest Stewardship Council certification is the only system widely supported by aboriginal peoples, environmental groups and progressive segments of the forest industry. None of the companies operating in the Rocky Mountain Foothills are seeking Forest Stewardship Council certification for the public forests they manage.



2003 © Garth Lenz

*Weyerhaeuser clearcuts in formerly intact caribou habitat.*



Source: Stelfox and Wynes, 1999

## Unfulfilled Forest Industry Commitments to Protected Areas

### **The Alberta Forest Products Association**

(66 member companies) signed on to the Alberta Forest Conservation Strategy and has endorsed the following:

- The protection of a network of natural landscape areas that represent the environmental diversity of Alberta's six natural regions.
- The key decisions (on protection) must be driven by science, not by politics or self-interests.
- Sustainable development of the forest resource for the benefit of all Albertans.

### **Sunpine, Weldwood, Weyerhaeuser**

From the Final Report of the Enhanced Forest Management Task Force: Policy Requirements for Implementation. Jan. 1997

(In 1995, a joint government and Alberta Forest Products Association task force was struck to recommend a comprehensive policy framework that would complement the Alberta Forest Conservation Strategy and facilitate the implementation of enhanced forest management. Participants were Alberta Environmental Protection, Alberta Forest Products Association, Millar Western, Sunpine, Weldwood (Hinton) and Weyerhaeuser Canada.)

“The portion of Alberta's forest lands designated for commercial timber production – the industrial forest landbase – is under increasing pressure. Enhanced forest management on portions of the industrial forest landbase provides a means for maintaining or increasing timber supply and the economical benefits derived from timber production on a sustainable basis. In this context, EFM will contribute to maintaining the flow of economic benefits from the forest while supporting the Alberta Forest Conservation Strategy (AFCS) goal of ensuring that the forest landscape includes a representative proportion of protected areas.”

**Canadian Forest Products (Canfor)** – from Canfor's Forestry Principles, 1999

- Canfor will use forest ecosystem management that encompasses entire forest landscapes and that forecasts the future condition of forests for 100 years or more.
- Forests in a natural state are becoming increasingly rare throughout the world. We support the creation of conservation areas which are representative of natural forests.

## Petroleum Industry

Through its various activities, the oil and gas sector has left a significant impact on the forests of the Rocky Mountain Foothills. This impact is intensifying as the demand for 'secure' supply of North American petroleum increases and reserves along the Eastern Slopes are exhausted. Activity in this portion of Alberta by the energy sector is predicted to last a minimum of 40-70 years for conventional oil and gas deposits.

Causes of forest fragmentation by the energy sector include: seismic lines, roads, well sites, pipelines, access roads, and processing plants. The majority of new wellsites, pipelines, and powerlines occur in pristine forest.

## Unfulfilled Petroleum Industry Commitments to Protected Areas

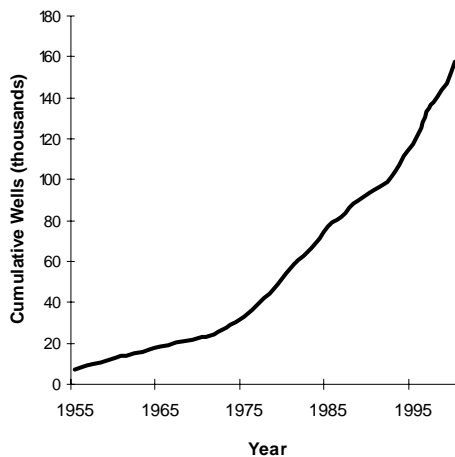
**The Canadian Association of Petroleum Producers (CAPP)** signed on to the Alberta Forest Conservation Strategy in 1997. In 1998 CAPP committed to the Special Places vision of a network of protected areas representative of Alberta's environmental diversity. They affirmed the vision of the Special Places 2000 initiative including a network of protected areas representing the environmental diversity of the province's six natural regions and 20 subregions. In a signed agreement, CAPP and conservation groups recommended to the Alberta Government a suite of tools to be used to facilitate the removal of existing activities or tenures from areas designated for protection. Government ignored this recommendation.



Air Photo Services SRD, 1995

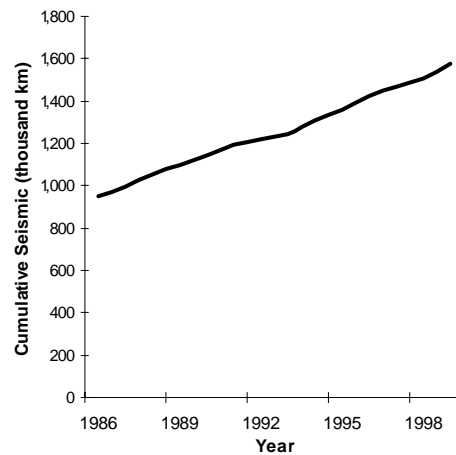
Petroleum industry activity fragmenting the forest with roads, wellsites and seismic lines.

**Cumulative number of oil and gas wells completed in: 1955-2000**



Source: CAPP, 2001

**Cumulative length of seismic lines approved in the Green Zone: 1986-1999**



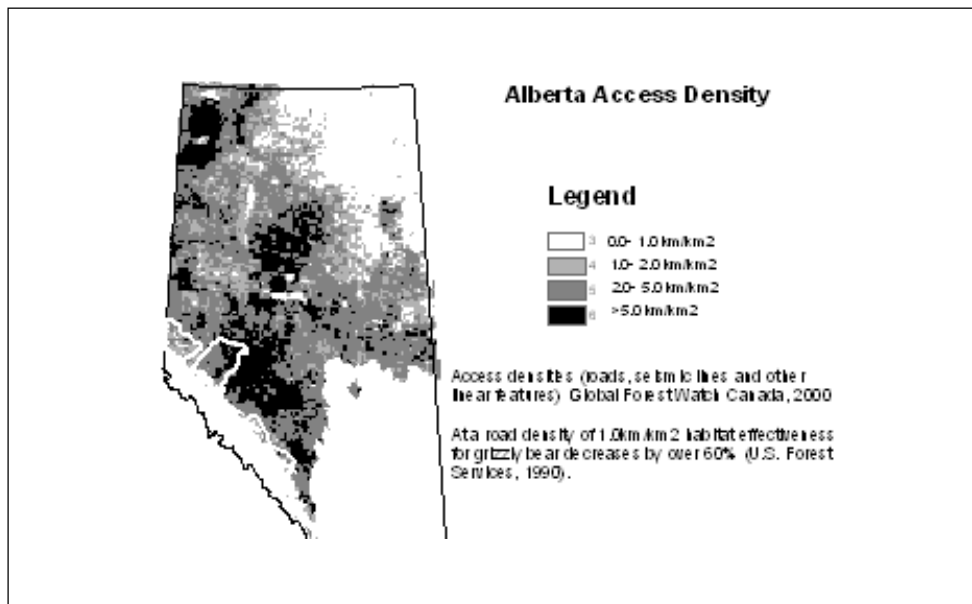
Source: Alberta Sustainable Resource Development records

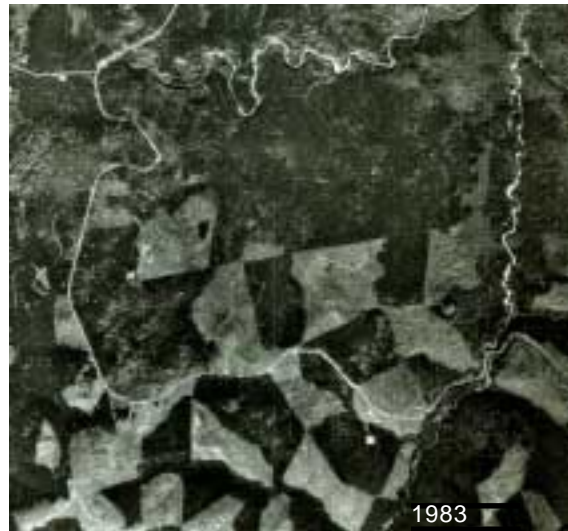
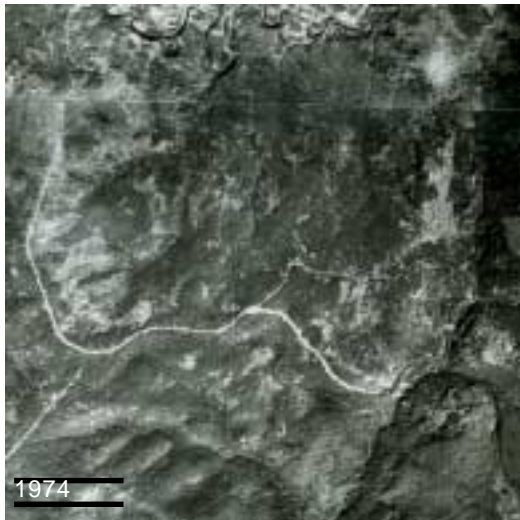
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## Cumulative Effects

Due to a lack of integrated planning, the disturbances caused by the petroleum and forestry sectors add to each other, leading to a rapid degradation of the forest. Forestry operations and oil and gas exploration and development displace wildlife and destroy habitat. They disrupt predator-prey relationships, alter watersheds and often allow invasion by non-native species. They also increase road kill, hunting and poaching, and noise that contributes to wildlife stress. An Alberta government study done in 1996 determined that of 740 townships (areas ~100 sq. km or 36 sq. miles) comprising the Rocky Mountain Foothills only five were 'intact,' i.e., lacking wellsites, logging or significant linear disturbance.

There are no government regulations to limit the amount of seismic line cutting, wellsites, roads and pipelines in Alberta's forests. Although forest industry logging rates are limited by government regulation, the allowable cut is based only on sustaining the fibre supply/production of the forest, not on maintaining the forest's ecological integrity. The combination of industrial activity and fire also have a cumulative disturbance impact which results in the decline of forest integrity and wilderness value. The forest is getting smaller, younger and more fragmented; natural patterns and processes are being altered; and there is a marked increase in motorized human access along with its secondary problems. Woodland caribou, grizzly bear, wolverine and other wilderness or old-growth dependent species, such as some migratory birds are declining as a result.





Air Photo Services, Alberta Sustainable Resource Development



*Kakwa area cumulative effects: timelapse sequence from 1974, 1983 and 1995 documenting the transformation of an area with development of roads, cutblocks and petroleum activities. (No more recent photo available.)*

## Some Benefits of Rocky Mountain Foothills Protected Areas

- ⦿ contribute to the maintenance of biodiversity of the Foothills Natural Region;
- ⦿ meet public demand for the protection of wilderness;
- ⦿ provide ecological benchmarks for Alberta's Foothills Natural Region, as required for the implementation of ecological forest management;
- ⦿ enable the highest standards of forest product certification (Forest Stewardship Council);
- ⦿ assist market access for the local forest industry in the face of growing public demand for sustainable forest management;
- ⦿ contribute to the economic diversification of the Rocky Mountain Foothills of Alberta through new opportunities for tourism; and
- ⦿ provide an opportunity for the Alberta government and forest industry to honour their commitments to the National Forest Strategy, the Canadian Biodiversity Strategy, the Alberta Forest Conservation Strategy, and others.

In 1996, an Alberta Government report, *Parks and Protected Areas: Their Contribution to the Alberta Economy*, found the economic contribution of provincial parks and other legally protected areas to be comparable to that of other resource based sectors. In particular, it found the economic contribution of parks similar to that of the agriculture and forestry sectors when compared on a hectare to hectare basis. The report calculated only the recreation and tourism values, noting that there are also social, environmental and other economic values from parks. In terms of employment, parks directly employ more people than the forestry sector.



Cameo: Helene Walsh; all others, Terry Deamer

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## A History of Efforts to Protect Endangered Forests in the Rocky Mountain Foothills

The Rocky Mountain Foothills, together with the mountains, comprise the Alberta Government's Eastern Slopes planning region.

- Ⓞ **1975:** The government response to extensive public consultation on the future of the Eastern Slopes stated: *“Development of the Eastern Slopes will adopt a Multiple-Use Policy as the basic concept. This will ensure that while some carefully selected projects will proceed in certain designated areas, vast tracts of land will be kept in natural and wilderness state. A conservative estimate is that a minimum of 70% of the Eastern Slopes Region will be maintained in present natural or wilderness areas.”*
- Ⓞ **1977:** A Policy for Resource Management of the Eastern Slopes (the Eastern Slopes Policy) stated: *“Critical wildlife habitat will be protected to maintain those species presently found in the Eastern Slopes.”* And *“The entire Eastern Slopes is important for wildlife...wildlife values must be recognized at the management planning level for the entire area”.*
- Ⓞ **1984:** The revised Eastern Slopes Policy, included the following objectives for the region: *“To ensure that wildlife populations are protected from severe decline and that viable populations are maintained; To maintain wildlife on the basis of fundamental ecological principles”* and *“To maintain areas of wilderness or primitive character.”*
- Ⓞ **1990:** The Report of the Expert Review Panel on Forest Management in Alberta recommended that the selection process for new protected areas: *“...be formalized immediately to ensure significant ecosystems are represented in appropriate categories.”* The report also recommended *“Support should be given to selection, protection, management, and status review of representative forest ecosystems throughout Alberta....”*
- Ⓞ **1992:** Alberta signed onto a joint federal-provincial *Statement of Commitment to Complete Canada's Networks of Protected Areas*. In Alberta, this program was called “Special Places 2000”. At its end in 2001, the Alberta Government received a failing grade on World Wildlife Fund Canada's national report card.
- Ⓞ **1996:** The Alberta Forest Conservation Strategy recommended the establishment of *“Representative Protected Areas,”* containing ecosystems typical of the natural regions and subregions of Alberta.
- Ⓞ **2004:** To date less than 2% of the Rocky Mountain Foothill has been protected from industrial use. Alberta conservation groups, together with some international groups (ForestEthics, Greenpeace, Natural Resources Defense Council, and Rainforest Action Network) have identified Endangered Forests in this ecoregion, and call for a moratorium on new industrial development in these areas until legislated protected areas are established.

## Focal Species in the Rocky Mountain Foothills

### Woodland Caribou

The Alberta Wildlife Act designates woodland caribou as a threatened species due to the decline in their distribution and their low numbers resulting from habitat loss and fragmentation.

In winter, the caribou in the Rocky Mountain Foothills of Alberta commonly use mature and old coniferous or mixed forests in the Foothills. The caribou are naturally widely dispersed in low densities over their range, a strategy that minimizes predation. They are slow to reproduce and cannot tolerate the disturbance associated with industrial development. The increased access resulting from industrial development causes increased mortality from vehicle collisions, hunting, predation, and general disturbance. When clear-cut logging occurs in or near caribou range there is an influx of moose and deer, which prefer the vegetation that comes in after logging. This increase in prey species attracts more predators to the area and results in increased predation on the caribou. Logging limits caribou feeding areas, reduces the caribou's ability to respond to a variety of winter conditions and concentrates the animals in a smaller and smaller area. In addition roads and seismic lines increase the ease of travel for wolves and other predators. Both factors result in increased predation of caribou.



CPAWS

Lichen, the primary food for caribou, is very slow growing and found in older forests greater than 80 years. A government publication (1990) states: *“It takes 80 to 150 years for a forest community to grow adequate amounts of lichen for caribou. Their winter diet is usually comprised of 60% to 70% lichens.... When snow becomes crusted, digging for ground lichens is very difficult. Tree lichens can then provide an adequate diet for most of the winter.”*

In the Rocky Mountain Foothills there are two distinct types of woodland caribou; mountain and boreal. Most mountain caribou migrate between alpine or subalpine summer ranges where they calve and their winter range in the forested foothills. Boreal ecotypes remain year-round in the foothills forest, and there is considerable overlap between their summer and winter ranges.

Alberta's Woodland Caribou Conservation Strategy recognizes the value of protected areas as a strategy for the maintenance and recovery of woodland caribou populations. However, there are no protected areas in the Rocky Mountain Foothills caribou winter range. There appear to be 6 distinct herds in the Rocky Mountain Foothills and in light of the intensive industrial use of caribou range their status is of concern. For example the herds in North Banff and the Little Smoky regions are at immediate risk of local extinction, and part of the A La Peche herd no longer uses its winter range. (More information on caribou is provided in the Endangered Forest site descriptions.)

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## Grizzly Bear

There are only about 500 grizzly bears remaining in Alberta, with a further 185 in the mountain national parks. This is a very low number when compared to the Fish and Wildlife Division's 1990 goal of 1,000 bears. In February 2002, Alberta's Endangered Species Coordinating Committee recommended the grizzly bear's status be increased from "May be at Risk" to "Threatened". This recommended status change occurred shortly



Terry Deamer

after the Fish and Wildlife Division released a new status report on the Grizzly Bear (January 2002). The report states, *"Despite recent successes in population management and the reduction of grizzly bear mortality in Alberta, longer-term threats to this inherently sensitive species remain. The most serious threat to Alberta grizzly bear*

*populations is human-caused mortality resulting from uncontrolled human access and activity."* The government has not followed the recommendation.



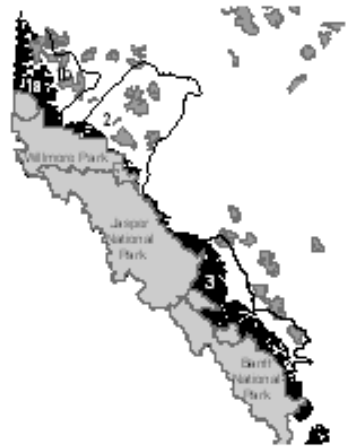
CPAWS

In Alberta, including the Foothills, grizzly bear densities are low because of the naturally low food supply compared to warmer climates. This low population density, means large areas are necessary to maintain Alberta's grizzly bear populations. Large areas are also necessary to meet the grizzly bear's need for habitat security. For example, female grizzly bears with cubs often inhabit remote areas away from the presence of other bears in order to maximize cub safety and facilitate undisturbed interactions of mothers with their cubs.

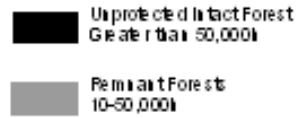
The Fish and Wildlife Division's 2002 status report indicates, *" Grizzly bears are particularly prone to cumulative land use effects because of their inability to adapt to human disturbance. ...The greatest threat to the grizzly bear population is loss of wilderness habitats through resource extraction and recreational development."*

Large protected area in the Foothills of west-central Alberta, free of new industrial disturbance, would be a very significant step for the recovery of grizzly bears.

## Rocky Mountain Foothills Endangered Forest Values



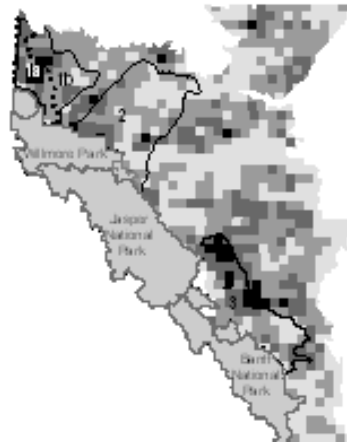
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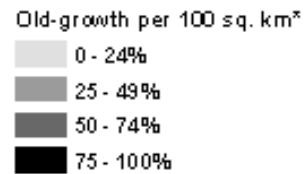
- |  |
|--|
| 1 Kakwa  |
| a. area for protection                                       |
| b. area for combination of protection and special management |
| 2 Little Smoky area for protection                           |
| 3 Bighorn area for protection                                |

\* Based on draft 2003 dataset from Global Forest Watch Canada of small unfragmented blocks

### Old-growth



### Legend





\* From Alberta Phase Three Data

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## Caribou and Key Grizzly Range



### Legend

-  Caribou Range
-  Key Grizzly Range\*

- 1 Kakwa
  - a. area for protection
  - b. area for combination of protection and special management
- 2 Little Smoky area for protection
- 3 Bighorn area for protection

\* From Environmentally Significant Areas of Alberta, 1997

## Bull Trout Streams



### Legend

-  Bull Trout Streams

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## Wolverine

The wolverine is listed by the Alberta Government as a threatened species that “May Be At Risk” of extinction in Alberta. Wolverines were once found across Alberta, but now are restricted to the northern half of the province and along the mountains and foothills.



M. Degner

Their numbers have declined in most regions of Alberta during the past two decades. Unfortunately, estimates have largely relied on trapping data, which does not give an adequate assessment of their population status. Thus, they have been the subject of more intensive study over the past few years. Trapping data suggests that the highest numbers are found in western Alberta.

Wolverine populations decline as a result of human activities that fragment or eliminate habitat. These include human settlement, extensive logging, oil and gas development, recreational developments and increased trapping and hunting resulting from increased access. A government report concludes that with an ever-expanding human population, there may be a time when most wolverine populations will be restricted to large protected areas.

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## Bull Trout

Bull trout are a threatened species in Alberta. They live in cold mountain headwaters streams. At one time they were common in all the major river systems flowing from the Eastern Slopes and found all the way to the prairie and parkland reaches of the rivers. However, during the last 30 years there has been a significant reduction in their numbers and distribution. This has been due to a combination of over fishing, their slow growth rate and habitat degradation.

In order to spawn, bull trout require cold, ground-water-fed streams that flow year-round and are clean and free of sediment. Alberta has a limited number of such mountain headwaters. Any alteration to the watershed that causes erosion, increased siltation, removal of stream cover, or changes in water flow, volume or temperature, affects the number of bull trout that hatch and survive to maturity. Logging and petroleum activity in the vicinity of bull trout streams increases the likelihood that their habitat will be impaired. Also, the increased access to bull trout streams that industrial activity often provides contributes to over fishing and stream degradation.



Protection of the Endangered Forests, with their many bull trout streams, will significantly contribute to the health of this native fish species in Alberta.

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## Birds

Canada's Boreal Forest is critical to the North American bird life. A third of the continent's land-living birds are hatched in the boreal forest. As many as five billion land-living birds, and 40% of North America's nesting water-fowl migrate out of the boreal forest each autumn. They spend the winters in southern Canada, the United States, and Central and South America and return to the boreal forest each spring to take advantage of the abundant food available in the summer and to raise their young. The annual migration of birds between the tropical Americas and the north has been termed "the world's largest vertebrate migration system." While there is much public concern about the degradation of the tropical forests, the boreal is equally critical to their survival.

Numerous migratory songbirds that nest in the Rocky Mountain Foothills are in decline as a result of the loss of old-growth habitat and forest fragmentation caused by industrial use. Already, the western tanager for example, which prefers old-growth coniferous and mixedwood forest, is listed as "Sensitive" in Alberta. Non-migratory birds, such as the black-backed woodpecker, northern pygmy owl, and great gray owl (which requires mature forest stands for nesting) are also listed as "Sensitive". Alberta scientists are finding that a number of bird species become significantly less abundant in forested areas with industrial disturbance after only a portion of the forest is logged. These effects will become even more serious when the remaining mature or old-growth forest is logged according to the planned future cuts.



© Robin White/FoldLex



Helene Waish

*Solitary sandpiper*

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## Kakwa Endangered Forest

### General Description

The Kakwa Endangered Forest harbours provincially significant remnant habitats and hydrological functions (waterfalls, and terraces) that are unique to the area. It contains habitat for three caribou herds, key ungulate range for bighorn sheep, elk, deer and moose, and some of the few remaining key grizzly bear habitats in the Foothills of Alberta. It also provides summer and winter habitat for bull trout and many other fish species. It has an impressive diversity of riparian landforms and vegetation communities.

The Kakwa (porcupine in the Cree language) is an area with steep fossil-covered valley walls, terraces, braided streams and meadows. The headwaters of the Kakwa River are in the Rocky Mountains and Foothills. The Kakwa drains into the Smoky River.

Fishing and recreational opportunities are abundant in the Kakwa area. A robust population of native fish including bull trout, Rocky Mountain whitefish and Arctic grayling thrive in the watershed. The Kakwa is a fine recreational paddling river with class 1 to class 5 rapids.



Brian Bildson

The area has a long history. Old cabins and aboriginal gravesites are seen along the southern and northern sides of the Kakwa River. Porcupine Meadows and Red Rock Creek also have significance for the aboriginal community. An archeological survey in the 1990's identified the age of some of the remnant log cabins to the turn of the century. The past "human footprint" suggests that archeological resources may reach back 10,000 years.

### Special Values

- © Three herds of threatened woodland caribou (mountain ecotype) live in the Kakwa forest. Highest total counts taken between 1993 and 2000 were 42 for the Narraway herd and 187 for the Redrock/Prairie Creek herds.

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- Ⓞ Large numbers of grizzly bears and members of the weasel family like fisher and marten.
  - Ⓞ Wildlife wintering areas such as Horn Ridge for bighorn sheep and Lynx Creek for bull trout.
  - Ⓞ The Kakwa watershed shines with spectacular waterfalls, colourful rock outcrops and valleys and a natural cold sulphur spring called appropriately “Stinking Springs”.

## History

- Ⓞ **1970:** The Wild Kakwa became under consideration as Provincial Park.
- Ⓞ **1973:** The Wild Kakwa Society proposed protection for the Wild Kakwa under the Wilderness Areas Act.
- Ⓞ **1974:** The Alberta government announced plan to establish a park to protect the Kakwa and South Kakwa rivers.
- Ⓞ **1977:** Alberta proposed an Inter-provincial park to the British Columbia Government.
- Ⓞ **1992:** The Alberta Government and Weyerhaeuser met to discuss a protected area. Weyerhaeuser agreed at the time that the Kakwa should be classified as a “Wild River” but managed as an integrated landuse area.
- Ⓞ **1993:** The need for an Integrated Resource Management Plan for the Kakwa area was identified.
- Ⓞ **1996:** Wild Kakwa Provincial Park established (no Foothills included).
- Ⓞ **2001:** The Greater Kakwa group was created to work towards further protection within the Kakwa watershed.

## Threats

Extensive logging has occurred around the perimeter of the Kakwa Endangered Forest, and logging has also occurred in portions of the Red Rock/Prairie Creek caribou winter range. Numerous oil and gas developments in the form of seismic lines, well sites, roads and plant sites are making significant inroads within the entire forest. Active companies include Talisman, Devon and ARL. At present there are few road crossings of the Kakwa River, but industry infrastructure is rapidly encroaching on this region.

The Greater Kakwa group has identified the critical need to preserve a corridor that links the Two Lakes recreation area and the Kakwa Park. They have also called for a government analysis of existing habitat in light of endangered or threatened species requirements. Of greatest priority for preservation is caribou and bull trout habitat.

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## Little Smoky Endangered Forest

### General Description

Composed of several Provincial Environmentally Significant Areas in the Rocky Mountains and Foothills Ecoregions, the Little Smoky Endangered Forest has an incredible diversity of ecological features. The area contains critical year-round range for the dwindling Little Smoky caribou herd, the Highway 40 herd, winter range for the A La Peche herd, a significant grizzly bear population, cougar, wolf, key moose, elk, mule deer range and critical terrestrial furbearer habitat for wolverine, fisher and river otters. The Pinto Creek goatherd is a unique mountain goat population, isolated from other Rocky Mountain populations in non-mountainous terrain within the Little Smoky EF.

The Little Smoky has high plant diversity including upland old-growth coniferous forest, deciduous, mixed and coniferous woodland (with stands of old-growth white spruce, fir and lodgepole pine) a variety of wetland and upland plant communities. It has well-developed patterned wetlands, including one of the largest, most diverse patterned wetland complexes in the Upper Foothills of Alberta. It is part of one of the most extensive and relatively undisturbed Upper and Lower Foothills habitat-rich complexes in Alberta. Relatively undisturbed valley habitats of grassy slopes, wet meadows, springs and ponds offer some of the most extensive, productive riparian woodland habitat in the Upper Foothills of Alberta.

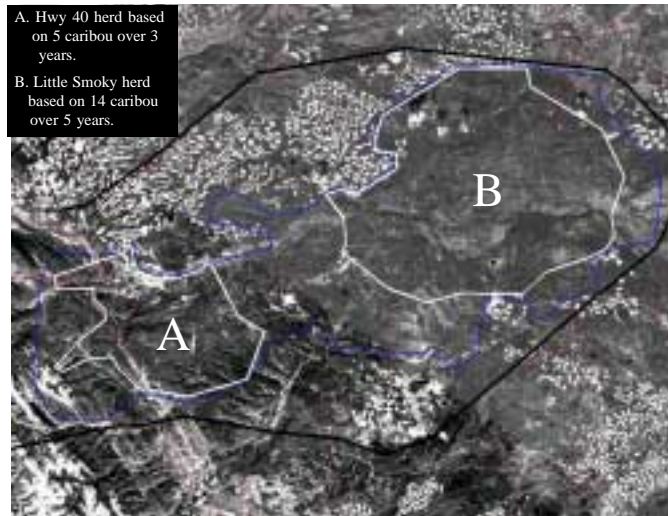
The Little Smoky Endangered Forest rivers and streams provide spawning, rearing habitat for native fish species including bull trout, Arctic grayling, mountain whitefish, and one of three known locations for pygmy whitefish in Alberta.

### Special Values

- ⑥ Intact foothills forest.
- ⑥ Close proximity to the Willmore Wilderness protected area provides much needed connectivity for wide ranging wildlife such as the A La Peche Caribou herd (which summers in Willmore and used to winter in the foothills), grizzly bear and wolverine.

- © Three caribou herds are known to depend on the Little Smoky Endangered Forest.

**a.** The Little Smoky herd: a boreal ecotype living year round in the forest, moving only about 12 km between their winter and summer ranges. There are 60-100 caribou in the herd. The Little Smoky Caribou are at immediate risk of local extinction. This herd was listed in 1985 as threatened and with a re-evaluation in 2001 are now considered both provincially and nationally threatened.



*Little Smoky caribou range showing adjacent cutblocks and last remaining relatively intact area for the Little Smoky and A La Peche/Hwy. 40 herds. These are minimum home ranges based on only 19 caribou since 1999. The black line indicates the area managed as caribou range.*

**b.** The A La Peche herd: a mountain ecotype of about 150-200 animals. This caribou herd once migrated into the alpine - sub-alpine to calve and return in the late fall to spend winters in the forest. Winter range abandonment is an issue with the A La Peche caribou, as these animals have not migrated into their traditional winter range since 1996.

**c.** The Highway 40 herd: thought to be originally part of the A La Peche herd this group of animal stays year round in the former winter range of the A La Peche herd.



Karen Stroebel

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## History

- Ⓞ **1980:** Logging began.
- Ⓞ **Early 1980s:** Government began studies to determine caribou movements, as well as manage the core forest to sustain caribou populations and the native fish populations (Arctic grayling, bull trout) in the Little Smoky watershed.
- Ⓞ **1993:** The Berland Subregional Integrated Resource Plan stated: “Caribou rely on old-growth forests as winter range as these forests contain ground (terrestrial) and tree (arboreal) lichens. Any activities that will negatively affect caribou habitat through increase winter access or decreased lichen production will be in conflict with the restoration objectives for this threatened species”. This plan also identified that the wood available for the sawmill had “merchantability problems” though recent technological changes in the logging industry specifically advances in drying, sawing and the availability of wood swaps among other forest companies have increased the economic viability of the wood supply.
- Ⓞ **1993:** Over 200 sq. miles (550 sq. km) of forest logged within this area.
- Ⓞ **1996:** The government report *Selecting Protected Areas: The Foothills Natural Region of Alberta*, 1996 identified the Little Smoky-Berland complex as one of the 13 best candidate sites for protection in the Foothills Natural Region.
- Ⓞ **1999:** Most of the Little Smoky Endangered Forest was nominated as a site for protection in the government’s Special Places Program, but was not protected.

## Specific Threats

Four forest management agreements intersect in the Little Smoky Endangered Forest. Consensus in caribou management and forest protection between government and industry is difficult with multiple stakeholders competing for limited resources. At this time logging is managed on a company-by-company basis. Two companies, Alberta Newsprint Company and Canfor, received a one-year winter 2003/04 approval to log on the edge of the core Little Smoky Caribou Range. Whether they log there in the future remains to be seen.

A coalition of logging companies, Weyerhaeuser, Weldwood, Canfor and Alberta Newsprint, the provincial government and other stakeholders have proposed a demonstration project in the A La Peche/ Highway 40 herd range to log in a manner that ‘emulates’ natural disturbance.

A 100 km proposed pipeline would dissect both the Little Smoky caribou range and the winter range of the A La Peche herd.

Oil and gas activity is ongoing, without any caribou habitat supply analysis being completed. Companies include Suncor, Talisman, Maverick, Scott and Devon.

## Weldwood Logs the Mountain Shadows Area

Since 1997 local people have been trying to preserve a small portion of the Little Smoky Endangered Forest from logging by Weldwood. The Mountain Shadows area is about 25,000h in size and occupies less than 3% of Weldwood's forest management area. In the southwest corner of the Little Smoky EF, part of this area was once included within the original boundaries of Jasper National Park. It has been used for recreation for nearly 100 years with guiding and outfitting, hunting, fishing, hiking, cross country skiing, snowmobiling and off highway vehicle use. It has significant Aboriginal presence with cemeteries, ceremonial sites and traditional trails. Much of this area was designated as an Ecologically Significant Area by a Foothills Model Forest study. Also, within part of it, the United Nations sponsored International Biological Programme found such a rich assemblage of Upper Foothills mixed forest vegetation that the



area is considered an international benchmark. Further studies have noted this mixed forest hosts some of the highest numbers of bird species

in Weldwood's management area. The Mountain Shadows area contains some of the last remaining intact Foothills forest in the area and is in close proximity to the town of Hinton. The Mountain Shadows Trail runs the length of the area making it especially attractive as a natural asset for local economic diversification into the recreation and ecotourism sectors. Many letters from local people have been sent to Weldwood, and to government, to voice concern over logging in the Mountain Shadows area. A local community attempt to defer logging there until the completion of a government initiated regional landuse plan also failed. Weldwood began logging the

Mountain Shadows area in 2002, that logging continues today, and the regional landuse plan intended to integrate multiple values for this landscape remains incomplete.

Helene Walsh

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## Bighorn Country Endangered Forest

### General Description

In Bighorn County, the Foothills eco-region of the Boreal is a biological mixing bowl where a wide variety of plants and animals from the Arctic, Boreal, Rocky Mountains, Parkland and Plains regions come in contact with each other. This unique range of biological diversity includes everything from the powerful grizzly bear and shy lynx to the threatened Canadian toad, the great gray owl and the tiny Calliope and rufous humming birds.

Until the 1970s, significant herds of mountain caribou relied on parts of this Endangered Forest, particularly for winter habitat. As identified by the Alberta Fish and Wildlife Division in the 1980s, recovery of this threatened species includes the necessity of protecting of its historic range.

The Foothills portion of this Endangered Forest is characterized by high, rolling hills, deeply incised valleys, scenic gorges with significant bedrock exposures, wild rivers and streams, wetland complexes and extensive boreal forests of nearly pure coniferous tree-cover. The western, Rocky Mountain portion has scenic, rugged mountain peaks and ridges, small glaciers, alpine landscapes, lakes in hanging valleys and Subalpine forests. As well, there are extensive Montane landscapes and Subalpine valleys with expansive south and southwest facing, open grassy slopes; both of which provide highly productive wildlife habitat. Bighorn Country includes provincially zoned Critical Wildlife Habitat for wolves, mule deer, moose, elk, mountain caribou, bighorn sheep, mountain goats and native fish species (cutthroat trout, Rocky Mountain whitefish and bull trout). There is also key habitat for grizzly and black bear, coyote, cougar, lynx, wolverine, fisher, mink, marten and white-tailed deer. Historically, it was important habitat for bison.

First Nations' use here spans the time dating from the numerous prehistoric sites to present-day traditional uses and residency. The wilderness of the routes taken by early European explorers and Canadian adventurers can still be experienced by today's visitors. This Endangered Forest is also the foundation for more than 40 tourism and outfitting businesses, including those of the fast growing, ecotourism sector.



Helene Walsh

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## Special Values

- ⦿ Key for assisting in the recovery of Alberta's grizzly bears, wolverines, bull trout and most southern herd of mountain caribou.
- ⦿ One of the "biological hotspots" remaining without legislated park protection in Alberta's portion of the Yellowstone to Yukon Conservation Initiative.
- ⦿ Old-growth forests, diverse riparian plant communities, valley-bottom shrublands, Montane landscapes and a unique area of Plains grassland within the Foothills.
- ⦿ Encompasses one-fifth of Alberta's provincially significant, Foothills ESAs.
- ⦿ The headwaters of six rivers that are a key part of the Saskatchewan River Basin, supplying water to landscapes and communities of the prairie provinces.
- ⦿ First Nations' history and current-day traditional use.
- ⦿ Prehistoric and historic routes and sites.



## History

- ⦿ **1911:** The federal government established the Rocky Mountain Forest Reserve (which includes Bighorn Country). The purpose was described thusly: *"These are areas of non-agricultural land established for the protection and reproduction of timber, for the protection of watersheds, and for the maintenance of conditions favourable to a continuous water supply and for the protection of animals, birds and fish. The scenic and recreational values of these forests are now deemed to be resources of major importance."*
- ⦿ **1993:** The superintendent of the Rocky-Clearwater district of the Forest Reserve indicated that when two small logging licenses in the northern part of Bighorn Country are completed, the area would be dropped from future forestry allocations. Instead, it would be left intact for other forest values, such as watershed protection, wildlife and fisheries habitat and recreation.

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- Ⓞ **1996:** The Alberta Government released the report, *Parks and Protected Areas: Their Contribution to the Alberta Economy*. Using the report figures it was estimated that the establishment of Bighorn Country and the designation of the Bighorn Wildland Park within it could contribute \$77.7 million of economic activity annually and around 1,756 person-years of employment.
  - Ⓞ **1997:** Without public consultation, the Alberta Forest Service issued Forest Management Agreements (FMAs) to Weyerhaeuser and Sundance for logging in the northern part of Bighorn Country. In the winter of 1998, Sunpine logged an old-growth forest in southern Bighorn Country.
  - Ⓞ **1999:** A coalition of local citizens, outdoor recreationists, naturalists, ecotourism operators, guides and outfitters from the Red Deer, Sundre and Rocky Mountain House areas, together with Alberta conservation organizations formed the Bighorn Country Wildlands Coalition to advocate protection.
  - Ⓞ **2003:** Bighorn Country was identified as a Biogem by the Natural Resources Defense Council.

### Specific Threats

All three FMA holders (Weyerhaeuser, Sundance and Sunpine) and six of the 30 petroleum lease holders have jointly planned industrial access throughout northern Bighorn Country in preparation for extensive resource extraction. Weyerhaeuser plans to clear-cut log the northern part, commencing the winter of 2004. Shell Canada and Suncor Energy have plans for further petroleum activity in the south and several of companies (singularly or jointly), including Talisman Energy, PetroCanada and Husky Energy have begun exploration drilling and development in the northeast. Murphy Oil and Devon Energy also hold leases further west, and were part of the industrial access plan for northern Bighorn Country.

## Rocky Mountain Foothills Endangered Forests and Forestry Companies

