



The State of Alberta's Parks and Protected Areas

AN ANALYSIS OF THE CHALLENGES AND OPPORTUNITIES FOR ENSURING
ecological integrity





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**"The State of Alberta's Parks
and Protected Areas:
An analysis of the challenges
and opportunities for ensuring
ecological integrity"**
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Northern Alberta

About the Canadian Parks and Wilderness Society

The Canadian Parks and Wilderness Society (CPAWS) is the voice for Canada's remaining wilderness landscapes. We create consensus for wilderness conservation by engaging Canadians, government and industry at the community level. Since 1968 the Northern Alberta Chapter has worked to maintain biodiversity and wilderness in Alberta through:

- the establishment of protected areas
- ensuring the long-term health of established parks, and
- implementing industrial practices that are sustainable for nature, communities, and the economy.

CPAWS Northern Alberta is part of a national organization consisting of 13 chapters and over 17,000 members. More information about CPAWS Northern Alberta is available at www.cpawsnab.org or by contacting infonab@cpaws.org.

About ParksWatch

The ParksWatch Program is an initiative of CPAWS Northern Alberta, and its primary goal is to ensure the ecological integrity of Alberta's parks and protected areas, so that they can fulfill their conservation mandate of preserving ecosystem functions and wilderness for future generations. The program recognizes that a park has not only ecological values, but also social, economic, and community values. The program's goals are accomplished primarily through public outreach, education and providing stewardship opportunities. This is done cooperatively with the Alberta government's Parks Division and other environmental organizations in Alberta.



Rebecca Reeves hiking in Willmore Wilderness Park.

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The Alberta Ecotrust Foundation is the leader in building partnerships throughout Alberta between environmental organizations, corporations, and others who support environmental action to: fund and support effective grassroots environmental projects, build capacity and sustainability in the voluntary sector, and promote the environment as the foundation of a healthy community. Since 1992, this partnership has provided close to \$3.5 million in financial support for over 300 environmental projects throughout the province.

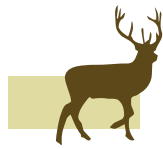


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Executive Summary

The passing of the Provincial Parks and Protected Areas Act in 1930 marked the beginning of Alberta's network of parks and protected areas. At the time, the purpose of the parks system was to provide places for outdoor recreation and enjoyment. Since then, there has been a significant shift towards a policy that stresses the importance of ecology and recognizes preservation as its primary goal.

Despite this conservation priority for Alberta Parks, systemic issues facing the network are compromising the ability for the Alberta Parks Division to meet its mandate. The main purpose of this report is to examine how these systemic issues have affected the ability of the Alberta Parks Division to protect the ecological integrity of the provincial parks network.

The Government of Alberta committed to assisting in the completion of a network of protected areas representative of Canada's land-based natural regions by the year 2000 by signing on to Canada's Statement of Commitment to Complete Canada's Networks of Protected Areas in 1992. However, in 2007, Alberta's system of protected areas is still not representative of the province's natural regions and subregions. The protected areas are generally too small to ensure adequate protection of the biodiversity they represent. They are not connected by functional corridors to prevent them from becoming ecological islands in a sea of agricultural, industrial, and motorized recreational use. Finally, the majority

of protected areas do not have buffer zones to lessen the effects of adjacent activities.

Legislation and the multiple agency environmental management structure of the Alberta Government has allowed for a host of permitted industrial and recreational uses both within and bordering protected areas. This has created significant challenges facing land and overall environmental management, all of which are compromising the ecological integrity of the Alberta parks network and inhibiting effective ecosystem-based management (for the general goal of protecting native ecosystem integrity over the long term).

Financial cutbacks, government re-organization and a lack of priority for the environment, have resulted in nearly 20 years of neglect for the Alberta parks network. Recently, the Alberta Government has taken a slow yet positive step by reinvesting in our parks with an increase in infrastructure funding and some operational funding. Nevertheless, the lengthy period of reduced funding for the Alberta Parks Division has resulted in a limited capacity for



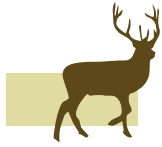
RECOMMENDATIONS

- 1. FUNDING:** Increase funding for Alberta's parks and protected areas network to levels required to ensure effective park management (i.e. planning, monitoring, enforcement, and environmental education).
- 2. LEGISLATION:** Strengthen existing legislation and introduce new legislation to ensure that the maintenance of ecological integrity is the primary mandate of the network and that the necessary regulatory tools are available to achieve this.
- 3. NETWORK DESIGN and LAND MANAGEMENT:** Strengthen Alberta's network of parks and protected areas to better conserve Alberta's ecological diversity and to ensure that the integrity of protected areas is not compromised by adjacent activities.

scientific study and monitoring, an inability to complete management plans in a timely fashion, a loss of enforcement officers and managers, and the elimination of numerous heritage appreciation programs.

The systemic problems facing Alberta's parks and protected areas are primarily due to a lack of sufficient political support and leadership. The failure of the government to recognize and protect the ecological values of the province's ecosystems has resulted in an incomplete and poorly designed network of protected areas. In addition, Alberta is now ranked as having the weakest parks legislation in Canada.

Parks and protected areas provide a wide range of benefits to all Albertans. For example, parks are essential for protecting Alberta's biodiversity, including species at risk. If they are properly designed and managed, protected areas can provide ecological benchmarks for naturally functioning ecosystems. These benchmarks are used in scientific and adaptive management techniques to maintain biodiversity in areas with sustainable industrial initiatives. Parks and protected areas also provide economic benefits through tourism and recreation and ecosystem services. Alberta's parks and protected areas also contribute to the overall quality of life of all Albertans. Continuing and increasing the renewed reinvestment in our parks would enhance these benefits, both today and tomorrow.



1. Introduction

“Today’s system of parks and protected areas is incredibly diverse and the diversity of experiences and landscapes is the system’s greatest asset.”

(ALBERTA PARKS 2006A)

1.1 Alberta’s natural heritage

Alberta’s landscapes are composed of six natural regions: Rocky Mountain, Foothills, Grassland, Aspen Parkland, Boreal Forest, and Canadian Shield. These natural regions are comprised of 21 sub-regions (Figure 1-1), each of which is a distinct ecosystem containing a wide variety of flora and fauna (ATPRC 2007a). From the picturesque coulees of the southeast, through the grasslands to the spectacular Rocky Mountains in the west, and north to the vast Boreal Forest, Alberta boasts an enviable diversity of natural heritage.

Alberta’s ecosystems are losing their integrity as a result of increasing human encroachment and development in both rural and urban regions of Alberta. This trend presents a challenge for Albertans, who enjoy the material prosperity resulting from a wealth of riches in an energy-hungry world, but who also consistently rank preservation of the natural environment as one of their top three priorities, behind only health care and education (AG 2004). Historically, Alberta’s grassland natural region was the economic engine of Alberta, contributing to

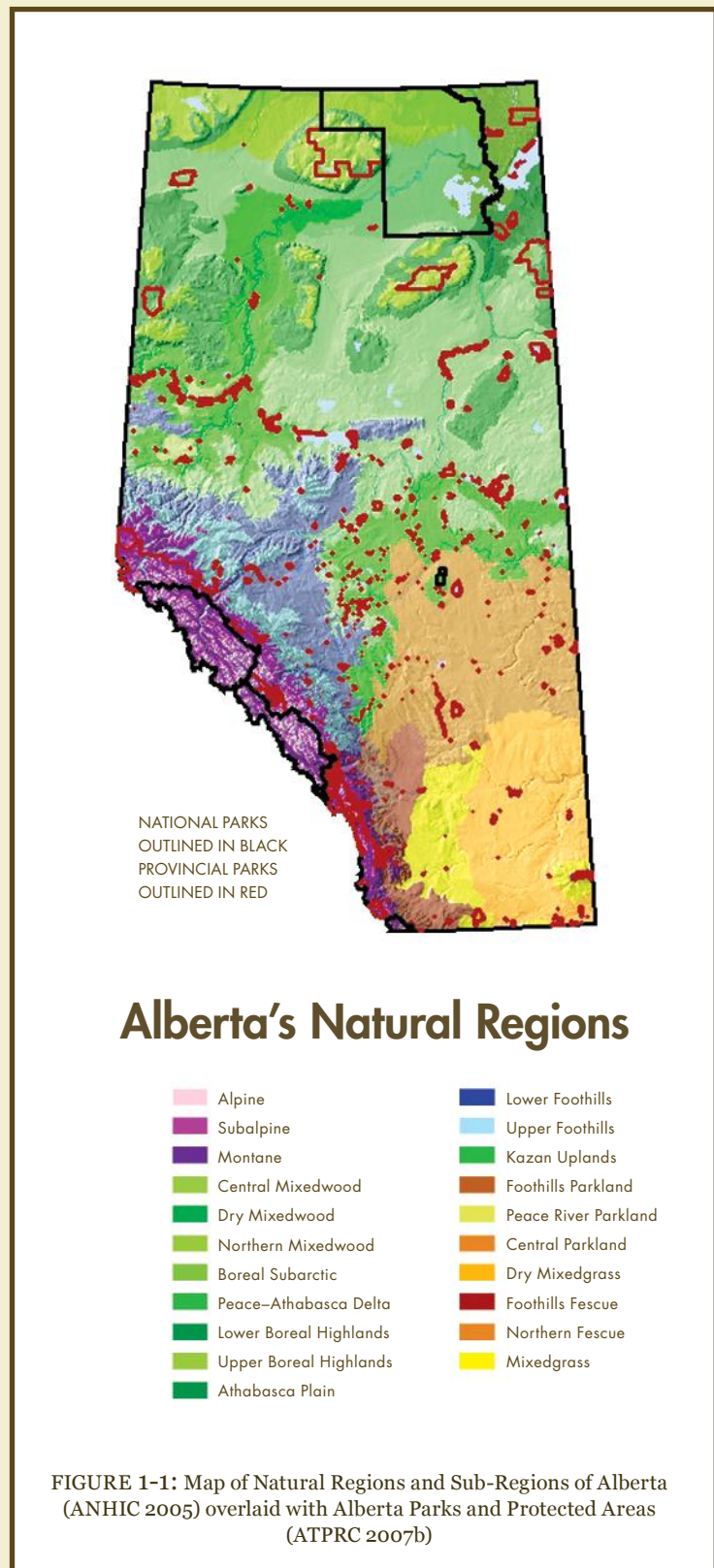
Canada’s agricultural production. More recently, the oil and gas industry has expanded to most parts of the province to become the cornerstone of the economy. Forestry operations have also spread throughout the Boreal and Foothills natural regions. As a result, after more than 100 years of intensive resource exploitation, Albertans are now seeing large areas of the province heavily impacted. For example, very few native grasslands remain in southern Alberta and important wildlife populations, such as woodland caribou (Dzus 2001) and

forest songbirds (Schneider 2002) are in decline. This is largely a manifestation of the impacts of large-scale forestry and oil and gas development in the Boreal Forest and Foothills natural regions. There is also increasing concern about the quality and quantity of Alberta's water supply (Griffiths et al. 2001).

The creation of a network of parks and protected areas is one strategy implemented by society to preserve natural diversity (Chape et al. 2005). Canada became a world leader in nature preservation in 1885, when a 26 km² reserve was created around the Banff Hot Springs to become the world's third, and Canada's first, National Park. Alberta's provincial system of parks and protected areas was born in 1930, and has since grown to include 504 sites. These parks and the five National Parks situated inside Alberta represent 12.5% of the province's total area (Figure 1-1).

What is a park?

Canada recognizes the IUCN's definition of a park or protected area as "an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal and other effective means."



Today, Alberta's parks are cherished by millions for the wilderness they protect, their rich diversity of wildlife, recreation opportunities and their beauty. With its impressive biological diversity and large-scale industrial activities, Alberta has an important responsibility to create and maintain a parks system that will meaningfully conserve its biodiversity for both its own sake and for the benefit of current and future generations. Unfortunately, the ecological integrity of Alberta's parks and protected areas network is being compromised by human activities both inside and outside the borders of these special places.

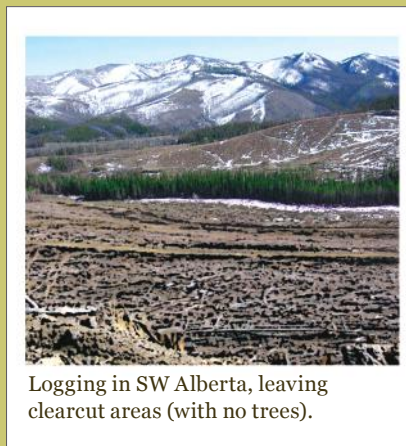
1.2 Report Purpose

Incorporating the concept of ecological integrity into park management and land use is an essential element in the successful conservation of ecosystems. This report is the outcome of an effort by the Canadian Parks and Wilderness Society (CPAWS) ParksWatch program to assess the extent to which ecological integrity is being maintained in Alberta's parks and protected areas. To help us in this endeavor, we have attempted to answer the following questions posed by Hockings et al. (2000) as a methodology for assessing the efficacy of management within individual parks and entire parks systems:

- Where are we now?
- Where do we want to be, and how are we going to get there?
- What do we need to get there?

In accordance with Hockings et al. (2000), our evaluation, which is that of a non-government organization with the goal stated above, is consistent with a level-one analysis. This report's evaluation of management effectiveness, which should be explored further and in greater detail by the Alberta government, has the specific goals of (Hockings et al. 2000):

- 1) helping managers improve ongoing management of protected areas through adaptive management;
- 2) influencing policy to improve protected area systems and management arrangement; and



- 3) providing accountability to, and raising the awareness of, the public.

It should be recognized that effective parks and protected areas management is a complex task and requires cooperation from many interest groups. Though this study was extensive, there are still other opportunities and challenges for protecting and restoring the ecological integrity of the Alberta parks network that were outside of the scope of this project.

We encourage the Alberta Parks Division and other government agencies to explore:

- Aboriginal involvement in protected area establishment and management
- The effect that climate change will have on the Alberta parks network's ability to appropriately represent and maintain Alberta's biodiversity in the future
- The threats facing Alberta's freshwater (lakes and rivers) both inside and outside of protected areas

- The management of all recreation including non-motorized recreation such as mountain biking, horse back riding etc.
- The role of eco-tourism and outfitting operators in our parks and protected areas
- The effects of privatization of some parks services and operations
- The role that volunteers, steward groups and conservation organizations play
- Explore further the effects of using hunting, trapping and grazing as management tools in Alberta's parks and protected areas.

Please note that this review deals specifically with those parks and protected areas that are the responsibility of the Alberta Government. At the time of printing, this responsibility fell to the Division of Parks, Conservation, Recreation and Sport in the Department of Alberta Tourism, Parks, Recreation and Culture. Because of its many name changes, the agency that has been responsible for the Alberta parks and protected areas network will be referred to as the Alberta Parks Division in this report. For brevity, Alberta's parks and protected areas network will be referred to simply as the Alberta



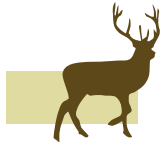
Kakwa Wildland Provincial Park protects the watershed of the Kakwa River and Falls.

parks network. The National Parks within Alberta, which are administered by the Federal Government, are not addressed in this report.

In the following section, we review the background of the Alberta parks network. Section 3 deals with threats to the ecological integrity of the network associated with site design and landscape management. Sections 4 and 5 discuss the importance of legislation and funding in maintaining ecological integrity. We conclude the report with recommendations for changes that we believe are necessary to ensure the ecological integrity of a system of representative protected areas in Alberta (Section 6).



Diverse landscapes are protected within Alberta's parks.



2. Background:

ALBERTA'S PARKS AND PROTECTED AREAS NETWORK

“Lists of protected areas and management effectiveness are little more than snapshots. In reality, these areas are moving targets; they change with governments and economic and social conditions.”

(EIDSVIK 1993)

2.1 Parks paradigm shift: from recreation to conservation

Alberta's network of parks and protected areas under provincial jurisdiction came into being with the passing of the Provincial Parks Act on March 21, 1930. At the time of its founding, the main goal of the provincial park network was to provide Albertans and visitors to the province publicly owned places for outdoor recreation and enjoyment (Swinnerton 1993).



Wild mushroom in
Young's Point Provincial Park.

In its early stages, the parks network consisted mainly of “small recreation sites that provided Albertans with scenic spots to swim, picnic, and camp” (ATPRC 2007b). From this initial mandate of providing suitable sites for outdoor recreation, there has been a significant shift towards a policy that puts ecology and conservation as the primary goal. This change is consistent with the international trends in environmental awareness of the 1980s, when parks evolved from being places of recreation and were managed exclusively for internal threats, to areas for which the significance of external influences and the necessity to invest resources in

scientific understanding and management of biophysical systems were recognized (Dearden and Rollins 1993).

Phillips (2003) referred to this change in park philosophy as “a new paradigm for protected areas in the twenty-first century.” Essentially, its focus shifted from recreation to one of preservation, or from consumption to conservation. Some of the key changes in this new park philosophy are (Phillips 2003; Chape et al. 2005):

- Creating a spectrum of protected area management categories that have different conservation objectives
- Recognizing the role that parks play in the conservation of biological diversity and species at risk
- Recognizing the role that social and cultural values play for parks
- Realizing that parks can contribute to sustainable development
- Utilizing parks as an indicator for sustainable landscape management and vibrant communities (i.e. quality of life).

Park management has moved from within park boundaries to a consideration of how parks fit within the greater landscape, both natural and societal. As Eidsvik (1993) explained, “this shift involved a movement away from preservation of fauna and flora toward an integrated management of natural resources through the preparation of national and regional conservation strategies.” Thus, in order to protect the ecological integrity of a park, management must be sophisticated, science-oriented and extend beyond park borders to include broader landscape management (Zinkan 1992).

Nearly 200 countries have agreed that the primary goal of protected areas is to achieve



The first Alberta parks were primarily beach and lake recreation destinations.

specific conservation objectives (Chape et. al. 2005). Funding for the management of these areas has widened from a focus on recreation to include science and landscape conservation (den Otter 2000). Globally, there is growing acceptance that the conservation values of protected areas, and the benefits that they confer, are far more important than the consumption benefits of the first days of parks in North America.

2.2 Mandate of the Alberta Parks Division

As stated in the Vision, Mission, and Goals of the Alberta Parks Division, the Alberta government clearly recognizes that the provincial parks network plays a fundamental role in the protection and maintenance of biological diversity of Alberta by ensuring the continuation of natural processes (ATPRC 2007d):

Vision

“Alberta’s parks and protected areas preserve in perpetuity landscapes, natural features and processes representative of the environmental diversity of the province.”

Mission

As “stewards of the environment” the Government of Alberta “preserves, protects and enhances the province’s natural heritage within a network of parks and protected areas. Many of these areas are also tourist attractions, providing a range of outdoor recreation opportunities where Albertans and visitors to the province experience, enjoy and learn about our natural and cultural heritage.”

Key words and phrases in the Alberta governments Vision statement such as “preserve”, “in perpetuity”, “representative,” and “environmental diversity” imply the preservation of ecological integrity (Section 3).

In the mission statement, the Government acknowledges that as a “stewards [sic] of the environment” it “preserves, protects, and enhances the province’s natural heritage within a network of parks and protected areas.” Along with this clear statement of a responsibility for preservation is the admission that many of these areas offer opportunities for recreation and tourism.

The Alberta Parks Division also has four goals. The primary goal is preservation “of the province’s natural heritage.” However, this goal must be balanced with three goals catering to human activities; these are referred to as “heritage appreciation,” “outdoor recreation,” and “heritage tourism.”

By signing on to Canada’s Statement of Commitment to Complete Canada’s Networks of Protected Areas (November 25, 1992) the government of Alberta has committed to assist in (Environment Canada 2006):

- Completing Canada’s networks of protected areas representative of Canada’s land-based natural regions by the year 2000 and accelerate the protection of areas representative of Canada’s marine natural regions.



People and wildlife benefit from preservation balanced with recreation (ATPRC).

The Provincial Government is to be held accountable for protecting Alberta's wild spaces and wildlife for future generations.



The newly named and legally protected Louis Hole Centennial Provincial Park (ATPRC).

- Accelerating the identification and protection of Canada's critical wildlife habitat;
- Adopting frameworks, strategies, and timeframes for the completion of protected areas networks;
- Continuing to cooperate in the protection of ecosystems, landscapes and wildlife habitat; and
- Ensuring that protected areas are integral components of all sustainable development strategies.

In 1995, the Alberta government began its Special Places Program. These international and national commitments, together with the promises made to Albertans through the Vision and Mission statements, clearly demonstrate that the Provincial Government is to be held accountable for protecting Alberta's wild spaces and wildlife for future generations. While this commitment is commendable, the Alberta Government's support for its own mission statement is not obvious based on its track record of weak political support for the Alberta Parks Division over the last two decades (Section 2.3).

2.3 Governance of Alberta's parks network

International reports on effective park management have identified three criteria for testing political support for protected areas: "good governance, enforcement of legal protection and provision of resources necessary for protected area management" (Chape et al. 2005). The Alberta Parks Division experienced a substantial amount of reorganization, staff and resource cutbacks, especially during the late 1990s. This was clearly indicative of the Alberta Government's lack of political support for parks during the 1990s. den Otter (2000) found that many Parks Division staff felt that the reorganization in the mid-1990s "was an early signal that the government did not hold parks in high regard and would [be followed by more] shuffl(ing) of parks on to different departments. The prediction proved to be accurate as the parks portfolio in the following year was handled by many different agencies."

In total, departmental responsibility for the Alberta Parks Division has been reassigned nine times since the mid-1970s and it has been reorganized at least four times in the same time period.

(ANNUAL REPORTS 1973-2006, TABLE 2-1).

These administrative shifts were accompanied by a significant downgrading of the Division when it went from being a major Division within a department to simply an element of a Division that included many other responsibilities. In 2001, the parks program was elevated to a

stand-alone Alberta Parks Division with its own Assistant Deputy Minister.

Many of the facilities and much of the infrastructure present in Alberta's parks today were built in the 1970s and 1980s when it shared one department with recreation (annual reports). The budget was more than double during those two decades, compared with more recent years (Section 5, annual reports 1973-1990, 2005).

The last time the Alberta Parks Division existed as a major Division within a parks-focused department was in 1992. Early that year, the former Alberta Parks and Recreation Department was amalgamated with the Department of Tourism to become the Department of Alberta Tourism, Parks and Recreation. However, the most significant change for the Alberta Parks Division occurred later in 1992 when the Department of Forestry, Lands and Wildlife, Department of Environment, and the Parks Division were amalgamated into the Department of Environmental Protection (AEP 1993). This new department was founded on an integrated resource management philosophy and promised to keep Alberta on the forefront of environmental protection (AEP 1993). At the time of the amalgamation, this new Department was given three years to cut 856 staff positions and reduce the budget by \$101 million (AEP 1994c). To accomplish this, the Department privatized many park services, closed some campgrounds and continued to cut the parks operating budget (AEP 2000). Within 10 years the total budget for the Alberta Parks Division decreased by over 40%.

The reorganization into the Department of Environmental Protection could have been seen to represent a perception shift from recreation to acknowledging the conservation values of parks. However, amalgamating departments

Twenty years of change

FISCAL YEAR	DEPARTMENT NAME	DEPT. ORGANIZATION
1984–1987	Recreation and Parks	Alberta Parks Division and Olympics
1987–1988	Recreation and Parks Parks Division	Same as above
1988–1989	Recreation and Parks Provincial Parks Service	Alberta Parks Division
1989–1990	Recreation and Parks Provincial Parks Service	Alberta Parks Division and community grants
1990–1991	Recreation and Parks–Provincial Parks Service + Kananaskis Country	Alberta Parks Division and community recreation and sport
1991–1992	Tourism, Parks and Recreation	Alberta Parks Division and Tourism and recreation (February 92)
1992–1993	Department of Environmental Protection (established Dec 1992)	Seven divisions, one being Alberta Parks Division
1993–1994	Department of Environmental Protection	Same as above
1994–1996	Department of Environmental Protection	Parks Management Division (10 divisions, one being Alberta Parks Division)
1996–2000	Alberta Environmental Protection	Natural Resources Service Division (included Fish and Wildlife, Parks and Water services)
2000–2001	Alberta Environment	Same as above
2001–2006	Alberta Community Development	Four divisions, one being Alberta Parks Division
2006–present	Alberta Tourism, Parks, Recreation and Culture	Same as above
INFORMATION FROM GOVERNMENT OF ALBERTA ANNUAL REPORTS		



Table 2-1: Twenty years of change

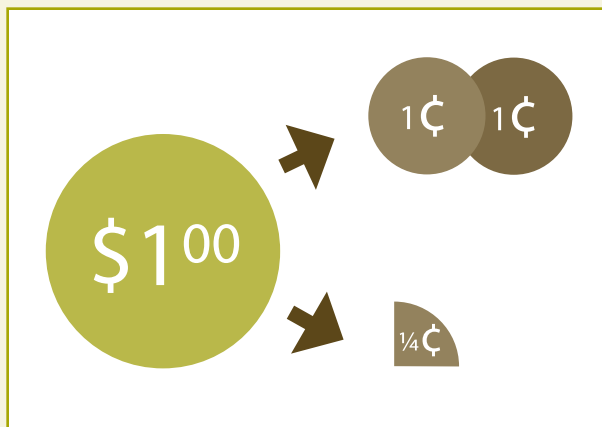
that had the environment in common, but did not necessarily share underlying philosophy, goals, or approaches to environmental management, created the potential for conflict between the divisions.

The last major shift for the Division occurred in fiscal year 2001/02, when it was moved to the Department of Community Development. In December of 2006, this department was amalgamated with Tourism and Economic Development to become Tourism, Parks, Recreation and Culture. Again, the Alberta Parks Division remains separate from other departments making decisions on the land base, such as the Department of Energy, Environment and Sustainable Resource Development.

The effects of the dramatic changes to the Parks Division in the 1990s can still be felt today. The following analysis finds that there are systemic issues facing the Alberta parks network. These issues ultimately stemmed from a lack of political support during the 1990s, which failed to recognize and protect the ecological values of Alberta. Lack of political support for the Alberta parks network has resulted in the following:

- Incomplete parks network
- Canada's weakest parks legislation (Boyd 2002)
- Significant operations cut backs.

The following sections will examine how these systemic problems have created challenges for the Alberta Parks Division to meet its mandate of preservation and protect the ecological integrity of Alberta's Parks and protected areas.

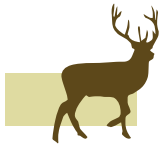


Alberta's environmental deficit

For every dollar, the Alberta Government spends only 2 cents on overall environmental management (combined budgets of Departments of Environment, Sustainable Resource Development and the Alberta Parks Division), with only 0.24 cents going to funding the Alberta parks network. (2007-08 Government Budget Estimates)

Special Places 2000

The Special Places 2000 program was a response of the Alberta government to the World Wildlife Fund Canada Endangered Spaces program and the Biodiversity Convention presented in 1992 at the Earth Summit Rio (AEP no date). The goal of the Alberta program was "to complete a network of protected areas to preserve the province's environmental diversity" (ATPRC 2007f) and it ran from 1995-2001. Despite the program's designation of most of Alberta's Wildland Provincial Parks, some concluded that the program failed as a provincial protected areas strategy (Kennett 1995). It was described as a "multiple-use policy for public lands" (Kennett 1995) and a "multiple abuse" policy by conservationists (Nikiforuk 1998). Throughout the process, it was heavily criticized by various stakeholders, including environmentalists, the forestry industry (represented by the Alberta Forest Products Association), and the oil and gas industry (represented by the Canadian Association of Petroleum Producers), for failing to create representative protected areas that restricted industrial or other damaging activities (Edmonton Journal 1999). Near the end of the program, it was labeled a "special betrayal of the public interest" (Nikiforuk 1998).



3. Ecological Integrity

AND THE DESIGN OF THE ALBERTA PARKS NETWORK

“... the end of Alberta’s remaining wilderness lands and rivers is now painfully within sight, making us the last generation of Albertans who will have the choice to preserve sufficient examples of our wilderness heritage before development pressures forever foreclose that option.”

(MITCHELL AND PACHAL 1995)

Over the last decade, the recorded mandate of the Alberta parks network has shifted from one of recreation and preservation to one in which preservation is the primary goal.

While the term “ecological integrity” is not included in the current Vision, Mission and Goals of the Alberta Parks Division, its importance is suggested by the new priority of preservation ahead of the other goals (Section 2.3). In addition, the Alberta Government has identified ecological integrity objectives or indicators for a portion of its protected areas (Environment Canada 2006). A recent status report on Canadian protected areas noted that most jurisdictions, including Alberta, “have recognized the importance of maintaining the ecological integrity of their terrestrial protected areas network (in whole or in part) by including specific reference in appropriate legislation or policy” (Environment Canada 2006).

Ecological integrity is defined as the degree to which all ecosystem components and their

interactions are represented and functioning (Quigley et al. 1996), or:

“the capability of an ecological area of supporting and maintaining processes and assemblages of organisms (communities) that have a composition and functional organization comparable to that of similar landscape units of the region.” (Gauthier 1992)

Ecological integrity is a condition where all the parts of an ecosystem are present and in good working order.

Maintaining ecological integrity is difficult when the landscape surrounding a protected area is impacted by human activities to a greater extent than would otherwise be expected within the natural range of variation. Ecological integrity becomes increasingly threatened as human uses intensify both within and surrounding a protected area (Noss 1995).

This chapter provides detail on what is necessary for the maintenance of ecological integrity within a parks network and explores whether these characteristics are addressed in the design and management of the Alberta parks network.

A protected area network should include a combination of:

- i. Representative, unique and threatened habitats
- ii. Areas large enough for wide-ranging wildlife
- iii. Protection of ecological processes and functions
- iv. Biodiversity hot spots
- v. Habitat for species at risk

(Environment Canada 2006)

3.1 Importance of ecological representation

Protected areas preserve assemblages of organisms (communities) by maintaining the habitat and ecosystem processes that species require for their existence (Noss 1992). Since the habitat requirements of most species are not known, a species-by-species approach to habitat conservation does not work (Franklin 1993). The alternative “coarse-filter” approach attempts to meet the habitat requirements of the majority of species by ensuring that all ecosystem types are represented at an appropriate scale within the system of protected areas (Noss 1992, Kavanagh and Iacobelli 1995). The network of parks and protected areas is said to be “representative” when all ecosystem types are represented to an appropriate degree.



Alberta’s Parkland natural region has only 0.8% of it protected –the Rumsey natural area.



Only 1.4% of Alberta's Foothills Natural Region is protected; the rest is open to forestry activity.

Are Alberta parks representative? Our incomplete parks network

The Alberta Government uses the natural regions landscape classification system to describe the province's environmental diversity. This system divides Alberta's six natural regions into 21 sub-regions on the basis of differences in geology, landforms, soils, hydrology, climate, and dominant vegetation patterns (AEP 1994a). Following this division, Alberta's protected areas network should include protected areas within each natural sub-region.

In March of 1995, the Alberta Government launched its Special Places 2000 program. This protected areas policy was intended to complete a network of special places that represented the environmental diversity of both the province's natural regions and natural subregions. Preservation was to be the primary focus of Special Places.

In order to ensure protection of the full diversity of the province, a land classification system (natural history themes) was used to analyze gaps in the

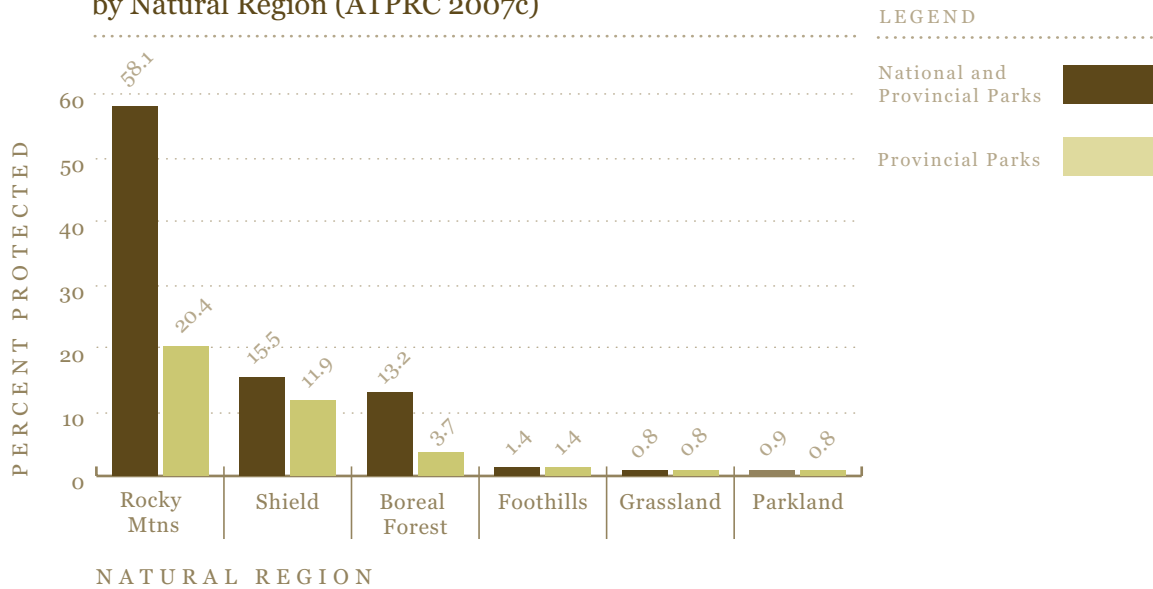
The truth behind the 12%

In the 1987 World Commission on Environment and Development report titled *Our Common Future*, it was suggested "that the total expanse of protected areas needs to be at least tripled if it is to constitute a representative sample of Earth's ecosystem" (Brundtland, G.H. 1987). At that time nearly 4% of the planet was considered protected – thus the 12% concept was born. This report, together with "many international commissions, resolutions and declarations... signaled the urgency to complete the world's networks of protected areas" (WWF 1995). Canada responded

with the signing of *A Statement of Commitment to Complete Canada's Networks of Protected Areas* (November 25, 1992) in which every Province, Territory and the Federal Government were signatories. The commitment included the statement: "The World Commission on Environment and Development has recommended that at least 12% of the planet be set aside in protected areas." However, the World Wildlife Fund Canada states that the figure of 12% was "never a specific target or ceiling" and was always considered "a bare minimum" (WWF 1995). It is not known exactly

how much of each natural subregion in Alberta should be protected in order to conserve its biodiversity. However, in 1999 a Federal Government Senate subcommittee recommended that up to 20% of the Boreal Forest should be set aside as protected areas (Senate Subcommittee on the Boreal Forest 1999). And in 2003 the Canadian Boreal Initiative, which has a membership of forest and petroleum companies as well as conservation groups, agreed that a minimum of 50% of the entire boreal region should be conserved in a network of large interconnected protected areas (CBI 2003).

FIGURE 3-1
Percent of area protected (ATPRC 2007b)
by Natural Region (ATPRC 2007c)



existing protected area system (AEP 1994). Targets were set to indicate the minimum areas for the highest level of protection required to fill the gaps to meet the preservation goal.

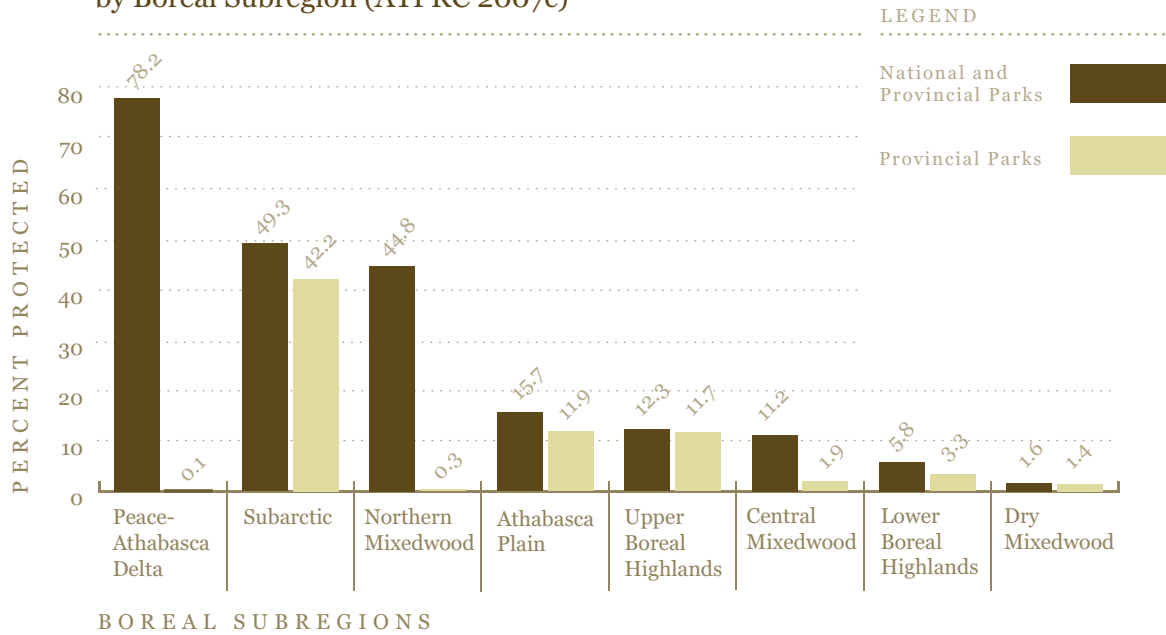
With the conclusion of Special Places 2000, a total of 81 new and 13 expanded sites were added to the Alberta parks network. Now, 12.5% of Alberta is under some form of protection, with 8.3% lying in National Parks and the remaining in Provincial Parks (4.2%). Almost all of the national parks area is in the Rocky Mountain parks and in Wood Buffalo National Park (Figure 3-1). Alberta Parks Division data show that in four of six natural regions (Foothills, Grasslands, Parkland, Boreal forest)

their minimum targets still have not been met (ATPRC 2007).

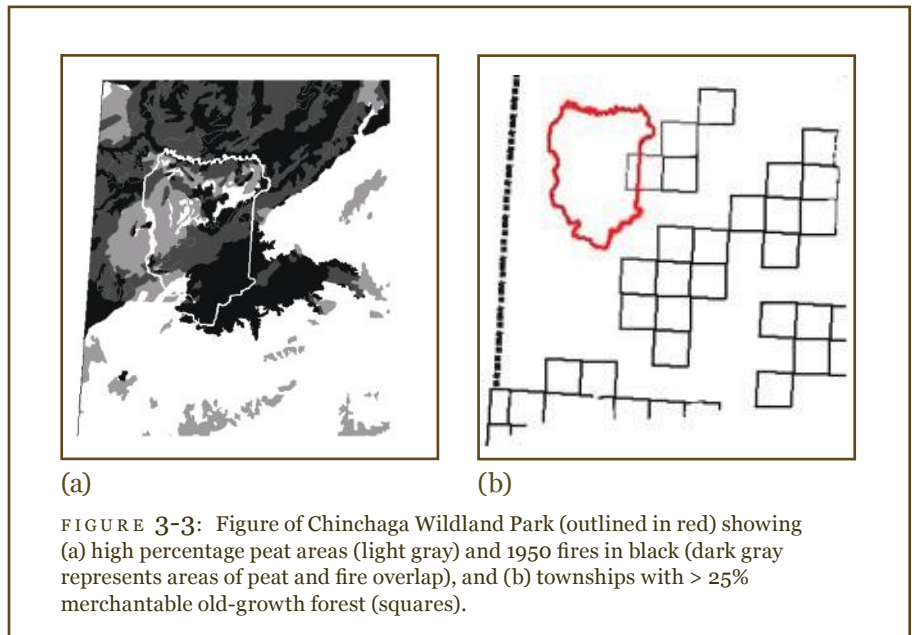
Although 13.2% of the Boreal is considered protected, upon closer evaluation we see that the Lower Boreal Highlands and Dry Mixedwood subregions are not adequately represented in either Federal or Provincial parks (Figure 3-2). It has also been pointed out that very little of the area protected is representative of the merchantable forest that has been allocated to the forest industry (Schneider 2002). For example, the Chinchaga Wildland Provincial Park (Figure 3-3) is composed of over 70% peatlands, with limited merchantable timber included within the park boundaries.

If the Alberta parks network is to be representative of its natural regions and

FIGURE 3-2
 Percent of area protected by National
 and Provincial park agencies (ATPRC 2007b)
 by Boreal Subregion (ATPRC 2007c)

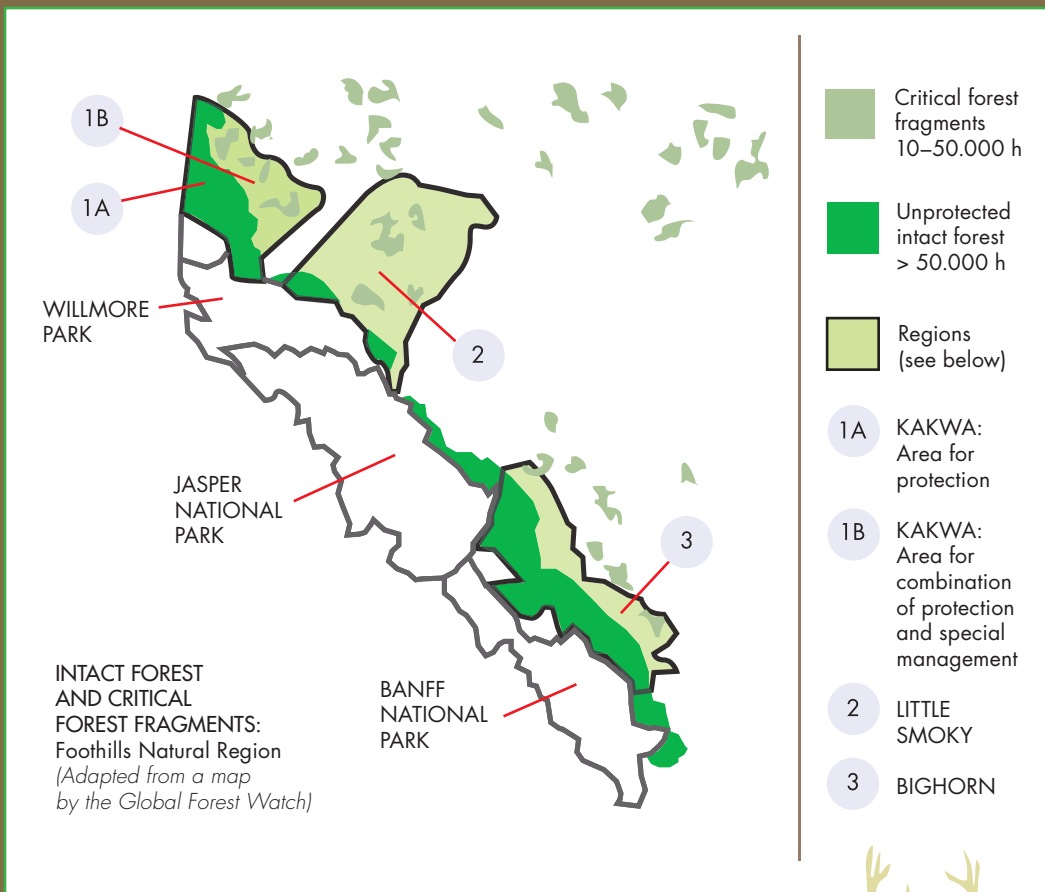


subregions, the network requires completion by the creation of new parks and/or the expansion of existing ones, with priority given to intact sites in the subregions of the Foothills, Grassland, and Parkland Natural Regions, as well as the Lower Boreal Highlands and Dry Mixedwood of the Boreal Forest. In addition, all protected area boundaries should be determined based on natural features rather than industrial interest wherever possible.



Saving the Foothills

Only 1.4% of the Foothills natural region is protected from industrial development, and industrial use is threatening the last of the few remaining areas. Without immediate habitat protection, species such as the endangered woodland caribou, bull trout and threatened grizzly bears face local extinction. The Little Smoky area, for example, is home to two caribou herds, one which is “under immediate risk of extirpation,” and another one which no longer uses its winter range because it has been heavily impacted by industrial use. The Little Smoky area, Kakwa area, and the Bighorn Forests have been identified by scientists and environmental organizations as the last best chances of protecting the Foothills natural region.





Grizzly bears, such as this female, require large protected areas for survival.
Photo by Peter Dettling courtesy of CPAWS Calgary/Banff.

3.2 Importance of protected areas size

Shaffer (1981) states that “the resilience of a protected area to a natural disturbance, such as fire, and to the negative effects from its surroundings varies directly with its size. A small area has a small population of any particular species, making it more vulnerable to a decline in population.”

While the minimum size necessary to effectively maintain the ecological integrity of a protected area is not known, the Canadian Environmental Advisory Council (CEAC 1992) has recommended that a protected area should be at least 4,000 km² to effectively conserve biodiversity and wilderness areas. A computer simulation study using historical fire data from northern Alberta demonstrated that protected areas in the boreal forest should be approximately 5,000 km² to allow for adequate functioning of natural fire disturbances and to protect a wide range of forest age classes. These are essential to the diversity of the boreal ecosystem (Schneider 2000). In their report on designing protected areas for ecological integrity in northern Canada, Wiersma et al. (2005) concluded that:

“Protected areas greater than 3000 km² and located within an intact habitat matrix should be able to maintain their historical complement of species and natural processes. The more fragmented the habitat matrix surrounding protected areas, the larger the protected area itself will have to be. The 3000 km² is a minimum size guideline; to better ensure that ecological integrity is maintained over the long-term, protected areas should be as large as possible.”



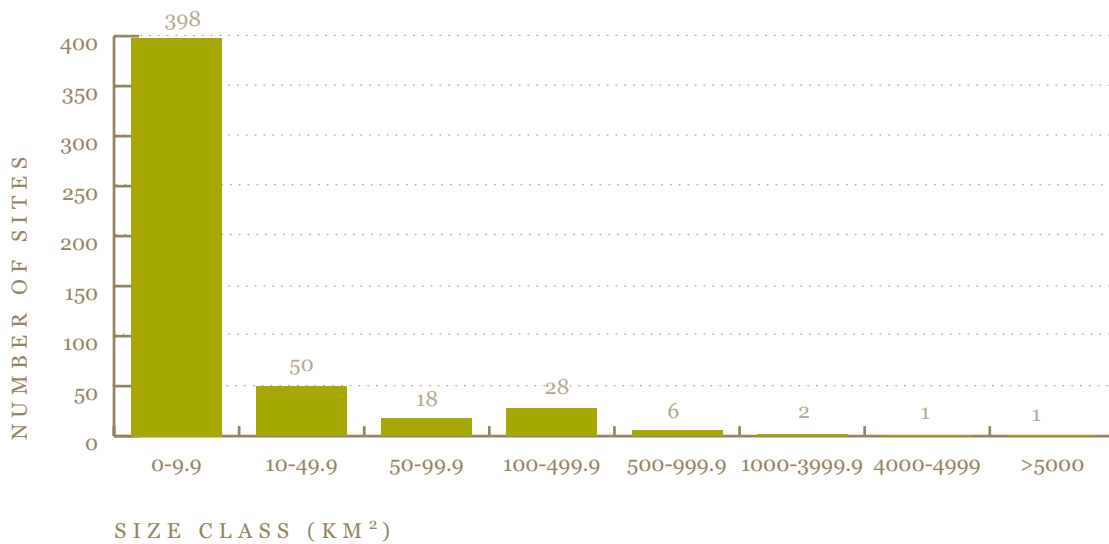
Vehicle/road use flanks the protected area at West Castle Wetlands reserve.

“Large (>3000 km²) protected areas embedded in an unfragmented habitat matrix will allow natural processes (e.g., fire, insect outbreaks, population fluctuations) to take place with minimal management.”

Wiersma et al. (2005) also discussed the value of replication of protected areas, that is, having more than one for each ecoregion:

“The number of protected areas required to represent the diversity of target regions will vary; studies have shown that for mammals, it may be possible to represent all species within an ecoregion using just one or two large protected areas. However, to represent other taxa and features, an increase in the number of protected areas will most likely be necessary.”

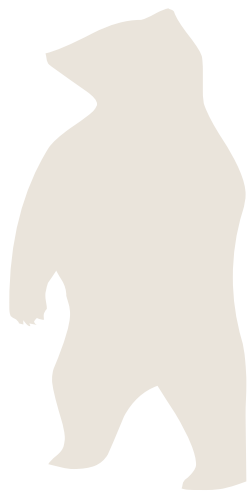
FIGURE 3-4
Number of parks (n=504) in Alberta’s parks and protected areas network in 2007 by size class (ATPRC 2007)



Size of Alberta parks and ecological integrity

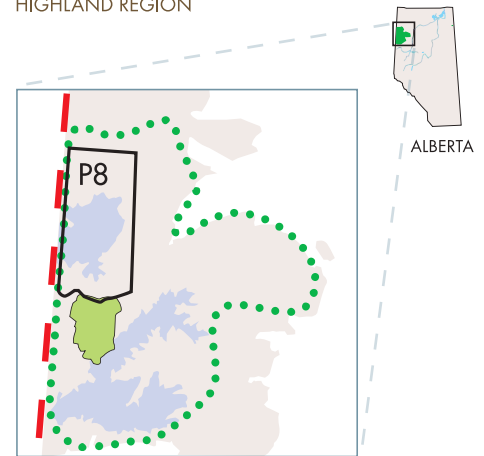
Despite acknowledgement by Alberta Environmental Protection that “Large wilderness areas in the order of 4,000 km² and larger are recommended for complete biodiversity and wilderness protection,” (AEP 1994b) the province has only two sites of that size—Caribou Mountains Wildland Provincial Park (5,908 km²) and Willmore Wilderness Park (4,595 km²) (Figure 3-4). In fact, there are only four parks larger than 1,000 km², the other two being Wildland Provincial Parks: Marguerite River (1962 km²) and Birch Mountains (1445 km²), which are both well under the 3,000 km² benchmark suggested by Wiersma et al. (2005).

Although many of Alberta’s protected areas are not large enough to ensure the maintenance of ecological integrity by themselves (Griffiths et al. 2001), they still have value by serving as habitat for smaller species, links between other sites, and by providing the opportunity to build reserve clusters into larger protected areas (Weirsma et al. 2005) (e.g. Kananaskis Country contains five Provincial Parks, four Wildland Provincial Parks, one Ecological Reserve, and several Provincial Recreation Areas). They may also complement some of the conservation objectives of the larger areas or protect rare features or plants.



Expanded Park Opportunity

DETAIL OF LOWER BOREAL
HIGHLAND REGION



KEY TO MAP REGIONS

- | | |
|-------------------------------------|---------------------------------|
| Upper Boreal Highlands | Chinchaga Wildland Park |
| Lower Boreal Highlands | Area P8: Forestry is prohibited |
| Area of interest for park expansion | Alberta NW border |

Opportunity for creating a large park in the Lower Boreal Highland region

Chinchaga Wildland Provincial Park (currently 803 km²) is surrounded by a wonderful natural forest area. The area is home to woodland caribou, grizzly bears, trumpeter swans, wolverine and many other wildlife species. This is arguably the best location in the province for a new caribou protected area because of minimal conflict with already prohibited forestry activities in P8. Enlarging Chinchaga Wildland Provincial Park is one of the best opportunities in Alberta for a world-class protected area of a size that will maintain wildlife and natural processes such as fire and predator-prey relationships forever, an increasingly rare condition on our planet.

3.3 Importance of connectivity and buffers

The importance and functionality of the connectivity between protected areas has been reviewed by Noss (1995): the value of connected reserves is increased because animals and plants (through their seeds etc.) are able to move among them, making a larger area available. As a result the total area protected can be less if the areas are connected.

Connectivity can be achieved not just through a corridor, but also through a landscape managed in such a way that organisms can still effectively move through

it.

A narrow corridor is not as useful as a wide corridor because the edge effect can increase mortality for dispersing organisms that are subject to predation.

The size of the corridor needs to take into account the habits of the species that will be using it. For example a narrow fence row corridor may be suitable for mice, but a much wider corridor is necessary for wolves.

Maintaining existing corridors is better than trying to replace them in the future.

Protected areas need to be close together to be considered connected in landscapes where natural corridors have been destroyed and are difficult to restore.

The ability to maintain ecological integrity in a park is enhanced by surrounding it with a buffer zone where multiple uses are permitted but mitigated with legislated limits for disturbance (Noss 1995). Large protected areas, or even smaller ones with designated buffer zones around their boundaries and between neighbouring protected areas (buffer zone functioning for connectivity) are particularly important for the conservation of wide-ranging species such as grizzly bears, wolverine, and wolves (Eagles 1993).



Oil well near Lesser Slave Lake Provincial Park.



Logging up to the boundary of Lakeland Provincial Park.



Logging surrounds William A. Switzer Provincial Park.

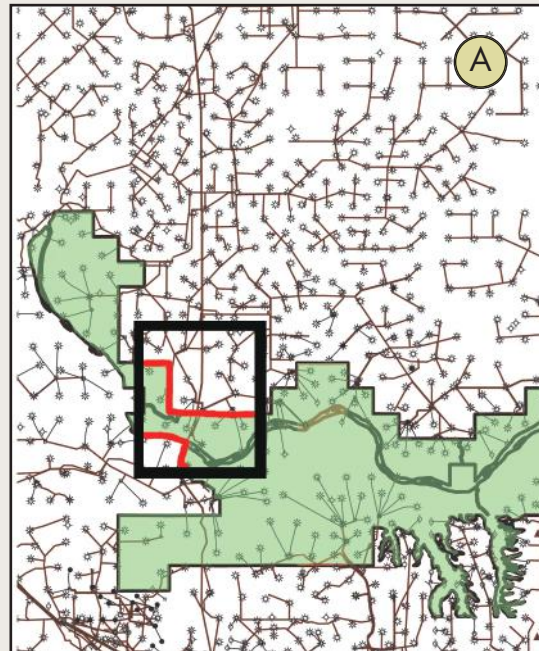
"Land use around the park is often critical to the survival of wildlife in the park...When a park becomes a green island in a sea of hostile habitat, as in cities, some species cannot cope."
(Eagles 1993)

Lack of connectivity and islandization

Many of Alberta's protected areas lack corridors to nearby protected areas that would facilitate the easy movement of species (Griffiths et al. 2001). Fragmentation from urban expansion, agricultural, forestry, and oil and gas activities adjacent to park boundaries are turning Alberta's protected areas into ecological islands. These incompatible land uses have been ranked as the most serious threat to parks and protected areas by most park jurisdictions across Canada (Environment Canada 2006).

Aerial photos and satellite images are an easy, and often the best way, of assessing the degree of fragmentation and ecological island effect from the disturbances surrounding a park or protected area. Listed here are some examples of parks becoming islands due to failure by the Alberta government to properly manage the use of lands adjacent to protected areas:

- **Dinosaur Provincial Park** (located in the Grassland Natural Region, Figure 3-5).



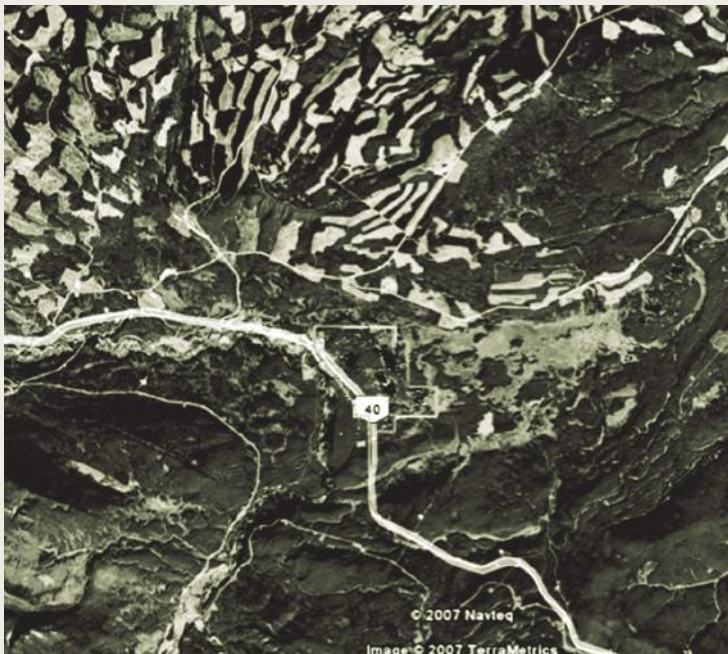
DINOSAUR PROVINCIAL PARK

FIGURE 3-5: Map (a) of Dinosaur Provincial Park and surrounding area, demonstrates how oil and gas activities (roads and wells) have fragmented the area surrounding the park. Map (b) is an aerial photo of a section of map (a) and shows fragmentation from both agriculture and oil and gas activities. (AB SRD aerial photo).

- **Pierre Gray Lakes Provincial Park**

(located in the Foothills Natural Region)

There is still an opportunity to expand the boundaries east into the Little Smoky and west to Willmore Wilderness Park to prevent it from becoming an island (Figure 3-6).



PIERRE GRAY LAKES PROVINCIAL PARK

FIGURE 3-6: Forestry clearcuts are evident in this aerial photo of an area in the Pierre Gray Lakes Provincial Park (Google Earth 2007).

- **Young's Point Provincial Park**

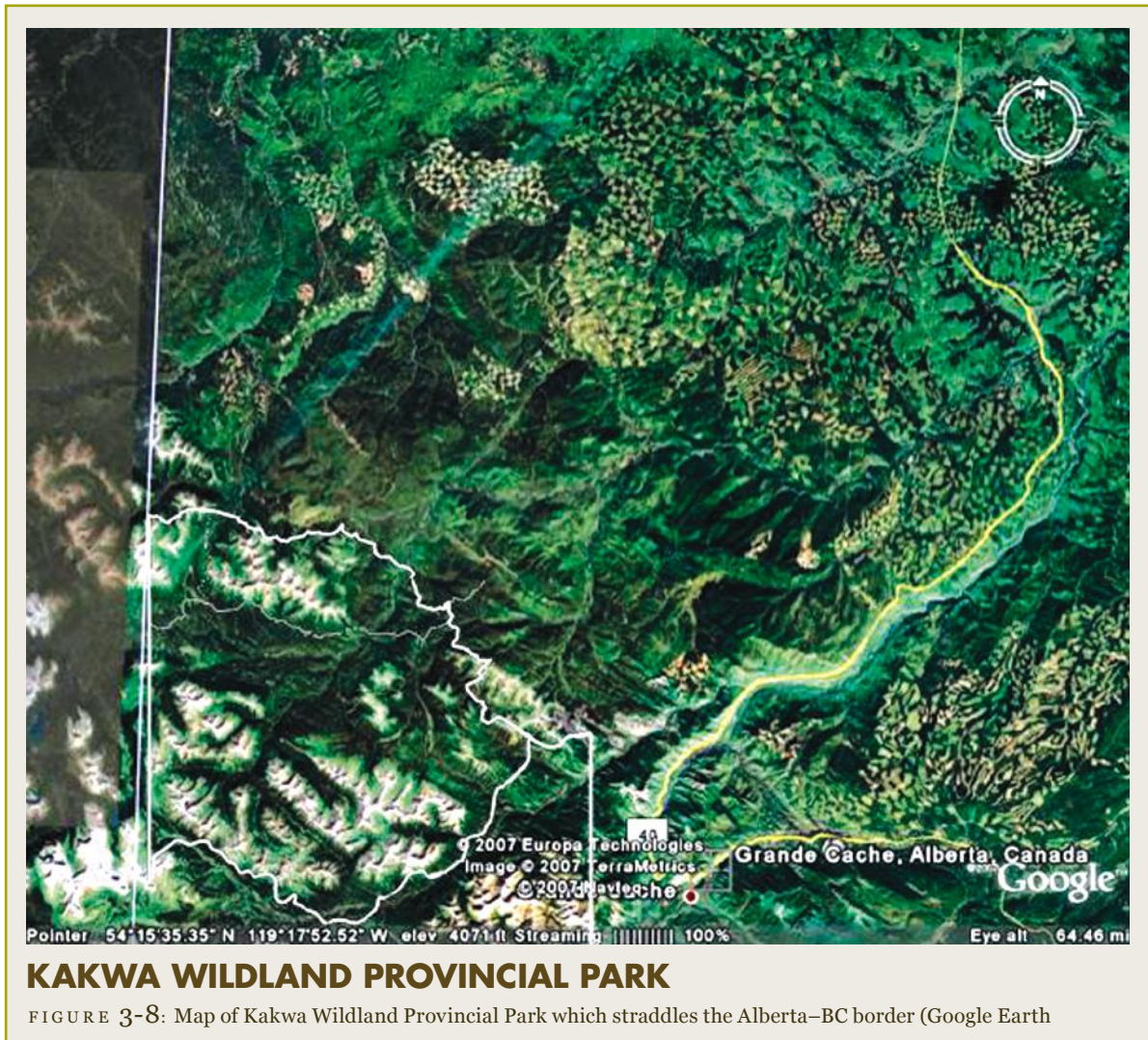
(located in the Boreal Natural Region)

There is potential to work with land managers in the region (private, First Nations and industry) to protect the boundaries of this park (Figure 3-7).



YOUNG'S POINT PROVINCIAL PARK

FIGURE 3-7: Aerial photo of Young's Point Provincial Park showing fragmentation surrounding the park due to agriculture, forestry and oil and gas activities (Google Earth 2007).



Preventing islandization

Opportunities to prevent an island effect include creating new parks adjacent to existing ones. For example, Kakwa Wildland Provincial Park is now an inter-provincial park connected to Willmore Wilderness Park and the Kakwa Provincial Park in British Columbia. Both Kakwa Parks, together with Willmore, are now being managed cooperatively by the Alberta and British Columbia governments. Expanding the boundaries of the Kakwa in Alberta would be an excellent way to represent the Foothills in the Alberta parks network while, at the same time,

avoiding the possibility of islandization (Figure 3-8).

Corridors can be either protected areas or areas of special management that permit multiple species to travel through them. These passageways are an effective way of preventing the islandization of secure habitat. The importance of corridors has been recognized by the Yellowstone-to-Yukon Conservation Initiative (Y2Y). Environmental organizations have been pursuing the legislated protection for the Castle region of southwest Alberta for



Y2Y CORRIDOR INITIATIVE: SOUTHERN PART

FIGURE 3-9: Southern part of Y2Y corridor initiative: protection of the crown land in the Castle Region of Southwest Alberta would connect Waterton National Park with protected areas to the north, helping to enhance connectivity in the Y2Y corridor (Map courtesy of the Miistakis Institute for the Rockies 2002).

many years (Figure 3-9). Despite recommendations from the Natural Resources Conservation Board (NRCB 1993) to provide legislated protection for the Castle, the Alberta government thus far largely failed to implement meaningful measures to secure wildlife connectivity through the unprotected portions of the Alberta’s Southern East Slopes. A protected area in the Castle, combined with municipal incentives for wildlife connectivity through the Crownsnest Pass region, and wildlife friendly management of the Upper Old Man Watershed, would assist in securing vital wildlife corridors between Waterton Lakes National Park and the protected areas complex of Banff-Jasper-Kananaskis.



MIQUELON LAKE PROVINCIAL PARK

FIGURE 3-10: Aerial photo of Miquelon Lake Provincial Park showing intact regions north and northwest that could be used as corridors to Ministik Bird Sanctuary.

Corridor opportunity in the Boreal Dry mixedwood south and west of Miquelon Lake Provincial Park has been fragmented by agriculture, but intact regions to the north, northwest and east remain, connecting it to the Ministik Bird Sanctuary (Figure 3-10).

In regards to buffers, the Alberta Legislative Assembly passed the Wilderness Areas, Ecological Reserves, Natural Areas, and Heritage Rangelands Amendment Act (Bill 18) in March 2006. Bill 18 removed a provision within legislation that would allow for a

designated buffer zone around Wilderness Areas. Although this provision was never applied, its removal means the Alberta Parks Division now has no legislative tool in place to mitigate or restrict activities occurring on adjacent lands that are affecting the ecological integrity of Wilderness Areas (AH 2006). The Alberta parks network has never had a broad legislative tool for protecting buffer zones for all protected areas.

The Alberta Parks Division has some policy tools for providing management guidelines

Working together for CORRIDORS

The Beaver Hills Initiative

The Beaver Hills Initiative is a cooperative partnership between counties, municipalities, the provincial government, private landowners and the non-profit sector. Their mission is to work together through coordinated and collaborative action, to conserve the ecological integrity of the area known as the Beaverhills/Cooking Lake Moraine. The boundary of the Moraine crosses five municipalities and includes agricultural lands between Elk Island National Park and Miquelon Lake Provincial Park. By managing the area as a network of connected parks and protected areas, the long term goal is to ensure current protected areas are not reduced to island landscapes and that the ecosystems and biodiversity of the protected areas area sustained.

Parks and Protected Areas within the Beaver Hills

managed by other agencies

Elk Island National Park (Parks Canada)
 Strathcona Wilderness Center
 (County of Strathcona)
 Miquelon Wildland (Ducks Unlimited)
 Ministik Bird Sanctuary
 (Public Lands - Alberta SRD)

Parks and Protected Areas within the Beaver Hills

managed by the Alberta Parks Division

Cooking Lake-Blackfoot Grazing,
 Wildlife and Provincial Recreation Area
 Beaverhill Lake Heritage Rangeland
 Natural Area



FIGURE 3-11: Satellite image of the Beaver Hills region (outlined in black), with parks and protected areas outlined in white. Checkered patterns outside of protected areas show fragmentation due to agriculture . (Photo courtesy of the Beaver Hills Initiative)

Beaverhill Natural Area
 Antler Lake Island Natural Area
 North Cooking Lake Natural Area
 Hastings Lake Islands Natural Area
 Edgar T. Jones Natural Area
 Parkland Natural Area
 Miquelon Lake Provincial Park

Sites identified as ecologically significant but not designated as a protected area yet within the Beaver Hills:

Wanisan Lake Natural Area
 (Protective Notation - PNT)
 Hastings Lake Natural Area (PNT)

and restrictions to industrial use outside of the parks and protected areas network with Protective Notations (PNT) or Consultative Notations (CNT), a type of land reservation in the Alberta Government Land Status Automated System. These notations “provide for varying degrees of protection, from complete protection to permitting agricultural, industrial or other uses with land use conditions. Restrictive notations can protect soils, wildlife and/or landscape features from incompatible land use” (ASRD 2007a). These notations provide an opportunity for the Alberta Parks Division to be consulted on land uses in the area; however, as these notations fall under the Public Lands Act, notations can only be applied to provincial crown land and require final approval from the Department of Sustainable Resource Development.

The best example of a buffer zone on provincial crown land is found in the recently approved Sundance Provincial Park’s Management Plan (September 2006). The Alberta Parks Division utilizes a 500-meter PNT surrounding Sundance Provincial Park as a buffer for the park boundaries. The purpose of this zone is “to protect the ecological integrity of the special place without unduly restricting industrial activity” (ACD 2006b). Within the management plan, this PNT is described as a Special Management Zone and contains guidelines for permitted but restricted industrial use. The use of a PNT as a buffer zone or special management zone could be applied to existing parks or protected areas, as well as any new protected areas, as a tool for ensuring that our parks do not become ecological islands.

Another example of a buffer policy in Alberta is the one implemented for Cypress Hills Provincial Inter-provincial Park. The County of Cypress, together with municipal, public, and Alberta government representatives, created

the Cypress Hills Fringe Area Structure Plan (2003), which is intended to maintain a buffer zone around Cypress Hills Park as agricultural land. The goal of this 278 km² buffer area is to “provide an opportunity for development in the Cypress Fringe plan area in a manner that respects the values that created Cypress Hills Park and respects the heritage and ecological landscape of the area” (CPMP 2003). The need for a buffer was recognized because of increasing demands for development close to the park’s boundary. These representatives recognized that developments, both urban and industrial, would not only alter the aesthetic qualities of the area, but also damage the ecological integrity of the park.

Environment Canada (2006) states that the existence of regulatory-based buffers or corridors are a measure of the government’s ability or will to achieve connectivity of protected areas. To protect the ecological integrity of its protected areas network, the Alberta Government needs to identify functional corridors between parks and manage them to ensure the appropriate connectivity is achieved. In addition, it is critical that the government ensures that policy and planning initiatives such as the Integrated Land Management Program and the Land Use Framework take account of requirements for maintaining the ecological integrity of protected areas and establishing new ones.

3.4 Importance of an ecological management approach

Ecosystem-based management

Ecosystem-based management (EBM) has been accepted as the main approach to land management in protected areas and the greater landscape both in Canada and throughout North America (Quinn 2002). EBM has been defined by Grumbine (1994) as:

“Ecosystem management integrates scientific knowledge of ecological relationships within a complex sociopolitical and values framework toward the general goal of protecting native ecosystem integrity over the long term”

Key themes of EBM that are particularly important for Protected Areas Management (Grumbine 1994):

- Protecting ecological integrity
- Dealing with uncertainty through adaptive management
- Filling knowledge gaps using both scientific and social research
- Requiring clear and measurable conservation goals
- Anticipating changes in values, politics and biological knowledge.

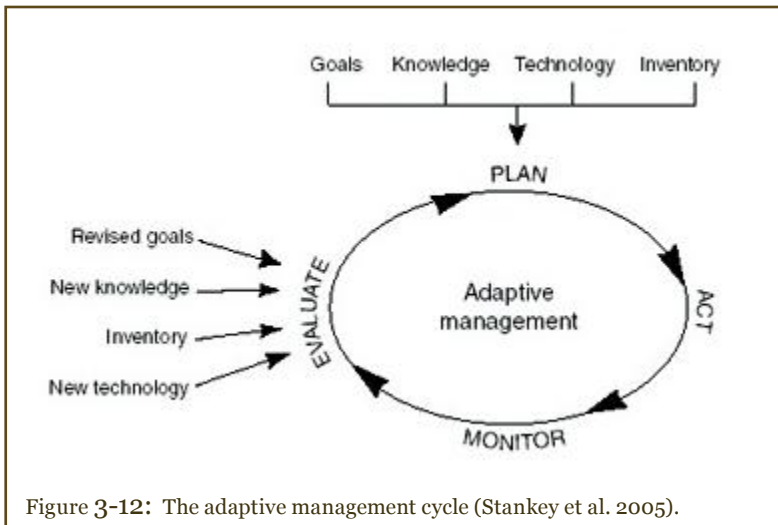


Figure 3-12: The adaptive management cycle (Stankey et al. 2005).

Adaptive management

EBM gives a framework within which conservation goals can be set, knowledge is gathered and assessed, and management proceeds to achieve these goals. Increasingly, EBM uses adaptive management, a process whereby managers continually monitor the results of their decisions and actions and seek ways to improve them (Walters 1986). Adaptive management includes a feedback cycle and adjustment of management practices (Borrman et al. 1994) and should include continuous collaboration among scientists, resource managers, industry, and public stakeholders (den Otter 1999). During each cycle, the goals of the protected areas should be reviewed, together with any new knowledge of the area (e.g. status of a threatened species) or technology (Figure 3-12). This effective style of management stresses the importance of a Parks Division having the ability, tools, and authority to collect data and to be flexible in management practices.

Indicators

There is a great need to identify and validate measurable attributes (indicators) of ecological integrity in many kinds of ecosystems, so that alternative reserve designs or management plans can be compared in terms of their potential integrity, and the integrity of established reserves and intervening lands can be monitored over time (Noss 1995).

Noss (1995) provided this advice on the selection of indicators:

The most important criteria in narrowing the field to a workable set of indicators are (1) a validated relationship of the indicator to the phenomenon (ecological integrity) of interest; (2) convenience and cost-effectiveness of the indicator for repeated measurement; (3) ability of the indicator to provide an early warning of change or trouble ahead; and (4) ability of an indicator to distinguish changes caused by human activity from “natural” changes.

Noss (1995) provided a long list of measurable indicators at the landscape, community, and species levels; for example, roads at the landscape level, exotic species at the community level, and endangered or wide-ranging species at the species level. He also recommended that management thresholds (e.g. road density) be considered in monitoring.

Management approach in Alberta

The terms “adaptive management” and “ecosystem-based management” can be found in some park management plans. Some indicators and monitoring are described in the Bob Creek Wildland Provincial Park and Black Creek Heritage Rangeland draft plans, and in the Sundance Provincial Park plan. However, these terms are not explicitly defined, nor are the critical components of research and monitoring that are central to this approach outlined. The Evan Thomas Provincial Park (ACD 2004c), Peter Lougheed and Spray Valley Provincial Park Management Plan (ACD 2006b) and Bow Valley Management plans (ACD 2002a) state that more needs to be done in terms of establishing more precise monitoring targets or indicator species by supporting ongoing research activities. It is encouraging to see the use of these terms, but the extent of implementation remains to be seen.

The Canadian Protected Areas Status Report 2000-2005 found that most parks jurisdictions still do not have “the necessary measures to manage or monitor ecological integrity within their network” (Environment Canada 2006). The Alberta Parks Division currently has not identified any ecological indicators, nor does it have an active monitoring program (Section 5). Indeed, the management of William A. Switzer Provincial Park has been described as passive management and management for Willmore Wilderness Park is considered reactive (den Otter 1999).

Barriers to adaptive management in Alberta’s foothill parks (William A. Switzer Provincial Park and Willmore Wilderness Park) have been attributed to a lack of agency vision, insufficient policy structure, political power, and bureaucratic complexity, preventing a free flow of information (den Otter 1999). The Government of Alberta should work to implement ecosystem-based management to ensure the ecological integrity of the Alberta parks network. This would include increasing capacity for the Alberta Parks Division to complete management plans and perform the necessary monitoring for adaptive management (Section 5).



4. Legislative Challenges

IN MAINTAINING & RESTORING ECOLOGICAL INTEGRITY WITHIN THE EXISTING ALBERTA PARKS NETWORK

“...we must realize that the vast majority of environmental management is really people management; this is the largest issue to be tackled.” (EAGLES 1993)

David Boyd, Senior Associate of the POLIS Project on Ecological Governance, reviewed Canada’s national and provincial protected areas legislation and its efficacy in incorporating the fundamental aspects of protected areas as part of a nation-wide project (Boyd 2002). In his Report Card assessing each province’s parks legislation, Dr. Boyd gave Alberta an F-. This tied the province with Ontario for the lowest grade in the country. In 2006, the government of Ontario approved a new parks act, leaving Alberta with the poorest protected areas legislation in Canada.

We observe that Alberta’s legislation:

- Fails to clearly make the preservation of ecological integrity the top priority.
- Does not prohibit industrial resource activity in protected areas, except in wilderness areas and Willmore Wilderness Park.
- Allows the Cabinet to eliminate or reduce the size of a park without any public notice or process, with the exception that public notice is required to eliminate an ecological reserve.
- Does not commit to protect areas that are representative of the province’s ecoregions (i.e. natural regions).
- Fails to contain legal means for regional management (e.g. buffer zones or corridors).
- Does not commit to any State of the Park reporting.

4.1 Categories of protected areas

The World Conservation Union (IUCN) has led the international discussion on parks and protected areas. The IUCN recognized that “(v)arious types of categories of protected areas are needed to deal with combinations of benefits to be sought from wild species and ecosystems,” each of which “are managed to meet different objectives” (IUCN 1983). The primary goals of protected areas include preservation of genetic diversity, maintenance of essential ecological processes and ensuring sustainable use of species and ecosystems (IUCN 1983). Reflecting these goals, the IUCN proposed the following categories of protected areas, each with different management priorities (IUCN 2003; see Appendix A for more information):

CATEGORY Ia: Strict nature reserve area: managed mainly for science.

CATEGORY Ib: Wilderness area: protected area managed mainly for wilderness protection.

CATEGORY II: National park: protected area managed mainly for ecosystem protection and recreation.

CATEGORY III: Natural monument: protected area managed mainly for conservation of specific natural features.

CATEGORY IV: Habitat/Species Management Area: protected area managed mainly for conservation through management intervention.

CATEGORY V: Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation or recreation.

CATEGORY VI: Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural resources.

The IUCN (1983) acknowledges that a park can have more than one priority as its mandate, even to the extent of having all management priorities for an area. However, one management objective must not comprise another objective, or impair the integrity of the ecosystem.

Categories within the Alberta parks network

In Alberta, eight classifications provide varying degrees of protection and a range of opportunities for outdoor recreation as summarized in Table 4.1. Parks and protected areas are managed under three pieces of legislation: the Provincial Parks Act, the Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act, and the Willmore Wilderness Park Act. Based on our comparison of Alberta’s park classifications with the IUCN categories, only Wilderness Areas (Category Ib), and the Willmore Wilderness Park (Category Ib) are protected as defined by the IUCN standards; Wildland Provincial Parks would also qualify as Category Ib sites if grazing were not permitted. Ecological Reserves, Provincial Parks, and Heritage Rangelands seem to fall under Category VI, and Natural Areas and Provincial Recreation Areas do not receive sufficient protection to belong to any of the IUCN categories.

Swinnerton (1993) noted that park “designation is a critical first step towards the achievement of a park system.” However, it is clear from the permitted uses listed in Table 4-1 that designation does not necessarily mean protection. Swinnerton (1993) added that designation can “to a large extent (be) illusory unless individual parks meet their intended goals and objectives.”

TABLE 4 - 1 : Site Spectrum of Alberta's parks and protected areas (as interpreted by D. Poulton from legislation).

	WILDERNESS AREA	ECOLOGICAL RESERVE	WILLMORE WILDERNESS PARK	PROVINCIAL PARKS		NATURAL AREA	RECREATION AREAS
				WILDLAND P. P.	P.P.'S GENERALLY		
STATED PURPOSE	None	"...to preserve public lands for ecological purposes."	"benefit, education, and enjoyment" of the people of Alberta; to "be maintained for the enjoyment of future generations."	None, except that set out for provincial parks generally	"developed and maintained: [1] for the conservation and management of the flora and fauna [2] for the preservation of a specified area and objects therein that are of geological, cultural, ecological, and other scientific interest [3] to facilitate their use and enjoyment for outdoor recreation."	"in order to: (a) protect sensitive or scenic publicland from disturbance, and (b) ensure the availability of public land in anatural state for use by the public for recreation, education, and any other purpose..."	"developed and maintained to facilitate the use and enjoyment for outdoor recreation."
OIL AND GAS DEVELOPMENT	✗	Pre-existing leases only	✗	◆	May be permitted	✓	✓
PIPELINES	✗	◆	✗	◆	May be permitted	✓	✓
MINING/ QUARRYING	✗	✗	✗	◆	May be permitted	✓	✓
GRAVEL EXTRACTION	✗	✗	✗	◆	May be permitted	✓	✓
TELECOM TOWERS	✗	✗	✗	◆	May be permitted	✓	✓
CULTIVATION	✗	✗	✗	◆	May be permitted	✓	✓
COMMERCIAL LOGGING	✗	✗	✗	pre-existing rights only	✗	✓	✓
WILDFIRE SUPPRESSION OR PRE-SUPPRESSION	✓m	✓m	By regulation	✓	✓	✓	✓
INSECT & DISEASE CONTROL	✓m Minister may authorize actions for "the prevention of damage to natural resources or property"	✓m Minister may authorize actions for "the prevention of damage to natural resources or property"	By regulation and crown grant	✓	✓	✓	✓
NEW ROADS	✓wc (never used)	✓wc (never used)	silent	✗	✓	✓	✓
MOTORIZED OFF-ROAD	✗	➔	silent	➔	➔	✓	✓
COMMERCIAL TOURISM FACILITIES	✓wc (never used)	✓wc	Outfitters facilities only	◆	✓wc	✓	✓

◆ pre-existing leases only; any facility construction requires consent of minister

✓ permitted
✗ prohibited

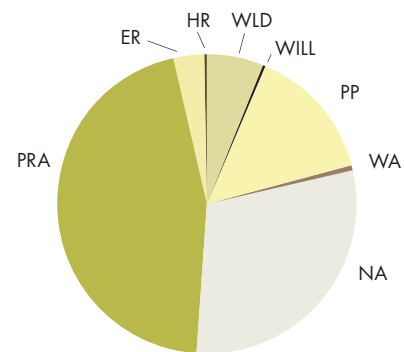
✓m minister may authorize with consent of minister
✓wc
➔ designated routes only

◆ pre-existing right of ways only; any facility construction requires consent of minister

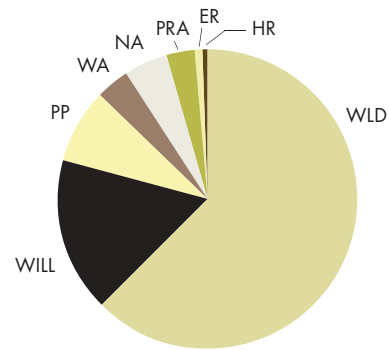
The number and total area of Alberta's 504 parks and protected area sites are not distributed equally among the eight different classifications (Figure 4-1). The 378 Provincial Recreation Areas and Natural Areas (75.0% of the total) comprise only 7.8% of the area. By contrast, the 36 sites (7.1%) with the highest degree of protection, namely Wildland Provincial Parks, Wilderness Areas, and Willmore Wilderness Park, account for 83.0% of the area.

Within legislation, the stated purpose of Provincial Recreation Areas is solely for outdoor recreation. There is no mention of preservation of ecological integrity and, as such, these lands are afforded no legal protection. Furthermore, their average size of 3.6 km² (1.6 km² when Lakeland is excluded, ATPRC 2007b) is much too small for them to fulfill any serious conservation goal. Therefore, while acknowledging that they perform an important role in Albertans' enjoyment of the natural environment, smaller Provincial Recreation Areas should not be listed as contributing to Alberta's preservation goals within the Alberta parks network. Instead, it would be more appropriate to recognize these areas publicly as Provincial Campgrounds. The larger Recreation Areas, such as Lakeland (443.2 km²) and Cooking Lake-Blackfoot (97.0 km²), should be upgraded to Provincial Parks. Furthermore, Natural Areas, which are set aside to preserve land in a "natural state," should be afforded greater protection than they presently have.

FIGURE 4 - 1 : Alberta's parks & protected areas: site designation (number of sites and size of area protected, ATPRC 2007b)



NUMBER OF SITES



SIZE (km²) OF SITES

Key to pie charts

	NUMBER OF SITES	SIZE (km ²) PROTECTED
WLD Wildland Provincial Park	32	17,294
WILL Willmore Wilderness Park	1	4,596
PP Provincial Park	73	2,173
WA Wilderness Area	3	1,010
NA Natural Area	149	1,323
PRA Provincial Recreation Area	229	815
ER Ecological Reserve	16	294
HR Heritage Rangeland	1	78



PRIOR TO APPROVAL...

Think about the parks!

When new industrial projects are approved around parks and protected areas, the principle of “conservation first” should be applied. This would ensure that decisions place the conservation of areas (e.g. wildlife and habitat) and watersheds ahead of other values on the landscape (e.g. industrial, resource extraction, urban developments). When a proposal for a new or expanded industrial project is being considered, the assessment should consider whether or not “adequate lands have been set aside for conservation” in the surrounding areas and the natural region (EC 2006).

4.2 Multi-agency environmental management

In their study of the success of ecosystem-based management when several agencies are in control, Bissix and Rees (2001) concluded that: “the central resource management agency may hold notional legislative authority, but lack the necessary fiscal and management resources to autonomously implement an ecosystem management plan.” In those cases long-term outcomes remain uncertain.

While the Alberta Parks Division has primary jurisdiction over all classification of Alberta parks and protected areas except Natural Areas and Heritage Rangelands, it shares many land management decisions with four other government departments. The roles played by these other departments, both within the parks and along their boundaries, are summarized in Table 4.2.

The ecological integrity of a park is significantly influenced by both the surrounding land uses and by the industry, landowners and government that regulates land use. The Alberta government should take steps to ensure that the Alberta Parks Division has a prominent role in land use planning around Alberta’s parks and protected areas. A progressive first step in achieving this would be to ensure that the division plays an important role in policy and planning initiatives, such as the Integrated Land Management Program and the Land Use Framework. The Parks Division should also be an official partner in SREM (Sustainable Resource and Environmental Management). SREM is an inter-departmental commitment between the Departments of Environment, Energy and SRD to work together and take “joint responsibility to achieve agreed-upon natural resource and environmental outcomes” (SREM 2007).

NAME OF DEPT	MANDATE	ROLE WITHIN PARKS	ROLE ALONG PARK BOUNDARIES
ENERGY	"promotes development of Alberta's energy and mineral resources, recommends and implements energy and mineral related policy, grants rights for exploration and development to industry." (AE 2007)	Manages oil, gas and coal bed methane exploration within as many as 99% of parks, allows seismic and road activity	Manages and permits development adjacent to park boundaries and between all parks within Alberta
ENVIRONMENT	"manages the use of Alberta's diverse landscapes to sustain a healthy environment, a prosperous economy and strong communities... committed to protecting the province's air, land and water." {AE 2007}	Responsible for water management of lakes, rivers within parks	Establishes policies, legislation, guidelines, and standards for environmental management and protection....Allocates resources through approvals, dispositions, and licenses, and enforces those decisions.
SUSTAINABLE RESOURCE DEVELOPMENT	"...encourages balanced and responsible use of Alberta's natural resources through the application of leading practices management, sciences and stewardship." (ASRD 2007b)	Permits and assists to regulate hunting, trapping and commercial fishing in parks. Assists in management of Heritage Rangelands and Natural Areas. Manages wildfire suppression and mountain pine beetle management in parks.	Allocates and manages forestry permits for logging and access rights for oil/gas adjacent to park boundaries. Fish and wildlife management, wildfire suppression and mountain pine beetle management adjacent to park boundaries.
INFRASTRUCTURE AND TRANSPORTATION	"...contributes to Alberta's economic prosperity and quality of life through the provision and support of effective and safe transportation, public buildings, and environmentally safe water and wastewater infrastructure." (AIT 2007)	"...Plans, designs, constructs, rehabilitates, operates and maintains provincial highways and other government owned and supported infrastructure" (such as roads within parks) Assists with staff accommodations and other infrastructure within parks such as water infrastructure (ie. sewage and drinking water)	Manages and builds vehicle access on parks from provincial highways to rural roads.

TABLE 4-2: Role of Alberta Government agencies in land management and their influence both within parks and along park boundaries.



Oil and gas surface access can leave irreversible damage (near Lakeland Provincial Park boundary).

Activities that are not compatible with environmental protection do occur.

(TIMONEY AND LEE 2001)

4.3 Permitted uses

As specified in the mandate of the Alberta Parks Division (Section 2.2), preservation is the primary goal of the Alberta parks network. Heritage appreciation, outdoor recreation, and tourism are secondary goals. However, these goals have presented a number of challenges within the system, as “experience has shown that these objectives are not always mutually compatible” (Swinerton 1993).

The mandate of the Alberta parks network does not state that parks are intended for other uses, but activities that are not compatible with environmental protection do occur (Timoney and Lee 2001). In many of Alberta’s protected areas, these include oil and gas development, cattle grazing, and motorized recreation. Other permitted uses not expanded on in this report include: gravel extraction, commercial fishing, and unmanaged random camping. By contrast, none of these activities are permitted within Canada’s National Parks.

4.3.1 Oil and gas

CLEAR LEGAL PROHIBITIONS FOR OIL AND GAS IN PARKS

Clearly prohibited in only 0.8% of parks and protected area sites (20.3% of parks landbase).

Oil and gas extraction is prohibited only in Willmore Wilderness Park and 3 Wilderness Areas (AE 2003, AG and AE 1997, AG 2000).

SUBSURFACE RIGHTS

Permitted in 100% of sites.

Subsurface rights (a lease over the minerals underneath the surface) under all parks are open for purchase. In some cases legislated restrictions on surface rights prevents access to subsurface resources (such as in the Wilderness Areas) and thus deters companies from purchasing subsurface rights.

NEW SURFACE RIGHTS

Permitted in 75% [J.5] of sites.

(7.9% of parks landbase).

Surface rights permit access to the land overtop of the subsurface lease (for roads, pipelines and wells etc.) and are required in most operations, except when directional drilling can be used. New surface rights are permitted to new subsurface purchases in Natural Areas and the Provincial Recreation Areas. Some sites contain freehold leases or privately owned subsurface rights, while others established during Special Places 2000 have grandfathered surface rights. Owners of subsurface rights are permitted surface rights to access their resources.

GRANDFATHERED RIGHTS

(honoring existing surface and subsurface leases)

Occur in 99.2% of sites
(79.7% of parks landbase).

Companies are allowed to renew both surface and subsurface rights and apply for new activities (pipelines, roads etc.) as extensions to existing commitments. These applications are “subject to a review through the current application and approval process” (AE 2003).

In all cases, it is up to park managers and approved management

plans to determine under what conditions surface access rights and associated plans (roads, pipelines etc.) will be approved. While operating within protected areas, companies must work cooperatively with park managers and are encouraged to do directional drilling from outside the protected area when possible (ACD 2002a, ACD 2003a, ACD 2006b, AG 2000).

ALLOWED ADJACENT TO PARK BOUNDARIES WITHOUT HAVING TO CONSULT WITH PARKS OR APPLY BEST PRACTICES

Permitted adjacent to 100% of sites.

With the exception of the Special Management Zone (PNT) around Sundance Provincial Park (Section 3.3).

4.3.2 Trapping

Permitted in 96.0% of sites (78.6% of parks landbase)

Trappers are often permitted to use off-highway vehicles, primarily snowmobiles. In addition, trappers are often permitted to use trappers cabins in parks that prohibit OHVs and private accommodations, such as Willmore Wilderness Park. The existing policy has a commitment to honor existing trapping rights while working cooperatively with the Department of Sustainable Resource Development to manage them appropriately for protected areas (ACD 2003b, AG 2000).



4.3.3 Hunting

Permitted in 81.6% of sites (87.0% of parks landbase)

Regulated by Department of Sustainable Resource Development (ACD 2003a, AG 2000).



Cows like this one graze in Cypress Hills Interprovincial Park.

4.3.4 Grazing

Permitted in 99.0% of sites (79.7% of parks landbase)

Permitted Grazing Leases are used as a management practice mostly applied in the Grasslands natural region. Although permitted in 99% of sites this does not imply that grazing occurs on all of these sites. The importance of an approved management plan and capacity for adaptive management is critical for managing a grazing lease in a protected area (AG 2000).

4.3.5 Roads

Human activities generally require the construction of roads, which contribute significantly to the fragmentation of a protected area and thereby seriously affect its ecological integrity. Roads are defined as any right-of-way that can be traveled by motorized or non-motorized means and have been identified as a significant contributor to habitat loss, road kill, behavioral change in animals, physical barriers to animals, increased edge effects and predation, increased spread of non-native species, and increased hunting and poaching (AEP 1996).

A study by Alberta Environmental Protection (AEP 1996) found that nearly all parks within the Foothills Natural Region had active oil or gas wells, and all were traversed by numerous access routes. Four provincial parks, Crimson Lake, William A. Switzer, Carson-Pegasus, and Lesser Slave Lake, which encompass a land area of 144 km², had a total of 389 km of roads, pipelines, transmission lines, cut lines, and trails within their boundaries. The road density of 2.7 km/km² in these parks yielded habitat effectiveness indexes of less than 10% for grizzly bears (USFS 1990) and less than 30% for elk (Lyon 1983). All of the provincial parks in this Natural Region had access routes and seismic lines to the extent that road densities ranged from 2.36 to 3.51 km/km²

FRAGMENTATION

Fragmentation is frequently caused by humans when native vegetation is cleared for human activities such as agriculture, seismic lines, wellsites, powerlines or roads. Areas that were once continuous become divided into separate fragments. This results in a decline in habitat quality for sensitive species such as caribou, grizzly bear and nesting birds. The harmful effects are a result of the creation of increased access by predators, invasive species and people.



Roads fragment the wilderness and create access for random camping.

Fragmentation within Parks:

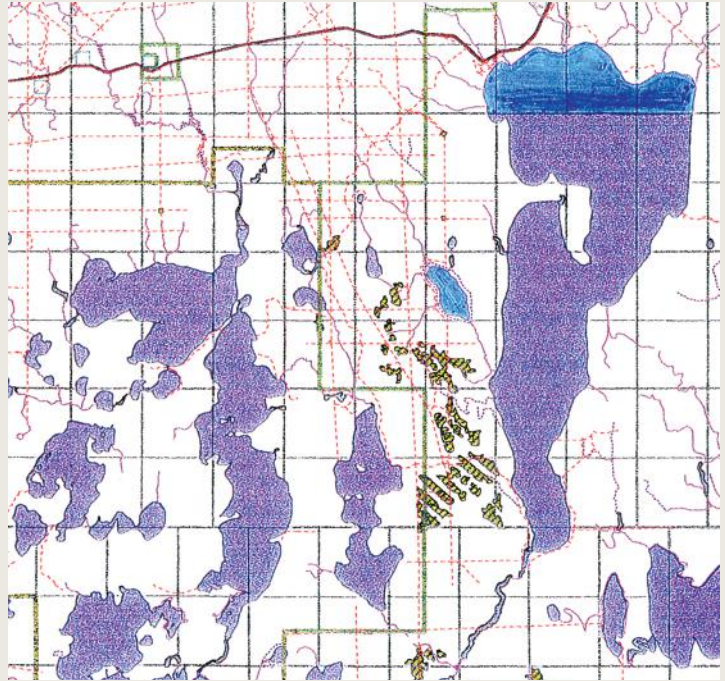
1) LAKELAND PROVINCIAL RECREATION AREA is fragmented from forestry and oil and gas activities in the park. Roads and seismic lines also create new access routes to the parks for motorized activities

2) CRIMSON LAKE PROVINCIAL PARK and the surrounding area have been heavily fragmented by oil and gas, forestry, and agriculture activities.

Reed Noss, a well known conservation biologist, has stated:

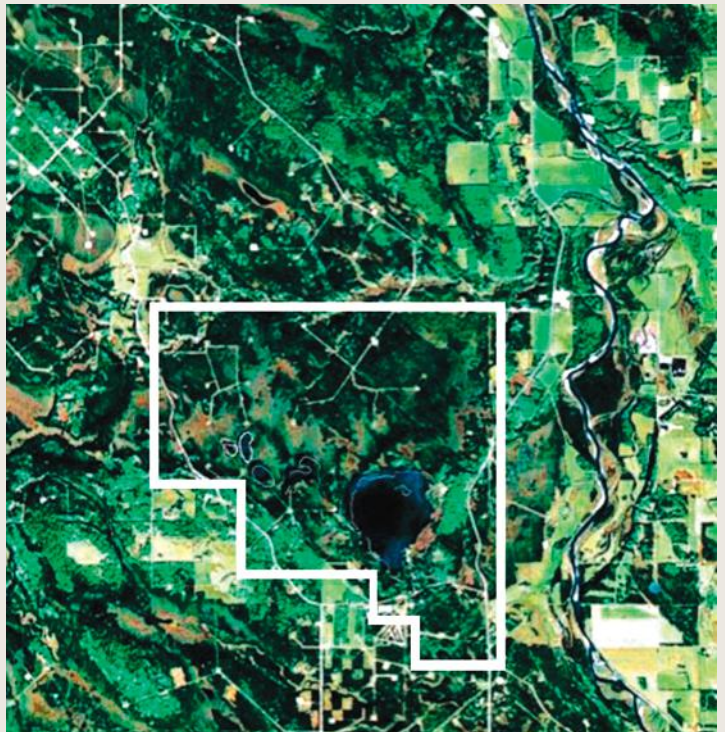
“If I had to choose one indicator to assess and compare the ecological integrity of wildlands, it would be road density, as roads make most other human disturbance possible and have cumulative effects that persist as long as the road is in place.”

(NOSS 1995)



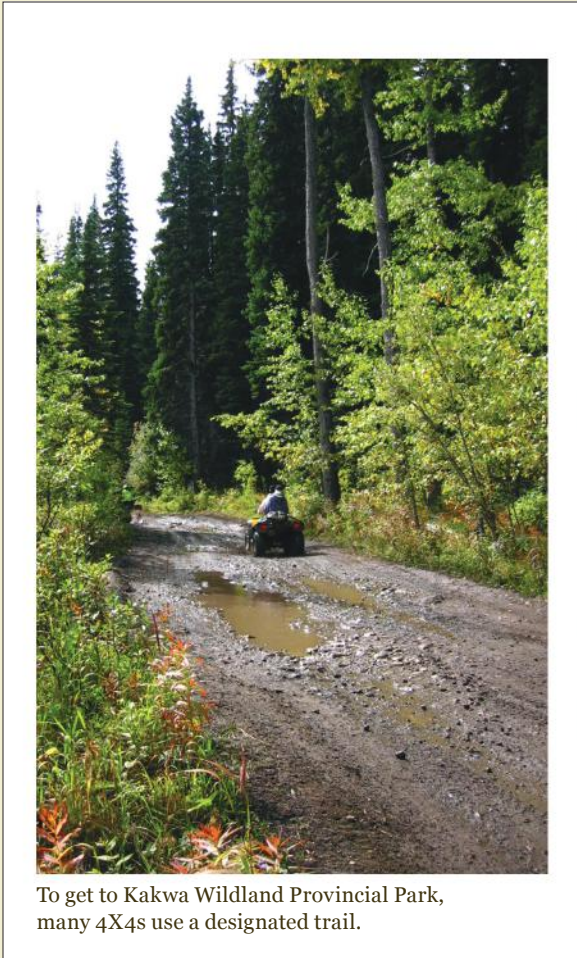
LAKELAND PROVINCIAL RECREATION AREA

FIGURE 4-2: Map detail showing some of the fragmentation from roads and industrial activities in Lakeland Provincial Recreation Area.



CRIMSON LAKE PROVINCIAL PARK

FIGURE 4-3: Crimson Lake Provincial Park and surrounding area showing fragmentation by oil and gas, forestry, and agricultural activities.



To get to Kakwa Wildland Provincial Park, many 4X4s use a designated trail.

4.3.6 Motorized Recreation

Unrestricted in 29.6% of sites

(4.8% of parks landbase)

There are no laws prohibiting the use of OHVs in Natural Areas.

Completely restricted in 3.8% of sites

(21.4% of parks landbase)

Legislation and regulations prohibit OHV use in Wilderness Areas, Willmore Wilderness Area, and Ecological Reserves.

Parks with regulations that restrict OHV use but make exceptions to allow for some designated trails: 66.5% of sites

(73.9% of parks landbase)

Heritage Rangelands, Wildland Parks, Provincial Parks and Recreation Areas (ACD 2003a, AG 2000)

Off-highway vehicles (OHVs) is a term used for quads, snowmobiles, and other all-terrain vehicles, such as 4-wheel drive trucks.

Controlling the access of OHVs to protected areas and limiting their environmental impacts are important challenges facing the Alberta Parks Division, municipal governments and local communities. Each new industrial development (primarily forestry and oil and gas) within or adjacent to a protected area increases linear disturbances with new roads, seismic lines, and clearings. These disturbances create uncontrolled access to both crown land and protected areas for OHVs (Kennett 1995).

It has been suggested that two of the most critical problems facing the ecological health of Alberta's parks are (former staff, personal communication 1996 and 2006):

- Motorized boat and off-highway vehicle use
- Management is placing recreation values over those of ecological integrity and preservation.



This quad trail in Lakeland opened the canoe lake circuit to motorized boats.



OHV trails have damaged sensitive wet areas in Lakeland Prov. Rec. Area.

The use of motorized vehicles and motorized boats pulled by OHVs leads to increased poaching (of both fish and wildlife) and environmental damage to sensitive areas, such as wetlands and sand dunes (Timoney and Lee 2001). Allowing people to access lakes and forests that were not easily accessible before also increases problems associated with undesignated camping such as litter, human waste and unattended fires.

Heavily used OHV trails are continually widened, resulting in increased soil erosion and compaction, as well as an increased potential for soil contamination (AWA 2002). If the trail crosses a waterway, then fish habitat may be degraded and/or polluted (AWA 2002). The noise and emissions from OHVs cause physical stress to wildlife in the area (Kennett 1995) and negatively affect the experience and safety of visitors engaged in non-motorized recreation (AWA 2002). The uncontrolled use of OHVs in protected and sensitive areas has been identified as one of the “most disruptive impacts” on threatened species such as grizzly bears in the Castle-Crown area (Kennett 1995).

In an attempt to manage OHVs, the Alberta government has established designated trails in some parks and protected areas where there was an established regional trail prior to the establishment of the protected area. The creation of such trails is intended to limit access and deter vehicles from off-trail areas and other trails (such as designated non-motorized trails). However, in order for designated trails to be an effective conservation tool, resources for education, signs, bridges, gates, and enforcement are needed to ensure that riders stay on the trails and understand why it is important to do so.

The use of OHVs is strictly prohibited only in Wilderness Areas, Willmore Wilderness Park and Ecological Reserves, which together

comprise 22% of the provincially protected land base. Although regulations do exist to prohibit OHVs in Wildland Provincial Parks and Provincial Parks, exceptions to the rule are emerging. Parks such as Sundance Provincial Park (ACD 2006b), Caribou Mountains Wildland Park (Samson 2006), Kakwa Wildland Provincial Park, and Lakeland Provincial Park currently have designated OHV trails within their boundaries.

OHVs are legally prohibited in Heritage Rangelands, but the only park with this designation, the Black Creek Heritage Rangeland, has an amendment to allow two designated trails through it in order to link up with other trails permitted in the adjacent Bob Creek Wildland Provincial Park (ACD 2003c). If this trend continues, new access could be allowed in up to 74% of the parks land base.

Despite this clear pressure to open up more parks for OHV use, a recent recreation survey



OHVs often create random illegal trails off of designated trails.

found that only 11.6% of Albertans use quads or off-road vehicles and 7.5% use snowmobiles (ACD 2004b). The same study showed that 64% of Albertans stated that provincial parks should not allow motorized off-road vehicles and 53% stated that snowmobiles should also be prohibited.

Alberta's parks and protected areas cover only 4.2% of the province and are the only places that the government of Alberta has committed to some form of conservation, low-impact recreation and environmental education. In spite of this commitment, less than 22% of Alberta's parks and protected areas land base (5,900 km²) is strictly off-limits to motorized recreation. The Government of Alberta should work with other departments, organizations and stakeholders to create an acceptable alternative for motorized recreational use (such as a recreation corridors trail network) to remove the pressure to have these trails within park boundaries.

Finding solutions for OHV use in protected areas

- The Government of Alberta should work to uphold and enforce the current legislation that prohibits OHV use in Wilderness Areas, Willmore Wilderness Park, Heritage Rangelands and Ecological Reserves
- Designated OHV trails in protected areas with high conservation values (such as Wildland Parks, Provincial Parks, and the larger Provincial Recreation Areas) and OHV use in Natural Areas should be evaluated for their impact on the ecological integrity of the park as well as the ability of the Alberta Parks Division to monitor and enforce trail use. In those areas where OHV trails are causing ecological damage (either because of overuse or lack of enforcement) trails should be closed until appropriate measures are taken.
- It is also recommended that no new trails should be established in any protected area; unless it is proven that the trail improves the ecological integrity of the area by either closing other trails in sensitive habitat or as a measure to eliminate random use.

4.4 Cumulative impacts

A key issue facing the Alberta parks network at this time is conflict with incompatible uses. The Alberta parks network is especially vulnerable to the loss of ecological integrity due to the high market value of resources contained within and around parks (e.g. oil and gas). Activities that threaten ecological integrity should be prohibited within the boundaries of parks and protected areas.

Pressures to allow the exploitation of oil and gas resources, plus increased hunting, trapping and grazing activities are mounting both within and near the boundaries of Alberta's parks. In addition, forestry activities are increasing immediately adjacent to protected areas boundaries. While any one of these activities by itself may not have a significant effect on an ecosystem, several occurring together could have a cumulative impact that degrades the ecological integrity of the ecosystem. Some activities, such as grazing and hunting, can be employed as management tools, but in order for them to be used effectively, it is essential that land managers have the capacity and interdepartmental cooperation to monitor and, where necessary, restrict these uses when they adversely impact preservation goals.

The Alberta government should work to strengthen overall legislation to limit cumulative impacts related to multiple uses in and around parks and protected areas.



5. Capacity and Resources

“Protected areas in most countries urgently need technical and financial resources to ensure that they are effectively managed to achieve their objectives.” (IUCN-WPCA 2003)

Park management can only be effective in maintaining the ecological integrity of a protected area if sufficient resources are available to carry out the elements of an ecosystem-based management approach and to enforce legislation. Funding is also required to enable a suitable level of heritage appreciation by the public as well as to ensure public safety.

Figure 5-1 shows the operating and total budget (operating plus capital) of the Alberta Parks Division for the last two decades (adjusted for inflation). The overall trend in total funding from 1988 until 2000 was a decline from \$76.1 million to \$21.1 million, the low point occurring in 1999 when only \$21.1 million was allocated. In 2001, the Alberta Parks Division was shuffled from

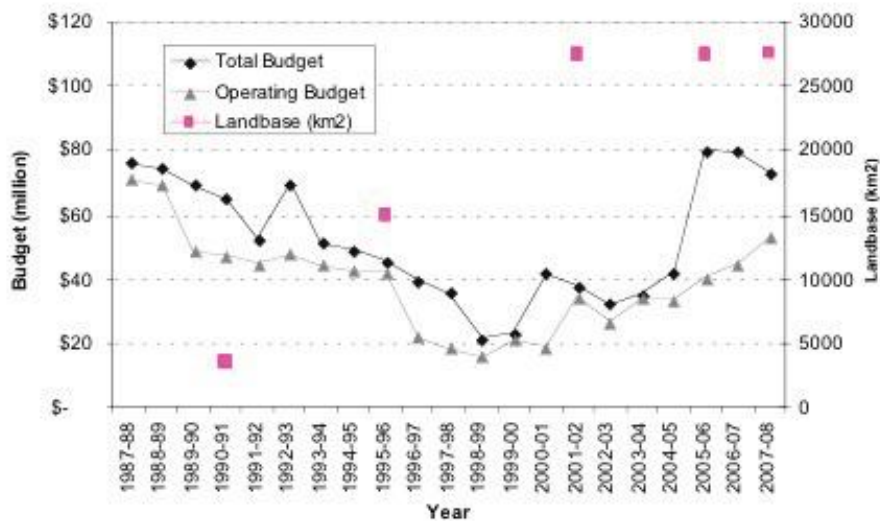


FIGURE 5-1: [J.7] Operating and total (operating plus capital) budget of the Alberta Parks Division for the last two decades adjusted for inflation (based on various government documents: public accounts, budget estimates, business plans, program estimates, and annual reports). Note: 1990-91 landbase does not include Willmore Wilderness Area as it was managed by Sustainable Resources Development not the Alberta Parks Division in 1991.

the Department of Environmental Protection (where it shared staff with other resource related departments) to Community Development. As such, the funding for the division increased in 2001. However, funding remained at half of what it was prior to the severe budget cuts of the late 1990s. Between 1991 and 2002 the number of protected areas increased by 156% from 202 sites to 518 and the land base rose by 685% from 3000 km² to 27520 km² (Figure 5-2).

These budget cuts resulted in reductions to various programs and staff within the park system including park rangers, interpreters, administrators, park planners and biologists (Swinnerton 1993). For perspective, when broken down this budget figure (operational budget of \$34.2 million in 2001/02) was only sufficient to staff and equip the equivalent of 0.6 full time equivalent (FTE) for each protected area (518 sites) or 0.01 FTE/km². By comparison, in 1990/91 (\$47.1 million) there was

the equivalent of 3.6 FTEs per protected area (202 sites) or 0.21 FTE/km².

While these numbers are averages and do not reflect the actual staff allocations throughout the Alberta parks network, they do demonstrate that while the funding levels are currently higher than 1991 levels, the increases are not nearly enough to maintain the Alberta Parks Division's capacity to manage its land base. In the 2007/08 budget the Alberta Government has allocated \$52.7 million for the Alberta Parks Division. This represents the equivalent of 0.9 FTE per site or 0.02 FTE/km². Clearly, this level of funding is inadequate to support a significant attempt at ecosystem-based management of Alberta's protected areas.

In 2005, the budget of the Alberta Parks Division nearly doubled from \$42.0 million to \$80.3 million. This included the first increase in capital funding in nearly 15 years with the Alberta Parks Renewal Project committing

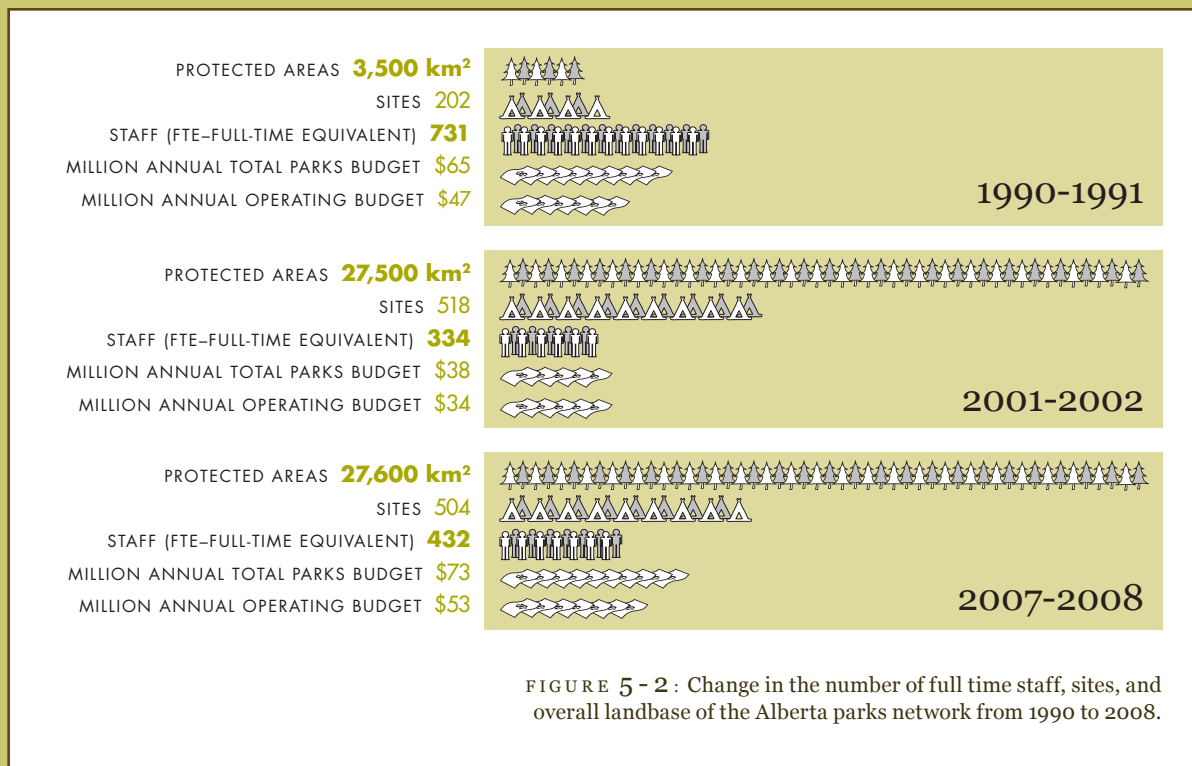


FIGURE 5 - 2 : Change in the number of full time staff, sites, and overall landbase of the Alberta parks network from 1990 to 2008.



1990s cutbacks can be seen in park buildings such as these old outhouses.

\$92 million over the next four years (ACD 2005). The primary objective of this project is to upgrade the aging infrastructure in Alberta's parks after the many years of financial cuts. Most of the money was committed to "ensure the safety of the water and sewer systems" and to "renew basic parks facilities" (ACD 2005). In the Alberta Community Development business plan for 2006-09, "infrastructure renewal" continues to be a strategic priority for the department (ACD 2006a). The Department recognizes that much more funding is required to restore elements essential to park maintenance and safety, which were neglected in the mid to late 1990s. However, an increase of only \$4 million in operating funds was allocated in the 2005-2006 budget, leaving Alberta Parks still unable to effectively manage park visitors and those activities critical to protecting

ecological integrity, such as planning and enforcement.

The total Alberta Parks budget decreased slightly in 2006-07 to \$79.6 million and again in the recently announced 2007-08 budget (estimated \$73.1 million). However, despite the overall decrease in the 2007-08 budget, the Alberta Government increased the portion allocated to operational funding by \$8 million. This increase is earmarked for hiring 34 new full-time staff positions in addition to 60 new seasonal staff. Specifically, Alberta Parks will be hiring "more conservation officers, maintenance service workers, planners, interpretive and visitor information staff, and gate staff to better serve the public and protect the land and facilities" to address "increased demands for service and maintenance" (ATPRC 2007g).

In spite of recent increases in total budget for the Alberta Parks Division, the effects of the 1990s personnel reductions have lingered: in 2006, staff levels were still only 52% of what they had been in 1992. The recent staff increases will bring this number up to 59%, looking after a land base that has increased by 685%. The inability of the Alberta Parks Division to perform the necessary research and

monitoring, produce management plans, enforce the law, and provide public education programs is the result of inadequate funding. Lack of funding ultimately stems from insufficient political support and a low priority placed on the maintenance of the Alberta parks network by the Alberta Government.

The lack of support by the provincial government for the Alberta Parks Division, as manifested by inadequate funding, has created four major problems for the division in terms of park management:

1. A lack of capacity for science and monitoring resulting in an ability to do ecosystem based management
2. An inability to complete and update management plans in a timely fashion
3. The loss of enforcement officers
4. A reduction in the number of heritage appreciation programs.



Basic park infrastructure still needs to be replaced (Beauvais Lakes Park).

5.1 Role of science and monitoring

As discussed in Section 3.4, the essential components of ecosystem-based management are a) research to determine the appropriate indicators of ecological integrity, and b) continuous monitoring of these indicators to assess the success of the management approach. The efforts of the Alberta government to implement any kind of ecosystem-based management are weak. In 1996, the Alberta Natural Heritage Information Centre (ANHIC) was established as an integral program of the Alberta Parks Division. As one of over 80 Conservation Data Centres in an international network, the ANHIC has the objectives of providing information for conservation and development planning, natural resource and protected area management, and research and education. The biological databases built by ANHIC and its affiliates have the potential to be an important tool for long-term environmental monitoring and public education if given the appropriate monitoring and public reporting mandate and associated resources (ATPRC 2007h). However, only seven people are currently employed by the ANHIC, so their capacity to deliver the necessary components of ecosystem-based management (validation and measurement of indicators) for Alberta's protected areas is severely limited. At this capacity, ANHIC is only able to produce an initial biophysical (flora and fauna) inventory, focusing on rare species, for a limited number of parks.

Currently there is no dedicated parks and protected areas monitoring and status reporting program in the province.



Volunteers monitor bird species in Lakeland Provincial Recreation Area.

5.2 Role of developing management plans

A management plan for a park outlines specific needs or issues, day-to-day guidance, and a long-term vision for park management and public use (ATPRC 2007i). The planning process provides an opportunity for input from stakeholders affected by the plan and the local community. Plans should also be used as guides for broader landscape management, which is an important factor in ensuring ecological integrity and resolving user conflicts (IUCN 1983). Having a management plan, as well as the capacity to ensure that it is implemented and updated regularly (every 5 years), is essential for effective park management (Ervin 2003) and the maintenance of ecological integrity.

Only 58 (less than 12%) of the 504 sites in Alberta's parks system have approved management plans, 22 of which are more than 10 years old (Figure 5-3, Table 5-1). Most parks with high natural value do not have completed or updated management plans, including Willmore Wilderness Park, all three Wilderness Areas, and 26 of the 32 Wildland Provincial Parks. Management planning efforts

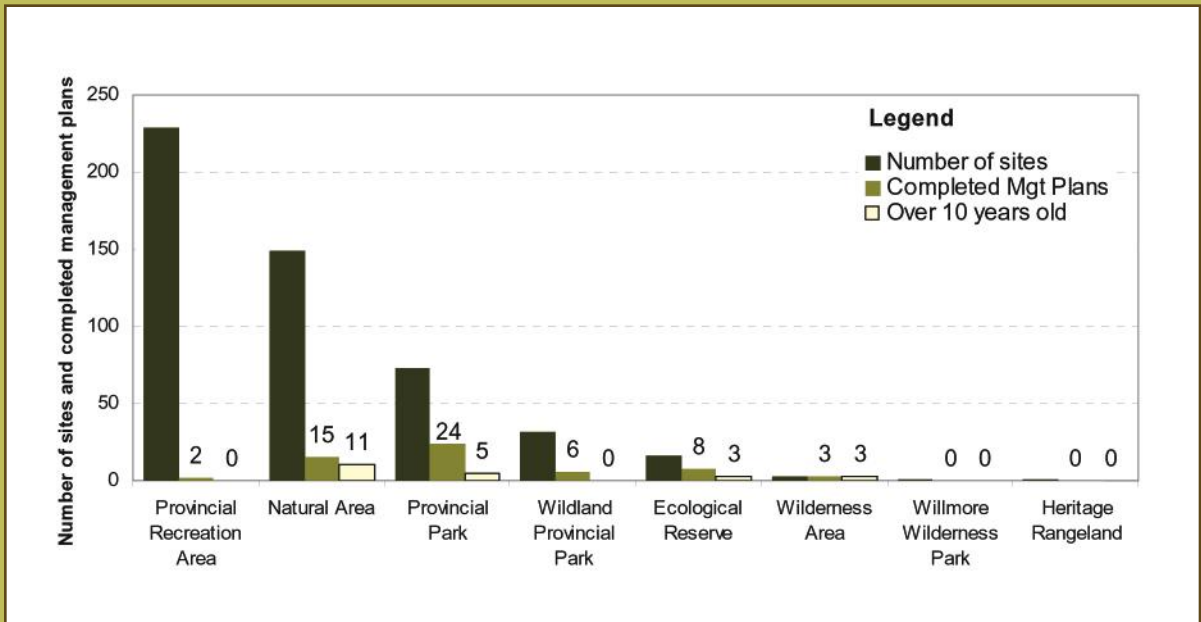


FIGURE 5-3: Number of sites and completed management plans (including those over 10 years old) for sites in the Alberta parks network.

appear to have been concentrated on high multi-use sites such as Provincial Parks (24 complete) and Provincial Recreation Areas (24 complete). While these areas can be ecologically significant, they are frequently very small and their natural ecological value is often compromised by multi-use activities both within and adjacent to their borders.

In the past year, management plans have been completed for three Provincial Parks: Sundance, Peter Lougheed and Spray Lakes. At the current rate, it will take 100 years to complete the plans for the entire parks system. This does not include the need to review and update plans at regular intervals to address new challenges and threats as required by effective ecosystem-based management.

The lack of a management plan can lead to unmanaged and environmentally harmful activities in a park. For example, the management plan for Lakeland Provincial Park and Provincial Recreation Area, was initiated in 1991 (AEP 1996) and is still not complete as of 2007. As a result, there have been extensive impacts from off-highway vehicle use, oil and gas development, and overfishing resulting in serious threats to the ecological integrity of these protected areas.

A management plan for a park outlines specific needs or issues, day-to-day guidance, and a long-term vision for park management and public use.

(ATPRC 2007I)

5.3 Role of park enforcement and management

As noted by Chape et al. (2005), the enforcement of legal protection is essential for effective park management and is an indicator of political support and good governance for parks.

The staff cuts in the 1990s hit Park Rangers (now called Conservation Officers) the hardest (den Otter 2000), as the position of the traditional ranger who resided in a park was eliminated. Whereas rangers used to live, work, and patrol in the parks year-round, seasonal officers are now brought in

PARK TYPE	NO. OF SITES	NO. OF COMPLETED PLANS	1-5 YEARS OLD	5-9 YEARS OLD	>10 YEARS OLD
Willmore Wilderness Park	1	0	0	0	0
Wilderness Area	3	3	0	0	3
Ecological Reserve	16	8	0	5	3
Heritage Rangeland	1	0	0	0	0
Wildland Provincial Park	32	6	2	4	0
Provincial Park	73	24	10	9	5
Natural Area	149	15	0	4	11
Provincial Recreation Area	229	2	1	1	0
TOTAL	504	58	13	23	22

TABLE 5-1: Number of management plans for sites in the Alberta parks network.

Effective park management “is a complex task that needs the expertise of biologists, geologists, geographers, planners, administrators, sociologists, economists, law enforcement officers, and many others, all brought together to focus on common objectives.” (Eidsvik 1993)

and trained each summer. Over one hundred seasonal officers, often students, are now the face of Alberta's Parks Division, placed mainly in provincial parks. Most of their time is spent enforcing campground regulations, leaving the parks without information services, fish and wildlife enforcement, and public safety officers during the day (R. Reeves, author account 2003-04).

Although each park district in the province still has permanent conservation officers, most of them work in an office (usually in town, far from the park). The officers' presence in the park is important for patrolling for poachers and for providing a consistent presence and collaboration with other enforcement and resource management agencies (WCL 2004; den Otter 2000). This presence also aids with local community involvement and stewardship programs, and helps decrease vandalism to parks facilities and property.



A bear trap in Young's Point Provincial Park. Funding is needed for equipment and staff for wildlife management, and to ensure public safety.

As noted by Ervin (2003) parks with many access routes, roads and other types of fragmentation are especially at risk and vulnerable to the loss of ecological integrity. Due to Alberta's emphasis on rapid resource development and intensification of land uses, parks have numerous roads and seismic lines, increasing the access for illegal activities and the challenge to patrol and manage them.

The difficulty in patrolling and managing large parks with numerous motorized access routes is exacerbated by staff cuts and an equipment deficit that have left many parks with little to no enforcement at all.

Seasonal conservation officers are primarily located in provincial parks and some recreation areas with only about 100 parks patrolled on a regular basis (R. Reeves, author account 2004). Other parks in the network are generally not staffed. Provincial

Recreation Areas, Natural Areas, isolated Wildland Parks, and Ecological Reserves will rarely or never see a conservation officer, a biologist, or an interpreter. While volunteer stewards, non-governmental organizations, or individuals look after some of these areas, their capacity and tools to enforce or monitor these areas is limited.



Alberta Parks Conservation Officers work very hard.

- helping the visitor to understand, appreciate, and enjoy not only nature but the area as a whole;
- awakening public awareness of the purposes and policies of parks,
- helping to develop a concern for preservation;
- helping to minimize negative effects on the local community and natural environment, enhance visitor safety, minimize recreational conflicts, and generally improve the method of visitor dispersal;
- helping to reduce vandalism and enforcement problems.

The popularity of Alberta’s parks presents an excellent opportunity to educate the public about ecological conservation issues. Over the last decade, the annual visitor rate has averaged over 8.5 million visitors (day users and overnight campers, ACD 2004a and 2006d). However, the Alberta Parks Division is still feeling the effects of program cuts from the 1990s. In 2006/07 there were only 32 seasonal staff and approximately 10 full-time staff to educate, enhance park experiences, assist school programs and inspire these visitors. During the same year, some school programs had to be cancelled due to a lack of staff and program capacity (Former Staff, personal communication 2006).

Only 10 Provincial Parks in the 504 parks in the Alberta parks network offer some type of interpretive and educational services. The Alberta Parks Division continues to have interpretation teams in the most visited parks: Kananaskis Country, Lesser Slave Lake, Dinosaur, and Cypress Hills Provincial Parks (ACD 2004a). Other parks, such as Saskatoon Island and William A. Switzer Provincial Parks, each have only one seasonal interpreter who

5.4 Role of heritage appreciation

Public support, at both the political and community level, is essential if the conservation and preservation goals for protected areas are to have any hope of succeeding (Butler 1993). Parks experts around the world agree on the need for governments and educational institutions to support and promote environmental and conservation programs at all levels of education (Eagles 1993). Specifically, park interpretation programs, services, and staff are essential elements in effective park management (Ervin 2003). They are important in protecting the ecological integrity of a park by (Butler 1993):



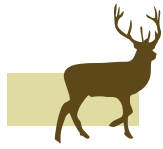
Without interpreters or information offices, many public message boards are empty.

provides school programs, day events, and evening programs. The majority of provincial parks have lost their interpretation staff altogether or share one with another park. Ecological Reserves, Wildland Provincial Parks and Natural Areas have never had interpretative programs (R. Reeves, author account 2004).

For Alberta's Centennial in 2005, the provincial government built four new interpretative centers in three of the four flagship parks: Lesser Slave Lake Provincial Park, Cypress Hill InterProvincial Park, Writing-On-Stone Provincial Park and Dinosaur Provincial Park (ACD 2005). This reinvestment is a positive step for restoring the Heritage Appreciation programs across the Province.



The only interpreter in the Grande Prairie Region is at Saskatoon Island Provincial Park.



6. Looking to the Future

“Good parks systems preserve our cultural diversity; great parks systems extend it.”

(W.F. LAPAGE)

6.1 What would a healthy, well funded Parks and Protected Areas Network do for Alberta?

Canada’s “natural capital,” which is preserved in protected areas is a vital component of Canada’s social, economic and environmental well-being and has a direct link to “the health of Canadians” (Wilke 2006). As protected areas become some of the last remaining natural habitats, these values will only increase with time (Eidsvik 1993).

The Alberta Parks Division has long recognized the diversity of values that parks offer. In its recent draft strategic planning efforts the Division indicates that:

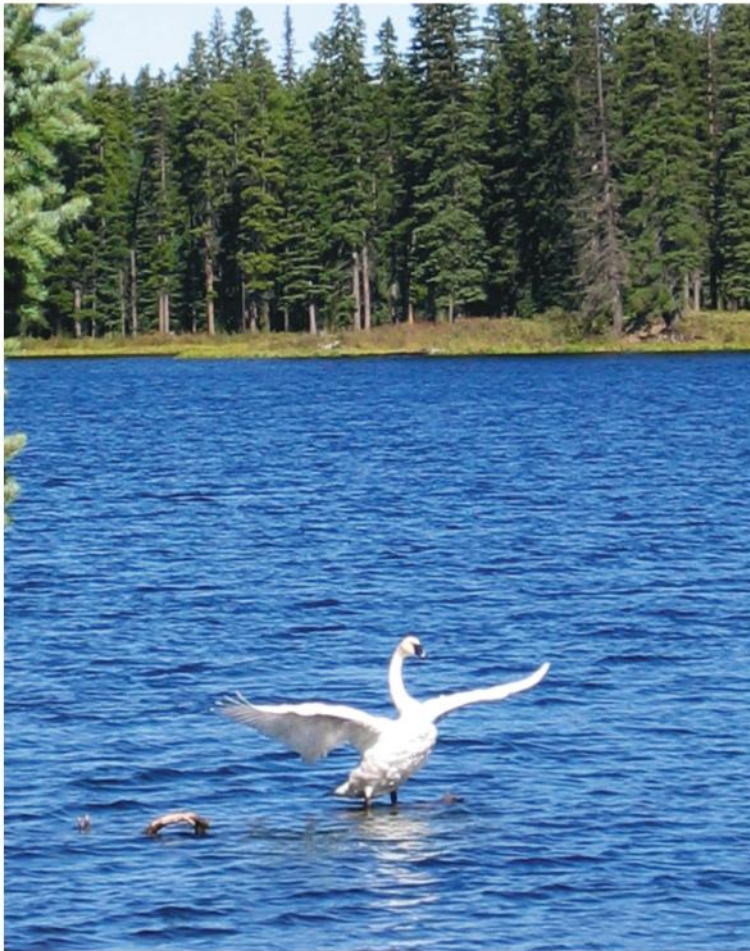
“The process for developing this Strategic Plan emerged with the recognition that the Parks and Protected Areas program significantly contributes to Albertans’ quality of life. This holistic view requires a framework for decision-making that acknowledges the interconnectedness between the Program’s contribution to the environment, society, and the economy.” (ACD 2006f)

All of the potential benefits of park and protected areas are outlined in Appendix B (Canadian Environmental Advisory Council

1991). Those that play a particularly important role in Alberta are highlighted below.

Ecological

- **Protect biodiversity:** By conserving representative intact wilderness areas the Alberta parks network preserves the biodiversity of our province. Ninety percent of Albertans feel that parks and open spaces are important to preserving Alberta’s landscapes, plants and animals (ACD 2004b).
- **Protect species at risk:** Alberta is legally committed to protecting endangered species and associated critical habitats.
- **Loss of habitat:** Loss of habitat is the primary cause of species decline and



Many protected areas, such as Two Lakes Provincial Park, provide nesting sites for trumpeter swans.

Ninety percent of Albertans feel that parks and open spaces are important to preserving Alberta's landscapes, plants and animals.

(ACD 2004B)

extinction (Griffiths et al. 2001). Parks play an important role in protecting native species, many of which are becoming increasingly threatened and endangered (Eagles 1993, Griffiths et al. 2001, CEAC 1991).

Scientific

Parks play an increasingly important role as natural laboratories (CEAC 1991) acting as benchmarks on how ecosystems function in areas of low human impact. Protected areas with healthy functioning ecosystems act as invaluable reference sites for researchers to determine whether human activities in the remaining landscape are allowing biodiversity to be maintained, or if management practices need to change. A lack of protection for critical and sensitive areas can result in “vast amount of



A volunteer collects information on Rumsay Ecological Reserve.

scientific and ultimately useful information ... being irrevocably lost as species become extinct through habitat destruction, over-exploration, pollution, etc.” (Wallis nd)

Economic

- **Protect natural capital (air, water, soil):**

Protected habitats contribute many ecological services such as storing carbon and maintaining watershed health. This natural capital provides Canada with “billions of dollars in ecological goods and services (EC 2006). For example, the boreal forest in Canada contributes an estimated \$93.2 billion annually in ecosystem services (CBI and PI 2005).

- **Diversification of economy:**

Parks and protected areas contribute significantly to tourism - Alberta’s fourth largest economic driver. The tourism industry is more sustainable than resource-based activities and benefits both urban and rural communities (CEAC 1991). Alberta’s parks and protected areas generate as much economic activity (related to tourism and the overall operation of the parks) as lands used for forestry and agriculture, up to \$940 per hectare and 243 person-years of employment per 100 km² (Dobson and Thompson 1996). Provincial parks and protected areas add \$1.2 billion/year to the Alberta economy, and spending generated by park visitors is estimated at \$2.7 billion/year (AG 2006d).

Educational

Alberta’s parks act as outdoor classrooms, ensuring that each generation is able to explore, understand and appreciate the complexities of the natural world and humans’ impact on the environment (Griffiths et al. 2001). By raising awareness, education and interpretation programs can inspire citizens to actively participate in their local community to address environmental issues (Butler 1993). Allowing children and adults alike to reconnect with nature is a fundamental role played by parks and park staff (CEAC 1991).



Interpreters offer outdoor classrooms to school groups and park visitors in Dinosaur Provincial Park (ATPRC).



The environmentally friendly new Boreal Centre for Bird Conservation in Lesser Slave Lake Provincial Park.

Good image

The management of Alberta's wilderness and wildlife is of increasing international concern as our resources are sold abroad. Consumers of Alberta's forest and petroleum products are becoming more environmentally conscious and expect sustainable management of our resources. Alberta has made commitments to the establishment of a network of protected areas through the Canadian Biodiversity Strategy, the National Forest Strategy, and the Alberta Forest Conservation Strategy, but as yet has not met those commitments.

The lingerie giant Victoria's Secret (and its parent company Limited Brands) has stopped buying pulp (used in the production of catalogues) sourced from Alberta's foothills forests because of concern for woodland caribou management. (Edmonton Journal 2006)



Providing places for low-impact outdoor recreation contributes to healthier and happier Albertans.

Enhance quality of life

- **Enhance outdoor recreation**

opportunities: On average Alberta Parks receive over 8.5 million visitors annually since the early 1990s (ACD 2004a), of which nearly 90% are Albertans (ATPRC 2007g). In a 2004 survey, when asked if “recreation and parks facilities and services improve quality of life,” 60% of Albertans responded it was “very important,” and 31% said it was “important” (ACD 2004b). Parks provide places for physical activity and over 82% of Albertans surveyed agreed that taking part in leisure or recreation activities in the outdoors are important or very important for physical health and exercise (ACD 2004b). Albertans enjoy these activities in order to relax (78%), for pleasure (87%) and to enjoy nature (70%) (ACD 2004b).

- **Empower citizens as volunteers**

and stewards: More than 2,000 Albertans collectively donate more than 100,000 hours of volunteer time to Alberta parks and protected areas each year (ACD 2006d). The IUCN (1983) calls on government agencies to recognize and support the important role that volunteers (both individual and through organizations) play in the effective management of parks and protected areas.

- **Strengthen cultural identity:** Parks play an essential role in fostering pride in one’s region as they “strengthen cultural identity and heritage values” (CEAC 1991). Protecting wild spaces also contributes to protection of First Nations’ traditional uses and sacred places.



The economic boom in Alberta is placing unprecedented pressures on the province's remaining wilderness areas. Time is of the essence for implementation of an updated protected areas strategy.

6.2 Recommendations

If Alberta is to have a network of parks and protected areas that maintains the ecological integrity of the province's diverse ecosystems, the government must take the initiative to enforce the protection that is mandated by the law, strengthen the legislated protection of existing areas, and work to ensure appropriate representation of Alberta's ecological diversity. In order to accomplish this, the government must strengthen and enact legislation that establishes these policies in law, and provide the funding necessary for the policies to be carried out by the Alberta Parks Division.

The strengthening of current parks legislation and establishment of protected areas must become a priority before our last remaining intact wilderness is changed forever. There is no reason, if the political will is there, for policy directives to be delayed or ignored. With the level of revenues the government is receiving, sufficient funding for completing management plans, adopting ecosystem-based management practices, increasing the Division's enforcement capacity and heritage appreciation programs should be in place within two to three years. Legislation to provide stronger protection of natural values should be enacted within five years.

How many more staff does the Alberta Parks Division require?

There is no set standard for determining how many staff are needed in order to effectively manage a parks and protected areas network for ecological integrity. It is also difficult to hire and train a great number of staff in one year. For perspective, here are the comparable full time equivalents (FTE) to staff levels prior to the major cutbacks of the early 1990s:

FISCAL YEAR	STAFF PER SITE RATIO	STAFF PER KM ²
1990-1991	3.62	0.21
2007-2008 (includes current hires)	0.86	0.02
Staff increase required to 1990-1991 levels	4 X (1391 FTE staff) (30% increase per year for next 5 years)	13 X (5340 FTE staff) (60% increase per year for next 10 years)
Required increase in operational funding (based on 2007-2008 budget)	\$41.8 million per year (\$209 million over the next 5 years)	\$80 million per year (\$800 million over the next 10 years)

Funding

(short and long-term: 1-5 years)

MAIN RECOMMENDATION

Increase funding for the management of protected areas at levels required to enable park management initiatives to be implemented and applicable legislation to be enforced.

Funding is required for:

- a) Developing and updating management plans with public consultation.
- b) Ensuring that managers and planners can apply adaptive management.
- c) Research, monitoring, and public reporting of management practices.
- d) Enforcement staff and equipment to ensure that the Alberta Parks Division has the ability to enforce rules, ensure public safety and control access to parks and protected areas.
- e) Heritage appreciation programs, infrastructure and materials.
- f) Where designated trails have been established, ensure that resources are provided for proper management (e.g. enforcement, education, bridges and access reclamation).



On the right track

In 2005, the Alberta government (together with local partners) began construction of new interpretative centers in Dinosaur Provincial Park, Cypress Hills Inter-provincial Park, Writing-On-Stone Provincial Park and the Boreal Center for Bird Conservation in Lesser Slave Lake Provincial Park (ACD 2005).

On the right track

Penalties for violating regulations under the Provincial Parks Act were increased in 2005 (ATPRC 2007c).

On the right track

Two Lakes and Pierre Gray Lakes (Foothills Natural Region) were upgraded from Provincial Recreation Areas to Provincial Parks in 2006 (ATPRC 2007b).

Legislation

MAIN RECOMMENDATION

Strengthen existing legislation and introduce new legislation to ensure that the maintenance of ecological integrity is the primary mandate of the network and that the necessary regulatory tools are available to achieve this.

The legislation should:

Short-term (1-2 years):

- a) Review current designations of Provincial Recreation Areas and Natural Areas to ensure that the appropriate level of protection and intensity of management is consistent with their ecological value.
- b) Ensure that protected areas management planning is mandatory and conducted within a timely manner (i.e. within a 5-year completion/update cycle). Principles of ecosystem-based management should be applied.
- c) Prohibit activities that threaten ecological integrity in parks and protected areas (e.g. industrial resource use, roads, unmanaged OHV use, new OHV access).

Long-term (3-5 years):

- a) Strengthen legislation to limit cumulative impacts of multiple uses in parks and protected areas.
- b) Legally protect boundaries of parks and protected areas, using natural features wherever possible.

Network design and land management

MAIN RECOMMENDATION

Strengthen Alberta's network of protected areas to better conserve Alberta's ecological diversity and to ensure that the integrity of protected areas is not compromised by adjacent activities.

Short-term (1-2 years):

- a) Establish new protected areas and expand existing ones with priority to be given to sufficiently large, intact areas in natural regions and sub regions currently under-represented (e.g. Parkland, Grasslands and Foothills).
- b) Ensure that policy and planning initiatives such as the Integrated Land Management Program and the Land Use Framework take account of requirements for maintaining the ecological integrity of protected areas and establishing new ones.
- c) Make the Alberta Parks Division an official partner in SREM (Sustainable Resource and Environmental Management).

Long-term (3-5 years):

- a) Continue work on establishing new parks and protected areas and expanding existing ones.
- b) Enhance connectivity of the protected areas network by identifying functional corridors between areas and managing them appropriately.
- c) Establish policy for both government and industries in order to mitigate impacts on park boundaries, both on private and public land. Adopt legislative buffer zones.



On the right track

In 2005, the Alberta Parks Division, together with the Alberta Conservation Association and Suncor Energy created a program called the Boreal Habitat Conservation Initiative.

With \$1 million dollars from Suncor, the park boundaries of Winagami Provincial Park and Winagami Wildland Park were expanded.

On the right track

In August 2006, the Alberta Government invested \$40 million to purchase land adjacent to donated land (valued at \$27 million) by the Harvie Family to create the new Glenbow Ranch Provincial Park (ACD 2006e).

RECOMMENDATION

Establish an independent Alberta Parks Council

Given a poor record for the Alberta government in preserving the natural legacy of this province, changes must be made in the government's 'everything, everywhere for everyone' land management practices.

To ensure government accountability for maintaining the ecological integrity of Alberta's protected areas, we recommend that a broad-based Alberta Parks Council be established.

The Council, which would be independent and at arms-length from the government, would monitor progress of the successful implementation of an updated Parks Strategy, evaluate the program's efficacy in maintaining ecological integrity, and report on the state of the protected areas network to the public at least every five years.

6.3 Conclusion

In 1973, the Minister responsible for Parks (the Honourable Allan Warrack) presented the Alberta Legislative Assembly with a paper that stated, "the present park system was inadequate; that more park lands were needed; that existing parks were badly in need of upgrading; that there were serious resource development conflicts in some parks; and that Albertans in metropolitan centres ... lacked opportunities to visit parks" (ATPRC 2007f). At the time, the government responded with a dramatic increase in funding, and the parks land base was slowly expanded over the following 30 years.

Today, this report has shown that despite stronger statements regarding the need for conservation of natural values (Vision and Mission of the Alberta Parks Division), many of those same challenges were recognized in the early 1970s and still exist today.

It is important to recognize that many of the challenges outlined in this report cannot be solved by the Alberta Parks Division alone. Significant improvement of the Alberta parks network will require cooperation from a number of stakeholders and land users, and thus will take time to implement. However, it is vital to acknowledge the urgency related to solving these issues before environmental damage becomes irreversible (e.g. complete loss of special geological features or populations of endangered species).

Addressing these challenges to the Alberta parks network that have been outlined in this report will require:

- Alberta Government support for increased funding capacity and for a demonstrated commitment to the preservation mandate of the Alberta Parks Division.

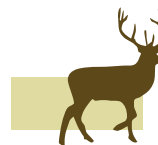
- Cooperation from other Alberta government departments, specifically Energy, Sustainable Resource Development, and Environment.
- Cooperation and support from other land managers and users, specifically the forestry, oil/gas and agriculture sectors of the province.
- Continued cooperation and support from all Albertans, including park users and volunteer park stewards.
- Increased communication and participation with a variety of stakeholders and communities including tourism operators, recreation users, aboriginal groups, rural municipalities, and environmental organizations.
- Cooperation with the managers of private conservation lands (organizations and landowners).

These stakeholders will need to work together to ensure that gaps in the Alberta parks network (both in terms of protected area representation, legislation, and capacity needs) are filled according to conservation-based ecological criteria and principles. As the Bali Declaration of 1982 states, “the objectives of living resource conservation can be accomplished if wild species and ecosystems are maintained appropriately within an overall strategy involving awareness and support of the general public, governments and industry” (IUCN 1983). Ensuring that the private, non-government and government sectors are both informed and engaged in park-related issues is essential to a healthy parks system.

In December 2006 the new Premier of Alberta, Ed Stelmach made a public commitment to “improve Albertans’ quality of life” and “develop a plan for provincial parks and recreation areas to accommodate population growth” (AG 2006b). In a mandate letter to the Minister of the newly named Department of Tourism,

Parks, Recreation and Culture, the Premier listed three priorities for the Department, one of which was to “develop a plan for provincial parks and recreation areas to accommodate population growth and improve quality of life opportunities”(AG 2006c). However, it is yet to be seen if the Alberta government is truly committed to maintaining the ecological integrity of Alberta’s parks network in the face of unprecedented pressures from population growth and resource development so that the network is sustained and enhanced for future generations.

Alberta is a young province that is celebrating its 75th anniversary of Parks and Protected Areas. Although most Albertans now dwell in urban centers, a connection to the wild remains in our collective psyche and serves as a defining feature of our identity. As Canada’s most prosperous province it is certainly within our means to develop a world-class, well-funded parks and protected areas network. It is also our responsibility. Twenty-five years in the future, when we stand at the vantage point of the Alberta parks and protected areas’ centennial, a well-designed and well-managed parks and protected areas network will stand out as one of the most important accomplishments Alberta has achieved.





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Appendix A. IUCN Protected Area Categories

Category Ia: Strict nature reserve/wilderness protection area. Managed mainly for science or wilderness protection: an area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.

Category Ib: Wilderness area. Protected area managed mainly for wilderness protection: large area of unmodified or slightly modified land and/or sea, retaining its natural characteristics and influence, without permanent or significant habitation, which is protected and managed to preserve its natural condition.

Category II: National park. Protected area managed mainly for ecosystem protection and recreation: a natural area of land and/or sea designated to

- (a) protect the ecological integrity of one or more ecosystems for present and future generations;
- (b) exclude exploitation or occupation inimical to the purposes of designation of the area; and
- (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.

Category III: Natural monument. Protected area managed mainly for conservation of specific natural features: an area containing specific natural or natural/cultural feature(s) of outstanding or unique value because of their inherent rarity, representativeness or aesthetic qualities or cultural significance.

Category IV: Habitat/Species Management Area. Protected area managed mainly for conservation through management intervention – area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats to meet the requirements of specific species.

Category V: Protected Landscape/Seascape. Protected area managed mainly for landscape/seascape conservation or recreation: an area of land, with coast or sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.

Category VI: Managed Resource Protected Area. Protected area managed mainly for the sustainable use of natural resources: an area containing predominantly unmodified natural systems, managed to ensure long-term protection and maintenance of biological diversity, while also providing a sustainable flow of natural products and services to meet community needs.

Appendix B. Values of Protected Areas

(Canadian Environmental Advisory Council, 1991):

Ecological

- maintain essential ecological processes, and preserve the genetic diversity of species and the genetic variations within them;
- permit the continued evolution of wild species through natural selection in relatively undisturbed settings;
- provide “environmental services” such as the production of oxygen, the creation and protection of soils, the absorption and breakdown of pollutants, and the amelioration of local and global climates;
- preserve a full range of ecological options for future generations.

Educational

- promote a deeper understanding of the relationship between humanity and the ecosphere;
- build public support for habitat protection, waste reduction and pollution abatement outside of protected areas.

Scientific

- provide natural laboratories in which to gather and assess information on how ecosystems function and how they respond to change;
- serve as benchmarks against which to measure changes caused by humans or nature.

Economic

- preserve genetic stocks that have a vast potential for new foods, medicines and other products (over 50% of modern medicines make use of wild plant or animal species);
- protect habitat for species which are harvested outside of the areas (e.g., fish stocks, migratory wildlife);
- diversify local and regional economies through the tourism associated with parks and wilderness areas;
- promote non-consumptive recreation for the enjoyment of nature, physical fitness and escape from the pressures of urban living;
- avoid the costs associated with correcting environmental problems after they have occurred.

Cultural and spiritual

- foster national unity among Canadians;
- strengthen cultural identity and heritage values;
- respect the spiritual values of Canada’s aboriginal peoples;
- inspire artists, poets, musicians, writers and sculptors; and
- ensure the survival of species that symbolize our nation such as the grizzly bear, polar bear and moose.





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