Cypress Hills

Provincial Park

Management Plan

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Government of Alberta

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PREAMBLE

We invite Albertans to make a connection with the natural environment through our parks; to understand how we are part of a larger system – an ecosystem of living things. That connection is paramount to our survival. Our sustainability is a direct result of our ability to co-exist within a natural system.

By working together, Parks' staff, volunteers, stakeholders, partners and the public build a constituency of support for parks. We build a community of people connected to the natural world.

We believe in a set of values – a way of doing business involving knowledge, caring and action toward the conservation and enjoyment of our rich natural and cultural heritage in Alberta.

Parks within the Provincial Context

Alberta's prosperity has created opportunities for our economy and people, but it has also created challenges for Alberta's landscapes. Industrial activity, municipal development, infrastructure, recreation, and conservation interests often are competing to use the same piece of land. The competition between user groups creates conflict, and often puts stress on the finite capacity of our land, air, water, and habitat.

To resolve this conflict, the Government of Alberta developed the Land Use Framework (LUF). The purpose of the Land Use Framework is to manage growth, not stop it, and to sustain our growing economy, but balance this with Alberta's social and environmental goals. This is what the Land Use Framework is about – smart growth.

A key player in the management of growth is Alberta Tourism, Parks and Recreation as it has the responsibility for managing Alberta's provincial parks and for supporting tourism development. To ensure the management of parks aligns with the Government of Alberta's strategic direction, the *Plan for Parks* was drafted. It outlines key planning elements also found in the Land Use Framework, and both share the following desired outcomes:

- People-friendly communities and recreational opportunities
- Healthy ecosystems and environment
- Sustainable prosperity supported by our land and natural resources

The *Plan for Parks* also provides a foundation for decision making through a set of guiding principles. These guiding principles will help guide complex decision making where needs are diverse and sometimes competing.

The guiding principles are:

- Accountability
- Citizen Engagement
- Collaboration
- Continuous Improvement and Innovation
- Education
- Environmental Leadership
- Inclusion
- Integrated Management
- Knowledge-based Decision-making
- Respectful and Responsive
- Stewardship
- Sustainability

Alberta Tourism, Parks and Recreation will report to Albertans on progress that has been made towards the desired outcomes and milestones in the Ministry Annual Report. This way, Albertans will be able to track the environmental, social, and economic health of Alberta's parks system.

Regional planning under the Land Use Framework will address land use needs across the seven regions of the province. Regional plans developed under the Land Use Framework will provide broad direction, and will be an important input in the development of all park management plans. Park management plans are completed at a smaller scale prescribing detailed direction for a site or group of related sites, but always within a broader provincial and regional context.

Working Together Toward a Common Vision

We also recognize that unless we manage the environment responsibly, the beautiful landscapes we enjoy may cease to exist. Good environmental management positively impacts ecosystems found within park boundaries and the effect is felt throughout the province.

Alberta's Plan for Parks reaffirms that we must meet both objectives – recreation and conservation – within Alberta's parks system because they are inextricably linked.

The Plan for Parks includes the following vision:

Alberta's parks inspire people to discover, value, protect and enjoy the natural world and the benefits it provides for current and future generations.

Key to this vision is the role of Albertans, who will help create the recommendations that guide how their parks are managed.

Community Engagement is Integral to Our Success

The *Plan for Parks* reaffirms a commitment to engage Albertans to ensure informed decisions are made that are sensitive and responsive to public concerns and values. Consultation with our Aboriginal communities, stakeholder groups, partners, and the public is beneficial in planning and decision-making. It helps to identify and gain understanding of key issues; to help fully identify and assess the impacts of options; to ensure that all components of public involvement have been considered; and, to feed information into the decision-making process and to evaluate the results.

The Parks Division believes strongly that meaningful consultation is an essential component of community engagement. The partnerships and relationships developed and nurtured through community engagement are generally long-term and provide an effective assessment of park management.

Aboriginal consultation is a unique process because the Government of Alberta recognizes Aboriginal communities on a government-to-government basis. Consultation between the Parks Division and Aboriginal communities involves information sharing and ongoing relationship building with the objective to reduce or mitigate impacts on Treaty rights and traditional uses on lands administered by the Parks Division.

Community engagement and consultation will continue to be a critical aspect of park management planning processes.

Cypress Hills Interprovincial Park is a priority site

Cypress Hills Interprovincial Park - Alberta is a significant site in the Alberta Parks' system and was chosen as a priority for management plan development.

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ABBREVIATIONS

ANHIC	Alberta Natural Heritage Information Centre
ARC	Alberta Innovates
AUE	Animal Unit Equivalency
AUM	Animal Unit Month
AWA	Alberta Wilderness Association
BCSA	Battle Creek Stock Association
CD	Census Division
CHIP	Cypress Hills Interprovincial Park
CLI	Canada Land Inventory
CMI	Climate Moisture Index
CO	Conservation Officer
GCM	Global Climate Model
HA	Heritage Appreciation
HACH	Heritage Association of Cypress Hills
HADP	Heritage Appreciation Development Plan
HRV	Historic Resource Value
LMU	Landscape Management Unit
MD	Municipal District
MLSA	Medicine Lodge Stock Association
MOU	Memorandum of Understanding
MPB	Mountain Pine Beetle
NCC	Nature Conservancy of Canada
NDT	Natural Disturbance Type
NFPA	National Fire Protection Association
NRV	Natural Range of Variability
NWMP	North West Mounted Police
PET	Potential Evapotranspiration
PD	Parks Division
PUF	Proper Utilization Factor
RASC	Royal Astronomical Society of Canada
RCMP	Royal Canadian Mounted Police
SARA	Species at Risk Act
SEASAR	South East Alberta Search and Rescue
SRD	Sustainable Resource Development
SWEF	Small-scale Wind Energy Facility
TPR	Tourism, Parks and Recreation
VS	Visitor Services
WEF	Wind Energy Facility
WMU	Wildlife Management Unit
WUI	Wildland Urban Interface

GLOSSARY OF TERMS

Adaptive Management A combination of management, research and monitoring in which credible information is gained and management activities are modified by experience (Scientific Panel for Sustainable Forest Practices in Clayoquot Sound 1995).

Animal Unit Month (AUM) The amount of for age required by an “animal unit” grazing for one month (Alberta Government 2007).

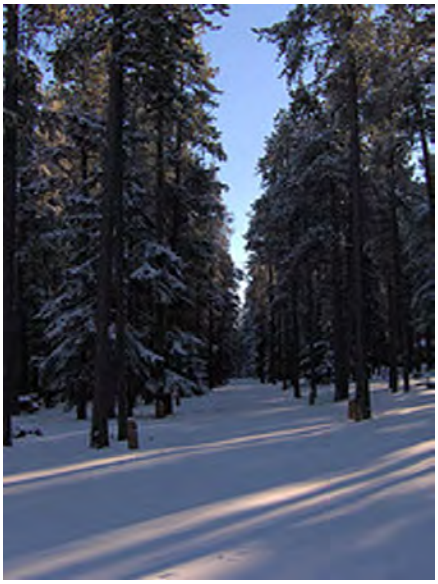
Biodiversity The assortment of life on earth including the variety of genetic material in all living things, the variety of species on earth and the various kinds of living communities and the environments in which they all occur.

Biological carrying capacity A population level that can be supported for an organism, given the quantity of food, habitat, water and other life infrastructure present.

Connectivity Habitat linkages that connect distinguishable areas such as habitat patches or nodes within a landscape (Alberta Prairie Conservation Forum 2006).

Conservation The wise use, management and protection of resources to maintain their quality and quantity on a sustainable basis (Alberta Prairie Conservation Forum 2006).

Ecological integrity Ecosystems have integrity when their native components (plants, animals and other organisms) and processes (such as growth and production) are intact.



Ecosystems The interaction between organisms, including humans, and their physical environment. Ecosystem health/integrity refers to the adequate structure and functioning of an ecosystem, as described by scientific information and societal priorities.

Ecosystem Management The concept of understanding and balancing inter-dependent issues related to ecology, economy and people in a manner that ensures a sustainable environment. We pose the question: What do we want the Cypress Hills

Uplands to look like over the next few decades, and how do we manage the various inter-dependant resources such as forests, grasslands and riparian areas, and the impact of people, so as to ensure sustainability?

FireSmart Zone An area within a given distance of a human structure under special management to minimize the risk of wildfire spreading to that structure.

Landscape A heterogeneous land area composed of a mosaic of interacting ecosystems that is repeated in similar form throughout, such as blocks of forest and agricultural fields (Forman 1995).

Landscape Management Unit A contiguous area having a recognizable pattern of topography, vegetation and land use.

Natural range of variability The spectrum of ecosystem states and processes encountered over a long time period (Gayton 2001).

Natural Heritage The geological features and landforms, associated biodiversity and ecosystem functions of a defined area.

Natural Region / Subregion A natural region is a broad landscape division characterized by a distinct set of climatic, vegetation, soil and topographic features. A natural subregion is a finer subdivision of the natural region based on landform variations over a smaller area. There are six natural regions subdivided into 20 natural subregions in Alberta (Natural Regions Committee 2006).

Passive management To permit natural processes to occur without active intervention, e.g., allowing native vegetation to grow, die and decay.

Range condition The present state of vegetation compared with that of the climax or original vegetation of the site (Wroe et al. 1988).

Range health The degree to which the integrity of the soil and the ecological processes of rangeland ecosystems are sustained (NRC 1994).

Relict cordilleran species Plant and animal species that spread eastward from the Rocky Mountains after the last glacial retreat but were isolated in the Cypress Hills as the climate of the plains became warmer and drier over time. These species are now found in the Montane Subregion of the hills.

Riparian An area of land adjacent to a stream, river, lake or wetland that contains vegetation that, due to the presence of water, is distinctly different from the vegetation of adjacent upland areas (Alberta Riparian Habitat Management Society 2005).

Stewardship An ethic whereby citizens, industry, communities and governments work together to responsibly care for and manage Alberta's natural resources and environment.

Seral stage A successional stage of a plant community before it reaches its 'climax' community (Government of British Columbia).

Viewscapes or Viewsheds are the extent to which people can see to the horizon in any direction while standing in a specific location.

EXECUTIVE SUMMARY

We are stewards of the land that has been entrusted to our care. Under this stewardship umbrella, Cypress Hills Interprovincial Park-Alberta is a flagship in a system of approximately 500 parks in Alberta.

This park management plan incorporates the stewardship values of knowledge, caring and action into a framework for management of this amazing landscape. Stewardship is the ***why***, the park management plan is the ***how***.

The management plan is divided into six chapters. **Chapter 1 (Introduction)** describes the background information on the park including location, access and climate as well as the role of the park within Alberta's system of parks. **Chapter 2 (Conservation and Protection)** describes the natural and cultural resources of the park and management of these resources. **Chapter 3 (Tourism and Community)** describes the facilities and infrastructure available in the park and in Elkwater Townsite, park visitation and regional tourism initiatives, and park involvement in community programs and events. In **Chapter 4 (Learning and Engagement),** the visitor services programs in the park are outlined, including heritage appreciation services (interpretive and educational services, orientation and information services, and marketing and promotions) and stewardship activities. **Chapter 5 (Outdoor Recreation and Healthy Living)** describes the recreation opportunities available in the park in addition to public safety issues and responses. **Chapter 6 (Park Management Units)** outlines the landscape management units and land use zoning and licenses for the park along with site-specific objectives.

Each chapter is divided by topic, in which a description of the current and past situation in the park is given. The description is followed by a planning table that describes the topic; management objectives; and strategies or actions for each given objective.

1.0 INTRODUCTION

1.1 HOW WILL THE MANAGEMENT PLAN BE USED

This document provides a framework for the management of Cypress Hills Provincial Park for a ten-year time period commencing on the approval date of this plan. It forms the foundation from which specific management and operational initiatives will be developed for the park.

This plan will be used by park staff and will also be available for use by other public agencies and individuals such as volunteers, leaseholders, members of special interest groups, and members of the public who have an interest in the management of Cypress Hills Provincial Park. It will also provide information that will assist in preparing annual operating plans and budgets.

Cypress Hills Provincial Park will be used in this document to refer to the provincial park found in Alberta. Any reference to Saskatchewan's park will be noted as Cypress Hills Provincial Park (Saskatchewan) or Saskatchewan's Cypress Hills Provincial Park. The Interprovincial Park will be referred to as Cypress Hills Interprovincial Park (CHIP).

1.2 WORKING TOGETHER

Other agencies having a role in park management include Alberta Sustainable Resource Development (SRD) - Fish and Wildlife Management Division; Alberta Environment; and Alberta Transportation. Support is also given from SRD on a variety of issues including forest health, forest fire control and benchmark range monitoring. These groups will also have the management plan accessible to them.

1.3 BACKGROUND

Cypress Hills Provincial Park, located in the southeast of Alberta, is an important part of the province's natural and cultural heritage (Map 1). The significance of this site and its classification under Alberta's system of parks are described below, along with a management vision for Cypress Hills Provincial Park and how it fits into the strategic direction of Alberta's parks system. A background on the park itself including regional context, location, climate and history is also given. This chapter provides an introduction to the management plan and its use in providing direction for the future of the park.

1.4 ALBERTA'S PROVINCIAL PARKS SYSTEM

The strategic direction for Alberta's parks system, *Alberta's Plan for Parks* (*Plan for Parks*), acknowledges the interconnectedness between the environmental, societal, and economic values of parks to the people of Alberta. It also recognizes parks as being important to the quality of life Albertans enjoy and that responsible management of our parks is essential to ensure that parks support a high quality of life for current and future generations.

1.4.1 The Vision for Parks

The *Plan for Parks* established a new vision for the parks system. This vision illustrates the need to balance recreation and conservation, as they are inextricably linked.

The vision for the provincial parks system is:

Alberta's parks inspire people to discover, value, protect and enjoy the natural world and the benefits it provides for current and future generations.

1.4.2 The Desired Outcomes of Parks

Specific management objectives and actions that are presented in park management plans are intended to guide the present and future management and operation of parks. These specific objectives and actions are framed within the broad desired outcomes of the parks system.

There are three desired outcomes for the provincial parks system.

- People friendly communities and recreational opportunities
- Healthy ecosystems and environment
- Sustainable prosperity supported by our land and natural resources

These three desired outcomes are not ranked by priority. They are inter-related and must be achieved together to meet the expectations of Albertans.

Similar to parks organizations across Canada and the world, Alberta Parks adopted four high-level program goals that address the important role of parks in the conservation of biodiversity, outdoor recreation, environmental education, and tourism.

The four program goals span the breadth of the Alberta Parks program, and similar to the desired outcomes, balance in the delivery of these goals through management objectives and actions, provides balance across the entire parks system.

The goals used to frame management objectives and actions for program delivery in park management plans are:

Conservation & Protection – Parks conserve Alberta's natural heritage and associated cultural heritage for current and future generations.

Learning & Engagement – Parks offer an opportunity to learn about, appreciate and care for Alberta's natural and cultural heritage.

Tourism & Community – Parks foster sustainable, nature-based experiences for Albertans and visitors that contribute to the economic and social fabric of Alberta.

Outdoor Recreation & Healthy Living – Parks provide diverse, enjoyable outdoor recreation opportunities that contribute to healthy lifestyles.

1.5 SITE SIGNIFICANCE STATEMENT

Cypress Hills Provincial Park contributes towards protection of the natural resources that make the Cypress Hills a unique ecological entity. The park's geological and climatic features cause the Cypress Hills to contrast dramatically with the surrounding prairies and have given the area a set of unique natural and cultural landscape values including a rich historical heritage and extensive water resources. The park contains a wide variety of flora and fauna, some of which are rare, unique or endangered species, and rare plant communities.

The Cypress Hills are a unique landform within the Canadian prairies, extending east-west across the southern Alberta-Saskatchewan border at heights of over 600 m above the surrounding grasslands. This mountain-like environment contrasts dramatically with the surrounding prairies in terms of its forested slopes, grassland plateaus, relict cordilleran flora and fauna, and moderate climate.

The distinct ecosystem, physiographic features, environmental importance and rich western history of the Cypress Hills are recognized nation-wide.

1.6 PARK CLASSIFICATION

Cypress Hills is classified as a Provincial Park under Alberta's system of parks. **Provincial parks** preserve natural heritage; they support outdoor recreation, tourism and natural heritage appreciation activities that depend upon and are compatible with environmental protection.

Provincial Parks:

- protect both natural and cultural landscapes and features;
- are distinguished from wildland parks by their greater range of outdoor recreation facilities, the extent of road access, and the interpretive and educational programs and facilities that are available to visitors;

- offer a variety of outdoor recreation activities and support facilities that promote appreciation of a park's natural heritage and cultural features;
- provide interpretive and educational programs that enhance visitor understanding and appreciation of, and respect for, Alberta's natural heritage (without damaging natural values) are offered in some provincial parks; these programs serve visitors of diverse interests, ages, physical capabilities and outdoor skills; and,
- typically allow automobile access to staging areas and support facilities.

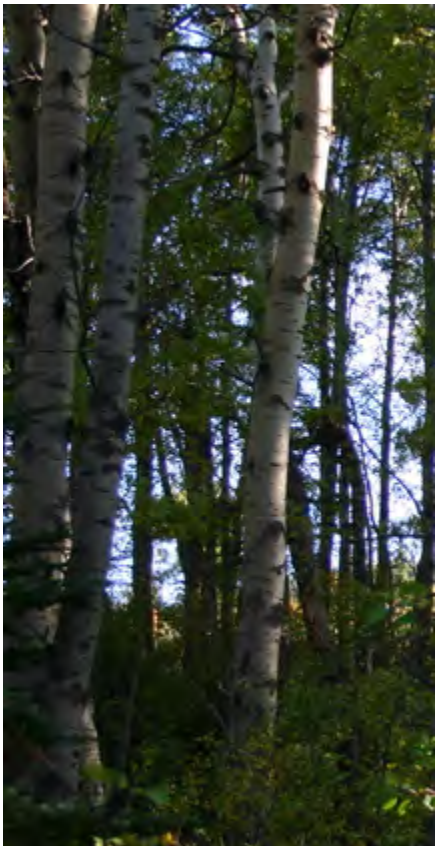
Alberta's parks inspire people to discover, value and enjoy the natural world and the benefits it provides for current and future generations (Alberta Parks' Vision 2009).

1.7 CYPRESS HILLS PROVINCIAL PARK MANAGEMENT VISION

The park's management perspective is reflected in the following vision statement: **Cypress Hills Provincial Park** will be managed for the protection, conservation, and appreciation of the heritage resources of the Cypress Hills ecosystems and the provision of outdoor recreation opportunities.

As a provincial park, Cypress Hills is managed according to the following purposes:

1. To assist in the preservation of the province's representative and special resources and ecosystems.
2. To protect the natural resources and ecosystems of the Cypress Hills that make this environment a unique component in Alberta's Parks system of natural regions.
3. To protect the prehistoric, historic, and cultural resources that assist in recording the human relationship with, and inhabitancy of, the Cypress Hills area.
4. To provide outdoor recreational, interpretive, and educational opportunities that enhance visitors' enjoyment and appreciation of the Cypress Hills environment.



Alberta Parks staff are mandated to work with the Saskatchewan Parks staff (Saskatchewan portion of Cypress Hills Interprovincial Park) according to terms of agreement laid out in a 1989 Memorandum of Understanding (MOU) which was amended in 1996 to include Fort Walsh National Historic Site (National Parks). According to the MOU, the three government agencies are required to work cooperatively to manage the resources and ecosystems of the Cypress Hills and seek ways to better promote and coordinate visitor services that are common to both parks. The terms of the agreement include:

- jointly pursuing resource management plans and general management and development statements for the Interprovincial Park;
- promoting the Interprovincial Park through joint development and distribution of maps and brochures;
- informing the public of the Interprovincial Park designation through highway signing;
- jointly pursuing an up-to-date visitor information system on park programs, campground vacancies, road and weather conditions;
- pursuing specific coordination and cooperation in developing visitor services and facilities, resource management activities and backcountry recreation opportunities; and,

Table 1. Program goals of Alberta Parks.

Conservation and Protection	Parks conserve Alberta's natural heritage and associated cultural heritage for current and future generations.
Outdoor Recreation and Healthy Living	Parks provide diverse, enjoyable outdoor recreation opportunities that contribute to healthy lifestyles.
Learning and Engagement	Parks offer an opportunity to learn about, appreciate and care for Alberta's natural and cultural heritage.
Tourism and Community	Parks foster sustainable, nature-based experiences for Albertans and visitors that contribute to the economic and social fabric of Alberta.

- investigating the feasibility and environmental impact of upgrading the Interprovincial Road linkage.

Although the Saskatchewan and Alberta governments are both responsible for the management of the Interprovincial Park, each agency is still required to manage and operate its own provincial park. This management plan is intended for Alberta's Cypress Hills Provincial Park.

1.8 REGIONAL CONTEXT

Cypress Hills Provincial Park is a unique site in that it is an island of distinctive terrain and vegetation surrounded by a sea of drier grassland. The park ecosystems are considered to be in both the Montane Subregion (Rocky Mountain Natural Region) and the Mixedgrass Subregion (Grasslands Natural Region) according to Alberta's classification of natural regions (Natural Regions Committee 2006). The majority of the park is in the former subregion.

The vegetation communities and wildlife found in Cypress Hills Provincial Park are strongly interconnected with the surrounding landscapes. Native grassland is an important component of the ecosystem adjacent to the park, especially to the south; this allows for movement of grassland species across park boundaries. There are fewer wetlands, water bodies and forested areas in the drier grasslands outside the hills. Some fragments of forest can be found in the area immediately surrounding the park, but these patches become scarce further from park boundaries. Contiguous forest patches link Cypress Hills Alberta with Cypress Hills Saskatchewan and with forested fragments outside the park's southwest boundary (Map 2). A relatively large wetland complex can be found in the lowland grasslands to the north of the park, significant for water birds and migratory species in the regional landscape.

The Cypress Hills are in the path of the Central Flyway taken by migrating birds travelling through the Great Plains. This flyway is one of four administrative flyways that cross North America and are governed by flyway councils; the Central Flyway stretches from the Northwest Territories into Alberta and Saskatchewan and southward through Montana, North and South Dakota, Wyoming, Nebraska, Colorado, Kansas, New Mexico, Texas and Oklahoma (Central Flyway Council 2003).

1.8.1 Socio-Economic Context

The park is located within Cypress County, which has a population of 6,114, 98% of which is rural (Statistics Canada 2002). The population of Cypress County increased by 7.6% between 1996 and 2001. This was the only county within the Mixedgrass Subregion to experience a population increase during this period. Medicine Hat, the largest urban centre in the area, is a growing community with a current population of approximately 57,000.

The total experienced labour force in Cypress County is 3,630 people, with 36% involved in agriculture and resource-based industries (Statistics Canada 2006). Much of Cypress County immediately surrounding the park is highly productive agricultural land. There are oil deposits and large quantities of natural gas reserves in the area.
A number of developed and recreational sites are located in the areas surrounding the park (Map 3). Saskatchewan's Cypress Hills Provincial Park consists of outdoor recreational resources, facilities, and services that are complementary to those of Alberta's park. The West Block Wilderness Area, which has minimal development, provides more primitive outdoor recreational opportunities than the Centre Block, which is much more intensively developed.

Adjacent to the southern boundary of Saskatchewan's portion of the West Block is Fort Walsh National Historic Site, a reconstruction of the North West Mounted Police post built in the Cypress Hills in 1875. This national historic site, operated by Parks Canada Agency, focuses upon preserving the cultural past of the area. This 6.5 km^2 park provides day use facilities and services.

Various outdoor recreational resources are found in the vicinity of Cypress Hills Provincial Park. These include:

- Golden Sheaf Park, a small campground operated by the County of Forty Mile, is located at Rattlesnake Reservoir;
- Bullshead Reservoir and Michelle Reservoir Provincial Recreation Areas which provide day use facilities;
- Echo Dale Regional Park which offers opportunities for swimming, canoeing and fishing in its man-made lake; and,
- Cavan Lake Park, a popular local fishing lake.

Several additional fascinating and unique landscapes can be found in and near the southeastern corner of the province. These resources include the arid lands south of the park, the Milk River Canyon, Red Rock Coulee, Pakowki Lake and its related sand dune formations, and the Great Sand Hills of southwestern Saskatchewan.

1.9 LOCATION AND ACCESS

Cypress Hills Provincial Park is located in the south-eastern corner of Alberta (Map 1). The park covers an area of approximately 205 km^2, extending 30 km at the widest point between its east and west boundaries and 10 km between its north and south boundaries. The park's eastern boundary coincides with the western boundary of the Saskatchewan Cypress Hills Provincial Park and lies along the Alberta-Saskatchewan border. The southern boundary of the park is approximately 75 km from the Canada-United States border.

Numerous roadways provide access into Cypress Hills Provincial Park (Map 4). The major access route is Highway 41 (Buffalo Trail) that provides entry into the park from both the north and the south. The Trans-Canada Highway 1 provides access to Highway 41. Both of these highways are paved. Access into the park is also possible by a number of other routes: Highway 514, Bull Trail, Graburn Road, Willow Creek Road and Golf Course Road (outside the park). Highway 514 (Jackpot Road) is an all-weather road that skirts the north side of the park between Highway 41 and Eagle Butte Road, while the latter roads are unimproved and are not considered to be all-weather roads. These roads are maintained by Cypress County.

Cypress Hills Provincial Park is connected to the rest of the Interprovincial Park by a series of roads that travel east into the West Block of CHIP-Saskatchewan and then across non-park land to the Centre Block. The Battle Creek and Fort Walsh Roads (located in the West Block) and the Gap Road (located in the Regional Municipality of Maple Creek, Saskatchewan) are the main roads that connect with the Centre Block of Cypress Hills Interprovincial Park. The Gap Road is located on non-park land. The condition of these roads vary and some roads are closed during the winter months.

Elkwater Townsite is located adjacent to Highway 41, on the southern shore of Elkwater Lake. The nearest city to the park is Medicine Hat, Alberta, located approximately 70 km from the Elkwater Townsite. The city of Calgary is found approximately 375 km from the park; travel to and from these locations is possible along Highway 41 and the Trans-Canada Highway. Smaller Alberta communities found in the area of the park include Irvine, Dunmore, Walsh and Manyberries. Wild Horse is the Canadian port of entry at the Canada-United States border. Nearby Saskatchewan towns include Eastend and Maple Creek, located approximately 100 km from Elkwater.

1.10 CLIMATE

The higher elevation of the Cypress Hills creates a climate and environment that supports unique animal and plant species and communities. The upper elevations of the eastern Cypress Hills belong to the Montane Subregion, which means they experience relatively mild seasons compared to the rest of Alberta (Natural Regions Committee 2006). Other climatic characteristics of the Montane Subregion include a summer-high precipitation pattern and frequent Chinook winds (Natural Regions Committee 2006). There are considerable differences in microclimate within the park depending on slope and aspect. North- and east-facing slopes are typically cooler and moister because of the lack of direct sunlight and protection from prevailing southwesterly winds (Natural Regions Committee 2006). The mean annual temperature of the Montane Subregion is 2.3˚C (a 13.9˚C mean in the warmest month and -10˚C mean in the coldest month; Natural Regions Committee 2006).

At lower elevations, the climate more resembles that of the Mixedgrass Subregion of the Grassland Natural Region. This subregion also follows a summer-high precipitation pattern with a typical June maximum and a moisture deficit occurring near the end of the growing season (Natural Regions Committee 2006). The mean annual temperature is 4.4˚C for the Mixedgrass Subregion with a mean temperature of 17.6˚C in the warmest month and -10.2˚C in the coldest month (Natural Regions Committee 2006). However, conditions in the Cypress Hills provide a slightly cooler and moister environment than elsewhere in Alberta's Mixedgrass Subregion (Adams et al. 2005b, Natural Regions Committee 2006). The cool and moist climate of the Hills results in reduced evaporation rates and deeper snow accumulation. These factors have been important in maintaining the unique biotic character of the area and enhancing the recreational potential of the Hills throughout the year.

Precipitation in the Cypress Hills is greater than in the surrounding prairies due to the orographic effect; however, this is tempered by the fact that the hills are still within the rain shadow of the Rocky Mountains. Over a twelve-year period, the average annual precipitation in the park has been estimated to be approximately 50-55 cm, compared to 33 cm in Medicine Hat (Environment Canada 2004). Summer precipitation typically comes in the form of local thunderstorms, resulting in a moderate evaporation rate and an annual water deficit of approximately 100 mm (Coleman 1968 in ARC 2001). Summer precipitation peaks occur in June and September. Mean annual precipitation is higher within the Montane Subregion (589 mm/year) than within the Mixedgrass Subregion (394 mm/year; Natural Regions Committee 2006).

Historic records and environmental evidence show the occurrence of ten one-year droughts and five three-year droughts (defined as periods of precipitation in the lowest 10th and 20th percentiles) in the historical climate record between 1700 and 2000 (Sauchyn et al. 2003).

1.11 PARK HISTORY

The Cypress Hills have had a fascinating cultural history, providing significance and resources to a diversity of users over 8000 years of uncovered history. This special place first offered shelter, food and a gathering place for generations of First Nations people, instigated the establishment of the North West Mounted Police and sustained numerous sawmill operations. In 1911, Cypress Hills was designated a Dominion Forest and in 1930, control of these lands was transferred to the province of Alberta. Cypress Hills Provincial Park was established in 1951 and development of recreational facilities soon followed. In recent times, the Cypress Hills have set precedence through the establishment of Canada's first Interprovincial Park and designation of the largest protected area Dark-Sky Preserve. A more detailed description of the history of the Cypress Hills is found in Appendix A.

1.11.1 History of Planning for the Cypress Hills Area

The Master Plan for Cypress Hills Provincial Park, approved in 1981, provided a useful overview of park resources and development as well as some direction for management and operations. Understandably, this twenty-five year old plan is outdated and justifiably inadequate to address the challenges and issues of today.

Significant efforts have since been made to arrive at direction-providing documents for Cypress Hills. Most recently, an extensive planning and public consultation process occurred between 1995 and 2000, resulting in the development of a draft park management plan. This June 2011 government-approved management plan recognizes and incorporates the substantial work previously completed.

The *Heritage Appreciation Development Plan* was completed in 2004 and is being used to guide Heritage Appreciation activities within Cypress Hills Provincial Park.

All other Cypress Hills' plans and documents will be reviewed and updated as required. A list of the planning history for the Cypress Hills area can be found in Appendix B.

PROGRAM GOAL: CONSERVATION AND PROTECTION

Parks conserve Alberta's natural heritage and associated cultural heritage for current and future generations.

Conservation and Protection Planning Principles

1.1 Ensure long-term ecological health.

- Efforts are made to limit the human footprint/impact on natural processes and systems where possible to allow them to continually evolve and change. There is little 'maintenance' of the system itself beyond limiting human impacts, where possible
- Biological diversity is conserved, including representative, unique, rare and endangered plant and animal species, communities and gene pools
- Special measures are taken to avoid degradation of water sources, wetlands, rare ecosites and rare vegetation associations, and habitats of regionally or nationally rare and threatened species
- Native ecosystems are allowed to function and evolve naturally wherever possible
- The impact of visitor activities on native ecosystems is minimized while means are provided for visitors to reconnect with nature
- Leadership, coordination and planning support are provided in developing ways to use the land and natural resources in ways that reduce impacts on biodiversity

1.2 The park is managed within the context of the broader landscape.

- Consideration of future outcomes related to environmental, economic and social factors
- Recognition that the park does not function in isolation of surrounding land use and habitat conditions
- Cooperation with park neighbours to minimize/mitigate outside impacts on the park
- Contribution of the park to a healthy regional ecosystem
- Ecosystem management is used to address issues in order to improve overall stewardship

1.3 The precautionary principle is exercised using the best available information to guide decision making while encouraging innovation through leadership and best practices.

- Decisions are based on best current scientific knowledge
- Planning and decision-making are proactive, adaptive and precautionary
- Natural biological, physical and climatological processes are allowed to shape the park environment except where facilities and significant communities, species, gene pools and landscapes are threatened

1.4 Research to strengthens sustainability and enhance visitor opportunities within and beyond the boundaries of the park is encouraged and undertaken.

1.5 Vegetation management occurs in consideration of natural processes typical of the site's Natural Subregion.

- All relevant and effective modes of vegetation management are considered while ensuring that all ecological considerations are strictly safeguarded
- In all cases, vegetation management is undertaken using an ecologically appropriate approach

1.6 Commitment to First Nations consultation as per Alberta's First Nations Consultation Policy.

PROGRAM GOAL: TOURISM AND COMMUNITY

Parks foster sustainable, nature-based experiences for Albertans and visitors that contribute to the economic and social fabric of Alberta.

Tourism and Community Planning Principles

2.1 Infrastructure is designed and developed to facilitate inclusive visitor experiences and where cost effective will employ new and innovative sustainable technologies.

- Architecture maintains sense of natural and cultural heritage, landscape and sense of place

2.2 Quality infrastructure services are provided that meet or exceed public expectations and result in high satisfaction.

2.3 Development is limited to a set areal extent (e.g., Facility Zone or Townsite) subject to guidelines that it takes place in an environmentally sensitive manner compatible with heritage appreciation and heritage protection goals.

- Footprint of facility zones is minimized

2.4 Sustainable tourism is based on an appreciation of the nature, history and culture of the park and does not threaten the beauty and ecological integrity of the park.

2.5 Community engagement is based on effective working relationships with local stakeholders, volunteers, partners and the public to accomplish mutually-valued, worthwhile aims.

2.6 All infrastructure development will utilize the Environmental Review Assessment and Historic Resource Impact Assessment

PROGRAM GOAL: LEARNING AND ENGAGEMENT

Parks offer an opportunity to learn about, appreciate and care for Alberta's natural and cultural heritage.

Learning and Engagement Planning Principles

3.1 Programs strive to inform, inspire and involve Albertans to improve their connection to the natural world.

- Promotes understanding of the environment and the ecological processes upon which we depend

3.2 Commitment to First Nations consultation as per Alberta's First Nations Consultation Policy.

PROGRAM GOAL: OUTDOOR RECREATION AND HEALTHY LIVING

Parks provide diverse, enjoyable outdoor recreation opportunities that contribute to healthy lifestyles.

Outdoor Recreation and Healthy Living Planning Principles

4.1 Provide safe and secure opportunities in a peaceful environment to ensure quality visitor experiences.

4.2 Enhance our quality of life by providing natural places for family and friends to recreate.

4.3 A fair, reasonable and equitable opportunity to participate in and benefit from a range of appropriate activities and experience available in the park regardless of social, economic or physical condition.

4.3 Commitment to First Nations consultation as per Alberta's First Nations Consultation Policy.

1.12 LANDSCAPE MANAGEMENT UNITS

To provide an ecological basis for managing Cypress Hills Provincial Park, the park was conceptually divided into ecological 'landscape management units (LMUs) based on similar geology, soils and vegetation under the assumption that areas of similar ecological background require similar management strategies (Map 5). Watershed boundaries were also taken into consideration when differentiating LMUs (Map 6).

There are twelve LMUs identified within the park:

*1. **Elkwater** includes the Townsite, Townsite campgrounds and Elkwater Lake and wetlands;*

*2. **North Shore** includes the grasslands to the north of Elkwater Lake;*

*3. **Ski Hill** includes the Hidden Valley Ski Hill area;*

*4. **West End** includes the escarpments at the far western end of the park;*

*5. **West Fire Tower** includes the portion of forested slopes along the southwestern end of Murray Hill Road;*

*6. **Willow Creek** includes the forested watershed of Willow Creek and Spring Creek draining south into the Lodge-Battle Creeks Watershed from the southwest of the park (luvisol soils);*

*7. **Murray Hill** includes the western escarpments on grassland chernozem soils along Murray Hill Road, west of Highway 41;*

*8. **Ross Creek Headwaters** includes the forested watersheds (luvisol soils) of Beaver and Mitchell Creeks north of Murray Hill and south of Elkwater in the Seven Persons Creek Watershed and east as far as Bull Trail;*

*9. **Plateau** includes the level upland fescue grassland (orthic black chernozem soils) plateau in the centre and southeast of the park;*

*10. **Spruce Coulee** includes Spruce Coulee Reservoir and Reesor Lake and the north slopes of the park north of Reesor Road approximately following the major watershed divide and east as far as the Reesor Hill;*

*11. **Reesor Hills** includes the northeastern slopes east of Reesor Lake; and,*

*12. **East Valleys** includes the forested watershed (luvisol soils) of Battle Creek, Storm Creek and Nine Mile Creek in the east of the park.*

2.0 CONSERVATION AND PROTECTION

Cypress Hills Provincial Park contributes towards protection of the natural resources that make the Cypress Hills a unique ecological entity. Managing the natural resources found within the park presents its own challenges, as do external threats such as global climate change and development adjacent to the park. Research, adaptive management and monitoring continue to be important.

2.1 GEOLOGY, LANDFORMS AND SOILS

The unique character of the Cypress Hills is a direct result of its geological history. Unlike the faulting and uplifting that formed the Rocky Mountains to the west or the local uplift from upwelling magma that formed the Sweetgrass Hills to the south, the Cypress Hills were formed by the deposition of sedimentary layers followed by erosion of the surrounding areas. The position of the Cypress Hills mid-way between the pre-glacial ancestors of the South Saskatchewan and Milk River drainage systems likely spared it the stronger erosional forces (Saskatchewan Museum of Natural History nd.)

As a result of the hills' resistance to millions of years of erosion and glaciation, the Cypress Hills reach up to heights of over 600 m above the surrounding prairies and remain as an unglaciated upland or the Cypress Hills Plateau, which is often referred to as a 'nunatak'. The plateau area ascends westward from an elevation of 1310 m in the east towards the highest peak of 1466 m, the Head of the Mountain. Abrupt, steep escarpments are found to the north and west, while the plateau slopes gradually downward to the plains in the south and east.

As the glaciers melted at the end of the last Ice Age, distinguishing geological features of the present day park were formed. For example, meltwater channels along the northern and western edges of the Hills created steep escarpments where prominent exposure of the Cypress Hills conglomerate can be found (Beaty 1975). Deglaciation also caused large amounts of debris to be deposited around the northern edge of the Hills to form a hummocky terrain (Beaty 1975). Also, during this time, northerly winds deposited moderate to fine-textured loess sediment on the plateau overtop of

the conglomerate formation. In places, this material covered the plateau to a depth of 30 cm to 2.5 m in some locations.

The Cypress Hills conglomerate is very porous and permeable, and in concert with bentonite clay layers, acts like a giant sponge which absorbs soil moisture. This moisture percolates downward and is slowly released by seepage springs along the slopes of the plateau, creating the conditions for the growth of the lush forests which dominate those areas as well as feeding important regional groundwater resources.

During the 14 000 years since the last glacial period, the Cypress Hills have been subjected to pronounced changes in climate and ecosystems (Strong and Hills 2005). Soil characteristics are influenced by the parent bedrock material, climate, biological communities, topography, and time. In the Cypress Hills, these factors have been markedly different than the surrounding prairie, and, consequently, the soils in the Hills are quite distinctive and transitions between soil types are marked.

The Hills are covered by both relict ancient soils known as paleosols that have not been buried by newer sediments and also by buried paleosols overlain by more recent deposits. The relict soils have been modified by changes in climate and the corresponding changes in the plant and animal communities. In addition to these unique soil features, the following four major types of soil are found in the Cypress Hills area:

1. well-developed forest soils (Montane Subregion);
2. grassland soils (Montane and Mixedgrass Subregions);
3. various wetland soils; and,
4. immature shallow soils which develop where conditions inhibit the accumulation of soil layers (e.g., floodplains or steep, eroding slopes).

There are a variety of soils in the Cypress Hills including forest soils (brunisols and luvisols), grassland soils (chernozems), and wetland soils (gleysols and terric humisols). Each of these soils types both reflect and influence the type of vegetation found in a particular area. An interesting feature of the Cypress Hills is that chernozems, typically formed under grassland conditions, can exist under some stands of aspen, spruce and lodgepole pine. The fescue grasslands of the Cypress Hills plateau are especially noteworthy for their deep black soils. When forest species invade grasslands, soils are altered through chemical processes associated with the tree cover. In the Cypress Hills, the boundary between the grassland and forest soils shifts slowly, according to the prevailing environmental conditions.

2.1.1 Conservation Significance

The Cypress Hills plateau is the largest unglaciated upland area in the province of Alberta. This has led to the presence of extremely old soils compared to neighbouring areas, making the Hills an important location for scientists to study pre-glacial North America (EcoLeaders 2004). Soil deposited by the glaciers (glacial till) is only found at

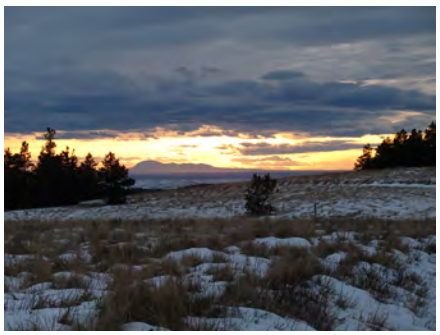
the edges of the Hills. Another indication that the Cypress Hills were not glaciated is the layer of wind-blown soil (known as loess) that was deposited over the conglomerate on the plateau during glaciation periods.

Slumping usually occurs after heavy rains or snowmelt, when the bentonite becomes saturated and unstable and can no longer support the layers above. Although slumping was evident in 1960, the big Police Point Slump occurred in 1967, moving 1.5 million m^3 of earth, and is still moving slowly today.

Palaeontological discoveries in the Cypress Hills provide evidence of the region's prehistoric life. For example, a significant set of fossils of Oligocene mammals were found in the Cypress Hills conglomerate dating to 40 million years ago, in the Saskatchewan portion of CHIP (Saskatchewan Museum of Natural History nd.). These fossils include bones of the Titanothere, a mammal similar to a rhinoceros with a unique branched horn. Other fossils of early rhinoceros-, pig- and deer-like mammals have been found in the conglomerate.

Specific sites of geological significance include:

Site	Size	Importance
Police Point Slump	~ 30 ha	geomorphological feature the site provides an exposed cross section of the Tertiary formations in the Cypress Hills
conglomerate outcoppings	~ 30 ha (combined)	significant outcroppings of Cypress Hills conglomerates are found along the headwaters of Battle Creek, along the south sides of both the Nine Mile Creek and Graburn Creek headwaters, and at Horseshoe Canyon



2.1.2 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU/ Zone-specific
Park Geology	To protect unique geological and geomorphological resources	• Consider the park's unique glacial history in programming and in park activities • Protect conglomerates from activities that lead to accelerated erosion or other movement of these features, considering such sites as: o Horseshoe Canyon (LMU 7) o Battle Creek headwaters (LMU 9) o Police Point slump (LMU 12) o south sides of Nine Mile and Graburn Creek headwaters (LMU 9) • Protect the unique geological landforms through appropriate land use zoning and management techniques	x	LMU 7 LMU 9 LMU 12
	Allow natural geological processes to occur in areas where they do not impact facilities or infrastructure	• Incorporate potential human hazards in our Public Safety programming e.g., identify areas of slope instability • Identify areas of slope instability (especially in places susceptible to excess rainwater runoff or high snowmelt zones) • Mitigate the impacts of slumping on the infrastructure and facilities in the Elkwater Facility Zone (LMU 1) or consider relocation of existing structures in unstable areas	x	LMU 1

2.2 NATURAL AND CULTURAL LANDSCAPE VALUES

The Cypress Hills landscape is of great natural significance and cultural value. The 'forest island' and the elevation of the Hills create an environment where common and rare cordilleran (montane) species flourish. The elevation of the Hills relative to the surrounding prairie offers expansive landscape views and allows for optimum night sky viewing. The quality of the night sky viewing has allowed Cypress Hills Interprovincial Park to be designated as Cypress Hills Dark-Sky Preserve.

2.2.1 The Hills as a Forest Island

The variety of habitats in Cypress Hills Provincial Park supports plant and animal communities that are uniquely different from that of the surrounding prairie. Some species are not found anywhere else in the province, while others are found in the Rocky Mountains, 300 km to the west. The latter group of species, referred to as relict cordilleran (montane) species, spread eastward from the mountains shortly after the last glacial retreat, but were isolated in the Hills when the climate of the plains gradually became warmer and drier. Much of the natural value of the Hills stems from the fact that the area is a refuge for species and ecosystems at the edge of their natural range (EcoLeaders 2004).

The Cypress Hills are therefore important as an 'island' of relict cordilleran flora and fauna situated in a sea of drier mixed grassland. The composition and habitat relationships of the flora and fauna are unique in Canada and provide clues to pre-glacial, glacial and post-glacial environments in the area. The Cypress Hills area is distinct in the meeting of three different biotas in such close proximity: the montane, mixed grassland and dry mixed grassland (Matrix Planning 2003).

Small forest remnants similar to the Cypress Hills are found isolated throughout the Great Plains of North America, and are an important part of continental biodiversity. Many forest species in the Cypress Hills parallel vegetation found in the Rocky Mountains to the west and Montana's Sweetgrass Hills to the south (EcoLeaders 2004).

Cypress Hills Provincial Park falls both within the Montane and Mixedgrass Natural Subregions, with the majority of the areas under the former category and the Mixedgrass Subregion found along the edge of the park boundaries.

2.2.2 Viewscapes

Another landscape value of the Cypress Hills Provincial Park is its viewscapes. Points of higher elevation in the park provide for viewing of the park's forested slopes, its lakes, and the surrounding prairies.

Significant developed viewpoints are found in the park, including:

1. The **Horseshoe Canyon Viewpoint**, the closest to Elkwater Townsite, is located at the southern end of the Horseshoe Canyon Trail overlooking the Horseshoe Canyon Slump and the rolling rangeland found to the north of the park; and,
2. The **Reesor Lake Viewpoint**, found along the Reesor Lake Road, provides the opportunity for park users to view the widest panorama: Reesor Lake area, the prairies lying to the north of the park, and Saskatchewan's Cypress Hills in the east.

Other viewscapes as yet undeveloped include:

- The Head of the Mountain, located in the park's west end overlooking the prairies southwest of the Cypress Hills as well as Montana's Sweetgrass Hills. The elevation is 1466 m, the highest elevation in both the Cypress Hills and in southern Canada between the Rocky Mountain foothills and the Labrador coastal mountains (Beaty 1972);
- the view of the Police Point Slump from Battle Creek Road;
- the view of the undeveloped prairie to the north of Elkwater Lake from the Townsite and the southern shore of Elkwater Lake;
- the Elkwater Lake wetlands at the south shore of Elkwater Lake;
- view of lake and Battle Creek valley from Reesor Lake Road;
- the Battle Creek/Graburn Point viewpoint looking south from Battle Creek Road east of Police Point Road;
- the view to the west from the top of Police Point Road;
- the view west over Spruce Coulee from across the road from the Reesor Lake Viewpoint; and,
- the view of the area south of the park and the Montana Sweetgrass Hills from the former landfill site.

There are additionally many scenic drives along park roads. Visual resources will be analyzed and incorporated into future planning in the park.

2.2.3 Cypress Hills Dark-Sky Preserve

The opportunities for night sky viewing are a significant value within the park. The Royal Astronomical Society of Canada (RASC) encouraged designation of Cypress Hills as one of few areas in the country for observing celestial bodies without interference from artificial lighting. The thinner atmosphere at high elevations and relatively stable weather provides numerous opportunities for excellent nighttime sky viewing. These factors, and minimal development in the region surrounding the park, help to make the Cypress Hills one of the best places in North America for stargazing. The Cypress Hills Dark-Sky Preserve was designated on September 28, 2004.

The current sources of light pollution are predominantly found in the Elkwater Townsite. However, programs have recently been implemented to utilize appropriate lighting fixtures which minimize impacts on the night sky. Further enhancement of these programs is required to maintain the dark-sky preserve.

2.2.4 Management Issues, Objectives, Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU/ Zone-specific
View-scapes	Maintain and protect the natural visual integrity within the park	• Conduct visual analysis and identify appropriate mitigation for all development proposals within scenic viewsheds as part of the Alberta Parks' Environmental Review process • Maintain existing viewpoints within the park including: o Horseshoe Canyon Viewpoint (LMU 7) o Reesor Lake Viewpoint (LMU 10) o off-trail viewpoints accessible on foot • Consider developing additional viewpoints in such areas as: o Head of the Mountain viewpoint (LMU 7) o view of Police Point Slump from Battle Creek Road (LMU 12) o Graburn Road east of Police Point Road (view south of plateau prairie; LMU 9) o top of Police Point Road (view to the west; LMU 9) • Visual integrity to be maintained in the following areas of the park: o Elkwater Townsite (LMU 1) o view of undeveloped north shore prairie to the north of Elkwater Lake from Townsite area (LMU 2) o wetlands at east end of Elkwater Lake (LMU 1) o view west over Spruce Coulee from across the road from Reesor Lake Viewpoint (LMU 10) o view of lake and Battle Creek valley from Reesor Lake Road (LMU 10)	x	LMU 1 LMU 2 LMU 7 LMU 9 LMU 10 LMU 12

Topic	Objectives	Strategies / Actions	Park-Wide	LMU/ Zone-specific
	Encourage the protection of viewscapes of surrounding lands not managed by Alberta Parks	• Participate in consultations with adjacent landowners and Cypress County regarding viewshed protection and scenic integrity • Communicate with staff and local community regarding importance of scenic resources • Initiate scenic integrity analysis for important and threatened viewsheds • Encourage research on economic impact and value of scenic resources (See: Research Management 2.10.1)	x	
Cypress Hills Dark-Sky Preserve	Maintain the designation of the Cypress Hills Dark-sky Preserve	• Refer to Infrastructure Objectives and Strategies/Actions	x	

2.3 CULTURAL HERITAGE

The Cypress Hills are rich in history and artifacts associated with the diversity of human occupation of the area. The history of Aboriginal groups, the arrival of Europeans, the fur trade, Métis settlement, the North West Mounted Police, the ranching era, and the Canadian conservation movement are well-represented. Archaeological excavations at the Stampede Site suggest that intermittent hunting and camp use occurred more than 8000 years ago. There is evidence that many First Nations used the area prior to 1870. Sixty-five historical resource sites have been identified to date within Cypress Hills Provincial Park.

The largest and most well-known prehistoric sites within the Park include the Stampede site (DjOn-26), the South Battle Creek Site (DjOm-17), the effigies at Sites DjOm-10 and DkOn-18 and burial sites that occur throughout the park. Historical period sites of significance include two North West Mounted Police Posts.

The Stampede site is one of the best known historical resource site locations within the park, and is a deep, well-stratified, multiple occupation site situated on a floodplain at the base of the north slope of the Cypress Hills. Located in the valley of a small stream that flows into Elkwater Lake in the northwestern portion of the park, it was identified during assessments in advance of campground development in 1971. The site represents activities associated with habitation and domestic activities and possesses as many as 14 different culture-bearing layers representing at least 8000 years of Alberta prehistory (Unfreed 2007).

The South Battle Creek site, identified in 1966, is comprised of a large land area (approximately 6.5 km long and 200 m wide) on the south arm of Battle Creek in the central portion of the park. The site is comprised of a number of elements, including a tipi ring at the west side of the site, lithic artifact scatters and collections of pottery. Materials associated with the site represent a number of occupation periods of both the Middle and Late Prehistoric Periods (approximately 7500 years ago to 300 years ago) in Alberta. Other campsites in the same general area include DjOn-14, near an unnamed spring on the northwest edge of the Cypress Hills, which contains numerous cobble tools, and DjOn-19, which includes a large scatter of artifacts at the head of the west arm of Battle Creek (Unfreed 2007).

Other unique prehistoric sites within Cypress Hills Provincial Park include DjOm-10, identified as an effigy. Within archaeological sites, effigies are generally collections of rock or sandstone slabs that are arranged in a pattern to represent an object, animal or human form. They are rarely found within the plains, and are thought to be associated with spiritual elements of culture. Recorded in 1966, the effigy at DjOm-10 was found on the north rim of Graburn Creek near the southern end of the park. Although no specific form was distinguished, a series of boulders laid in a patterned formation across an area 50 feet long and 30 feet wide was noted. Similar to this is site DkOn-18, identified as a stone feature site containing three tipi rings and a linear alignment of rocks. It was observed in 1988 along the edge of a small coulee near Elkwater Lake, in the northeast portion of the Park (Unfreed 2007).

Historical resource sites of a more sensitive nature include those that have been identified as burials, or talus pits and cairns that have be interpreted as being possibly used for burials. The one identified burial site, DgOn-23, was observed southeast of Elkwater Lake in 1985. At the time it was identified, it was composed of a number of pits and mounds. The mounds were noted as being distinctive, composed of flat-laid sandstone blocks. In other areas near the southeastern corner of the Park, sites DjOm-8 and DjOm-9 contain a total of 29 talus pits that occur on the north side of Graburn Creek. Within some of these pits, small fragments of bison bone were identified, and it has been interpreted that they may represent either storage pits or possible burials (Unfreed 2007).

Historic period sites within Cypress Hills Provincial Park are represented by the presence of two early North West Mounted Police Posts. Site DjOn-7, known as Head-of-the-Mountain outpost, was identified on the south bank of Elkwater Lake. Although the site was active during the period 1886 to 1888, it had been significantly disturbed by recreational use of the area as a picnic ground by the time the site was recorded in 1974. The Graburn outpost (DjOm-2) was found to be in slightly better condition, located on the southeast slope of Battle Creek near the Alberta-Saskatchewan border. At the time the site was recorded in 1974, some evidence of the main building, which was in use for at least part of the period between 1888 and 1893, was present. The significance of these sites lies in the fact that they represent some of the initial contact between local Aboriginal people and non-Aboriginal people, and the period of time of great cultural change as Canada worked toward establishing a border with the United States (Unfreed 2007).

Historic resources were identified for each legal Section partially or fully contained within Cypress Hills Provincial Park. Fifty-one of 83 legal Sections within the Park contain either palaeontological resources, prehistoric or historic archaeological resources, or occurrence of natural areas considered ‘high potential’ for containing historical resource sites but not yet ground-truthed. Palaeontological sites refer to sites containing vertebrate or invertebrate fossil remains or geological formations within which fossils may be found. Archaeological and historic resources refer to cultural properties anywhere from 40 to 10 000 years old. Specific sections containing historical sites and areas can be found in the most recent version of the provincial *Listing of Significant Historical Sites and Areas*.

There are additional historical and cultural sites located in and adjacent to the park, including the Tom Trott Memorial Forestry Museum, St. Margaret’s Anglican Church just outside the west boundary of the park, the Bull Trail, Graburn Cairn and the Kajewski Métis site.

2.3.1 Conservation Significance

Although sixty-five sites have been identified in the Cypress Hills area, the most significant cultural resource of the area has been designated as Stampede Site DjOn-26. This site has not been completely excavated, but the work that has been done

indicates that it is of significant value to the history of both the province and the Plains area. Stampede Site DjOn-26 may be one of the best records in Canada of the culture of the Plains Indians for the past 8000 years, and is thus significant to the province as well as the park. One of the important aspects of this site is its relative continuity over this long period of time and therefore its ability to compare ancient tribes and cultures at the same location (Unfreed 2007). Long-term human adaptation to social and environmental change in the Great Plains can therefore be tracked. This site is located on the rodeo grounds to the northeast of the Townsite entrance on the north side of Highway 41.

Currently, Site DjOn-26 is identified with a Historic Resource Value (HRV) of 3 (a 'Significant Historical Resource') on the Provincial Listing of Significant Historical Sites and Areas. This ranking makes it a candidate for Provincial Designation as a Historical Resource.

Site-specific areas of significance include:

Site	Size	Importance
Stampede Site DjOn-26	~ 15 ha	one of the most significant prehistoric/archaeological sites in the province of Alberta due to the fact that it may provide one of the best records of the Plains Indian culture of the past 8000 years highly valuable for scientific research, interpretive, and educational programs offered by the park

2.3.2 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU/ Zone-specific
Cultural History	Protect the park's cultural, historic and prehistoric resources for the purposes of scientific study and visitor education and enjoyment	• Work with Historic Resources Management staff to protect the integrity of Site DjOn-26 for scientific and educational purposes • Plan for education and interpretation opportunities at additional historical sites • Support, assist and pursue the designation of Site DJOn-26 as a Provincial Historic Resource • Develop intent statements for existing and future historic resource sites as they are identified • Support and assist in the development of a record of human use of the area • Support and assist First Nations Traditional Use Studies • Encourage meaningful engagement of First Nations through consultation, with the intent to reduce adverse impacts on Treaty Rights and traditional uses • Commitment to First Nations consultation as per Alberta's First Nations Consultation Policy • Support and assist research on geographical place names according to historical and traditional use knowledge	x	LMU 8

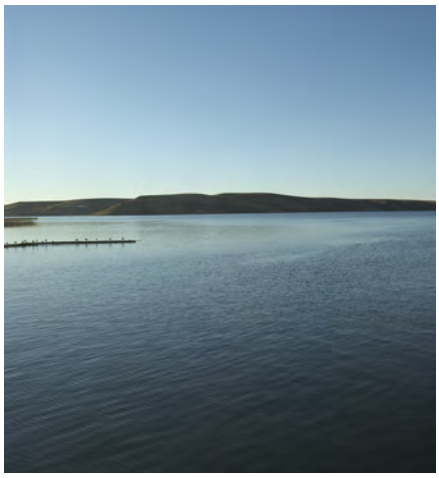
Topic	Objectives	Strategies / Actions	Park-Wide	LMU/ Zone-specific
	Encourage archaeological studies in order to gain a better understanding of the heritage resources in the park	• Maintain partnerships with educational institutions, the Royal Provincial Museum, First Nations and Métis groups and other agencies • Further research and excavation of Site DjOn-26 and other sites • Ensure archaeological sites have environmental assessments • Develop archaeological research initiatives with Universities and Institutions • Allow ongoing identification and evaluation of potential cultural sites and their operational preservation and Visitor Services opportunities	x	LMU 8
	Support Historical Resources Management staff in the evaluation of historical and archaeological sites and allocate resources appropriately	• Support historical site evaluation and prioritization	x	

2.4 WATER RESOURCES

More precipitation occurs in the Cypress Hills than the surrounding areas because of its higher elevation: the park is moister than the surrounding prairies and represents a major surface and groundwater recharge zone for the region. Various aquatic resources are found in Cypress Hills Provincial Park as a result of the increased moisture. These features include springs; seeps; permanent, intermittent and ephemeral streams; wetlands; and the three major water bodies of Elkwater Lake, Reesor Lake Reservoir and Spruce Coulee Reservoir (Map 6). Elkwater Lake (231 ha) is the only natural lake; water levels are controlled using a structure built at the outlet. Reesor Lake (51 ha) was constructed in 1955 and Spruce Coulee (21.4 ha) was completed in 1960 (PFRA - Medicine Hat). Alberta Environment is responsible for the maintenance and redevelopment of the three dams.

Because the topsoil and conglomerate bedrock is very porous in the Cypress Hills, precipitation seeps quickly though these layers and forms an aquifer above the clay layers of the Cretaceous formations (see section 2.1). This water seeps out through springs into many permanent or intermittent streams throughout the park's slopes. Spring flows are high after snowmelt and are also subject to drought.

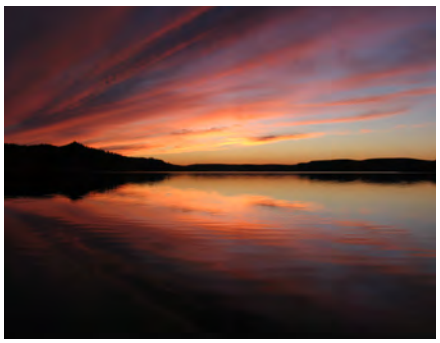
There are numerous streams found in the park. Battle Creek, Graburn Creek and Nine Mile Creek all have large, well-incised drainages that are found in the eastern portion of the park. Battle Creek in particular forms a major stream valley that dissects the park area. Reesor Lake provides storage for Battle Creek. Other creeks found in the park include Willow, Storm, Ski Hill, Mitchell, Ross and McAlpine Creeks. Ross Creek flows northward from Elkwater Lake, while McAlpine Creek drains the Spruce Coulee Reservoir. The larger streams are permanent, but many are intermittent and flow only after rain or snowmelt. All streams experience reduced flows after June.



Cypress Hills acts as a divide for two of Alberta's major watersheds – the South Saskatchewan River Watershed, flowing generally north, and the Milk River Watershed, flowing generally south and emptying into the Missouri River system. The western and northern escarpments of the park drain north into the South Saskatchewan River (e.g., Ross and McAlpine Creeks) while the eastern and southern slopes drain into the Milk River and Missouri River system (e.g., Battle, Graburn, Nine Mile, Willow, Stoney and Storm Creeks; ARC 2001). Smaller basins within the park include the Battle Creek, Ross Creek, MacKay, McAlpine, Boxelder, Lodge Middle and Bulls Head Basins. These basins are important in terms of water allocation and licensing.

There are few extensive marshlands in the park; however, small beds of cattails and bulrushes are present along the margins of Elkwater Lake and the reservoirs and also along the edges of water bodies on the park's north boundary. Wetlands mostly occur along north-facing slopes, along edges of the lakes near springs and rivers, or have been created by beaver dams (EcoLeaders 2004). Numerous ponds on the plateau are intermittent and have little emergent vegetation.

Seasonal water levels and water quality in the park's lakes and streams are influenced significantly by the condition of the riverine communities, the wetlands, and shoreline vegetation bordering each body of water. Spring runoff is retained by the riverine soils and vegetation and is released gradually, providing adequate summer and autumn water for aquatic ecosystems. Plant communities along streambanks moderate water temperatures by providing shade.



The primary water use in the area is domestic agricultural use by farms and ranches; water withdrawals for agriculture are taken from all three lakes (Matrix Planning 2003, EcoLeaders 2004). The area surrounding Cypress Hills Provincial Park includes an agricultural water co-op on Elkwater Lake with pipelines connecting the members. Stock water for cattle grazing within the park is taken from creeks, intermittent ponds, reservoirs, sloughs, beaver ponds, dugouts and dams (Boyle 2001). Several water sources under license from Alberta Environment have been enhanced or developed for livestock use to meet various grassland management goals. Cypress Hills Provincial Park completed applications for 'Traditional Agriculture Use' Permits through Alberta Environment in 1999; this allows Alberta Environment and the park staff to inventory and plan the annual uses. At least three dugouts and dams (including those at Spruce Coulee Reservoir and Reesor Lake Reservoir) have been constructed for livestock use in the park. There is some restricted drainage on the plateau which fills these dugouts and several of the sloughs. Additionally, some water sources inside the park are diverted for domestic, agricultural and recreation uses. These include several water pipeline dispositions, dams and wells inside the park that serve ranches, the golf course, and other facilities. For any development involving springs, creeks and reservoirs, the park staff ensures that the appropriate water permit or license is obtained from Alberta Environment (e.g., water diversion permits).

As far as water use and allocation are concerned, most surface water licenses have been allocated: no new licenses are to be considered in the Ross Creek basin, which includes Elkwater Lake. Moratoria on future water licenses in other basins of the park were also established by Alberta Environment to ensure adequate protection of water resources in a number of water basins in the greater Cypress Hills area. Existing water licensing moratoria within the park are provided in Table 2.

2.4.1 Lake and Beach Water Quality

During the summer months, park staff assist with the monitoring of the lake water quality for Alberta Environment on Elkwater Lake, Reesor Lake and Spruce Coulee Reservoirs. Samples are collected each month and submitted for analysis. The focus of the water quality monitoring program is on levels of phosphorus and on the amount of algae.

Water samples are also collected from the main beach at Elkwater Lake for the purpose of monitoring water quality for recreational users. These samples are submitted through the local health authority for analysis to ensure that the water is safe for swimmers.

Table 2. Water licensing moratoria in Cypress Hills Provincial Park.

Basin	Moratorium	Year Implemented
Ross Creek	irrigation	1978
	stock water / surface / groundwater	2000
MacKay, McAlpine, Boxelder	all surface water	1994
Lodge / Middle	irrigation / industrial (all surface water, except for small stock watering projects	1983
Bulls Head	moratorium as per the *Approved Water Management Plan for the South Saskatchewan River Basin* (Alberta)	2006
Battle Creek	no moratorium on water licences in effect at this time - however, Alberta Environment is still cautious to issue them, due to their apportionment agreement with Saskatchewan	

2.4.2 Conservation Significance

The Cypress Hills represent an important regional groundwater recharge zone. In addition, various aquatic resources of Cypress Hills Provincial Park are of significant value to the southeastern portion of Alberta. The park's three main water bodies (Elkwater Lake and the Spruce Coulee and Reesor Lake Reservoirs) are anomalies in this dry part of the province. As scarce resources, these water bodies are not only of environmental value but also are important scenic and recreational assets (e.g., fishing opportunities). The Reesor Lake watershed is also part of an International Water Treaty. The park's permanent streams (Ross, Battle, Graburn, Willow, Storm, Ski Hill and Nine Mile Creeks) and wetlands are among the few found in the southeast corner of Alberta.

Specific wetlands include:

Site	Size	Importance
Spruce Coulee Wetlands	~ 60 ha	provides important habitat for aquatic waterfowl, ungulates, aquatic invertebrates, amphibians, and potentially reptiles
Reesor Lake Wetlands	~15 ha	provides habitat for aquatic invertebrates, waterfowl, amphibians and reptiles
Willow Creek Wetland	~ 10 ha	representative of a forestland watershed contains isolated stands of relict lodgepole pine
Battle Creek Wetland / RANA Site	~ 0.5 ha	provides habitat for unique species of dragonflies monitoring site for northern leopard frogs (RANA, University of Calgary, Calgary Zoo)
Middlefield Wetland	~ 3 ha	provides important habitat for birds and rare plants

2.4.3 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Surface Water Resources	Maintain water quality and quantity within the Cypress Hills planning area to ensure current and future demands are met for both park and downstream use	• Reduce amounts of silt, organic wastes and other pollutants entering aquatic ecosystems • Implement a quantitative riparian health monitoring system at regular intervals to reduce amounts of silt and water pollutants • Model Best Practices on park lands • Cooperate and maintain communications with Alberta Environment • Provide support to *Water for Life: Alberta's Strategy for Sustainability* • With our government partners, continue to encourage and maintain adequate water levels in the lakes throughout the year in order to maintain a healthy aquatic ecosystem and healthy habitat • Develop a lake management plan in consultation with Alberta Environment (Water Resources) and Alberta Sustainable Resource Development (Fish and Wildlife Division) for the lake and two reservoirs, including: o boat zoning and motorized usage (Federal jurisdiction) o speed limits and zoning (Federal jurisdiction) o water withdrawals o shoreline use o recreation use (e.g. swimming, boating, fishing, if applicable) o suitable fishery	x	LMU 1 LMU 10
	Maintain a high standard of water quality with regards to aquatic health and safety for swimmers	• Continue to monitor lake and beach water quality in terms of phosphorus, algae content and safety for swimmers • Continue to monitor water samples during summer months at the Elkwater Lake Main Beach (LMU 1) to help ensure safety for swimmers		LMU 1

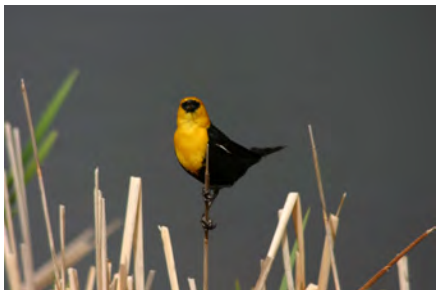
Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Maintain integrity and aquatic health of lake and streambeds	• Monitor water quality and sources of pollution in surface water bodies • Apply appropriate mitigation measures to minimize point-source pollution (e.g., zoning, restricted access)	x	
	Mitigate significant impacts on park watersheds through effective land and water management practices	• Protect and enhance wetland and riparian habitats in the park • Develop Best Practices for domestic livestock grazing to improve bank stability, riparian health, instream vegetation cover and aquatic resources • Support of Best Practices being pursued by Stock Associations • Natural hydrological processes (e.g., beaver) will be allowed to continue unless there is a threat to park infrastructure, public safety or species of concern • Include key wetlands within Protection Zones, including: o Elkwater Lake wetlands (LMU 1) o Spruce Coulee wetlands (LMU 10) o Reesor Lake wetlands (LMU 10) o Willow Creek wetlands (LMU 6) o Battle Creek wetland / RANA site (LMU 11) o Middlefield wetland (LMU 9) • Use appropriate measures to protect threatened wetlands e.g., fencing, off-site watering systems, etc.)	x	LMU 1 LMU 6 LMU 9 LMU 10 LMU 11

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Increase the efficiency of water use in the Elkwater Facility Zone	• Implement the recommendations from the water use study • Encourage sustainable landscape practices for the Townsite, including naturescaping /reduced domestic irrigation and rainwater harvesting • Develop standards for water fixtures within the park • Develop a water conservation strategy as part of the revised Elkwater Townsite Development Plan • Develop and deliver a water conservation education program targeted primarily at the cottage audience		LMU 1
	Mitigate impacts of dam reconstruction on water users, stakeholders, riparian ecosystems and park operations	• Develop a strategy in consultation with users to address temporary reduction in water availability • Ensure environmental impacts are mitigated and best practices are used in dam reconstruction		LMU 10

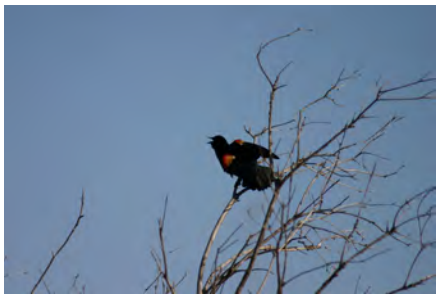
2.5 FAUNA

There are more than 217 bird species, 38 mammals, five reptile and four amphibian species that have been recorded in the Cypress Hills. Some of these are relict cordilleran or montane species, others are grassland species, and some are restricted in range to the Cypress Hills area. Most of the relict cordilleran fauna is found in the woodland and shrubland areas of the park, while the majority of sensitive species and species at risk are found in the grasslands. As yet, no comprehensive biophysical inventory has been compiled for Cypress Hills Provincial Park.

2.5.1 Birds



A list of bird species was compiled by Dickinson (2000) which included 217 native avian species recorded in Cypress Hills Provincial Park according to previously conducted surveys (including Semenchuk 1992, Wallis 1992; Appendix C). Of these species, 71 are wetland species (including aquatic, marsh and riparian habitats); 61 are predominantly forest species with another 25 species in forest edge or forest shrub ecotones; 36 are grassland species (with or without low shrubs and including grasslands with cliff or rock outcrops); and 17 are found mainly in tall shrub habitats (Dickinson 2000).



The Cypress Hills are notably different in their avian composition from the surrounding mixed grassland areas. Some species of significance include Sprague's pipit (SARA list) and the common poorwill (ANHIC: Rank S1) requiring special attention in the protection and preservation of their upland habitat. A partial listing of bird species by habitat type is found in Appendix C. Other sources of material will be used in the development of specific management practices where bird habitat is of concern.

2.5.2 Mammals

Abundant and diverse mammal populations were reported by early explorers and fur traders prior to the 1870s; however, many of the large mammals were eliminated from the park from 1870 to the early 1900s due to extensive commercial and subsistence hunting and trapping. Historically, bison, grizzly bear and grey wolves lived in the Cypress Hills. Since the 1920s, two or three reports of wolf sightings have occurred. Wildlife species introductions to the park area have included the red squirrel (1955) and pine marten (1987). Reintroductions of elk (in 1938) and moose (1956) have also occurred.

The park's ecosystems provide habitat for some of the most noticeable mammals of the park: moose, elk, white-tailed deer and mule deer. These ungulates rely heavily on the vegetative resources and habitats of the park. Cougar are present and appear to have established a stable population over the last five years. Currently, research on cougar is being conducted and an education and communications strategy is being developed.

Elk were re-introduced to the park in 1937-38 and have no significant predators. Elk are often the subject of management debate, as their presence in the park creates conflict with the agricultural community surrounding the Cypress Hills. A management hunt was initiated in Alberta and Saskatchewan in the late 1970s in an effort to reduce agricultural conflicts and maintain a population size of approximately 700 elk. Currently, a fall elk management hunt is held in October and November. Aerial surveys are conducted each winter to determine the elk herd size. The length of the hunting season is determined by the number of elk which need to be harvested. This is the only hunting permitted within the park.

A partial listing of mammals found in the park is included in Appendix D.

2.5.3 Reptiles and Amphibians

Four species of amphibians and five species of reptiles add to the faunal variety. The red-sided garter snake, a provincially sensitive species, has hibernacula within the park. Other species present include bullsnake, western plains garter snake, wandering garter snake, painted turtle, wood frog, northern leopard frog, tiger salamander and boreal chorus frog.

2.5.4 Fish

Elkwater Lake is habitat to native fish including northern pike and yellow perch. Yellow perch were introduced during the 1930s and again in 1940 and 1945. The two reservoirs do not support naturally-reproducing game fish populations: Reesor Lake and Spruce Coulee Reservoirs are stocked with rainbow trout and eastern brook trout, respectively. Fish populations are monitored by SRD (Fish and Wildlife Division) and park staff in all three water bodies. Park staff perform creel census surveys on a regular basis.

Two creeks in the park contain game fish. Battle Creek and Graburn Creek contain brook trout. Saskatchewan has stocked Battle Creek with rainbow trout since the early 1900s. Both of these creeks have angling restrictions in place in Alberta. Several non-game fish species are also found in the park's various aquatic ecosystems (O'Neil and Patalas 1992).

2.5.5 Invertebrates

Invertebrates are diverse in the park due to the diversity of habitats available to them. Butterflies and moths are abundant, with extremely high species diversity for such a small area. Initial counts suggest there are about 103 butterfly species in the Hills, over half the known butterfly species of Alberta and Saskatchewan (Kondla, pers. comm.). The arrowhead blue butterfly is a relict montane species that can be found

in the Cypress Hills grasslands. There are also some disjunct populations which may be taxonomically distinct subspecies. The rare subspecies Hutchin's checkerspot (*Euphydryas editha hutchinsi*) is found in the Cypress Hills region of Alberta and Saskatchewan. This species also occurs farther south in Montana and Wyoming, including the lower slopes of the Sweetgrass Hills as they cross into Alberta, and on the Milk River Ridge (Nordstrom, pers. comm.). The related species *Euphydryas bernadetta* is not yet ranked by ANHIC.

A variety of forest insects are relatively abundant or can be observed in the varied forest habitats. Some of the most observed insects on conifers include: white spotted sawyer beetle, yellow headed spruce sawfly, mountain pine beetle, spruce bark beetle, carpenter ants, adelgid galls on spruce, ambrosia beetle, turpentine beetle, lodgepole pine beetle, Ips bark beetle, spruce budworm (possibly a western and eastern hybrid), root collar weevil, and others. There have been no detailed invertebrate surveys on broadleaf forests. Most insects observed associated with broadleaf trees include varieties of leafminers, defoliating caterpillars, aphids, aphid galls, poplar borers, and others.

Several kinds of long-horned beetles are found in the forest habitats including the Oregon sawyer beetle and the velvet longhorn. The twice-stabbed lady beetle and other lady beetles, lacewing fly and flower flies keep the populations of aphids and scale insects down in lodgepole pine forests. Backswimmers, water striders, boatmen and predaceous diving beetles are present in ponds and wetlands (Saskatchewan Museum of Natural History nd.). There are also numerous dragonfly species, some rare.

2.5.6 Conservation Significance

Thirty-two of the avian species in the park are cordilleran/montane species with disjunct populations (Dickinson 2000). Eleven bird species are on ANHIC's Tracking List and 14 are on its Watch List (ANHIC 2006). Rare birds sighted or heard as of 2000 include great blue heron (Watch List), found in the Spruce Coulee marshes; black tern (*Chlidonias nigra*; Watch List) in the Elkwater and Spruce Coulee marshes; brown creeper (*Certhia americana*; Track List) in mixed woods habitat; and Sprague's pipit (*Anthus spragueii*; Watch List, threatened under SARA) on the Reesor Hills plateau (Baresco and Reynolds 2000). An isolated sub-population of red cross-bills (*Loxia curvirostra*) in the Cypress Hills has evolved thicker beaks in conjunction with the Cypress Hills lodgepole pine, which has thicker cones than in other locations (Benkman et al. 2003, EcoLeaders 2004). Occasionally, trumpeter swans have been found nesting on the lakes of Cypress Hills. Unfortunately, they have not been found nesting in the park since 1967, and the last record of trumpeter swans on the Saskatchewan side of the Interprovincial Park was in 1995 (Dickinson 2000). A number of grassland birds that are rare or uncommon outside the park thrive within the park's fescue grasslands. The park is also used by many migratory species in the Central Flyway.

Ten species of small mammals on ANHIC's Tracking List and three species on the Watch List occur or possibly occur within the park. Species on the Tracking List include seven bat species, sagebrush vole (*Lagurus curtatus*), bobcat (*Lynx rufus*) and swift fox while species on the Watch List include prairie shrew (*Sorex haydeni*), Richardson's ground squirrel and American badger (Dickinson 2000). The Hills also represent a biodiversity hotspot for butterflies and dragonflies. Appendix E provides a list of species of concern found within Cypress Hills Provincial Park. Map 7 shows the locations of ANHIC-tracked invertebrates and non-sensitive locations of two vertebrate species.

Because the Cypress Hills represents an ecotone between grassland and forest habitat, there is considerable edge habitat and patchiness. Edge-dependent species that thrive here include elk, bats and many bird species (Strauss 2001). Most endangered and threatened species within the Cypress Hills are associated with native grassland communities (Matrix Planning 2003).

2.5.7 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Diversity of Faunal Species	Protect the diversity and abundance of fauna and their habitat within the Cypress Hills	• Identify, protect and zone critical habitats within the park, including: o important wintering range for elk and other ungulates o park wetlands o fescue grasslands critical for Sprague's pipit and common poorwill • Identify, map and protect wildlife movement patterns and critical wildlife habitats • Strive towards ensuring that new non-native species (terrestrial) are not introduced	x	
	Create positive human wildlife interactions	• Enhance existing or provide new opportunities for wildlife observation in the park • Develop and implement a wildlife viewing strategy that incorporates both facilities (e.g., viewing stations / blinds) and self-guided and staf-fed events • Reduce wildlife-traffic collisions in the park o Implement mitigation measures considering reflector systems and speed reduction measures (to approx. 70 km/h) on primary highway (Highway 41) • Increase knowledge of current operational, management and visitor impacts on wildlife behaviour and critical habitat • Encourage research that addresses wildlife / visitor interactions and effects • Provide specialized human-wildlife conflict training to appropriate staff • Reduce habituation of mammals to human presence in the park	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
		• Develop and promote a "Wildsmart" program (e.g. landscaping, feeding, lighting, pets, etc.) o encourage park visitors and stakeholders (cottagers) to not feed wildlife through education and enforcement programs		
	Increase awareness and importance of maintaining viable populations of wildlife within the regional ecosystem	• Target regional communities in the wildlife-based interpretation and education programs • Partner with stakeholders to communicate regional wildlife messages • Increase available knowledge of carnivore species within Cypress Hills Provincial Park o complete a carnivore inventory of Cypress Hills Provincial Park	x	
	Enhance knowledge and increase awareness of rare species within the park	• Continue to inventory and monitor rare species and their habitats as resources are available • Ensure park staff is knowledgeable about rare species within the park and that they are taken into consideration when implementing any activities within the park (e.g., infrastructure development, environmental screening, trails, interpretive programming) • See also: Section 2.10 Research, Monitoring and Adaptive Management	x	
Resource Manage-ment and Mammals	Support the efforts of Alberta SRD Fish and Wildlife Division to reduce and eliminate the spread of CWD in Alberta without compromising the park's deer herd	• Maintain open communication between park staff and Alberta Fish and Wildlife Division regarding the status of Chronic Wasting Disease (CWD) in the area • Park staff will monitor ungulates within the park for signs of CWD and if suspected, will collect samples for testing	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Maintain an ecologically viable cougar population in the park while ensuring public safety	• Prepare a cougar management plan • Encourage specific types of cougar research that complement and supplement current databases • Ensure park facilities placement considers cougar movement and public safety	x	
Elk Manage-ment	Manage elk populations to maintain a healthy population level and to minimize conflicts with surrounding landowners	• Identify a biologically-based carrying capacity for elk in the park • Develop population targets for each elk sub-population based on biological carrying capacity and degree of stakeholder concern	x	
	Provide structured and unstructured opportunities for residents and visitors to appreciate the aesthetic and ecological values of free roaming elk within largely natural landscapes	• Delivery of elk-focused interpretive messages within existing park VS programs • Review elk management strategies to mitigate behavioural changes to elk resulting from the hunt	x	
	Set hunt dates and durations that provide an acceptable balance with other users while at the same achieving population management objectives	• Continue to work with Alberta Fish and Wildlife Division on an annual basis to determine the hunting season and license conditions • Educate visitors about personal safety during the hunting season • Adapt management of the hunt to address changing concerns	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Consider and test a variety of alternative management approaches to supplement or enhance elk management success	• Enhance winter forage quality within the park on elk winter range areas • Identify and monitor winter elk forage quality and quantity on a regular basis and adjust management accordingly • Review strategies developed through the draft Cypress Hills Elk Management Plan process and apply as appropriate • Research Best Practices in elk management being undertaken by management agencies elsewhere (e.g., U.S., Suffield) and promote professional relationships with these agencies	x	
	Communicate clearly the primary purpose of the hunt as a conservation management hunt	• Implement a public awareness strategy • Convey the key message of the conservation management hunt communications strategy: that the hunt is used to manage population levels within acceptable limits and is not necessarily an annual occurrence • Hunters and the public will be notified of the need for a Cypress Hills Provincial Park elk management hunt, and hunt particulars, through the normal processes and means used by Alberta Parks staff and Alberta Sustainable Resource Development (ASRD) Fish and Wildlife Division in this regard • The conservation management hunt will only occur when the elk population exceeds the identified limits	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Integrate elk habitat and other ecological requirements in livestock grazing strategies and practices	• Range health assessments will be incorporated into grazing strategies • Specifically include both domestic and wildlife grazing requirements in calculations of carrying capacity • Alberta Parks will identify and define elk habitat requirements that should be incorporated in future grazing management strategies. Elk habitat requirements that could be addressed include: o critical winter ranges o seasonal forage utilization o important calving areas o elk movement corridors o thermal cover requirements • Explicitly address elk habitat needs during the development of new (or during the review of existing) grazing management practices and range management plans / strategies by Alberta Parks and the three stock associations. • Alberta Parks will work cooperatively with the three stock associations in the development of range management plans/strategies and in the attainment of established rangeland/grazing objectives • Grassland habitat treatments/improvements that are undertaken (which are intended to improve livestock grazing) must also be beneficial to elk, other ungulates, and native species that are dependent on grassland ecosystems • Avoid overlap of the livestock grazing season with the elk management hunt where possible • If a management hunt is deemed necessary, Alberta Parks will consult with the three Stock Associations to minimize hunt impacts. Hunters in the park will be provided with pertinent information on livestock activity on the park during that period	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
		• The elk management hunt will be carried out in a manner that minimizes impacts to the park's natural heritage resources, and minimally interferes with other park activities		
Fisheries Manage-ment	Continue to work with SRD in the management of sport fisheries and coordinating these with park objectives	• Develop sport fishery plans for all areas that are consistent with detailed management objectives • Revisit current species distribution to determine appropriate species for the park based on suitability, recreational goals and ecological goals		LMU 1 LMU 10
	Maintain a viable and diverse aquatic community	• Conduct an aquatic ecosystem inventory to identify all native and introduced fish and invertebrate species • Manage park aquatic resources for native ecosystem health in addition to recreation quality • See also: Section 2.10 Research, Monitoring and Adaptive Management		LMU 1 LMU 10

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Protect and conserve native fish stocks	• Determine what fish species are native (Note: Saskatchewan has stocked Battle Creek for decades) • Consider catch and release programs for native species • Consider ecosystem value of 'problem' native species when prescribing management strategies (e.g., white suckers in Reesor Lake Reservoir, walleye in Spruce Coulee Reservoir)		LMU 1 LMU 10

2.6 FLORA

Cypress Hills is an island ecosystem that is characterized by unique vegetation. This includes: a rare rough fescue community, lodgepole pine forests, distinctive hawthorn communities and plant communities typically found in the Foothills Fescue Subregion of the Grassland Natural Region and the Montane Subregion of the Rocky Mountains Natural Region.

The diversity of vegetation is indicated by over 729 species of flowering plants and 28 fern and fern ally species. The distribution of the plant communities in Cypress Hills varies with the terrain. Rough fescue grasslands dominate the flat plateau area; white spruce forests are found in moist and cool sites on valley bottoms and north-facing slopes; and lodgepole pine forests are predominantly found on the mesic zone between the grassland and spruce forests and occasionally on south-facing slopes. Aspen woodlands occur at the border of the pine forest on the plateau, at lower elevations on the north slopes, and on some of the more protected south slopes. Balsam poplar occur near water, and one small stand of white birch is found east of the Elkwater Lake lowlands. Soil moisture and topography differentiate between the grassed and treed park areas; rough topography can also allow for tree survival by providing natural fire breaks (Strauss 2001). Lodgepole pine is tolerant of mineral soils and grows well in fire-disturbed sites (Smithers 1961 in Strauss 2001). Both white spruce and aspen require organic content in the soil to thrive (Strauss 2001). Mixed-grass prairie flora take over at lower elevations on the park slopes (Map 8; ANHIC 2006).

The park ecosystems can be generally divided into six major vegetation communities: lodgepole pine forest; white spruce forest; aspen forest; fescue grassland; mixed-grass prairie; and wetlands (Saskatchewan Museum of Natural History nd., EcoLeaders 2004). These vegetation communities and their typical flora are described in Appendix F. In addition, the park contains several unusual and regionally significant plants, including at least 16 species of orchids. The presence of orchids here is due to their association with the moist, relict cordilleran forest.

2.6.1 Conservation Significance

The vegetated ecosystems of the Cypress Hills require special consideration when making any management decisions. Protection of these unique ecosystems is paramount. Of particular note are disturbances or negative impacts that may affect the following: rough fescue grasslands, hawthorn plant communities, wetlands orchid sites, and any other rare ecological communities or rare vascular plants as tracked by ANHIC (Map 9). It is also important to consider any alteration to the forested canopy, as forested communities are rare in the southeastern portion of Alberta.

When considering management activities, especially those that may cause disturbances to the park's native flora, it is extremely important that appropriate environmental screening is first conducted in order to minimize any potential disturbance from the outset. This may include a screening for rare vascular plants or rare ecological

communities. In some cases, the significance of the ecosystem itself may prohibit a particular activity and/or other alternatives will be considered. Any impacts that do occur will be mitigated with appropriate research-based rehabilitation actions. For example, if disturbed natural areas are to be re-seeded, appropriate native seed mixes are to be utilized (see Section 2.7.5).

A full description of the known rare ecological communities and rare vascular plants found in Cypress Hills can be found in Appendix G.

2.6.2 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Forests, Woodlands and Shrub Habitats	Manage forests for ecologically and diverse communities that are representative of the Cypress Hills environment	• Monitor forest health: o identify and maintain forest management practices that encourage, mimic and/or emulate natural processes o investigate environmental factors (e.g., diseases, insects) and park management activities that may be a threat • Utilize and/or develop management practices that are consistent with intergovernmental protocols • Encourage research to define the Natural Range of Variation (NRV) in the park as well as natural disturbance processes and observed forest growth patterns unique to the Cypress Hills • Promote research opportunities to help the park identify best park forest management practices • Manage for a mosaic of local ecosystem elements that is consistent with the NRV • Follow direction of CHIP Vegetation Management Strategy	x	
	Protect the gene pool integrity of the Cypress Hills forests	• Preserve the genetic integrity in the park (i.e., not introducing foreign genetics to the locally unique populations) • Encourage research on the genetic makeup of the plant and tree species in the park o assess genetically unique attributes in the park (e.g., lodgepole pine, orchids, hawthorn) • Ensure that reclamation and planting within the park utilizes seeds and seedlings that are endemic to the park o collect tree seed for genetic conservation protection and for use in forest rehabilitation programs	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Native Grasslands	Conserve the extent, health and native biodiversity of fescue grasslands	• Monitor native grassland health: o monitor the impact of grazing on grasslands • Identify and utilize native grassland management practices that encourage, mimic and/or emulate natural processes o consider, evaluate and make use of a variety of grassland management tools such as domestic livestock grazing, haying, mowing, prescribed fires, or selective cutting to control woody plant expansion into grasslands o encourage research into landscape change and forest encroachment • Encourage connectivity with native grasslands located outside park boundaries • Implement an invasive species strategy	x	
	Maintain wildlife habitat for species of concern; protect or enhance habitat for species at risk	• Encourage a mosaic of grassland structure for a variety of species • Consider alternative vegetation management strategies for invasive species control purposes	x	
Riparian and Wetland Areas	Protect the integrity of riparian and wetland ecosystems	• Reduce or eliminate negative impacts on riparian and shoreline areas • Implement an invasive species strategy for riparian areas and wetlands	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Rare or Threatened Plant Species and Rare Ecological Commun-ities	Protect rare ecological communities and plant species of significance or special concern	• Identify and protect sites with plant species of concern and rare ecological communities (See Appendix G) • Develop a rare plant survey/ spatial database that will ensure consistency with provincial databases o locate and preserve occurrences of rare or unusual plants and rare ecological communities o plan for scheduled surveys and database updates as feasible • Protect and create management intent statements for sites of significance • Ensure that Environmental Reviews include surveys of rare plants and rare ecological communities	x	

2.7 VEGETATION MANAGEMENT

Vegetation management in Cypress Hills Provincial Park involves monitoring and managing the natural vegetation to meet park goals. While commercial logging is prohibited, active vegetation management is sometimes necessary (i.e., for public safety, insects and disease, invasive species, etc.).

The majority of vegetation work currently involves, but is not limited to, removing hazard trees, reducing fuel loads, and rehabilitating forest cover. Efforts have been made to improve roadway and trail safety and route access where hazard trees are a threat or unmanaged forest is encroaching upon roadways.

In a larger framework, disturbance regimes can often be measured by a natural range of variability (NRV), which may be less than fully understood for Cypress Hills. Historical disturbance regimes in the park include fire, grazing, insect infestations, disease, and climate and weather variability. Current vegetation management is directed towards reclamation after disturbance events and public safety concerns.

2.7.1 Fire Management

Fire is an historical natural disturbance process in the Cypress Hills. Fire type, size and frequency determine an area's fire regime (Strauss 2001). Tree-ring data and historical records suggest that the Cypress Hills ecosystems were regulated by two types of wildfire: frequent, low-intensity fires originating in the surrounding grasslands; and large, infrequent high-intensity fires (Strauss 2001). Reports on fire frequency are conflicting.

The large fire of 1889 likely had the greatest impact on the pattern and composition of the current forest. There have been a few large fires reported since 1889. However, the most recent large fire to occur was the human-caused Willow Creek fire that burned several hundred hectares in 1934 after originating from a sawmill operation.

Fire suppression measures followed the Dominion Forest Reserves and Parks Act of 1911. A network of 'fireguards' were established in the 1950s to prevent fire from travelling between grasslands and forested watersheds. Invasive species became prevalent on some fireguards, other areas were environmentally unstable, and lastly, fire science questioned if the fireguard system could actually stop the spread of wildfire. Therefore, the park now uses the term 'fire and resource trails'. Annual grading and maintenance of these features ended in 1998. Settlement in the surrounding area combined with the creation of other fire breaks (including fragmentation of the landscape by roads and fallow fields) have limited the size and extent of fires. In the 1980s, small cut areas were created over a five-year period to establish an age mosaic in order to reduce fire spread.

Many forest and grassland plant species are adapted to fire, and some depend on fire to reproduce and rejuvenate their habitat. Lodgepole pine forests and their

associated species (pinesap, pine-drops) are also fire-dependent (Bradley and Ernst 2000). Aspen reproduction is stimulated by fire by vigorous suckering, unless the fire is too intense and damages the root systems or entire canopy structure (Peterson and Peterson 1991, Strauss 2001).

Periodic wildfire can be a positive disturbance mechanism for maintaining ecological processes in the montane forest and grasslands. For example, forest encroachment onto grasslands may be limited if fire-disturbed areas are appropriately managed (Note: since pine cones open in response to fire, pine growth on bare ground following fire in grassland ecosystems is possible). From 1945 to 1992, the total forested area in the park has increased by approximately 450 ha, with most of this increase attributed to lodgepole pine and white spruce. Over the same time period, forest area where aspen and balsam poplar were dominant decreased by 50% (EcoLeaders 2004). This appears to indicate that the forest structure in the Cypress Hills is moving towards a white spruce climax community with an associated decline in aspen forest (ARC 2001).

There is potential for an intense fire in the Cypress Hills. The highest risks are associated with periods of high fire hazard in the spring and during drought years. However, current forest conditions in general present relatively high fire risks due to aging forests and the growing accumulation of woody fuels as a result of blow-down, insect damage, dwarf mistletoe parasitism, etc.

Wildfire risks are an issue in the Cypress Hills. Fire behaviour models predict the potential for extreme fires in the area with firebrand spotting distances of nearly one kilometre and rates of spread of up to 110 m/minute (Matrix Planning 2003). The risk to community and facilities can be reduced by completing wildland/urban interface (FireSmart) plans.

Cypress Hills Provincial Park has adopted the FireSmart program. Staff are currently working on completing a plan for the park. FireSmart standards are currently being considered in all new developments. A key priority of this work is Elkwater Townsite, but FireSmart work includes all facility areas of the park.

The public safety issues associated with fire in the park are discussed in section 5.2.1.

Much of the FireSmart strategy planning is based upon current wildfire science and research including risk assessments to identify or predict high hazard areas. FireSmart planning in the wildland urban interface attempts to minimize fire spread from urban areas to wildlands and from wildlands to urban areas. FireSmart plans typically recommend implementing plans for vegetation mitigation or altering structures' flammability, etc. based upon potential combustible fuels, topography, firebrand distances, and other factors.

2.7.2 Grazing

A natural grazing regime has long been a part of the Cypress Hills grassland ecosystems. Native ungulates including elk and bison, drawn by the water, grazed the area for centuries prior to the 1880s. Domestic livestock grazing arrived with European settlement. The more recent grazing regime was much different than pre-1880s in terms of timing, pattern and intensity of grazing (Bradley and Ernst 2000).

Within the Alberta Parks system, each cow month is considered one AUM. Alberta Parks is assessing a move towards Animal Unit Equivalencies (AUE) as today's cows tend to weigh considerably more than 450 kg (1000 lbs). This would bring Alberta Parks in line with livestock management practices of Cypress Hills-Saskatchewan and Alberta Sustainable Resource Development-Public Lands Division.

Livestock grazing is a controlled management tool somewhat different than what may have occurred historically. Some researchers have speculated that rough fescue was preferentially winter-grazed by bison and elk (Hull 2002). Although protein content of rough fescue is high in winter, dormant-season domestic grazing of fescue grasslands is not feasible in the park due to heavy snow accumulation, adverse winter conditions and lack of stock water (Boyle 2001).

Before 1900, domestic cattle and horses were grazed year-round on the plateau, with haying also occurring on creek bottoms and benchlands. Three stock associations (Battle Creek, Fox and Medicine Lodge) were established in 1919 and grazed both horses and cattle.

For the past several decades, the grazing system for cattle has been continuous seasonal grazing in the park from June 1 to October 15. Early stocking rates were approximately 16,000 animal unit months (AUMs). Current stocking rates have been set at 12,000 AUMs by a 1980 agreement between Alberta Recreation and Parks and the three stock associations. An AUM is considered as the amount of forage required to sustain a 450 kg (1000 lb) cow with or without one calf for one month.

Many of the vegetation species are likely adapted to a grazing regime. Moderate grazing has the potential to increase species, while continuous grazing during the growing season may negatively affect plant populations. For example, rough fescue is very productive, but it is also sensitive to overgrazing. In general, domestic grazing is considered an appropriate management tool for rangeland in the park.

Cattle and elk sometimes compete for the same grass resources within the park, which can result in resource conflicts. In late fall and winter, elk graze on grasses in exposed areas of grasslands in the park, usually on exposed windswept slopes facing south or west. In the summer, elk graze primarily on forbs and sedges, and browse in the forests or near forest edges, whereas cattle graze on the grasslands. Niche overlap thus occurs primarily in the fall, when the cattle are still on the grasslands and the elk begin their winter foraging. Elk winter ranges can be separated into distinct groups and include the Medicine Lodge, Spruce Coulee, Reesor Hills, Police Point and Nine Mile ranges (Hull 2002).

Grassland bird species richness in park rangelands is greatest in non-shrubby habitats with a range health category of 'Functioning' (containing higher litter cover and grass density than 'Non-Functioning' range; Hull 2002). Common rangeland bird species include savannah sparrow, western meadowlark, Sprague's pipit and upland sandpiper. Habitat structure is key to habitat selection by birds: different birds respond positively to different levels of grazing intensity.

Currently, grazing is conducted by the three stock associations under the authority of yearly grazing permits. Park staff work with each association to develop grazing strategies, range monitoring reports and cooperative initiatives, and oversee maintenance and improvement of ancillary developments as part of the livestock grazing program. The current arrangement of grazing fields is shown in Map 10.

2.7.3 Invasive Alien Species

Invasive alien plant species have established and exponentially expanded their foothold within Alberta's Parks network over the last few decades. Invasive alien plants are the second greatest threat to natural biodiversity and ecological integrity after cultivation/habitat loss of native vegetation communities. In Cypress Hills Provincial Park, between 10 to 20 percent of the fescue grassland and riparian areas have been invaded by invasive alien species to date. This includes both noxious weeds and invasive agronomic (non-native) grasses.

Non-native vascular plants inhabit areas near the Townsite and recreational facilities, along roads and fire trails, in riparian areas, and throughout extensive areas of the grasslands. Invasive species are prolific in disturbed areas (i.e., along major roadways, fire and resource trails).

Riparian meadows are often populated with non-native species (e.g., timothy, tall buttercup, dandelion, Canada thistle, ox-eye daisy). Encroachment by timothy, smooth brome, Canada thistle, Kentucky bluegrass and Canada bluegrass (in order of abundance) are reducing the quality of fescue grasslands. Smooth brome and timothy outcompete the native foothills rough fescue and may reduce habitat suitability for grassland birds such as Sprague's pipit or Baird's sparrow.

Other invasive species currently less abundant in the park include field bindweed, scentless chamomile, common toadflax, Japanese brome, absinthe, common tansy, clover, sweet clover, cicer milk vetch and crested wheat grass.

Under the provincial *Weed Control Act*, Alberta Parks is legally responsible to control both noxious and restricted weeds within the park land base. Alberta Parks is also legislated to maintain or improve the ecological integrity and natural biodiversity of these parks under the *Provincial Parks Act*. In order to achieve this latter goal, noxious and restricted weeds as well as other invasive alien species are to be controlled or managed. These include other invasive alien species not listed under the *Weed Control Act*, such as invasive agronomics, invasive ornamentals, and invasive aquatic plants.

A key to controlling invasive species spread within the park is to limit disturbance within native habitats, since it is very costly and extremely difficult to reclaim/restore areas to their original levels of biodiversity once an invasive alien species takes hold. Note that natural or prescribed fire will be a major disturbance.

2.7.4 Insects and Pathogens

Insects and pathogens affecting Cypress Hills Provincial Park include mountain pine beetle (MPB), spruce budworm and dwarf mistletoe.

MPB is considered a significant immediate and ongoing threat to Alberta's pine forests that has expanded east into Alberta from British Columbia. This insect targets mature pine trees (i.e., above 80 years of age) and often kills them within a year of attack. There was an infestation of MPB in the Cypress Hills in the early 1980s, which saw over 6000 infected pine removed before beetle population numbers fell to near zero in 1985-86. Park staff continue to monitor for MPB. However, the biggest factor limiting MPB is cold winters/weather for prolonged periods and/or early fall cold snaps.

Over the past several decades, the park has experienced several periods of spruce budworm infestation that targets white spruce stands. Consecutive years of very heavy to severe infestation may result in increased tree mortality.

Infestations of dwarf mistletoe (a parasitic plant) occur in various areas within the park. Like MPB, this plant affects the health of lodgepole pine.

A forest management plan was adopted in Cypress Hills Provincial Park in 1987. In 1992, a forest harvest moratorium was imposed to review management options.

In a warmer climate, the forests could become more vulnerable to insect and pathogen infestations.

2.7.5 Reclamation after Disturbance

Re-establishment of native communities following disturbance can be difficult, especially in native fescue grasslands. Rough fescue establishes poorly from seed. The presence of invasive agronomic species in the park such as timothy, smooth brome, Kentucky bluegrass, Canada bluegrass and Canada thistle creates competition for rough fescue communities.

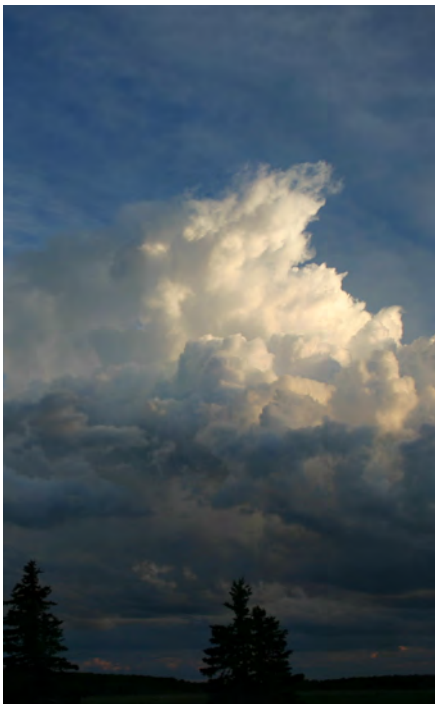
2.7.6 Management Issues, Objectives and Strategies

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Fire Management	Establish the role of fire in the park	• Develop an integrated wildfire and vegetation management plan for the park (incorporated into the CHIP Vegetation Management Strategy), including: o full sensitivity to public safety concerns and the protection of park infrastructure and adjacent property o appropriate fire regime for ecosystems (e.g., fescue grassland conservation, aspen regeneration) including frequency, seasonality and intensity. Any action taken will aim at mimicking the NDT (Natural Disturbance Type) o appropriate post-fire rest interval and reclamation procedures (including fencing) for any natural or prescribed burn site o fireguards and fire access trails in strategic locations • Prescribed fires may be considered a vegetation management tool when the circumstances are appropriate (e.g., to slow forest encroachment, control insect and pathogen infestations, improve biodiversity, control invasive plants, reduce fuel load and the level of fire hazard) o prescribed fire plan developed in advance of any prescribed burn o prescribed burns will be conducted with extreme caution and using established protocol standards o ensure pre- and post-burn vegetation monitoring o recommendations for prescribed burns will be made at the park level in consultation with public and stakeholder groups	x	
	Reduce the threat of a catastrophic fire	• Assess the need for vegetation management zones throughout the park • Develop a fire protection plan for each zone in the park • Ensure that the CHIP Vegetation Management Strategy takes into account fuel loading in the park	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Grazing Management	Manage livestock grazing according to Best Practices and current range management standards	• Develop an integrated grazing and range management section incorporated into the CHIP Vegetation Management Strategy o develop grazing strategies based on ecological principles and guidelines • Park staff oversees the maintenance and improvement of ancillary developments as part of managing the livestock grazing program • Minimize livestock impacts on species of concern, sensitive species and/or sensitive lands and environments (e.g., sharp-tailed grouse leks, rare species habitats, wetlands, rare plant communities) • Minimize livestock impacts on designated recreation trails	x	
	Manage grassland for diverse habitats	• Aim to provide a spectrum of range and riparian health classes, with most field management units in the 'healthy' rating	x	
Management of Invasive Species, Pests and Pathogens	Manage invasive species, insect and pathogen infestations according to Alberta Parks policies, legislation and Best Practices	• Develop an invasive species strategy o prevention strategies will be a key component to reduce introduction and spread of invasive alien species o early detection may lead to more effective control • Develop recommended procedures for controlling invasive species within park ecosystems o consider all relevant modes for control of invasive alien plants while assuring all ecological considerations (e.g., mowing, hand picking, grazing, haying, fire, spot chemical control, biological control) o incorporate invasive species control and mitigation into any park activities or development (i.e., grazing/range management plans, fire management, roadwork or trail development, etc.)	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
		• Monitor disturbance sites for introduction or spread of invasive species • Consider the need for insect and pathogen control programs where there is risk or probable threat to park infrastructure and ecological function • Compliance with the *Weed Control Act* and *Provincial Parks Act* related to control/management of invasive alien plants • Comply with applicable legislation and Best Practices for forest pests and pathogens management • Efforts will minimize the risk of spreading forest insects and pathogens in any vegetation management work • Support and liaise with appropriate government agencies and forest health professionals		
Disturbance Mitigation and Rehabil-itation	To reclaim/restore disturbed sites to as natural a condition as possible	• Develop a mitigation/reclamation strategy for disturbed sites to be incorporated into the CHIP Vegetation Management Strategy • Restore / reclaim areas that have been impacted through direct/indirect human activity • Support disturbance and mitigation research (e.g., fescue grasslands restoration) • Park staff will keep current on monitoring, reclamation and mitigation practices used in natural areas (e.g., natural recovery) • Vegetation rehabilitation programs will use native species found in the park, when possible, or use appropriate native seed/planting mixes	x	

2.8 CLIMATE CHANGE



Global climate models (GCMs) have been used to try to predict the effects climate change will have on the Cypress Hills. Predicted outcomes range from small temperature increases to much higher summer temperatures with milder winters and less available moisture, as well increased incidence of extreme weather events. Statistically significant warming of 0.9°C has already occurred from the late 1800s to the 1980s (Lemmen et al. 1998, Henderson et al. 2002).

Barrow and Yu (2005) used 29 climate change experiments to simulate how climate change will affect Alberta based on future atmospheric composition in different greenhouse gas emissions scenarios. Changes in average climate of Alberta in the 2020s, 2050s and 2080s were predicted. From these 29 scenarios, a subset of five projections that spanned the range of GCM results were selected: cooler and wetter (NCARPCM A1B), cooler and drier (CGCM2 B2(3)), warmer and wetter (HadCM3 A2(a)), and warmer and drier (CCSRNIES A1F1) than the median conditions (HadCM3 B2(b)) (Barrow and Yu 2005). For Alberta, temperatures are predicted to rise between 3-5°C from the 1961-1990 baseline by the 2050s, with minimum temperatures increasing more than the maximum. The IPCC Working Group II (1996) found that the boreal forest can shift northward with an average warming of 1°C, while the southern boundary transitions into grassland.

Moisture availability is expected to decline 10 cm by the 2020s, 21 cm by the 2050s and 32 cm by the 2080s (Henderson et al. 2002). The largest decreases in precipitation are likely to occur during the summer months, contributing to greater moisture stress during this season. The Climate Moisture Index (CMI) is a tool to estimate vegetation community types based on moisture availability. The CMI is calculated by taking mean annual precipitation and subtracting potential evapotranspiration (PET), measured in cm of water per year. CMI values can be correlated with vegetation type boundaries. At a CMI of zero, where precipitation and PET are equal, there is a boundary between the western Canadian boreal forest and parkland, while at a CMI of -15 parkland changes to grassland ecosystems (Henderson et al. 2002). In climate change scenarios, the mean decline in CMI in the Cypress Hills is estimated to be -9.8 by the 2020s, -20.1 by the 2050s and -30.1 by the 2080s. These declines are high enough to cause considerable ecosystem shifts. For an island forest ecosystem, this could mean significant risks to the forest. Forest encroachment onto grasslands would no longer be an issue; the situation would likely reverse as forests slowly disappear from the Cypress Hills. However, finer-scale data and climate research analyzing the potential impacts on higher elevations have not yet been well documented, as there are weather and climatic differences between these areas and the surrounding prairies.

The Cypress Hills are particularly vulnerable to climate change as they contain species and ecosystems at the edge of their natural range. The small size, isolation, restricted number of keystone species and ecotone characteristics of the forest in the Hills increases their vulnerability (Henderson et al. 2002).

Warm southwesterly winds, especially during winter, can desiccate trees by increasing evaporation from coniferous tree needles while water is frozen in the ground and is unavailable for replacement.

It is possible that with a drier climate, the trees might slowly disappear from the Cypress Hills. The park's lakes and wetlands could also be vulnerable to decreased moisture availability and higher evaporation. Fescue grassland may also be impacted by extended drought. There are also considerable implications for water use and conservation, infrastructure, rangeland and vegetation management within the park.

It is recognized that scientific evidence regarding the complexity of climate change and related impacts is dynamic, and park management will be adapted accordingly.

2.8.1 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU/ Zone-specific
Climate Change	Management within Cypress Hills will be consistent with the *Alberta Climate Change Plan*	• To be determined; strategy is under development	x	
	Promote research of genetic and ecological traits of various natural species displaying drought tolerance	• Encourage climate change research opportunities within the park (e.g., including assessment of the potential impacts of climate change on rough fescue grasslands)	x	

2.9 ADJACENT LAND USE AND DEVELOPMENT

Conservation and preservation of native ecosystems on lands adjacent to the park are important and help achieve park goals (e.g., native fescue and mixed grasslands). Any efforts that can be made by adjacent land owners to continue conservation efforts are encouraged.

2.9.1 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU/ Zone-specific
Adjacent Land Use and Develop-ment	Work co-operatively with Cypress County to coordinate and maintain open communications on development and other land use activities that occur both inside the park and on adjacent lands	• Actively support and participate in the referral process established by the Cypress Hills Area Structure Plan, whereby the park can comment on proposed developments within the buffer zone surrounding the park • Consider landscape-based ecological assessments for developments within the Cypress Hills Fringe Area	x	
	Encourage partnerships between conservation organizations, stewardship groups and Cypress Hills Provincial Park	• Encourage cross-boundary research and monitoring especially at the north and south borders of the park • Support the Nature Conservancy of Canada in their work to establish conservation easements on private and lease land adjacent to the park	x	
	Acquire land adjacent to the park as opportunities arise	• Consider acquisition of adjacent park lands on a willing-seller/willing-buyer basis	x	

2.10 RESEARCH, MONITORING AND ADAPTIVE MANAGEMENT

Research is integral in the ongoing management of the park system. A variety of research opportunities are available from informal monitoring to formal contracted and/or university-led studies. Participatory research is also conducted with members of the public, and includes such activities as butterfly counts and bird counts in the winter and spring. These activities are coordinated by park staff, and are useful in acquiring an idea of how specific populations are changing over time.

University-based research in Alberta parks is coordinated by a Research and Planning Program. Any requests for research within the park require the proponent to complete a Research and Collection Permit Application. The application is reviewed by park staff who assess if the research is appropriate or not.

Various monitoring programs are carried out by park staff (e.g., grassland health monitoring, weather observations, forest health monitoring, water quality monitoring for both domestic and lake water, wildlife monitoring and trail condition monitoring). Grassland monitoring involves monitoring range utilization and health. Forest health activities include: a pheromone baiting program for mountain pine beetle; investigating and monitoring various forest insects and diseases throughout the park; and identifying and removing hazardous trees in Elkwater Townsite, all campgrounds, and areas of the park containing facilities. Weather observations and information have been collected daily since approximately 1980, and are used for monitoring wildfire hazards according to the Canadian Forest Fire Danger Rating system. Monitoring of domestic water and lake water are completed according to public health legislation requirements. Park staff monitor elk populations, deer populations and behaviours, cougar and other wildlife. The various hiking and biking trails are also inspected and monitored for public safety and environmental concerns. Other inspection or monitoring services completed by various park staff help meet public safety and monitor environmental conditions.

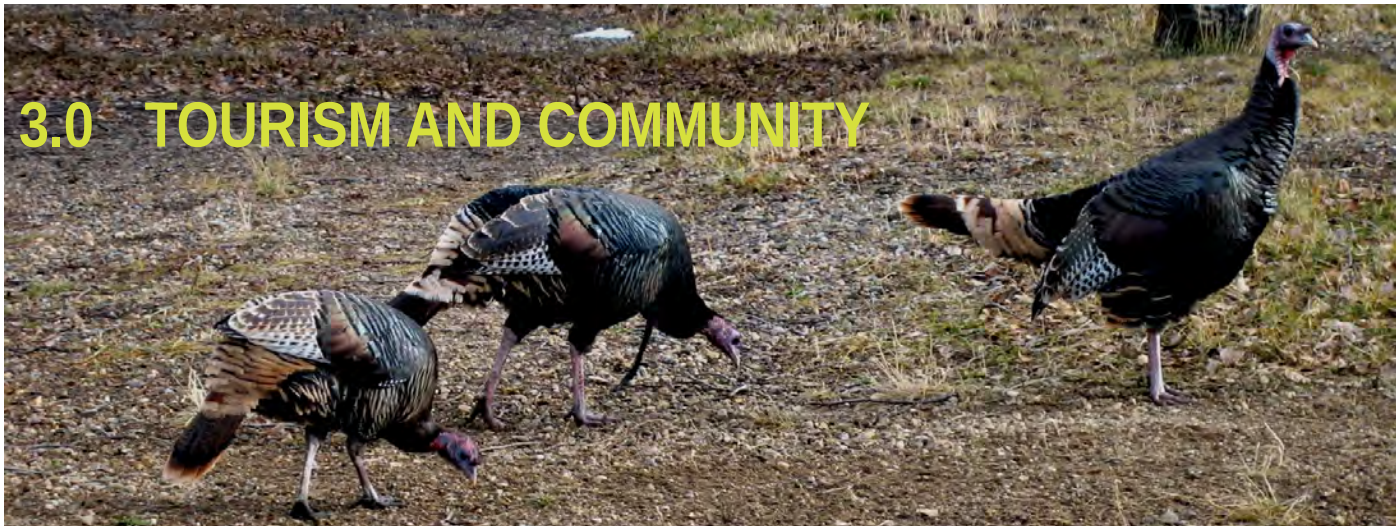
Adaptive management is a process of incorporating new knowledge (through research, work trials, monitoring and feedback) into management plans and strategies.

One current example of this technique in Cypress Hills Provincial Park is in range management. Yearly grazing strategy reports are produced for each stock association that help guide cattle management for that year. Monitoring is then conducted throughout the grazing season. At the end of the grazing season, the grazing strategy is evaluated in terms of its effectiveness and stock association/park compliance. This information is used in drafting the strategy for the following year.

2.10.1 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Research Manage-ment	Develop an adaptive management/research and/ or monitoring framework that positively supports park natural resource strategies and staff's abilities to enhance park natural resource qualities in Cypress Hills Provincial Park	• Develop an inventory of completed research projects and identify information gaps to be considered for future research projects • Develop a list of research that is currently occurring in the park • Develop a list of research priorities for Cypress Hills Provincial Park • Encourage citizen science initiatives, such as participatory public projects (e.g., species counts and surveys) • Comply with the direction of the Alberta Parks research strategy upon its development • Alberta Parks will continue to encourage Research and Collection activities within parks and will issue permits when appropriate • Copies of Research and Collection Permit reports will be collected, stored and added to a centralized data inventory • Encourage research opportunities that aid in protection/conservation of Cypress Hills native species and environments and support climate change monitoring and research • Develop research on specific management / mitigation responses by species / habitats • Encourage all researchers applying for Research and Collection permits to share their findings with park staff and the general public through participation in presentations and/or volunteer involvement in the park	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
		• Develop partnerships with the three stock associations, conservation organizations, educational institutions, research foundations and other agencies to enhance the monitoring and research in the park (i.e. Cows and Fish, SRD - Lands Division, SRD - Forest Management). • Develop a standardized monitoring/research protocol for elements including but not limited to: o rare/significant plants, animals and communities o invasive species o reclamation projects o vegetation management projects		



3.0 TOURISM AND COMMUNITY

There are numerous facilities and a developed infrastructure within Cypress Hills Provincial Park to provide for the needs of visitors. Tourism development is supported by understanding who the park users are and through visitor satisfaction surveys. Park tourism initiatives and marketing strategies are developed to support the diversity of park users. Linking community with park planning is achieved through community events and clubs located within the park as well as potential links with programs and services in nearby communities.

3.1 PARK FACILITIES AND INFRASTRUCTURE

Park facilities and infrastructure are relatively well-developed and include a Townsite with a variety of visitor services, municipal services and recreational facilities. More rustic facilities and services are also available throughout the park.

3.1.1 Park Facilities

The most developed facilities within the park are primarily concentrated within the Elkwater Townsite. A number of visitor services are available to serve the public and private cottagers. A variety of methods are used to deliver services within the park including contract and government-delivered services.

3.1.1.1 ELKWATER

The Townsite of Elkwater is not officially recognized as such under the *Municipal Government Act*, and is administered by Alberta Parks. Cypress County is responsible for collecting taxes; therefore, partnerships have been developed to partially fund the delivery of certain activities such as the volunteer Fire Department, road maintenance and street lighting. Strengthening these partnerships is key to enhancing Townsite infrastructure and maintenance. The majority of the funding to address Townsite infrastructure and maintenance is currently provided by Alberta Parks. Alberta Parks is mandated to make all decisions regarding activities within the Townsite including

infrastructure development, special events, contracted services, business approvals, and others.

The majority of recreation facilities and services of Cypress Hills Provincial Park are concentrated within the Elkwater Townsite area. These resources include:

- *a visitor centre*
- *amphitheatre*
- *community hall*
- *resort hotel*
- *restaurants*
- *beach*
- *beach concession*
- *gas station and confectionary*
- *playgrounds*
- *trails*
- *laundromat*
- *grocery store*
- *post office*
- *boat and bicycle rentals*
- *marina*
- *boat launches*
- *mini golf*

The Elkwater Townsite contains a cottage subdivision, which consists of 366 surveyed lots, 267 of which have been developed with private cottages. Twenty-four lots are occupied by the motel, gas station, staff apartments, community hall, staff houses, and the commercial complex that houses the restaurant, grocery store, laundromat and postal outlet. Approximately 75 additional lots are undeveloped due to topographical and general environmental restrictions. These lots will remain green space or park reserve.

All businesses, private group camps and cottages are operated under lease agreements with Alberta Parks. There are no lots available for further cottage development. Currently all Townsite development and improvements are managed consistent with the Elkwater Townsite Development Plan (1988). It is recognised that new development standards are required to address architectural and design guidelines. It is anticipated that these guidelines will be reviewed following completion and approval of this plan.

All lessees within the Townsite are responsible for meeting park policies and guidelines. To ensure that vegetation management practices are consistent with park policies, such as FireSmart, weed control and wildlife management, lessees must contact park staff prior to removing or modifying vegetation. Inspections are also carried out on leased land to ensure that facilities are maintained in a safe and aesthetic condition.

3.1.1.2 CAMPGROUNDS

CURRENT CAMPGROUNDS

Elkwater Facility Zone
- *Elkwater*
- *Ferguson Hill*
- *Firerock*
- *Beaver Creek*
- *Lakeview*
- *Lodgepole*
- *Old Baldy*

Remote Campgrounds
- *Battle Creek*
- *Reesor Lake*
- *Spruce Coulee*

Group Camps
- *Highway 41*
- *Willow Creek*
- *Main*

Cypress Hills Provincial Park currently has ten regular campgrounds with over 400 total sites, a number of which have power or power/water services. A campground revitalization program is currently underway which will increase the number and quality of power sites and will enhance shower and washroom facilities. All of the serviced sites are within the Elkwater Facility Zone. All remote campground areas have basic services only (vault toilets and centralized water standpipes). Appendix H describes in detail the current services available in each campground and group use area.

At present, a number of campgrounds in Cypress Hills Provincial Park are avaiable for reserving sites through the Alberta Parks campground reservation system located at www.Reserve.AlbertaParks.ca. When all sites are occupied (usually on long weekends) overflow sites are utilized.

As part of the Campground Revitalization Program, vegetation management is a key component. Declining forest cover and forest health concerns will be addressed through tree removal and replacement and campsite reconfiguration. Other environmental issues such as invasive species will also be addressed by this Program.

3.1.1.3 PRIVATE GROUP CAMPS

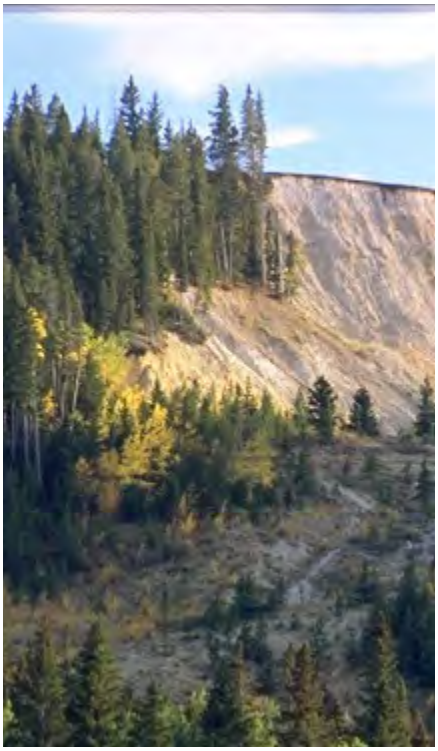
Five private group camps – the Girl Guides Camp, the Boy Scouts Camp, the YMCA Camp, Camp McCoy, and the Lutheran Church Camp – are operated in the Elkwater Townsite area. These facilities are privately owned, but the land on which they are situated is leased from the park as recreation dispositions. These private camps offer a variety of programs including some that focus on the development of both outdoor and leadership skills. Environmental education classes for students from area schools and occasionally for youth groups are held in these rental facilities.

3.1.1.4 DAY USE AREAS

Various day use facilities are provided in the park. The main beach area (including a marked swimming area) and marina is located along the lakefront on Elkwater Lake. Playground facilities are also located adjacent to the beach and near the mini golf facility.

In the Townsite area, picnic facilities are found along the south shores of Elkwater Lake. Two open picnic shelters which include fire pits and tables are located on the southeast area of the Townsite. West Central Day Use Area contains a small beach and picnic tables adjacent to the boardwalk. West End Day Use Area has a boat launch facility, small beach and picnic tables in an open grassed area. All of the above facilities are supplied with vault toilets.

Picnic tables are also provided in other day-use areas: between Ferguson Hill and Lodgepole campground; at Horseshoe Canyon Viewpoint; beside Reesor Lake; at Tom Trott Memorial Forestry Museum; at Reesor Lake Viewpoint; at Spruce Coulee trailhead parking lot; at Spring Creek trailhead parking lot; and at Spruce Coulee Reservoir.



3.1.1.5 VIEWPOINTS

There are currently two developed viewpoints in the park: Horseshoe Canyon Viewpoint and Reesor Lake Viewpoint. Horseshoe Canyon Viewpoint is located at the edge of the plateau at the southern end of the Horseshoe Canyon Trail. The Reesor Lake Viewpoint is a vehicle pull-out viewpoint located on Reesor Lake Road (see section 2.2.2). This plan will assess areas for further viewpoint development.

3.1.1.6 HIDDEN VALLEY SKI AREA

Hidden Valley Ski Area has been providing downhill skiing and snowboarding opportunities for many years. The Ski Area is operated under a long-term lease agreement with Alberta Parks. The ski hill infrastructure is jointly maintained and enhanced by both parties. Upon lease expiry, all investment remains as property of the Province. Thousands of skiers from southeastern Alberta and southwestern

Saskatchewan frequent the ski area. The facility has snow-making equipment and therefore is able to operate from December until March. This downhill ski facility forms a significant proportion of the winter recreational use in the park.

3.1.1.7 TOM TROTT MEMORIAL FORESTRY MUSEUM

The museum was originally built to commemorate Tom Trott, a forest officer who worked in Cypress Hills for 16 years and who had initiated the development of a forestry museum on this site. The museum is not used on a very intensive basis and many of the displays require upgrading. The museum is not currently accessible in winter. The site could provide opportunities for educating the public about the history and current issues of forest management in Cypress Hills Provincial Park and for curriculum-based school or youth group educational programming.

The site consists of a short interpretive trail with interpretive nodes featuring historical artefacts, structures, and tree species, with accompanying brochure; the old Medicine Lodge Fire Tower cabin building housing various artefacts such as early wildfire suppression equipment, photos and maps; a forest officer patrol cabin (Graburn Cabin); and the Medicine Lodge fire tower cupola on a twenty-foot tower.

3.1.2 Park Infrastructure

A variety of utilities and services, most of which are found in the Elkwater Townsite area, are provided in Cypress Hills Provincial Park. These utilities and services include roads, water supply, sewage and solid waste disposal, natural gas and electrical power.

3.1.2.1 ROADS

Park roads are presently maintained by Volker Stevin under contract with Alberta Transportation. There are approximately 27 km of paved roads, 7 km of oiled roads and 50 km of gravelled roads in the park.

Presently the following roads are paved:

- Highway 41 which runs north and south through the park;
- Reesor Lake Road from Highway 41 to Reesor Lake;
- Ferguson Hill Road;
- a portion of the Murray Hill Road from the Ferguson Hill Road intersection east to Horseshoe Canyon Viewpoint; and,
- the majority of Townsite roads within the core facility area.

Murray Hill Road from Highway 41 to the Ferguson Hill/Willow Creek Road intersection is oiled along with Golf Course Road.

The remainder of the roads within the park are gravelled. The conditions of the gravel roads vary, and on some of the roads four-wheel drive vehicles are required during inclement weather. At times, roads may be closed during spring, summer and fall due to safety hazards. Additionally, the following roads are closed during the winter: Battle Creek, Fort Walsh, Graburn, Nine Mile, Ferguson Hill, Golf Course, Willow Creek, and a portion of the Murray Hill road from Spring Creek trailhead parking area to the Eagle Butte Road.

Roads within the park are upgraded whenever budgets permit or when conditions require. Recently the Townsite and Highway 41 intersection was upgraded and Reesor Lake road was repaved. Some roads are prone to slumping, such as the roads leading to Firerock and Reesor Lake which have also been repaired.

The roads and resource trails are also managed according to park management needs such as access control, wildfire hazard, public safety, resource management concerns, and others. Access management plans will be developed following the park management plan.

3.1.2.2 WATER SYSTEM

Water is supplied throughout the park both within the campgrounds and the Elkwater Townsite. The Townsite water system was upgraded in 1998 with a second water reservoir being constructed in 2006. The major components of the water distribution system include: a water treatment plant, two water reservoirs, a water distribution system, and four raw water wells supplying the water treatment plant. Services are provided to cottage lease lots, businesses and park facilities.

The water treatment plant is comprised of two greensand pressure filters, a clear well treated water storage of 45 m^3 and two high lift vertical turbine pumps to distribute water to the water distribution system or to a water standpipe storage tank. Potassium permanganate is added for iron removal and chlorine added for disinfection. The water treatment plant is designed for a supply to the distribution system at 9.0 l/s (780m^3/day). The water supplied within the Townsite and facilities meets drinking water standards and approvals. Water is tested on an ongoing basis and submitted to Public Health.

Wells or springs provide the sources of water supply for the other campgrounds and day use areas. Firerock campground has a well of its own with a distribution system. Reesor Lake Dock campground also has its own well. All wells have licensing approvals under the *Water Resources Act.*

The following campgrounds are supplied by spring water: Ferguson Hill campground, Lodgepole campground, Battle Creek campground, Spruce Coulee campground and Reesor Lake campground.

Highway 41 and Willow Creek Group Use Areas have cisterns to which treated water is hauled by a water tank. Water supplied by springs and cisterns is also tested on a regular basis.

3.1.2.3 SANITARY SEWER SYSTEM

The following facilities within the Townsite are on a municipal sewer system which was installed in 1999:

- cottage subdivision,
- park administration office, new Visitor Centre, old Visitor Centre, maintenance shop, firehall, beach concession, park residences, apartment building, and other park facilities,
- park businesses,
- ski hill,
- private church and youth camps within the park, and,
- campgrounds (including Elkwater and Beaver Creek).

The municipal sewer system has two lift stations, five mini lift stations, 32 manholes, a 130-acre pivot, and six lagoon cells. Sewage empties into the lagoon located on the northwest side of Elkwater Lake. Upon proper settlement in the cell, the pivot is used to distribute the water onto the grassland. The lagoon is a licensed system. All Alberta Environment standards are followed.

Vault toilets are provided at the remaining campgrounds and day use facilities in the park. The sewage from the vault toilets is also emptied into the lagoon.

3.1.2.4 SOLID WASTE DISPOSAL

Within the park, solid waste disposal services are provided by park staff or by the campground operator. The campground operator is responsible for waste disposal in all campgrounds.

Solid waste disposal from the park is hauled to a transfer waste site located to the north of the park adjacent to secondary highway 514, just inside park boundaries. The park pays a portion of the cost to Cypress County for transferring the waste from the transfer site to the Redcliff landfill. Cypress County contracts this service to a disposal firm. Rural residents and private church camps also use the Elkwater transfer waste site for waste disposal.

The Heritage Association of Cypress Hills (HACH) coordinates a Park Recycle Program for cans and bottles within the park.

3.1.2.5 NATURAL GAS AND ELECTRICITY

The natural gas and electrical utilities in the park are provided by Forty Mile Gas Co-op and Fortis, respectively. All gas lines are underground, while electrical lines are both underground and overhead.

Telus is the primary telephone service provider to the park. The telephone lines are also found both above and below ground.

Utility companies must submit an application to the park before any new installations are provided. All requested work must be inspected and either a Letter of Authority or an easement is issued. Utility companies are required to follow all conditions outlined in their approval.

3.1.3 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Elkwater Townsite	Review and revise the *Elkwater Townsite Development Plan* and clearly delineate the spatial extent of urban development	• Reposition Elkwater as a 'green community' within a protected areas context o model sustainable practices, conservation, and other park-related initiatives such as the Dark-Sky Preserve) o consider involving professional support in green community planning in the process o support work of HACH in the park recycle program o investigate the possibility of starting/supporting a compost program • Develop a revised and updated Development Plan for the Elkwater Townsite that includes the following components: o consistency with departmental policy on demographics and policy position on population growth and limits to growth o identification of land use zones - review effectiveness of current zoning and classifications and revise as needed o identification of permitted and discretionary uses associated with land use zones o commercial accommodations and services inventory and needs analysis o clear physical boundaries to growth developed in consideration of ecological impacts o develop land use bylaws as required o definition of community character and strategies to preserve or enhance: ▯ green/open spaces ▯ responsible lighting practices and Dark Sky goals ▯ public access and mobility for elderly and mobility-impaired ▯ universal accessibility of public facilities and infrastructure		LMU 1

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
		o architectural and landscape design guidelines including: ▯ building heights, massing, setbacks ▯ acceptable building materials and colours ▯ tree protection and planting guidelines ▯ lighting ▯ landscaping with indigenous species o environmental protection guidelines including natural and cultural resource protection ▯ biological and cultural resources inventories or assessments o infrastructure and transportation o intergovernmental coordination o public consultation		
All Areas of the Park	All municipal services are provided on a cost recovery basis	• Evaluate fees on a periodic basis (at least every 3-5 years) and make recommendations to Alberta Parks Executive on cost-recovery options	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Ensure that visitor facilities and services within the park are complementary and are adequate to provide a full range of services. Interpretive, educational, outdoor recreation and special events programming needs will be considered in the design and/or construction of visitor facilities.	• Use all facilities (the new Visitor Centre, the old Visitor Centre, amphitheatre, evening program sites, trails and other facilities) as appropriate to support VS services • Make use of the new Visitor Centre on a year-round basis • Investigate the feasibility of developing a telescope station or observatory within Cypress Hills Provincial Park • Develop Spring Creek and Spruce Coulee trailhead areas to include parking, shelters, tables, etc. • Develop Head of the Mountain viewpoint area: o access: requirement for access road upgrade o facility development: parking, tables, benches, etc. • Develop a facility enhancement program for the park, including: o identification of potential locations for additional facilities, in consideration of upgrades to the Interprovincial park road o assessment of costs and prioritization for facility development o assess the needs for the development of new accommodations and services to complement those provided by CHIP-Saskatchewan and other area operators • Consider wildlife habitat and behaviour requirements in all development decisions o carry out Environmental Review of planning initiatives and development proposals that have potential effects on wildlife • Mitigate existing infrastructure developments with consideration for wildlife / livestock / human interactions	x	LMU 1 etc

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
		• Any future developments in Townsite area must have a limited impact on wildlife o Implement wildlife-friendly fencing where required o Identify areas of concern and prepare mitigation recommendations		
	Ensure that all private and public infrastructure is reflective of the unique character of the park (forms, building materials and architecture, etc.)	• Review existing guidelines and develop architectural, landscape and urban design guidelines for public and private facility development within the Townsite and outlying areas of the park • Ensure that renovations or future facility developments are compatible with the natural environment and aesthetic character of the park • Incorporate visual impact assessments within all park programs and for all park developments, e.g., fences, stock water developments, shelters, buildings • Revisit existing development to ensure scenic integrity is maintained	x	
	Investigate the upgrading, development and expansion needs of campgrounds in the Elkwater Facility Zone	• Implement the Elkwater Campground Revitalization Plan over the next 3-5 years • Visitor satisfaction surveys will continue to be used to help inform decisions regarding campground enhancements as outlined in the Campground Revitalization Program • Consider renaming ‘Lodgepole Campground’ to eliminate confusion between the campground at CHIP-Saskatchewan of the same name		LMU 1

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Reduce the threat of structural and wildfire destroying property and facilities in the park	• Reduce fuel loads adjacent to Elkwater Townsite and to park facility zones • Consider providing additional fire hydrants to ensure adequate water supply for Fire Department in the facility and cottage areas • Remove hazard trees surrounding all park infrastructure and facility zones including the Elkwater Townsite and ensure cottage and business owners are aware of the actions required to ensure hazards are removed on their lease • Ensure fire suppression devices (e.g., hydrants) in the Elkwater Facility Zone meet fire regulation standards • All new developments and renovation approvals will require the use of fire-resistant building materials (e.g., roofing rated a minimum of Class C ULC fire rating) • Develop and implement FireSmart guidelines and zones around Elkwater Townsite and all facilities • Complete Wildland Urban Interface-FireSmart plan for the park • Ensure safe disposal of woody debris; consider alternative disposal methods other than burning of woody debris where feasible • Conduct FireSmart assessments on a landscape level for the park	x	LMU 1
	Reduce the impact of flooding on facilities in susceptible areas	• Ensure new facilities are located outside of susceptible areas	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Ensure a variety of camping opportunities to offer a desired breadth of experiences to the public outside of the Elkwater Facility Zone	• Complete a campground and group use revitalization study for backcountry facilities o assessment of opportunities for backcountry camping and equestrian facilities o identification of potential locations for additional facilities, in consideration of future upgrades to the Interprovincial Park road	x	
	Rationalize and maintain the Tom Trott Forestry Museum site	• Evaluate the function and role of the forestry museum within Cypress Hills Provincial Park • Allocate resources for upgrading the forestry museum • Monitor the condition of the museum and other facilities regularly		LMU 7
	Ensure adequate infrastructure is in place to provide clean water to park visitors	• Conduct water use study for all sources outside of the Townsite/ existing municipal infrastructure (see Water Resources)	x	
	Ensure resources are prioritized and directed towards maintenance of park facilities and infrastructure to meet visitor demands	• Monitor condition of infrastructure on a regular basis • Develop priorities for implementing regular and deferred maintenance activities • Work cooperatively with Alberta Transportation in compliance with the formal agreement relating to road maintenance and access management	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
		• Work cooperatively with utility companies that have overhead lines in the park o work with utility companies, other contractors and park staff for the development of a hazard tree/canopy management program o investigate possibility of replacing overhead utility lines with underground lines		
	Develop and adhere to a designated lighting plan that minimizes light pollution, reduces energy consumption and enhances views of the night sky	• Comply with the Alberta Parks Responsible Lighting Practices policy (currently a work in progress) • Apply the Alberta Parks' Responsible Lighting Guidelines when developing guidelines for facilities within the park including natural colour balance, placement, down-lighting, sharp cutoff etc. • Promote and encourage responsible lighting practices for development within the Cypress Hills Fringe Area • Continue to retrofit non-complying lighting in Townsite as resources and budget allow • Specific strategies, actions and guidelines will be included in the Elkwater Townsite Plan to be completed in 2008	x	LMU 1
	Promote and seek support for a Reduce / Reuse / Recycle program in the park to minimize solid waste collection and disposal in landfill	• Support work of HACH in the park recycle program • Consider starting/supporting a compost program with the help of neighbouring conservation organizations • Consider developing a recycle station for paper, cardboard, plastics, tin and glass in the park	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Recognize groundwater locations and mitigate disturbances to groundwater springs and seeps in any development	• Inventory identifiable surface and ground water sources and land use throughout the park for water management planning (e.g., trails, roads)	x	
Regulatory Context	Determine the extent of compliance with the residency requirements as outlined on the *Alberta Provincial Parks Act*	• Determine actual number of cottagers not in compliance with the legislation • Seek departmental direction regarding non-compliance		LMU 1
	Determine a clear division of responsibility between agencies and among park staff in terms of overall coordination and provision of municipal services in Elkwater Facility Zone	• Develop a Memorandum of Agreement with Cypress County with respect to roles and responsibilities of the park and the county within Elkwater Townsite o include the provision of a mutual aid agreement • Consider the establishment of an Improvement District within the park to manage and administer all development in the area • Define roles and responsibilities with respect to facilities, services and maintenance of the Elkwater Townsite o identify responsibilities carried out by the County, the park, and private contractors • Review the Fire Protection Services Agreement with the County		LMU 1

3.2 TOURISM DEVELOPMENT

Cypress Hills Provincial Park is one of the most visited provincial parks in Alberta. There is a high level of visitation due to the diversity and seasonality of opportunities available. Year-round facilities and services accommodate camping, hiking, swimming, fishing and biking in the warmer months and fixed-roof accommodations, restaurants, a downhill ski facility, and groomed cross-country ski trails encourage visitation in the cooler months in fall and winter.

Surveys help to quantify satisfaction of these visitors to the park and its facilities and services. Tourism strategies across southern Alberta are currently being developed by the Alberta government including the Canadian Badlands Initiative and the Alberta Aboriginal Tourism Initiative. In addition, site and regional initiatives continue to influence visitation to the park.

3.2.1 Visitors to the Park

According to the *Visitation Statistics Report* (1 April 2002 to 31 March 2003), Cypress Hills was the fourth most visited park for camping, with a total of about 62 000 campers for the study period, and the ninth most visited park for day use. This is significant in that many of the other top camping and day use parks are located much closer to Calgary and Banff. Cypress Hills remains a popular regional destination.

Alberta, the fastest growing province in Canada, experienced a population increase of 10.6% between July 1, 2006 and June 30, 2007. Medicine Hat, the closest major urban centre to Cypress Hills Provincial Park, has experienced a significant increase in population over the past fifteen years. Between 1991 and 1996, the percent population change was 6.75%; between 1996 and 2001 the percent population change was 8.72%; and between 2001 and 2006 the percent population change was 8.56%. This steady increase in the population of Medicine Hat has the potential to boost park visitation. An increase in park visitation will allow for more opportunities and demand for tourism services. The park has the capacity and services to enhance shoulder season and year-round use.

Based on a survey given out at the Visitor Centre and at interpretive programs during the summer of 2003, it appears that the majority of visitors to Cypress Hills Provincial Park are Canadian (96%), with Americans and Europeans making up the remaining 4% (Western Management Consultants 2003). The greatest proportion of visitors is families consisting of two adults travelling with one or more children (60%). The majority of them are from the Medicine Hat area, and most plan to spend at least one night. Others are repeat non-local visitors that are there primarily to camp. Long term stays (six nights or more) were also common in Cypress Hills, due to the cottage facilities in Elkwater Townsite. This demonstrates the park's importance as a regional recreation destination. Visitors typically plan their trips to Cypress Hills based on previous visits, recommendations from others, and the internet. Visitation is expected to change in the

coming years due to significant provincial population growth in the future, improved program delivery and enhanced marketing.

The most popular activities in the park are sightseeing (95.5%), nature and wildlife viewing (93.2%), visiting viewpoints and lookouts (91.9%), other land-based activities (such as walking; 90.6%), and self-guided trail use (87.9%). Other activities and facilities that survey respondents rated highly in Cypress Hills included playgrounds, bicycling, swimming and fishing (Western Management Consultants 2003).

3.2.2 Visitor Satisfaction

Visitor satisfaction surveys in Cypress Hills have identified that park staff and contractors are friendly and courteous. Areas of concern included:

- cleanliness of the washrooms;
- value for camping fee, park information services;
- availability of firewood;
- condition of facilities;
- potable water;
- noise control; and,
- cleanliness of grounds.

Areas for improvement included the addition of shower facilities, better signage at campgrounds and at trails, trail conditions, and the provision of more services for the camping fee.

3.2.3 Park and Interprovincial Park Marketing Strategies

Cypress Hills Interprovincial Park and Fort Walsh National Historic Site drafted a joint marketing strategy to increase Alberta and Saskatchewan residents' support for the park. Awareness and understanding of park values are aimed at increasing visitation (Alberta Community Development 2001). Marketing objectives are as follows:

1. increase level of Saskatchewan and Alberta residents' awareness of Cypress Hills Interprovincial Park;
2. identify and market/promote specific 'non-consumptive' recreational activities in Cypress Hills Park;
3. determine the level of public satisfaction with customer service received at the park and offices, and to increase this satisfaction level annually;
4. increase the level of park visitors listing "safe and secure" as a critical factor in their enjoyment and use of the park;
5. increase the use of 'personal' and 'non-personal' park heritage appreciation products and services;
6. develop a line of park products for retail and wholesale opportunities;

7. increase the level of accurate public identification of typical job duties, level of education, training and skills required by park staff; and,
8. increase knowledge of and travel to Fort Walsh National Historic Site from the park.

To achieve the above objectives, the strategy builds on park strengths, constraints and opportunities in relation to nature and heritage protection, and heritage appreciation and outdoor recreation. The strategy focuses on the following themes: tactics/strategy, key market areas, and action plan: specific activities. The strategy was focused at two key broad market areas: Day Users and Overnight Visitors. The Marketing Strategy Themes for Cypress Hills Interprovincial Park and Fort Walsh National Historic Site are detailed in Appendix I.

3.2.4 Other Provincial, Regional and Local Tourism Initiatives

Recently, the Alberta government has developed an 'Aboriginal Tourism Initiative' for this province. Alberta Parks staff have been involved since its inception, and Cypress Hills Provincial Park has been deemed an important partner and provider of Aboriginal tourism opportunities.

Travel Alberta maintains two websites (www.travelalberta.com and www.albertaaboriginaltourism.com) that identify sites and events around Alberta with Aboriginal significance. Travel Alberta also provides information on some Aboriginal tourism opportunities around the province.

In partnership with Cypress Hills Provincial Park and Medicine Hat Public Schools, the Miywasin Centre, a resource centre for area Aboriginals in Medicine Hat, co-organizes History in the Hills, a four-day event in the park that showcases traditional First Nations, Métis, settler and contemporary culture as historically practiced in the region. Other partners include a variety of academic institutions, other governmental agencies and cultural organizations.

3.2.5 Canadian Badlands Initiative

In the last five years, the Alberta government has been promoting the development of a second tourism icon in the province. The Canadian Badlands region is found in the southeast corner of Alberta, ringed by Stettler, Red Deer, Calgary, Lethbridge, and the Milk River. They are surrounded on their eastern and southern borders by the Alberta-Saskatchewan border and the Alberta-Montana border. Municipal government leaders in the region formed a not-for-profit company in 2006 to develop tourism in the area. The company will be funded by annual levies collected from each participating municipality, as well as significant funding support from Alberta Tourism, Parks and Recreation and other sources. The company has developed a website and self-guided auto tours.

The initiative plans to focus on four key themes:

- natural history and dinosaurs;
- Aboriginal history and current culture;
- settlement, industrial development and the arts; and,
- recreation opportunities available in the region.

A series of self-guided tours has been developed for the region and several include visits to the Cypress Hills. Tourists are able to download route maps and interpretive information about the different routes online at www.canadianbadlands.com, or obtain them from Travel Alberta.

3.2.6 Trends in Tourism

It is recommended that tourism development at Cypress Hills Interprovincial Park focus primarily on three target markets: families with children, culture and heritage interest, and Aboriginal tourism markets (Western Management Consultants 2003).

Despite their current success and growth potential, these markets are being affected by trends related to:

- demographic shifts, with a large proportion of the population reaching retirement age in the near future;
- increasing numbers of adult-only households;
- increased concerns of tourists regarding personal security;
- enrichment experiences and enrichment-based travel: where visitors learn a new skill or activity, learn about another culture or the environment, or participate in some sort of spiritual or holistic activity;
- growing numbers of international travellers;
- opportunities provided by technological advances; and,
- proliferation of niche markets with highly specialized and customized visitor experiences (Western Management Consultant 2003).

Current policies and practices need to be flexible to accommodate the tourism growth projected. High increases in visitation need to be managed to ensure protection of park resources and visitor experiences. Since the promotion of positive visitor experiences is provincially mandated, park management must focus its attention and resources on achieving this mandate (Paul F.J. Eagles Planning 2003).

Increased tourism potential and revenue is not merely dependent on the ability of park authorities to proactively manage and control visitation dynamics and visitor experience, but to engage in tourism marketing and partnerships and provide relevant tourism outreach services (Western Management Consultants 2003). Adopting visitor management strategies based on the principles of sustainable tourism is vital in achieving goals related to enhancement of economic opportunities, protection of natural and cultural heritage, and advancement in the quality of life for all concerned (Paul F.J. Eagles Planning 2003).

In doing so, park authorities need to plan around future trends in tourism, building on existing park strengths and opportunities for improvement. To deal with the issue of insufficient accommodation and an aging visitor population, for instance, a step in the right direction would be to develop more and higher quality fixed-roof lodging, RV camping facilities, restaurants and shopping venues to accommodate not only the segment of the visitor population expected to reach retirement age, but other visitors preferring indoor accommodation. The park also needs to respond to the trend toward enrichment-based travel and organize package vacations that offer adventure activities that are new and unique.

3.2.7 Programs and Services in Nearby Communities

Cypress Hills Provincial Park is located within a five-hour drive (~500 km) from three major urban centres (Calgary, Regina and Saskatoon), and within a two-hour drive (~200 km) from four moderately sized urban centres (Swift Current, Medicine Hat, Lethbridge and Havre, Montana). The closest city and major population base is Medicine Hat. Major tourism attractions, facilities and events in Medicine Hat include: Police Point Park; Echo Dale Regional Park; Medicine Hat Clay Industries National Historic District; Esplanade Arts and Heritage Centre; Family Leisure Centre; the annual JazzFest; Spectrum Festival; the Saamis Teepee; camping; and a number of golf courses.

Besides urban centres, the park is also close to a number of other parks and sites of interest, including: Fort Walsh National Historic Site; CHIP-Saskatchewan; Great Sandhills Museum; Historic Reesor Ranch; Jasper Cultural and Historic Centre; Southwest Saskatchewan Oldtimers Association Museum; Spring Valley Guest Ranch; T. rex Discovery Centre; Michelle Reservoir Provincial Recreation Area; Bullshead Reservoir Provincial Recreation Area; Writing-on-Stone Provincial Park; Dinosaur Provincial Park; Maple Creek, Saskatchewan; Etzicom Museum; St. Margaret's Church Historic Site; Eastend, Saskatchewan; Red Rock Coulee Natural Area; Milk River Natural Area; and Kennedy Coulee Ecological Reserve (Map 3).

Alberta Parks has identified Writing-on-Stone Provincial Park and Dinosaur Provincial Park as 'sister parks' to Cypress Hills Provincial Park (Western Management Consultants 2003). The three parks are recognized as 'flagship' or destination parks in the southeast Alberta region, and Alberta Parks plans to market these three sites as part of a southeast Alberta package. All three sites feature camping facilities, family-oriented educational and interpretive programs, and all have cultural and archaeological heritage opportunities. In addition, Alberta Parks selected three protected areas close to the park that will be featured in Cypress Hills Provincial Park's Visitor Services programs: Red Rock Coulee Natural Area, Milk River Natural Area, and Kennedy Coulee Ecological Reserve (EcoLeaders 2004). The purpose of this initiative is to increase stewardship and educate the public about rare and sensitive habitat found in these sites.

The sites and attractions listed in this section represent other sites which may be of interest to tourists in the area, and could be linked to Cypress Hills Provincial Park through the development of region-wide cultural and recreational tourism programs. Further information on these sites can be found at the Cypress Hills Visitor Centre.

3.2.8 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Park Visitation	Provide a range of opportunities and services that ensure a quality experience for all park visitors	• Conduct research and/or surveys on park users' and non-users' opinions and values • Target park programming to a full range of visitor demographics, cultures and social backgrounds mindful of market demand and viability • Collect annual day use and other visitation statistics for the park • Maintain records of visitor demographics for use in planning recreation, Visitor Services and marketing strategies • Upgrade facilities as required according to visitation and market trends and demands and satisfaction surveys and subject to resource availability • Develop and deliver a park information, awareness and ambassador course for delivery to all park and partner staff	x	
Regional Tourism Context	Ensure that visitor use, recreation and VS activities support the preservation objectives of the park	• Ensure park visitors are aware of the sensitive natural and cultural heritage through social marketing, Visitor Services programming and services • Encourage visitation to occur in areas of the park where impacts can be minimized or managed and/or controlled (e.g., through permits, closures, licensing and appropriate infrastructure) • Monitor visitor use and impacts throughout the park • Evaluate potential impacts when there is a proposed new activity or when there is change in an existing activity's season, use or intensity	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
		• Encourage private sector tourism initiatives that are compatible with park objectives • Survey other parks to inventory what day use facilities/services they provide, levels of use and sustainability		
	Participate in a variety of marketing initiatives at local, regional, provincial , national and international scales	• Participate in and support regional and provincial tourism initiatives (i.e. Tourism Medicine Hat, Alberta South Tourism Destination Region and Travel Alberta) • Develop a Cypress Hills Provincial Park marketing strategy o define target markets and evaluation methodology for marketing and promotion activities • Participate in and support the CHIP Management Committee (Marketing Subcommittee) in implementing and updating the Interprovincial Park marketing strategy • Complete the CHIP Branding exercise • Support Aboriginal heritage tourism initiatives in the park	x	
	Provide up-to-date information on day use and other facilities to the public using a variety of mediums	• Inventory and assess existing day use facilities in the park • Revitalize the website and keep website updated on a regular basis	x	

3.3 COMMUNITY ENGAGEMENT

Community engagement is a process; it is “an effective working relationship with local people to achieve mutually valued, worthwhile aims” (author unknown). Community engagement is integral to future local support for the park, specifically, and the Alberta Parks system in general. The partnerships developed and nurtured through community engagement allow for the integration of the park into the larger landscape. Key examples of community engagement are outlined in this chapter.

3.3.1 Community Events

A number of celebrations and events are held in the community throughout the summer, involving Alberta Parks staff as organizers or participants. These events include: the Spring Bird Count; History in the Hills; Canada Day; Parks Day; Butterfly Count; Elkwater Lakeshore Fun Run; and a Sand Sculpture Contest. Other special events (i.e., park anniversary or facility openings) have also been organized periodically.

Organized community events have historically taken place between mid-May and early August, when park visitation is at its peak. Most are based in the Elkwater Townsite. New accommodation facilities have enhanced opportunities for events and partnerships with the community. Some community events are organized by the Elkwater Community Association: a group of local farmers, ranchers, cottage owners and area people who have worked with the park providing social events since the 1950s. Community events are also organized by the Heritage Association of Cypress Hills and other groups. In these events, Alberta Parks staff offer support through administration, permitting and sometimes logistic support.

Numerous Alberta Parks-delivered special events are designed to attract new and repeat visitors from target audiences. Topics are chosen to address current management issues.

3.3.2 Heritage Association of Cypress Hills

A Co-operating Association is a not-for-profit society that has a signed agreement with the department of Tourism, Parks and Recreation to enhance our heritage appreciation or resource management services at a specific site within the Alberta Parks network. Working in partnership with staff, these “arms’ length” associations provide additional products and services to our visitors.

The Heritage Association of Cypress Hills (HACH), established in 1989, is a volunteer group of dedicated park supporters who have developed or enhanced a number of projects and Program areas in partnership with Alberta Parks. These projects include:

- sponsorship of a ‘Guest Lecture Series’;
- development of a park-wide beverage container recycling program;

- sponsorship and coordination of a summer research and education program on wetlands and northern leopard frogs;
- development and administration of a Memorial Bench Program;
- sponsorship and coordination of Canada Day activities
- development and coordination of a Trail Care Program ; and,
- fund-raising for a variety of park programs.

3.3.3 The Venturers Society

The Venturers Society Program was founded in 1986 by Bill Nike, and through the years has established several teams which are stationed in several parks such as Fish Creek and Kananaskis Country. In September 2004, a Venturers Program was initiated to serve Cypress Hills Provincial Park and the immediate community. A second group commenced in the fall of 2005.

The mission statement of the Venturers is to ensure the physical, emotional, intellectual and spiritual development of participants with development disabilities through meaningful participation in the park and community, by enabling participants to experience the wonders of natural areas, and by recognizing their many contributions.

The mandate of the Venturers Program is to ensure that the needs, goals and aspirations of the participants are met through the provision of emotional and mental support, direction and advice by the initiatives of supervisory staff accompanying each individual participant in their daily journey.

The Venturers Program is structured around small teams of up to five individuals. Each group is led by a Team Leader to act as a mentor. The program is partially funded by Alberta Parks through in-kind support such as the provision of a work space, vehicle and tools to perform park duties. Some projects which the Venturers Program has completed in the past include assembling picnic tables, installing signs, fencing, planting trees, litter and garbage collection, and removing deadfall and hazardous trees. They have also done some contract work for cottagers and several businesses in the park. The Venturers Program is an integral part of the park operations and delivery of maintenance and resource projects.

3.3.4 Park Watch

Cypress Hills Park Watch is an association that was formed in 2003. It consists of community members, parks staff and adjacent landowners. See Section 5.2.7.1 for more information on this program.

3.3.5 Volunteer Fire Department

Cypress Hills Provincial Park currently has an agreement with Cypress County to provide human resources for fire protection within the park and the Elkwater Protection Area. The Elkwater Volunteer Fire Department consists of park staff and volunteer members of the community.

3.3.6 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU/ Zone-specific
Community Engagement	Encourage community special events in the park that are consistent with overall park objectives	• Facilitate, plan and present appropriate special events • Review special event requests for consistency with park objectives • Promote participatory public projects such as species counts and surveys • Support the continued use of the park for Aboriginal spiritual ceremonies that are consistent with park preservation objectives • Evaluate effectiveness of special events to ensure their relevance, appropriateness and consistency with overall park objectives	x	
	See: 'Objectives' in 4.3 regarding stewardship	• Support the Canadian Parks Council *Healthy by Nature* initiative and encourage the important connection between healthy ecosystems and healthy human populations	x	

4.0 LEARNING AND ENGAGEMENT

Stewardship and support of the park is the key goal, which presents a significant long-range benefit to the park. Visitor Services programs consist of those programs formally organized, administered, and facilitated by Alberta Parks. Heritage appreciation is delivered in Alberta parks through several modes: interpretation, environmental education, orientation, information services, marketing and promotions. Each mode can be delivered through personal or non-personal means, both within the park and outside the park through extension services. Some examples of current interpretation programs in Cypress Hills include guided walks, auto/bus tours, and campfire and amphitheatre programs. Environmental education programs are those which address specific topics relating to the park's natural and cultural history and the audience group's curriculum requirements, usually involving youth groups and school groups. Orientation and information services are those which provide visitors with information on the facilities, programs, safety, management, and regulations of the site.

Visitor Services programs also provide an ideal opportunity to educate members of the public about the special features and sensitive habitats within the park. Programs are often designed to educate visitors about management issues, with set objectives to improve understanding and encourage environmentally sustainable behaviour.

To meet current and future needs, a *Heritage Appreciation Development Plan* (HADP) has been prepared for Cypress Hills. The intent of this plan is to create VS programs that focus on awareness and appreciation of the park's natural and cultural heritage, increasing protected areas stewardship, and targeting a wider audience than park visitors alone. Future VS programs in the park will be moving from a topic-focused 'provision of information' model to a more hands-on approach where discovery and inquiry are fostered by greater participation by the audience and more dialogue with park staff and other experts.

A variety of stewardship opportunities are available in Cypress Hills. These include, but are not limited to, campground hosts, 'friends of' groups, trail care, research and stewardship special events (e.g., weed pulling events). The stewardship model that is employed is outlined in detail in the HADP and is reflective of provincial policy direction.

4.1 VISITOR SERVICES PROGRAMMING

The key objective is to deliver of a variety of VS programs about the park which meet the needs of a variety of audiences. The *Heritage Appreciation Development Plan* (HADP) describes and prioritizes the audiences in relation to the type of program offered. Successful programming will be realized through planned and periodic evaluation and fine-tuning of what is delivered. The types of programs offered will be guided by the Alberta Parks stewardship model (see Box 1). Detailed information on the stewardship model can be found in the HAPD.

Box 1. The Alberta Parks stewardship model.

Leads	persuades others effects change in awareness, appreciation, understanding and behaviour in others	Fan the Flame
Behaves	displays positive behaviour in her/his actions tangible actions	
Values	considers the environment to have intrinsic worth the environment becomes an important part of his/her identity	
Understands	has in-depth knowledge precisely grasps meanings able to interrelate concepts	
Appreciation	can comment on the content and importance of specific environmental components	Light the Spark
Aware	has learned something about the natural and cultural environment can remember some elements	
Unaware	not equipped with specific or general knowledge	
Unsupportive	behaves in ways that do not support environmental citizenship	

4.2 VISITOR CENTRE OPERATION AND ORIENTATION SERVICES

The intent of the Visitor Centre is to be the primary year-round venue for information and orientation services. Visitor Centre functions include personal and non-personal information services, a gift shop, indoor presentation space, exhibits and displays. Additional orientation services are provided through websites, phone services, park signage and print products. The aim of information and orientation services is to spark park visitors to explore the natural and cultural environment of the Cypress Hills. Visitors, new and repeat, will be encouraged to report back on their experiences and the Visitor Centre will be a welcoming venue in which they can share these experiences with other park users.

4.3 MANAGEMENT ISSUES, OBJECTIVES AND STRATEGIES/ACTIONS

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
All VS Topics	Provide opportunities for the public to have a 'virtual' experience of the Cypress Hills	• Develop and market website materials, pod casts, and produce and distribute quality print products	x	
	Develop and implement various methods for evaluating and improving the effectiveness of VS programs and services provided by the park staff and in the park by volunteers, private and non-profit sectors and other individuals	• Develop guidelines and standards for volunteers and private organizations to follow when presenting information • Develop or coordinate orientation and training opportunities for volunteers and private organizations • Develop and deliver a park information, awareness and ambassador course for delivery to all park and partner staff • Evaluate programs conducted by volunteers and private organizations for compliance with guidelines and standards • Evaluate programs on a continuous basis	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Orientation and Information Services	Provide accurate and timely information to the public using a variety of methods to ensure that visitors are properly prepared for their park experience, encouraged to explore the park and have a better understanding as they explore the park environment	• Develop an annual operation strategy for information and orientation services consistent with the recommendations of the HADP. This strategy will include at least the following: o operate the Visitor Centre on a year round basis o provide printed information about the park at local and regional tourism authorities or distribution points in the park and regional area o ensure that all park orientation, information and promotional products are consistent with park messages and presentation standards o keep website information up-to-date o update the telephone message system on a regular basis	x	
Interpretive Programs	To provide interpretive services that will enhance visitor understanding of the various ecosystems of the Cypress Hills environment and the role that parks plays in protecting the representative and special ecosystems found throughout Alberta	• Update the interpretive programs to meet the recommendations of the *Heritage Appreciation Development Plan* (e.g. address the audiences and their needs) • Accessibility will be considered in the development of all programs • Develop an annual strategy for delivery of interpretive programs consistent with the recommendations of the HADP • Continue to work cooperatively with Cypress Hills Interprovincial Park partners in the development and delivery of complementary programs	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	To provide the public with opportunities for exploration and appreciation of the Cypress Hills' natural systems and historical and cultural features	• Provide a range of opportunities year-round • Coordinate Visitor Services efforts with other parks in the region (e.g. Dinosaur and Writing-on-Stone Provincial Parks) and with Medicine Hat (e.g., Medicine Hat Interpretive Program, Medicine Hat Clay Industries National Historic District) • Develop programs that encompass the full range and diversity of ecosystems in the park o encourage existing and expanded appreciation of all appropriate park zones	x	
	Develop programs that provide visitors with a better understanding of park management issues and actions	• Develop a list of appropriate topics to be included in the annual strategy for the delivery of interpretive programs • Prepare communication plans for visitor awareness of vegetation management goals and any subsequent vegetation programs in the park o educate park visitors on the fire risks and preventable measures	x	
	Increase interpretation and VS programs on rare plant species and communities within the park	• Efforts will be made to provide interpretation and VS programs to promote awareness of the significance of rare plants and plant communities • Encourage staff development opportunities on rare plant species and rare ecological communities in the park	x	
	Promote the understanding of the Cypress Hills ecosystem and the region as a whole	• See marketing strategies and actions (See Section 3.2)	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Environ-mental Education Programs	Provide year round environmental education programs based upon the resources of Cypress Hills Provincial Park Increase participation in educational activities in the park and opportunities for message delivery in the wider region	• Develop an annual environmental education strategy (consistent with the HADP) initially focusing on: o increasing student use of the park in fall and winter o development of overnight trips for schools and youth groups o development of outreach or extension programs o development of extended adult-focused educational and learning opportunities • Develop an invasive species, pests and pathogens component within the environmental education section of the VS program	x	
Steward-ship	To provide the public with opportunities to contribute to park management and protection of the park's natural and cultural resources, including the provision of VS services	• Work cooperatively with the Heritage Association of Cypress Hills, other volunteer groups and independent volunteers and stewards • Encourage participation in the Alberta Parks Campground Host program • Continue to host invasive species management programs • Include volunteer opportunities in all park program areas (e.g. FireSmart, Park Watch, Volunteer Fire Department)	x	

5.0 OUTDOOR RECREATION AND HEALTHY LIVING

5.1 RECREATION

The Canadian Parks Council's *Healthy by Nature* strategy promotes five key messages: Parks: for your health; Parks: for your family; Parks: for your soul; Parks: for your community; and, Parks: for your environment. (See: http://www.parks-parcs.ca/english/pdf/HbN%20-%20Colour.pdf.) Alberta Parks endorses the *Healthy by Nature* strategy and promotes it's key messages recognizing the natural link between outdoor recreation and healthy living.

Cypress Hills Provincial Park offers many opportunities for camping, trail-related activities, water sports and other seasonal activities. The unique topography, lakes and forested landscapes are invaluable in that they offer a wider diversity of opportunities as compared to other parts of the region. In the area around Cypress Hills Provincial Park, the outdoor recreational resources consist of open landscapes, some lakes, and one major river, the South Saskatchewan.

A variety of outdoor recreation resources, facilities, and services are available in Cypress Hills Provincial Park on a year-round basis. Camping is a popular recreational activity supported by the campground facilities described in section 3.1. Additional recreational opportunities in the park range from nature-based activities such as hiking and interpretation to more intensive activities such as motor-boating and water-skiing. The majority of facilities for the more intensive recreational activities are found in the Elkwater Facility Zone. The remaining park areas provide a setting for less intensive, nature-oriented outdoor recreation.

5.1.1 Trail-Related Activities

An extensive trail network has been developed in the park for multiple uses. There are approximately fifty-six kilometres of trails within the Cypress Hills that provide opportunities for hiking, mountain biking and cross-country skiing. This trail system encompasses a variety of single trails which fall within and link the Beaver Creek, Spring Creek, Reesor Lake and Spruce Coulee areas (Maps 11 to 14). The entire trail network is accessible through trail connections from Elkwater Townsite, as well as

multiple campgrounds and day use parking lots. Trail features are detailed in Appendix J.

An important part of the trail network is the Trans-Canada Trail. In Cypress Hills Provincial Park, the route extends from the Elkwater Townsite to the Alberta-Saskatchewan border where it links to the Cypress Hills Saskatchewan trail network.

While many trails are designated as multi-use trails, some are designated as specific-use trails to allow for an enhanced user experience. Considerations for designation include terrain, quality of infrastructure, and ability to invest in trail improvements.

The park also offers ideal conditions for cross-country skiing. The area receives more snow than the surrounding region and its forested valleys retain snow and protect skiers from extreme winds. Diverse terrain also provide cross-country skiing opportunities for skiers of different skill levels, including gently sloping trails suitable for the novice, as well as steeper terrain for intermediate to advanced skiers. As conditions permit, trails are groomed regularly in winter.

5.1.1.1 EQUESTRIAN USE

Although the park has no formal equestrian trails or facilities, there are an increasing number of equestrian users who come out for day rides. The riders must obtain a permit from the Conservation Officers which outlines specific rules and guidelines for riding in the park. Riders are not permitted in the Elkwater Facility Zone, in campgrounds or on any of the park hiking trails. When fire hazards are high, riding may be restricted. On occasion, the park receives requests for special event trail rides involving large numbers of riders and wagons. These are handled by a Special Event Permit and are approved on a case by case basis.

5.1.2 Water Sports

Water sports are allowed on all three park lakes with Elkwater Lake being the busiest, particularly from June until early September. The lake is used extensively by many forms of vessels including high-powered water ski boats, personal water crafts, paddleboats, sailboats, canoes, windsurfers and small motor boats. As use increases, concerns for public safety, wetland habitat and water quality are becoming more prevalent. Reesor Lake only permits electric-powered motors, canoes, small car-topper boats and belly-boats. Spruce Coulee only permits non-motorized watercraft including canoes, rowboats and belly boats.

5.1.3 Recreational Activities

Cypress Hills Provincial Park provides many outdoor recreational opportunities throughout the year. Summer activities include camping, hiking, cycling, swimming,

fishing, geo-caching, and plant and wildlife observation. Winter activities include snowshoeing, cross-country skiing, skating, ice fishing and downhill skiing.

A complete list of recreational activities and opportunities is available by contacting park staff at the Cypress Hills Visitor Centre.

5.1.3.1 HIDDEN VALLEY SKI AREA

Cypress Hills Provincial Park is the site of the Hidden Valley Ski Area which has been popular in providing downhill skiing and snowboarding opportunities for many years. The ski area is located within the park on Highway 41 just south of Elkwater Lake, and attracts thousands of skiers from southeastern Alberta and southwestern Saskatchewan including a large number of school groups. The facility has snow making equipment so is able to operate from early December through late March even when snowfall amounts are low. The ski area features chair lifts and rope tows, a day lodge with cafeteria, and a snowboard and ski equipment rental shop and lessons. The ski hill also operates a regularly scheduled bus route to and from Medicine Hat. Hidden Valley Ski Hill is privately operated.

5.1.4 Recreation Trends

Recreational trends will be considered in the review and development of programs and facilities that are offered in the park. Any new development must be consistent with Alberta Parks' strategic direction and policies.

5.1.5 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Camping Facilities	Ensure that a visitor information system is in place that provides up-to-date information about park programs, campground vacancies, road and weather conditions	• Maintain up to date weather information services for campsite vacancies and conditions • Utilize new visitor services capacity to provide this information for visitors	x	
	Implement the campground revitalization strategy for the Elkwater Facility Zone	• The strategy will be implemented in a series of three to five phases. Estimated completion by 2010		LMU 1
	Develop revitalization strategies for the all outlying campgrounds, including group use facilities	• Consider the development of a summer/fall youth group camping area in the east end of the park in close proximity to trails/lakes/ recreational opportunities (i.e. adjacent to Reesor Lake or Spruce Coulee campgrounds) • A strategy will be developed by 2008. Development initiated after completion of Elkwater Facility Zone development • Integrate appropriate public presentation space or infrastructure into the design of campground and day use- facilities	x	
	Encourage visitor use of the other area of the park in addition to the Elkwater Lake, Spruce Coulee and Reesor Lake Reservoirs	• Include assessment and needs for additional facilities in the development strategy for the areas outside the Elkwater Facility Zone (e.g. backcountry camping opportunities, upgrades to IPP roads, equestrian facilities) • Integrate appropriate public presentation space or infrastructure into the design of campground and day use facilities	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Water Recreation Activities	To maintain the three main water bodies (Elkwater Lake, Spruce Coulee and Reesor Lake reservoirs) as major recreational features in the park	• Ensure close working relationship with Alberta Environment to monitor the water levels in Elkwater Lake • In consultation with Alberta Environment, determine appropriate levels of use based on water quality, quantity (allocations and lake levels) and environmental concerns • Continue proactive communications with Alberta Environment regarding water management decisions		LMU 1 LMU 10
	To provide a wide variety of water-based recreational activities within the limits of lake management objectives	• Develop lake management plans for Elkwater Lake, Spruce Coulee and Reesor Lake Reservoirs (see Water Resources)		LMU 1 LMU 10
	Monitor and review the recreational uses on Elkwater Lake, Reesor and Spruce Coulee Reservoirs in relation to environmental impact, visitor safety and visitor satisfaction	• In the interim, continue to permit motorized boating on Elkwater Lake Reservoir with the exception of the east bay which is for non-motorized watercraft only • Review and evaluate recreational use guidelines for Elkwater Lake Reservoir that addresses (among others): o levels of use o seasonality of use o water requirements o user conflicts and zoning the lake for different watercraft o speed limits o noise restrictions o time restrictions o policing of lake in summer o boating size limitations		LMU 1 LMU 10

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
		• Surveys to determine visitor level of satisfaction with recreational experience will be considered at each Reservoir • Continue to permit non-motorized, electric water craft on Spruce Coulee Reservoir and electric watercraft only on Reesor Lake Reservoir		
Trail System	To develop a matrix that identifies uses and accessibility for the entire Cypress Hills trail system	• To initially focus on expanding universally-accessible and interpretive trail infrastructure • To use the matrix in Appendix J to guide short term development and designation decisions • To refine the matrix to ensure all user group needs are adequately addressed	x	
	To increase accessibility for the physically-challenged to park recreational facilities	• Evaluate/audit universal accessibility of current trails and amenities • Consult with physically challenged individuals and advocacy groups to making park amenities more accessible • Research precedents for park universal accessibility • Upgrade trails to improve universal accessibility as funding and evaluations become available • Incorporate above research into Trail Development Plan	x	
	To improve and expand the network of trails found throughout the park	• Work with volunteers and neighboring agencies to maintain, improve and develop trails and facilities (e.g., improve washroom, garbage and orientation facilities at trail heads as budget permits) • Work with Stock Associations in the development of strategies to minimize cattle use (impacts) on designated recreation trails	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	To provide trail-based facilities and services that complement the natural setting of the park and have an acceptable environmental impact	• Prepare a Trail Development Plan for formal/designated trails in the park and provide input into trail development standards giving consideration to: o sustainable trail design o viewscapes and terrain variations o avoidance of sensitive ecological areas and wildlife crossings o universal accessibility o timing of trail work to minimize impact o reclamation of old trails o typical construction details o improved signage, maps and interpretive media at trail heads o feedback received from visitor surveys and trail monitoring o backcountry opportunities o equestrian facilities o interpretive opportunities o cross-country ski trail and winter activity needs (slope, terrain, facilities) o trail linkages o mountain biking opportunities	x	
	Develop and implement a “Share the Trail” communications strategy	• Formalize and implement policies and guidelines for the use and management of informal and designated trails • Improve signage at trailheads • Place maps and interpretive media at railheads, especially Spruce Coulee and Spring Creek • Work cooperatively with private sector, volunteers, surrounding landowners and stock associations to review existing policies and develop any new policies needed	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Designate routes and facilities for equestrian use in the Natural Environment Zone	• Cooperate with surrounding landowners to coordinate equestrian trails outside the park with trails and facilities located inside the park • Issue equestrian permits with applicable guidelines and conditions • Work with user groups and stakeholders to identify routes and areas of interest • Identify day-use access points • Investigate development of Battle Creek Campground as an equestrian facility • Work with CHIP-Saskatchewan to examine linkages to its equestrian trail network • Investigate potential impacts of equestrian use on park's natural environment • Coordinate development of equestrian trails with other types of trails, roads and fireguards to minimize conflicts	x	
Seasonal Activities	To provide opportunities for cross-country ski and other winter activities	• Continue to groom and maintain winter trails for cross-country skiing • Provide winter camping opportunities • Maintain all-season day-use areas • Consider developing multi-season backcountry hut system • Continued promotion of winter activities within the park • Research and implement best practices for winter trail maintenance	x	

5.2 PUBLIC SAFETY

Issues of public safety within Cypress Hills Provincial Park include fire protection, prevention of human-wildlife conflicts, emergency response procedures, public education, waterfront and winter access safety, and crime prevention within park boundaries.

5.2.1 Fire Protection

Fire protection plays a significant role in preventing, controlling, and suppressing those fires that pose a threat to the safety of park visitors; private, public, and commercial buildings; and the forest and grasslands of the Cypress Hills. There are two kinds of fire than can affect the park: wildland fires and structural fires.

Wildland fires are actioned either by parks initial attack crew or with support from Sustainable Resource Development (SRD). A Wildland Urban Interface Plan is currently being developed for Cypress Hills Provincial Park with the assistance of the Forest Protection Division of SRD.

Structural fires within the park and the Elkwater protection area within Cypress County are actioned by the Elkwater Fire Department. The mandate of the Fire Department is to respond to medical emergencies, serious traffic accidents, and grassland and structural fires within the protection area. The Fire Department consists of park staff and volunteer members. The park currently has an agreement with Cypress County to provide human resources for fire protection. Through the agreement, the County provided a fire hall and a fire pumper. Recently the County purchased a new fire pumper for the Fire Department. Annually, the County provides some equipment (such as turnout gear, hose, nozzles, etc.) as identified by the Fire Chief as well as financial support for training. The Fire Department has three fire pumpers, one initial attack unit and a rescue response truck. Within the Townsite, the Fire Department has access to 26 gravity-fed fire hydrants which meet National Fire Protection Association (NFPA) standards. If a hydrant is unavailable, water is relayed either through a fire pumper or water tank.

Alberta Forestry has developed FireSmart guidelines that outline several plans for minimizing risk in fire-prone areas. These guidelines are based on two development zones: the first within 1 to 1.5 km of hazard stands, and the second outside of 1.5 km. Within Development Zone 1, there are strict regulations: no coniferous trees within 5 m of structures, restrictions on trees/grasses within 10 m of structures (or within 30 m if there is a slope >30% below the structure), and structural guidelines for buildings and infrastructure, for example. Development Zone 2 is slightly more lenient regarding vegetation restrictions. All new buildings in the Townsite, including the hotel and new Park Visitor Centre, were built to FireSmart guidelines. The park also actively removes hazard trees from the Townsite and campgrounds.

5.2.2 Wildlife-Human Conflict Prevention

Park staff is committed to minimizing human-wildlife conflicts within Cypress Hills Provincial Park. There is potential for many different types of human and wildlife encounters which pose a real threat to public safety, to the wildlife in question, and to facilities and infrastructure. Several parks staff are trained to appropriately address wildlife-human conflict issues and to initiate programs that minimize negative interactions. Sighting reports, tracking, education, habitat modification, facility design, exclusion and aversion techniques are all used to identify and minimize potential conflicts.

Cougars, beaver, moose, elk, deer, raccoon, turkey, skunk, bat, squirrel, woodpecker and coyote populations are all established in the park. Each presents different examples of management issues, including:

- woodpeckers damaging the cedar siding of cottages and facility buildings;
- beavers plugging culverts and flooding roadways and trails, damaging trees and leaving partially girdled trees standing as hazards;
- bats entering cottage attics;
- cougars entering Elkwater Townsite, day use areas and campgrounds;
- moose and elk damaging fences;
- skunks and squirrels burrowing under porches;
- skunks and coyotes feeding on unsecured garbage; and,
- turkey and deer populations becoming habituated to taking food from humans.

Other conflicts include livestock depredation by wild predators, disease and parasite transfer, and human injury from aggressive animals.

5.2.3 Emergency Response

As one of the busiest provincial parks in the province, emergency response for a variety of issues is a high priority throughout all aspects of park operations. An evacuation plan has been developed for the park which also links to Cypress County and the City of Medicine Hat emergency response plans. The greatest threat is likely that of a large scale forest fire in and around the Elkwater Townsite. As hazards escalate, various steps are taken including posting and distribution of evacuation information, area and trail closures, equipment preparedness and increased patrols.

Search and Rescue is another aspect of emergency response in park staff are regularly involved. A missing persons plan is used for all reported overdue or missing persons. Depending on the level of urgency, additional agencies may also become involved including the RCMP and South East Alberta Search and Rescue (SEASAR).

The emergency response umbrella also includes plans or protocols for dealing with ice rescue, power outages, rope rescue, severe storms and other related emergencies. In most emergencies, park staff take the lead and work closely with the Elkwater Fire Department to help carry out an effective response. Other agencies that also may be

involved include Alberta Disaster Services, Redcliff RCMP, SEASAR, Red Cross and SRD along with other related agencies or departments.

5.2.4 Public Safety Education

Public safety is enhanced through education and patrols. The boat and bike safety programs are two such programs. Boat patrols are conducted on Elkwater Lake during the summer months to control traffic, inspect boaters, monitor for high risk concerns and provide educational materials. Staff also work with the Federal Department of Fisheries and Oceans to provide safety seminars. Mountain bike patrols are also conducted in the summer months to inspect trails, provide information to children on helmets and safety, and to complete compliance checks. Parks staff also ensure key safety information is posted at bulletin boards and is distributed to park users as appropriate. This information pertains to evacuations, wildlife concerns, ice safety, resource protection issues, emergency contact numbers, high theft areas and other related concerns.

5.2.5 Waterfront Safety

Elkwater Lake has four beach areas including the main beach which receives most of the summer use. A swimming area is established at the main beach, marked off by a float line as well as buoys beyond this to keep the boat traffic at a safe distance. The swimming area is unsupervised, so the park follows guidelines as set out by the Lifesaving Society to help ensure user safety. Regulations under the *Canada Shipping Act* specify a speed limit of 10 km/hr or less within 30 m of a shoreline. This offers some protection for the beach areas including secondary beaches unmarked by buoys or floatlines. For public safety and resource protection reasons, the far eastern portion of Elkwater Lake is zoned for 10 km/hr or less. This allows for more tranquil recreational use, helps protect shoreline habitat for nesting birds, and provides a safe zone for paddle boats and other recreational users. There is also a marked 10 km zone along the shoreline up to the swimming area which helps control the speed of boaters and keeps a safe zone for paddle boats. The main swimming area is closed off to boaters. Despite these measures, the lake is still quite active, congested and noisy in July and August. Park staff conduct some patrols on the water to help monitor safety concerns and to ensure boaters meet safety requirements.

5.2.6 Winter Access Management

Due to the park's size, topography and elevation variances, winter access management is an important component of public safety. Most areas of the park are quite difficult to access once snow-covered, even for 4x4 vehicles. The key areas are plowed as soon as practical; however, major winter storms can make travel difficult even on the main highway. Over the years park staff have installed numerous gates at key intersections to restrict travel into hazardous area. The only vehicle-accessible areas in the winter months are the Elkwater Townsite, Spring Creek trailhead, toboggan hill, Spruce

Coulee trailhead, and the roads to Reesor Lake and Spruce Coulee. Winter storms often cause closures to the Reesor Lake and Spruce Coulee reservoirs and are re-opened once plowing is completed and roads are inspected.

5.2.7 Crime Prevention Programs

Crime prevention programs within the park target vandalism, theft, environmental damage and disturbance to others in ways that enhance the quality and safety of the park experience for all visitors.

5.2.7.1 CYPRESS HILLS PARK WATCH

Cypress Hills Park Watch is a crime prevention program that was established in 2003 as a means to deal with vandalism, thefts, environmental damage and other related incidents in the park and Elkwater Townsite. An association was formed consisting of community members, parks staff and adjacent landowners. Crime prevention is carried out through the use of signage, brochures, trade shows, community presentations, posting of emergency numbers and distribution of other related information.

Cypress Hills Provincial Park also has a 24-hour park emergency number known as the 'Help Line'. Visitors are able to access emergency help by calling this number which can connect them with a Conservation Officer (CO). The Help Line is designed with the intent of covering park-specific emergencies such as missing persons, noise complaints, minor accidents, theft complaints, wildlife concerns and other related emergencies; for emergencies related to fire, ambulance or police requirements the 911 system is still in use. The Help Line along with Cypress Hills Park Watch provides an effective means of dealing with park-related concerns and emergencies. This program also partners with Rural Crime Watch, an Alberta crime prevention program.

5.2.7.2 ENFORCEMENT AND COMPLIANCE PROGRAM

Cypress Hills has a long history of problem behaviour among visitors during peak visitation times such as the May long weekend. Ongoing initiatives developed to reduce public disturbance include programs such as Liquor Bans, Zero Tolerance and May long weekend strategies.

Conservation Officers are appointed as Peace Officers within the Province of Alberta and this authorizes them to act upon certain criminal code matters as well as numerous Provincial Statutes. COs follow an Enforcement Compliance model when dealing with park users in enforcement situations, which may consist of education, prevention and/or enforcement. Officers' actions are dictated by the behaviour of an individual and will respond according to the Use of Force Model. All COs must maintain certain levels of enforcement proficiencies. Officer safety is paramount and officers do not respond to emergency call-outs alone unless the call-out is of a minor nature. Enforcement

duties may be carried out using foot patrols, bike, boat patrol, vehicle, helicopter, OHV, aircraft or horseback.

5.2.7.3 CONSERVATION OFFICER HORSE PROGRAM

A Conservation Officer Horse Program was initiated in 2006, with the intent of creating an alternative way of contacting the public and maintaining a positive atmosphere for visitors within the enforcement and compliance program as well as improving the working relationship with ranchers in and around the park. Horses also provide an alternative method of patrolling previously inaccessible areas of the park.

5.2.8 Management Issues, Objectives and Strategies/Actions

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
Safety of Park Users	Educate the public on public safety issues	• Ensure educational information is accessible regarding fire, flood, severe weather and other emergency response events • Develop preventative educational material to deal with human-wildlife issues • As new issues arise, materials will be developed and distributed as part of a communications strategy • Reduce risk to public safety at conglomerate exposures • Maintain waterfront safety through public education • Educate public on Firesmart principles • Firesmart messages recommended for use in interpretive programming in VS programs where feasible	x	
	To allow the public to experience a full range of park opportunities in a safe and enjoyable manner	• Control access where required through use of gates, signage and public education and seasonal closures • Implement standards as outlined in the Canadian Lifeguarding Standards for unsupervised swimming areas • Refer to lake recreational guidelines (see Recreational Activities) for water safety	x	LMU 1 LMU 10
	Minimize or mitigate multiple uses that result in user conflicts and public safety concerns	• Carry out the elk management hunt in a manner that protects park users	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
	Ensure an emergency response plan is reviewed and updated for Cypress Hills Provincial Park	• Prepare Emergency Response Plan that addresses each zone and park overall • Promote public awareness of Emergency Response Plan • Coordinate all safety and emergency services within the park • Ensure adequate and operational evacuation routes	x	
	Minimize occurrences and mitigate the impact of human-wildlife interaction in the park	• Develop and implement standards for facilities that do not attract wildlife, such as: o animal-proof waste disposal containers o screening under decks o playgrounds away from forest land o non-palatable Townsite plantings • Develop human-wildlife conflict prevention procedures allowing staff to make effective and responsible decisions and initiate appropriate actions, including policies on: o preventative action o control measures • Capture and subsequent relocation and/or euthanasia of the animal involved if necessary	x	
Enforce-ment and Compliance	To enforce applicable legislation, park regulations and policy and promote public safety	• Park staff will continue to be the lead staff to respond to security and safety measures • Continue to work with other agencies (i.e., RCMP) as required and for serious incidents (e.g., Criminal Code violations) • Maintain a good working relationship with other enforcement agencies to ensure both public and staff safety at all times	x	

Topic	Objectives	Strategies / Actions	Park-Wide	LMU / Zone-Specific
		• A security and safety plan will be developed to adequately monitor and respond to related incidents. This plan will include but not be limited to sections on: o manpower o education o check stops o signage o handouts • Conduct patrols to promote education along with compliance checks to deal with infractions • Monitor and enforce compliance with respect to the lake management plan • Public safety and enjoyment will be promoted considering methods such as: o imposition of liquor ban for the May long weekend • Continue to promote and implement zero tolerance to deal with significant issues		
	Ensure sufficient COs and other staff to meet security and enforcement requirements so as to enhance public safety, proper enjoyment and appreciation of the park	• Continue to support and monitor multiple methods of patrols including the CO horse program with respect to equipment, materials and human and financial resource needs • Maintain and promote the emergency line (893-HELP) • Support development of a provincial park emergency telephone line	x	

6.0 PARK MANAGEMENT UNITS

This section describes the landscape management units (LMUs) within Cypress Hills Provincial Park and the land use zoning used within Alberta's system of parks. Specific land use zones within the LMUs are described.

6.1 USE, DEVELOPMENT AND ZONING

Landscape Management Units (LMUs) are based upon similar underlying physiographic conditions and vegetation patterns as well as common use and management objectives. The LMUs allow for the integration of multiple objectives across park management program areas. They help to assure that all management is directed towards the achievement of a clear set of objectives for each LMU.

The LMUs in the park (see section 1.10) have specific objectives in addition to the park-wide objectives described throughout this plan. Each LMU has at least one overriding objective related to the management intent of the unit within the context of the park (Table 3). Each LMU also has site or zone-specific objectives. Twelve LMUs have been delineated. They are:

LMU 1. Elkwater
LMU 2. North Shore
LMU 3. Ski Hill
LMU 4. West End
LMU 5. West Fire Tower
LMU 6. Willow Creek
LMU 7. Murray Hill
LMU 8. Ross Creek Headwaters
LMU 9. Plateau
LMU 10. Spruce Coulee
LMU 11. Reesor Hills
LMU 12. East Valleys

Map 5 indicates the twelve units.

Table 3. General overriding objectives for each LMU.

LMU 1. Elkwater	To provide facilities, services and recreational opportunities to visitors in a manner than is environmentally sound, universally accessible and that promotes park messages and good stewardship. To prepare a Townsite Development Plan that will provide a clear vision for the future and encourage sustainable urban use.
LMU 2. North Shore	To maintain the scenic quality of the area as low-development grassland habitats. To provide access and a sense of entry to the park.
LMU 3. Ski Hill	To provide intensive outdoor recreation to park visitors in a manner that exemplifies ecologically sensitive design and operations. To present park messages and interpretive opportunities as part of the Provincial Park experience.
LMU 4. West End	To maintain the unique undeveloped scenic and ecological resources of the area and to interpret those resources to the public. To provide low-intensity, rustic recreation experiences within the park while maintaining landscape and ecological integrity with particular emphasis on protecting important wildlife habitats and viewing opportunities.
LMU 5. West Fire Tower	To maintain wildland forest habitats without development of visitor facilities.
LMU 6. Willow Creek	To manage for forest health and ecological integrity while maintaining year-round trail-based recreation and heritage appreciation.
LMU 7. Murray Hill	To protect scenic quality, recreation and heritage appreciation opportunities with particular attention to the geological history of the Cypress Hills landform and the resultant variety of vegetation. To provide a scenic roadway corridor that will provide motorists with a variety of viewscapes.
LMU 8. Ross Creek Headwaters	To manage for forest health and ecological integrity while maintaining accessible trail-based recreation and appreciation of park natural and cultural heritage.
LMU 9. Plateau	To sustain the health and ecological integrity of the native fescue grasslands. To ensure or enhance high scenic quality along the corridor by reducing the impact of development.

LMU 10. Spruce Coulee	To provide secluded, nature-based recreation experiences while maintaining landscape and ecological integrity. To interpret the unique ecological features of the area to visitors with particular emphasis on wetlands, orchids and avian habitats.
LMU 11. Reesor Hills	To provide low intensity recreation experiences within the park while maintaining landscape and ecological integrity with particular emphasis on protecting important wildlife habitats, geology, and heritage and scenic resources.
LMU 12. East Valleys	To protect and enhance ecological and scenic integrity of park creeks, riparian areas and forests. Strictly limit all development of trails and facilities to low-impact wilderness/ backcountry opportunities.

6.2 LAND USE ZONING

Land use zones have been delineated within each LMU. Land use zones in Alberta's parks reflect the need for specific geographical areas within a park to be classified based on preservation requirements, heritage appreciation, outdoor recreation or heritage tourism activities. There are seven land use zones currently identified for management planning in Alberta's system of parks. These include:

Preservation Zone is designated in areas where the preservation of natural values and ecological processes precedes all other uses.

Wilderness Zone includes natural landscapes capable of supporting wilderness recreation (e.g., trails, backcountry camping) while preserving natural heritage values.

Natural Environment Zone permits low-density recreation, education and interpretation consistent with protection and heritage appreciation. This area can include domestic grazing as an ongoing management regime.

Historical/Cultural Zone recognizes and preserves land or features with significant historical or archaeological value, often stabilized and/ or restored.

Visitor Services and Facility Zone supports day use and overnight accommodation in provincial parks and provincial recreation areas.

Access Zone includes major transportation routes and areas that offer access to outdoor recreation opportunities including parking lots, small picnic facilities and staging areas.

Integrated Management Zone only applies to provincial recreation areas, and represents those lands where resource use activities such as improved grazing occur alongside outdoor recreation opportunities.

Five of these zones have been applied to Cypress Hills Provincial Park: Preservation; Natural Environment; Historical/Cultural; Visitor Services and Facility; and Access Zones (Map 15; details of Zones within individual LMUs given on Maps 16 to 26). Table 4 describes the features of the LMUs and zones in the park. It was determined during the development of the Cypress Hills Provincial Park Management Plan that a recreation zone was not required as recreation activities are supported in all five zones as identified in the plan.

Table 4. Features of Landscape Management Units (LMUs) and Zones in Cypress Hills Provincial Park. Note that the majority of the park falls under Natural Environment Zone unless otherwise designated.

LMU	Preservation Zone	Historical/ Cultural Zone	Visitor Services and Facility Zone	Access Zone
LMU 1 Elkwater	Elkwater Lake bird nesting area/wetlands Elkwater Lake orchid sites		Elkwater Townsite and campgrounds	Roadways Highway 41
LMU 2 North Shore			Lagoon Area	Information pulloff
LMU 3 Ski Hill	Ski Hill orchid site			
LMU 4 West End				Murray Hill Road
LMU 5 West Fire Tower				Murray Hill Road
LMU 6 Willow Creek	Willow Creek wetlands		Willow Creek Group Camp	Willow Creek Road
LMU 7 Murray Hill			Highway 41 Group Camp Horseshoe Canyon Viewpoint Tom Trott Memorial Forest Museum	Murray Hill Road
LMU 8 Ross Creek	white birch stand white birch single tree conglomerate cliffs	Stampede archaeology site	Rodeo Grounds Main Group Camp	Ferguson Hill Road Spruce Coulee Trailhead

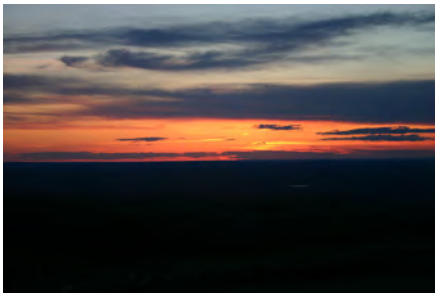
LMU	Preservation Zone	Historical/ Cultural Zone	Visitor Services and Facility Zone	Access Zone
LMU 9 Plateau	Survival Tree Battle Creek headwaters and conglomerates conglomerate cliffs Middle Field pothole			Information pulloff Bull Trail Graburn Road Spring Creek Trailhead
LMU 10 Spruce Coulee	Spruce Coulee wetlands Reesor Lake wetlands		Spruce Coulee Reesor Lake Viewpoint	Access point Bull Trail
LMU 11 Reesor Hills	conglomerate cliffs Battle Creek pothole Reesor Lake Hills		Reesor Lake	
LMU 12 East Valleys	Police Point Slump white spruce stand		Battle Creek Campground Graburn Campground	

6.2.1 Leases, Licenses and Written Authorities

Land use activities within park boundaries include recreational uses (e.g., cottaging, camping); commercial facilities and services; industrial and resource uses (e.g., pipelines, utility lines); and agricultural uses (e.g., grazing).

Land use within Cypress Hills Provincial Park is managed and regulated through a variety of agreements including:

a) cottage leases
b) recreational leases
c) grazing permits
d) miscellaneous permits, utility access rights, letters of authority granting permission and access for special land use activities.



6.2.2 A Summary of LMU and Zoning Objectives

While the general overriding objectives guide management within a given LMU, several LMU- or Zone-specific strategies and actions were identified in Sections 2.1 through 5.2. These are summarized by LMU and Zone in Table 5.

Table 5. LMU-specific objectives.

LMU	General Overriding Objectives	Strategies / Actions
LMU 1. Elkwater	To provide facilities, services and recreational opportunities to visitors in a manner that is environmentally sound, universally accessible and that promotes park messages and good stewardship. To prepare a Townsite Development Plan that will provide a clear vision for the future and encourage sustainable urban use.	**Preservation Zone**: o Visual integrity to be maintained in the wetlands at east end of Elkwater Lake o Include key wetlands within Protection Zones, including Elkwater Lake wetlands o Use appropriate measures to protect threatened wetlands (e.g., fencing, off-site watering systems, etc.) **Visitor Services and Facility Zone**: o Mitigate the impacts of slumping on the infrastructure and facilities in the Elkwater Facility Zone or consider relocation of existing structures in unstable areas o Visual integrity to be maintained in the Elkwater Townsite o Implement the recommendations from the water use study o Encourage sustainable landscape practices for the Townsite, including naturescaping /reduced domestic irrigation and rainwater harvesting o Develop standards for water fixtures within the park o Develop a water conservation strategy as part of the revised Elkwater Townsite Development Plan o Develop and deliver a water conservation education program targeted primarily at the cottage audience

LMU	General Overriding Objectives	Strategies / Actions
		o Reposition Elkwater as a 'green community' within a protected areas context ▯ model sustainable practices, conservation, and other park-related initiatives such as the Dark-Sky Preserve) ▯ consider involving professional support in green community planning in the process ▯ support work of HACH in the park recycle program ▯ investigate the possibility of starting/supporting a compost program with the help of neighbouring conservation o Develop a revised and updated Development Plan for the Elkwater Townsite that includes the following components: ▯ consistency with departmental policy on demographics and policy position on population growth and limits to growth ▯ identification of land use zones - review effectiveness of current zoning and classifications and revise as needed ▯ identification of permitted and discretionary uses associated with land use zones ▯ commercial accommodations and services inventory and needs analysis ▯ clear physical boundaries to growth developed in consideration of ecological impacts ▯ develop land use bylaws as required ▯ definition of community character and strategies to preserve or enhance: • green/open spaces • responsible lighting practices and Dark Sky goals • public access and mobility for elderly and mobility-impaired • universal accessibility of public facilities and infrastructure ▯ architectural and landscape design guidelines including: • building heights, massing, setbacks • acceptable building materials and colours • tree protection and planting guidelines • lighting • landscaping with indigenous species

LMU	General Overriding Objectives	Strategies / Actions
		▯ environmental protection guidelines including natural and cultural resource protection • biological and cultural resources inventories or assessments ▯ infrastructure and transportation ▯ intergovernmental coordination ▯ public consultation o Any future developments in Townsite area must have a limited impact on wildlife ▯ implement wildlife-friendly fencing ▯ identify areas of concern and prepare mitigation recommendations o Implement the Elkwater Campground Revitalization Program over the next 3-5 years o Visitor satisfaction surveys will continue to be used to help inform decisions regarding campground enhancements as outlined in the Campground Revitalization Program o Consider renaming 'Lodgepole Campground' to eliminate confusion between the campground at CHIP-Saskatchewan of the same name o Reduce fuel loads adjacent to Elkwater Townsite and to park facility zones o Remove hazard trees surrounding all park infrastructure and facility zones including the Elkwater Townsite and ensure cottage and business owners are aware of the actions required to ensure hazards are removed on their lease o Ensure fire suppression devices (e.g., hydrants) in the Elkwater Facility Zone meet fire regulation standards o All new developments and renovation approvals will require the use of fire-resistant building materials (e.g., roofing rated a minimum of Class C ULC fire rating)

LMU	General Overriding Objectives	Strategies / Actions

		o Develop and implement FireSmart guidelines and zones around Elkwater Townsite and all facilities
		o Continue to retrofit non-complying lighting in Townsite as resources and budget allow
		o Specific strategies, actions and guidelines will be included in the Elkwater Townsite Plan to be completed in 2008
		o Determine actual number of cottagers not in compliance with the legislation
		o Seek departmental direction regarding the non-compliance
		o Develop a Memorandum of Agreement with Cypress County with respect to roles and responsibilities of the park and the county within Elkwater Townsite
		  include the provision of a mutual aid agreement
		o Consider the establishment of an Improvement District within the park to manage and administer all development in the area
		o Define roles and responsibilities with respect to facilities, services and maintenance of the Elkwater Townsite
		  identify responsibilities carried out by the County, the park, and private contractors
		o Review the Fire Protection Services Agreement with the County
		o The (campground revitalization) strategy will be implemented in a series of three to five phases. Estimated completion by 2010.
		Elkwater Lake:
		o Develop a lake management plan in consultation with Alberta Environment (Water Resources) and Alberta Sustainable Resource Development (Fish and Wildlife Division) for the lake and two reservoirs, including:
		  boat zoning and motorized usage

LMU	General Overriding Objectives	Strategies / Actions
		speed limits and zoning water withdrawals shoreline use recreation use (e.g. swimming, boating, fishing, if applicable) suitable fishery o Continue to monitor water samples during summer months at the Elkwater Lake Main Beach to help ensure safety for swimmers o Develop sport fishery plans for all areas that are consistent with detailed management objectives o Revisit current species distribution to determine appropriate species for the park based on suitability, recreational goals and ecological goals o Conduct an aquatic ecosystem inventory to identify all native and introduced fish and invertebrate species o Manage park aquatic resources for native ecosystem health in addition to recreation quality o Consider catch and release programs for native species o Consider ecosystem value of 'problem' native species when prescribing management strategies (e.g., white suckers in Reesor Lake Reservoir, walleye in Spruce Coulee Reservoir) • Recreation (5.1.5) o Ensure close working relationship with Alberta Environment to monitor the water levels in Elkwater Lake o In consultation with Alberta Environment, determine appropriate levels of use based on water quality, quantity (allocations and lake levels) and environmental concerns o Continue proactive communications with Alberta Environment regarding water management decisions

LMU	General Overriding Objectives	Strategies / Actions
		o Develop lake management plans for Elkwater Lake (see Water Resources) o In the interim, continue to permit motorized boating on Elkwater Lake Reservoir with the exception of the east bay which is for non-motorized watercraft only o Review and evaluate recreational use guidelines for Elkwater Lake Reservoir that addresses (among others): levels of use seasonality of use water requirements user conflicts and zoning the lake for different watercraft speed limits noise restrictions time restrictions policing of lake in summer boating size limitations o Control access where required through use of gates, signage and public education and seasonal closures o Implement standards as outlined in the Canadian Lifeguarding Standards for unsupervised swimming areas o Refer to lake recreational guidelines (see Recreational Activities) for water safety
LMU 2. North Shore	To maintain the scenic quality of the area as low-development grassland habitats. To provide access and a sense of entry to the park.	**Natural Environment Zone**: o Visual integrity to be maintained with respect to the view of undeveloped north shore prairie to the north of Elkwater Lake from Townsite area

LMU	General Overriding Objectives	Strategies / Actions
LMU 3. Ski Hill	To provide intensive outdoor recreation to park visitors in a manner that exemplifies ecologically sensitive design and and operations. To present park messages and interpretive opportunities as part of the Provincial Park experience.	
LMU 4. West End	To maintain the unique undeveloped scenic and ecological resources of the area and to interpret those resources to the public. To provide low-intensity, rustic recreation experiences within the park while maintaining landscape and ecological integrity with particular emphasis on protecting important wildlife habitats and viewing opportunities.	
LMU 5. West Fire Tower	To maintain wildland forest habitats without development of visitor facilities.	
LMU 6. Willow Creek	To manage for forest health and ecological integrity while maintaining year-round trail-based recreation and heritage appreciation.	Preservation Zone: o Include key wetlands within Protection Zones, including Willow Creek wetlands o Use appropriate measures to protect threatened wetlands e.g., fencing, off-site watering systems, etc.)

LMU	General Overriding Objectives	Strategies / Actions
LMU 7. Murray Hill	To protect scenic quality, recreation and heritage appreciation opportunities with particular attention to the geological history of the Cypress Hills landform and the resultant variety of vegetation. To provide a scenic roadway corridor that will provide motorists with a variety of viewscapes.	**Preservation Zone**: o Protect conglomerates from activities that lead to accelerated erosion or other movement of these features, considering such sites as Horseshoe Canyon **Visitor Services and Facility Zone**: o Maintain existing viewpoints within the park including Horseshoe Canyon Viewpoint o Consider developing additional viewpoints in such areas as Head of the Mountain viewpoint o Develop Head of the Mountain viewpoint area: ▯ access: requirement for access road upgrade ▯ facility development: parking, tables, benches, etc. o Evaluate the function and role of the forestry museum within Cypress Hills Provincial Park o Allocate resources for upgrading the forestry museum o Monitor the condition of the museum and other facilities regularly
LMU 8. Ross Creek Headwaters	To manage for forest health and ecological integrity while maintaining accessible trail-based recreation and appreciation of park natural and cultural heritage.	**Historical/Cultural Zone**: o Work with Historic Resources Management staff to protect the integrity of Site DjOn-26 for scientific and educational purposes o Support and pursue the designation of Site DjOn-26 as a Provincial Historic Resource o Further research and excavation of Site DjOn-26 and other sites

LMU	General Overriding Objectives	Strategies / Actions
LMU 9. Plateau	To sustain the health and ecological integrity of the native fescue grasslands. To ensure or enhance high scenic quality along the corridor by reducing the impact of development.	**Preservation Zone**: o Protect conglomerates from activities that lead to accelerated erosion or other movement of these features, considering such sites as: ▯ Battle Creek headwaters ▯ south sides of Nine Mile and Graburn Creek headwaters o Include key wetlands within Protection Zones, including Middle Field wetland o Use appropriate measures to protect threatened wetlands (e.g., fencing, off-site watering systems, etc.) **Natural Environment Zone**: o Consider developing additional viewpoints in such areas as: o Graburn Road east of Police Point Road (view south of plateau prairie) o top of Police Point Road (view to the west)
LMU 10. Spruce Coulee	To provide secluded, nature-based recreation experiences while maintaining landscape and ecological integrity. To interpret the unique ecological features of the area to visitors with particular emphasis on wetlands, orchids and avian habitats.	**Preservation Zone**: o Include key wetlands within Protection Zones, including: ▯ Spruce Coulee wetlands ▯ Reesor Lake wetlands o Use appropriate measures to protect threatened wetlands (e.g., fencing, off-site watering systems, etc.) **Visitor Services and Facility Zone**: o Maintain existing viewpoints within the park, including Reesor Lake Viewpoint

LMU	General Overriding Objectives	Strategies / Actions
		o Visual integrity to be maintained in the following areas of the park: ▯ view west over Spruce Coulee from across the road from Reesor Lake Viewpoint ▯ view of lake and Battle Creek valley from Reesor Lake Road **Reesor Lake and Spruce Coulee Reservoirs**: o Develop a lake management plan in consultation with Alberta Environment (Water Resources) and Alberta Sustainable Resource Development (Fish and Wildlife Division) for the lake and two reservoirs, including: ▯ boat zoning and motorized usage ▯ speed limits and zoning ▯ water withdrawals ▯ shoreline use ▯ recreation use (e.g. swimming, boating, fishing, if applicable) ▯ suitable fishery o Develop a strategy in consultation with users to address temporary reduction in water availability (from dam reconstruction) o Ensure environmental impacts are mitigated and best practices are used in dam reconstruction o Develop sport fishery plans for all areas that are consistent with detailed management objectives o Revisit current species distribution to determine appropriate species for the park based on suitability, recreational goals and ecological goals o Conduct an aquatic ecosystem inventory to identify all native and introduced fish and invertebrate species o Manage park aquatic resources for native ecosystem health in addition to recreation quality

LMU	General Overriding Objectives	Strategies / Actions
		o Consider catch and release programs for native species o Consider ecosystem value of 'problem' native species when prescribing management strategies (e.g., white suckers in Reesor Lake Reservoir, walleye in Spruce Coulee Reservoir) o In consultation with Alberta Environment, determine appropriate levels of use based on water quality, quantity (allocations and lake levels) and environmental concerns o Continue proactive communications with Alberta Environment regarding water management decisions o Develop lake management plans for Spruce Coulee and Reesor Lake Reservoirs (see Water Resources) o Surveys to determine visitor level of satisfaction with recreational experience will be considered at each Reservoir o Continue to permit non-motorized, electric water craft on Spruce Coulee Reservoir and electric watercraft only on Reesor Lake Reservoir o Control access where required through use of gates, signage and public education and seasonal closures o Implement standards as outlined in the Canadian Lifeguarding Standards for unsupervised swimming areas o Refer to lake recreational guidelines (see Recreational Activities) for water safety
LMU 11. Reesor Hills	To provide low intensity recreation experiences within the park while maintaining landscape and ecological integrity with particular emphasis on protecting important wildlife habitats, geology and heritage and scenic resources.	**Preservation Zone**: o Include key wetlands within Protection Zones, including Battle Creek wetland / RANA site o Use appropriate measures to protect threatened wetlands (e.g., fencing, off-site watering systems, etc.)

LMU	General Overriding Objectives	Strategies / Actions
LMU 12. East Valleys	To protect and enhance ecological and scenic integrity of park creeks, riparian areas and forests. Strictly limit all development of trails and facilities to low-impact wilderness/backcountry opportunities.	**Preservation Zone**: o Protect conglomerates from activities that lead to accelerated erosion or other movement of these features, considering such sites as Police Point slump **Natural Environment Zone**: o Consider developing additional viewpoints in such areas as the view of Police Point Slump from Battle Creek Road

7.0 IMPLEMENTATION AND REVIEW

7.1 IMPLEMENTATION OF THE PLAN

Upon Assistant Deputy Minister review and approval, the Cypress Hills Provincial Park Management Plan will be implemented by park staff with support from stakeholders and the broader park community. There will be work plans developed to identify the activities (e.g., maintenance, capital projects, research and monitoring, etc.) and associated costs for the ten-year lifespan of the Plan.

Implementation reports will be prepared to document and highlight the accomplished activities.

7.2 REVIEW OF THE PLAN

The Cypress Hills Provincial Park Management Plan's implementation reports will be compiled and the practicality and appropriateness of the Plan's objectives will be evaluated.

The outcomes of management actions and strategies will be assessed and the understanding of issues will be updated.

The Plan will be measured by it's ability to successfully meet the defined objectives and resolve identified issues through implementation of the recommended actions and strategies.

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Alberta's Economy
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Alberta Parks
www.AlbertaParks.ca

Bullshead Reservoir Provincial Recreation Area
http://gateway.cd.gov.ab.ca/siteinformation.asp?id=289

Canadian Badlands Initiative
http://www.canadianbadlands.com

Cypress Hills Interprovincial Park
http://www.cypresshills.com

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www.CypressHillsPark.ca
http://gateway.cd.gov.ab.ca/siteinformation.aspx?id=29

Cypress Hills Provincial Park, Saskatchewan (Saskatchewan Environment Website)
http://www.tpcs.gov.sk.ca/CypressHills

Dinosaur Provincial Park
www.DinosaurPark.ca
http://gateway.cd.gov.ab.ca/siteinformation.aspx?id=246
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http://www.dinocountry.com

Etzikom Museum
http://www.foremostalberta.com/tourist.aspx?pgetzikom

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http://www.pc.gc.ca/eng/lhn-nhs/sk/walsh/

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http://www.se.gov.sk.ca/ecosystem/land%20use/Great%20Sand%20Hills/
http://www.environment.gov.sk.ca/2007-104TechnicalReviewComments

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http://www.reesorranch.com

Jasper Cultural and Historical Centre
http://www.jaspercentre.ca/0000pg.asp/ID/3344/SID/120

Maple Creek, Saskatchewan
http://www.maplecreek.ca

Michelle Reservoir Provincial Recreation Area
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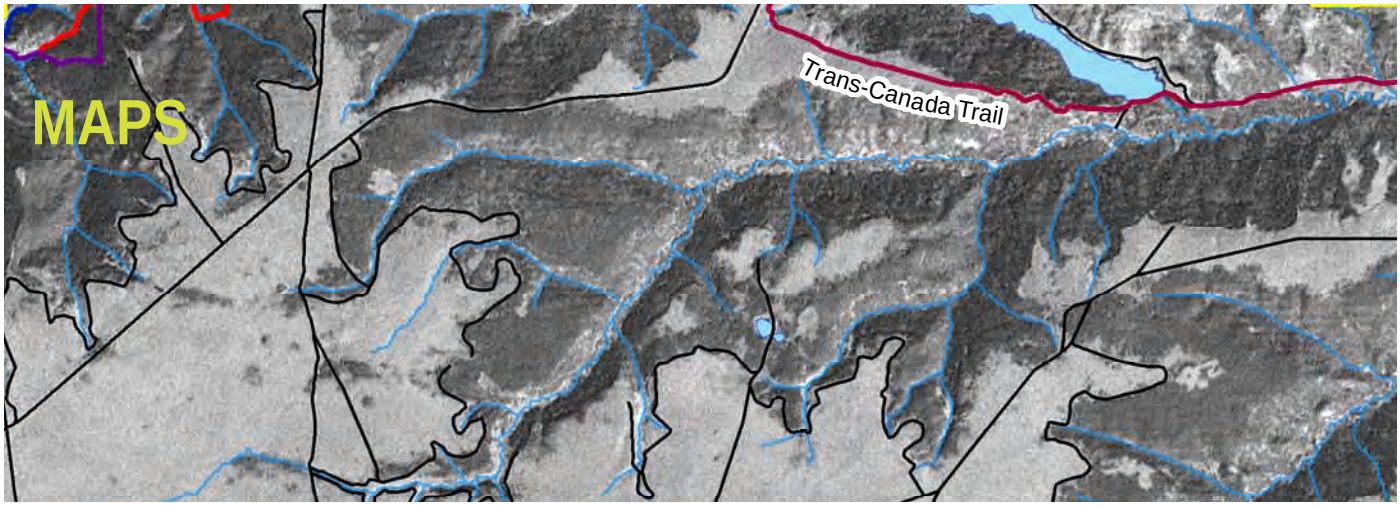
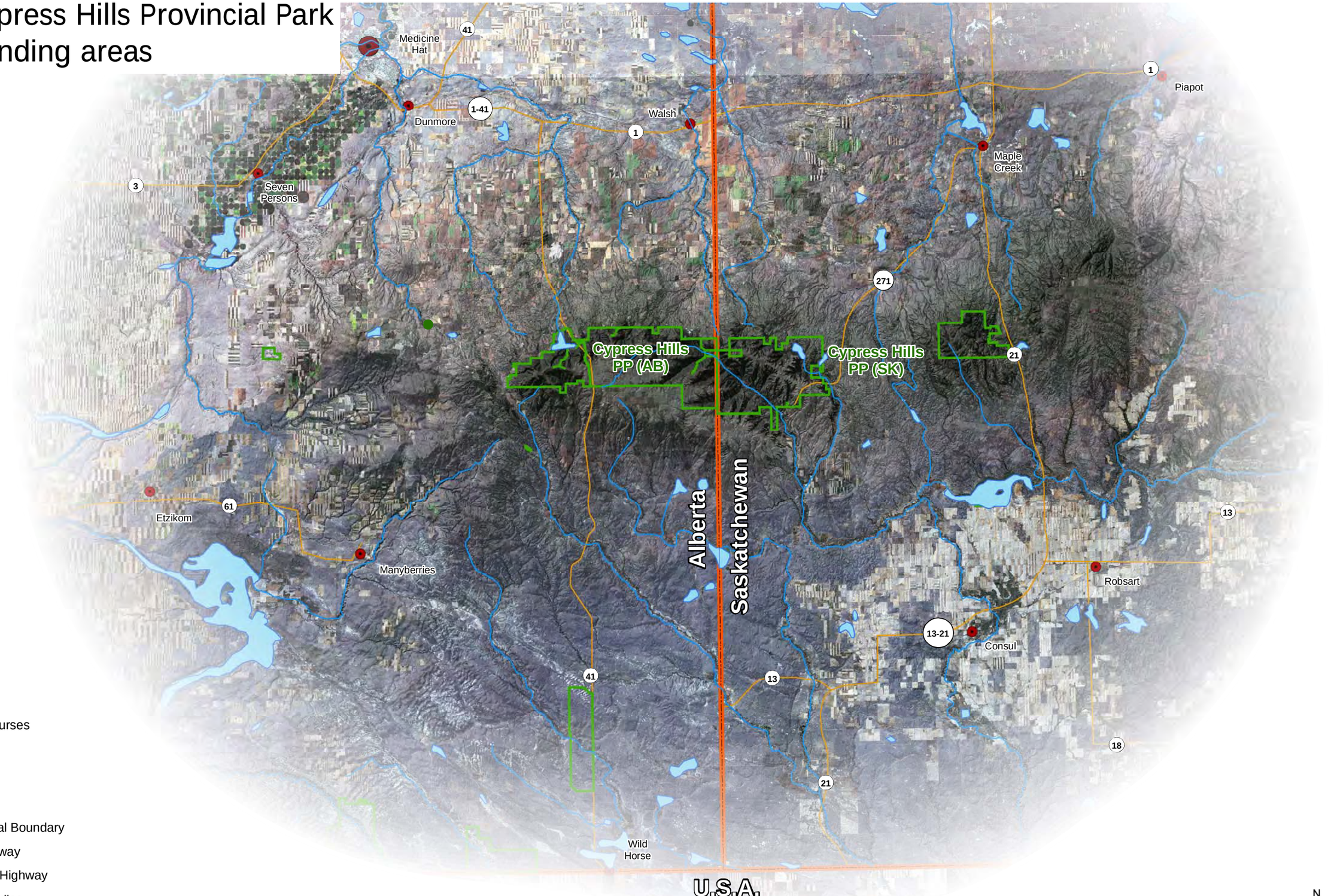

MAPS
Trans-Canada Trail

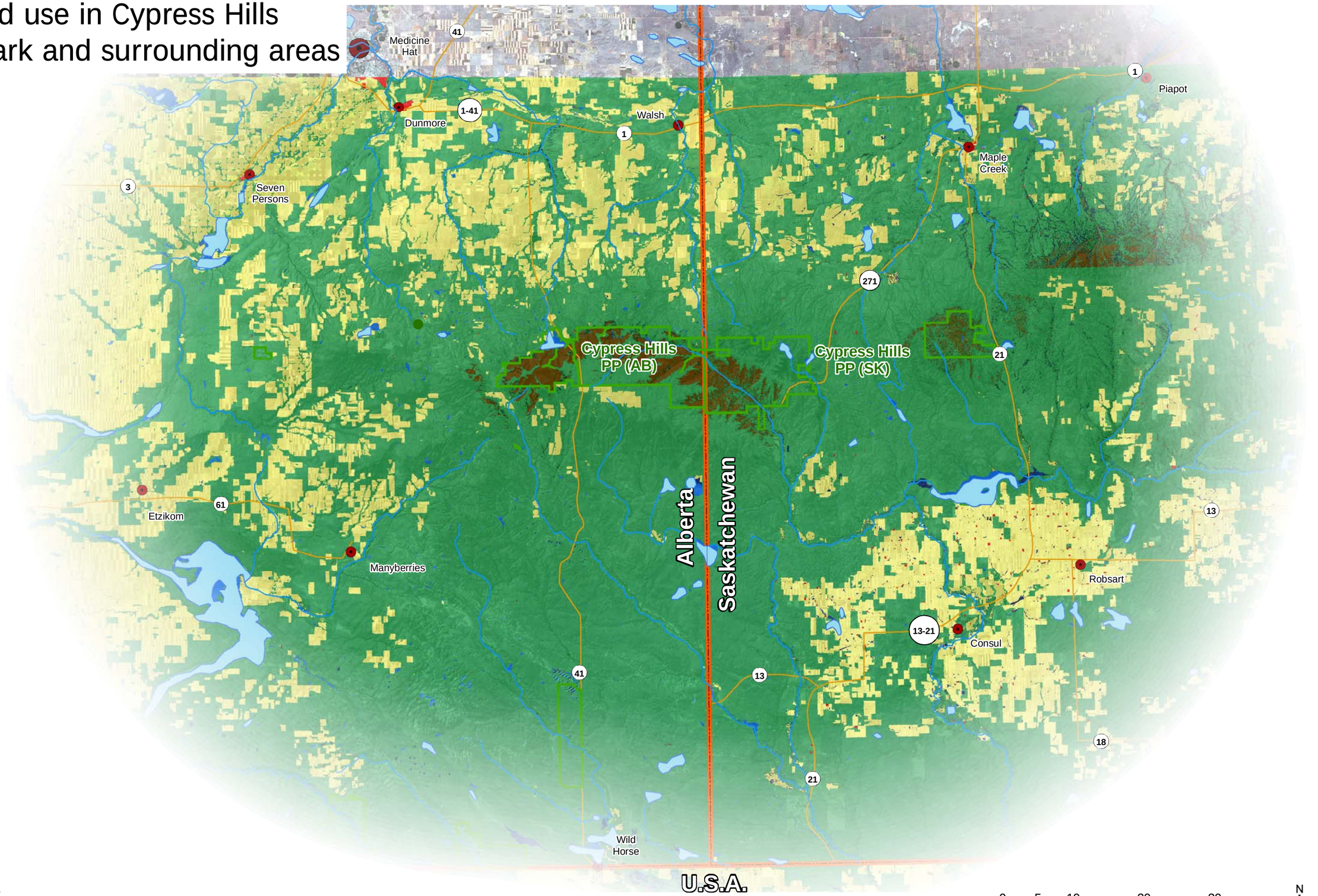
Map 1. Cypress Hills Provincial Park and surrounding areas



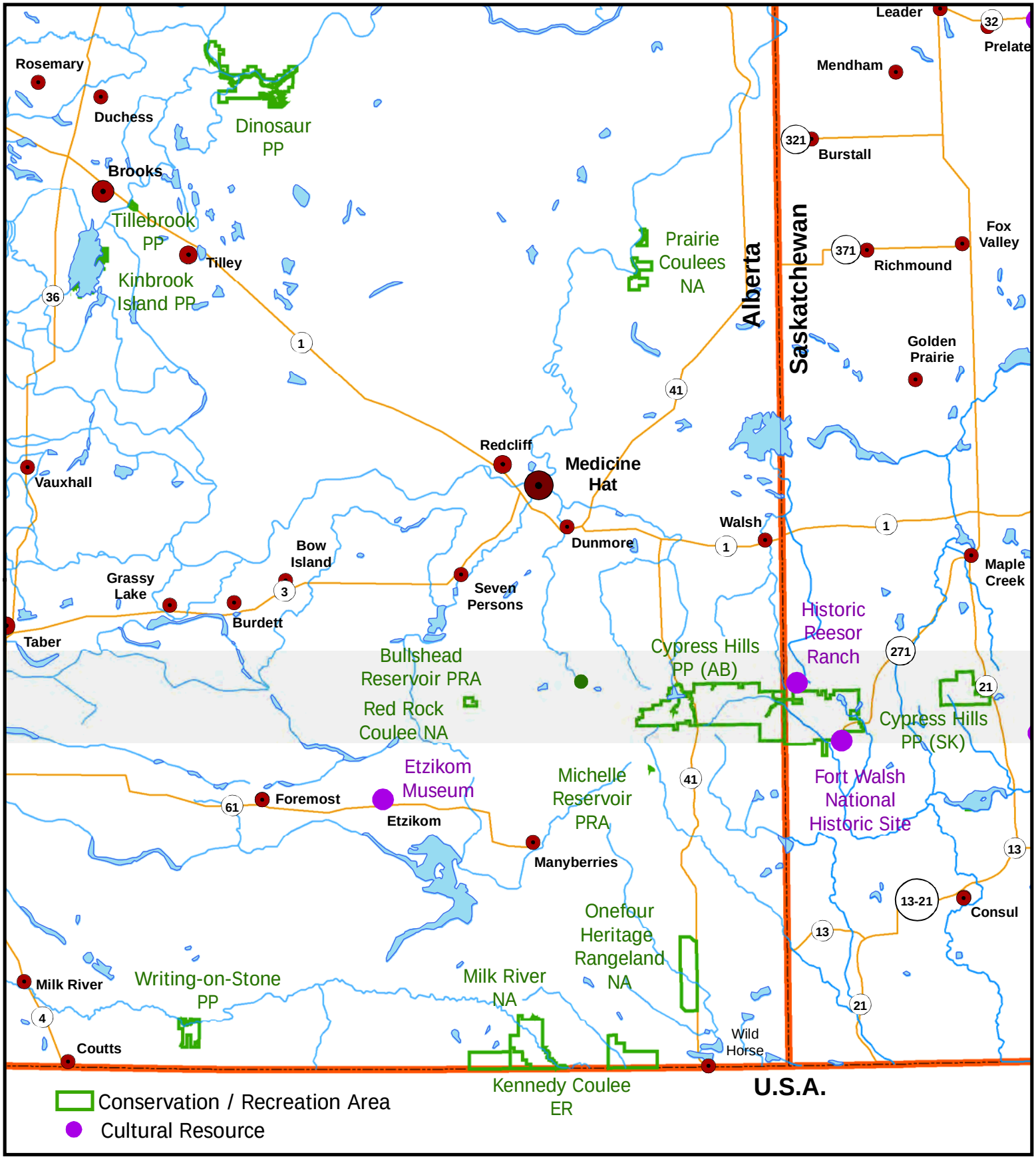
Legend

- Watercourses
- Cities
- Towns
- Parks
- Provincial Boundary
- Expressway
- Primary Highway
- Waterbodies

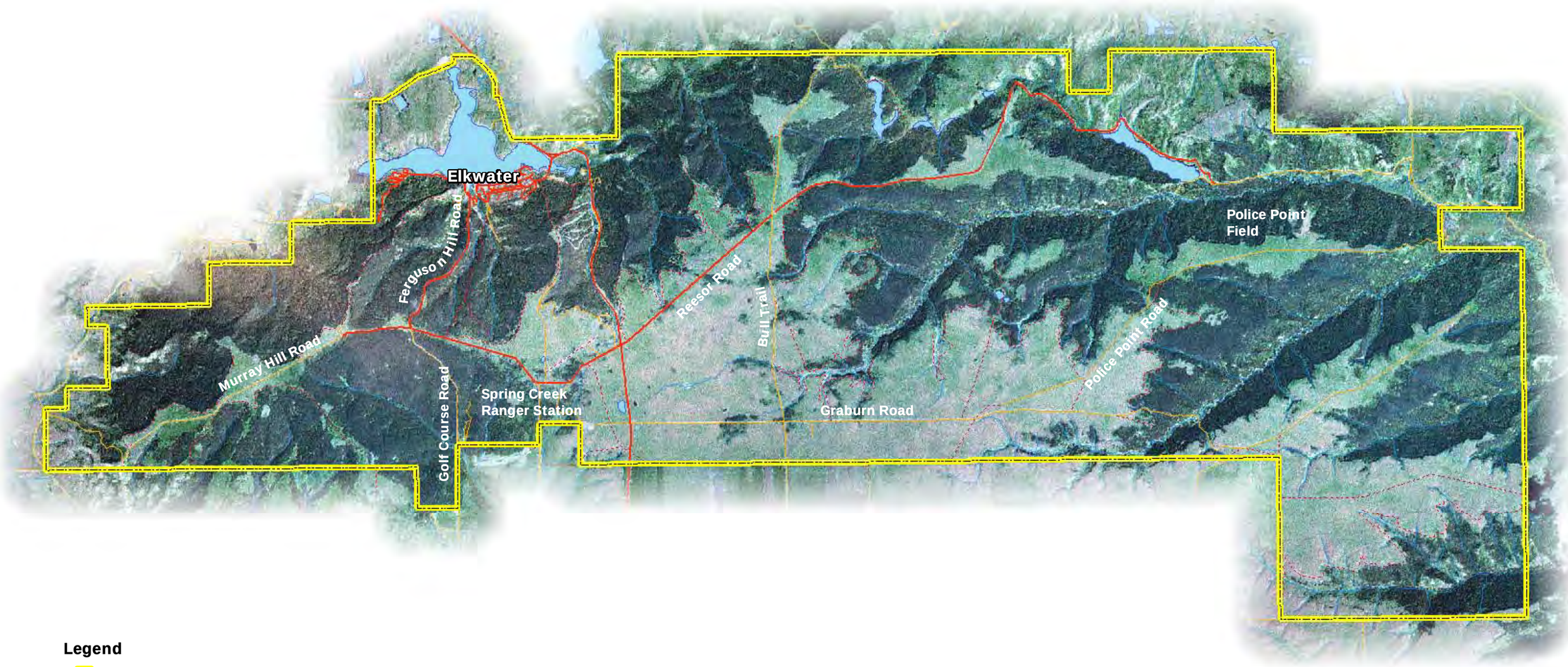
Map 2. Land use in Cypress Hills Provincial Park and surrounding areas



Map 3. Cypress Hills Provincial Park: Regional Recreation Context



Map 4. Cypress Hills Provincial Park: Access Routes



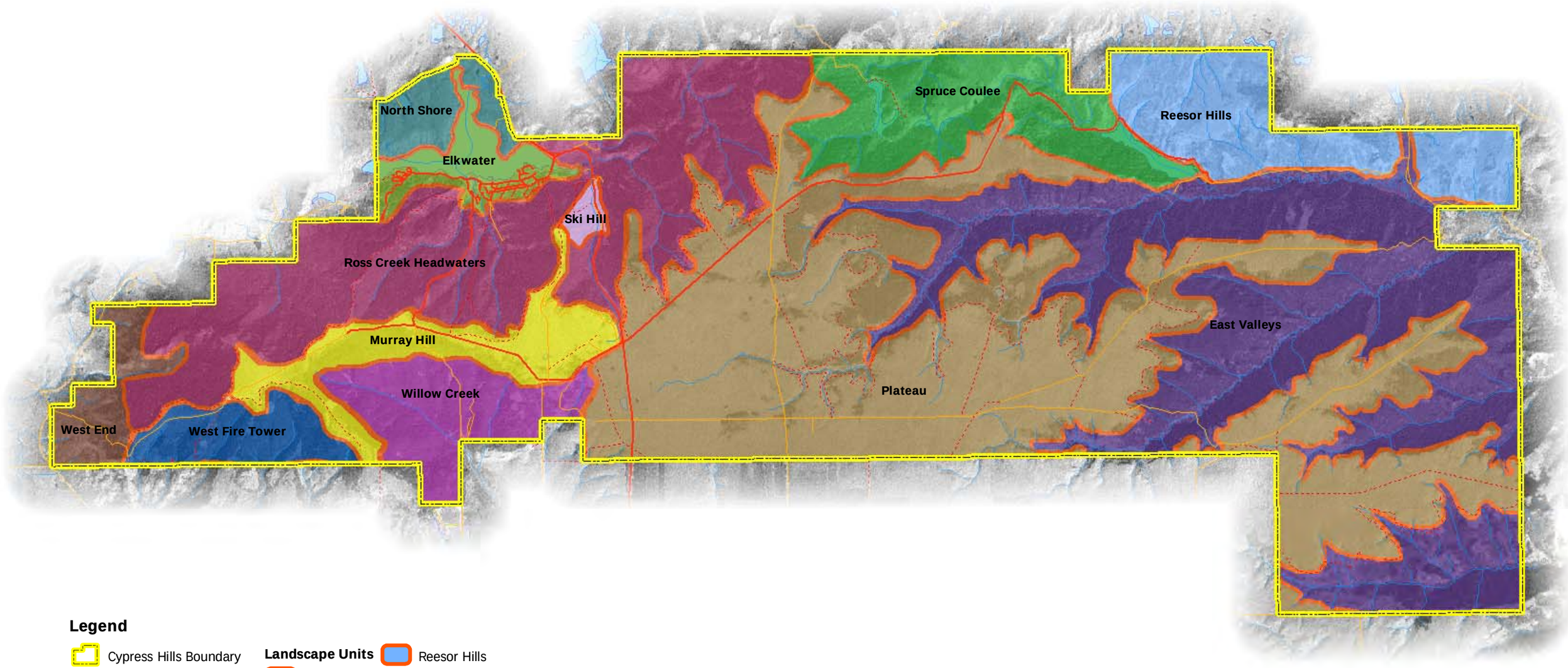
Legend

- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Waterbodies
- Watercourses

0 0.5 1 2 3 4 Kilometres

N

Map 5. Cypress Hills Provincial Park: Landscape Management Units



Legend

- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Watercourses
- Waterbodies

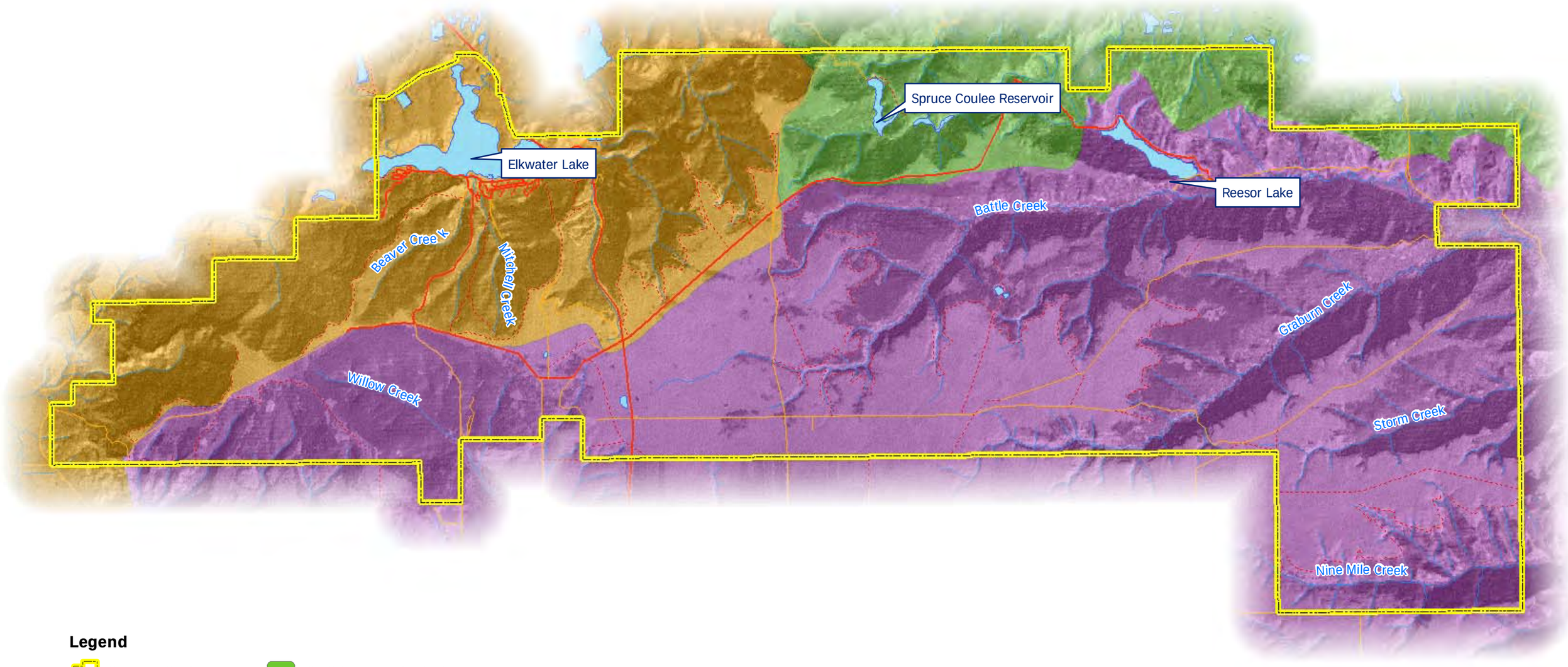
Landscape Units

- East Valleys
- Elkwater
- Murray Hill
- North Shore
- Plateau
- Reesor Hills
- Ross Creek Headwaters
- Spruce Coulee
- West End
- West Fire Tower
- Willow Creek
- Ski Hill

0 0.5 1 2 3 4 Kilometres

N

Map 6. Cypress Hills Provincial Park: Hydrology



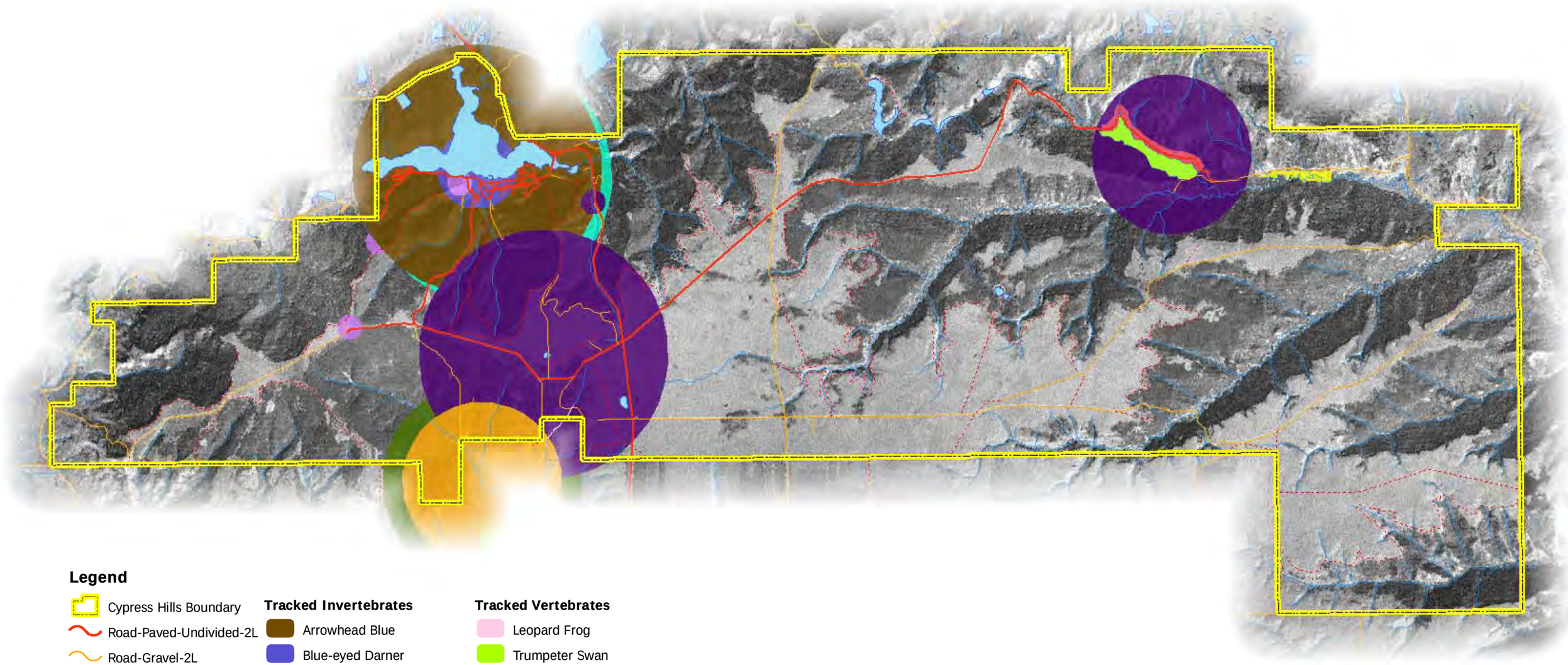
Legend

- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Waterbodies
- Watercourses
- Bigstick Lake Watershed
- Lodge-Battle Creeks Watershed
- Seven Persons Creek Watershed

0 0.5 1 2 3 4 Kilometres

N

Map 7. Cypress Hills Provincial Park: Location of Tracked Vertebrates (Non-Sensitive Locations) and Invertebrates



Legend

- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Waterbodies
- Watercourses

Tracked Invertebrates

- Arrowhead Blue
- Blue-eyed Darner
- Lance-tipped Darner
- Pacific Forktail
- Pronghorn Clubtail
- Rocky Mountain Dotted Blue
- Striped Meadowhawk
- Twelve-spotted Skimmer
- Woodland Skipper

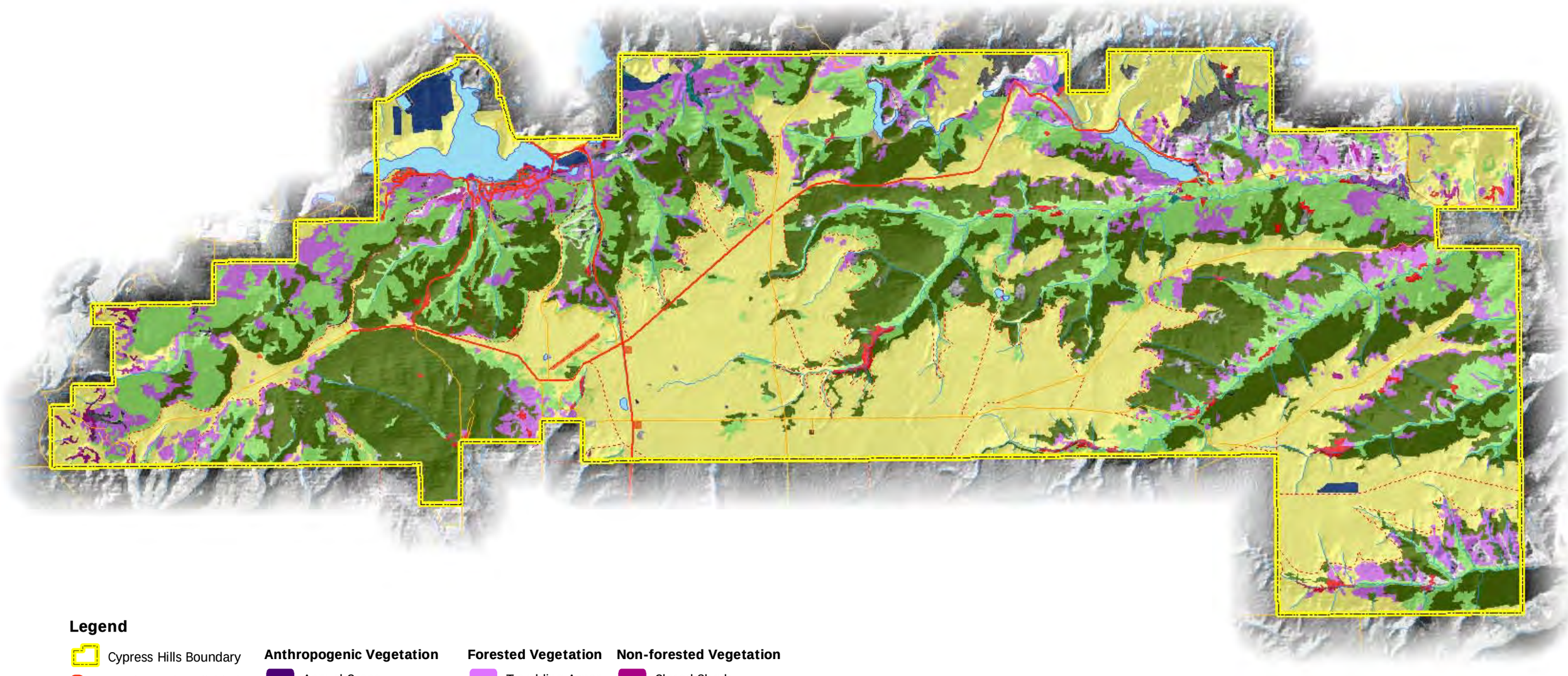
Tracked Vertebrates

- Leopard Frog
- Trumpeter Swan

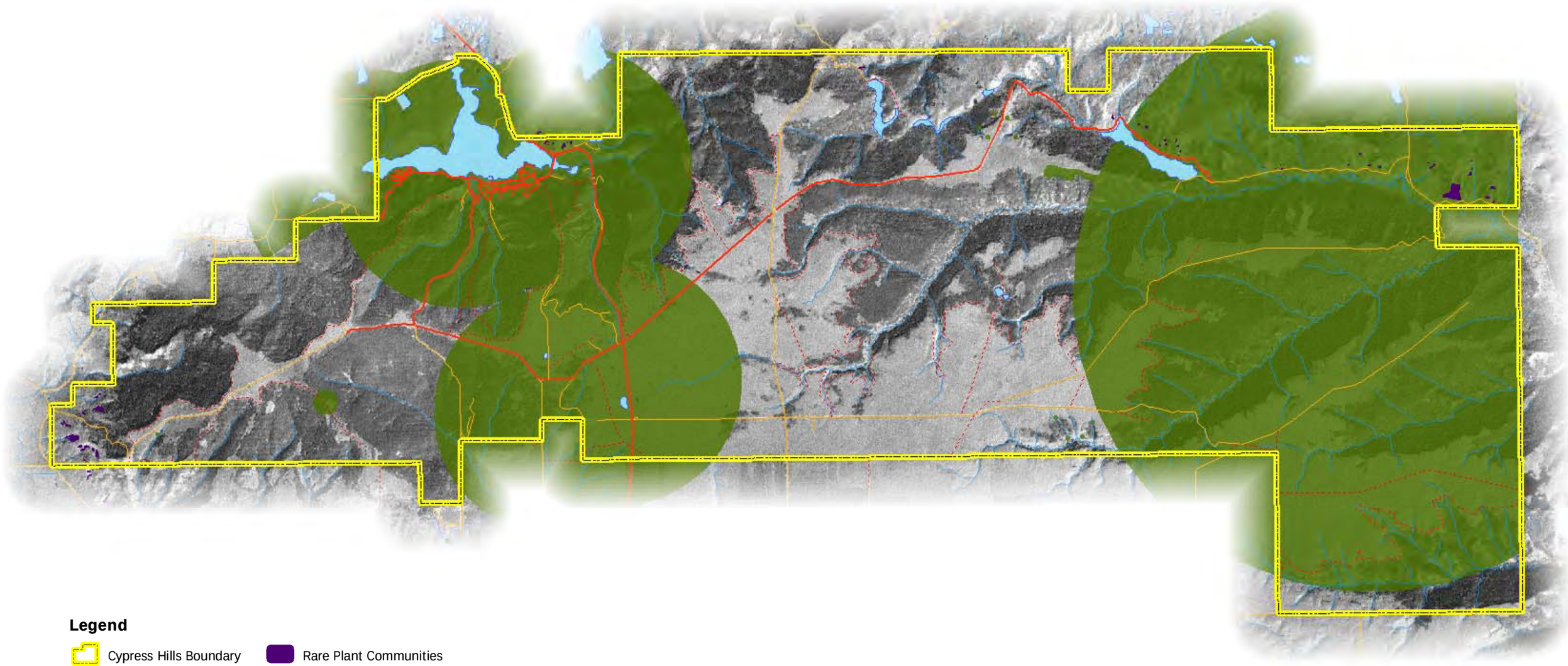
0 0.5 1 2 3 4 Kilometres

N

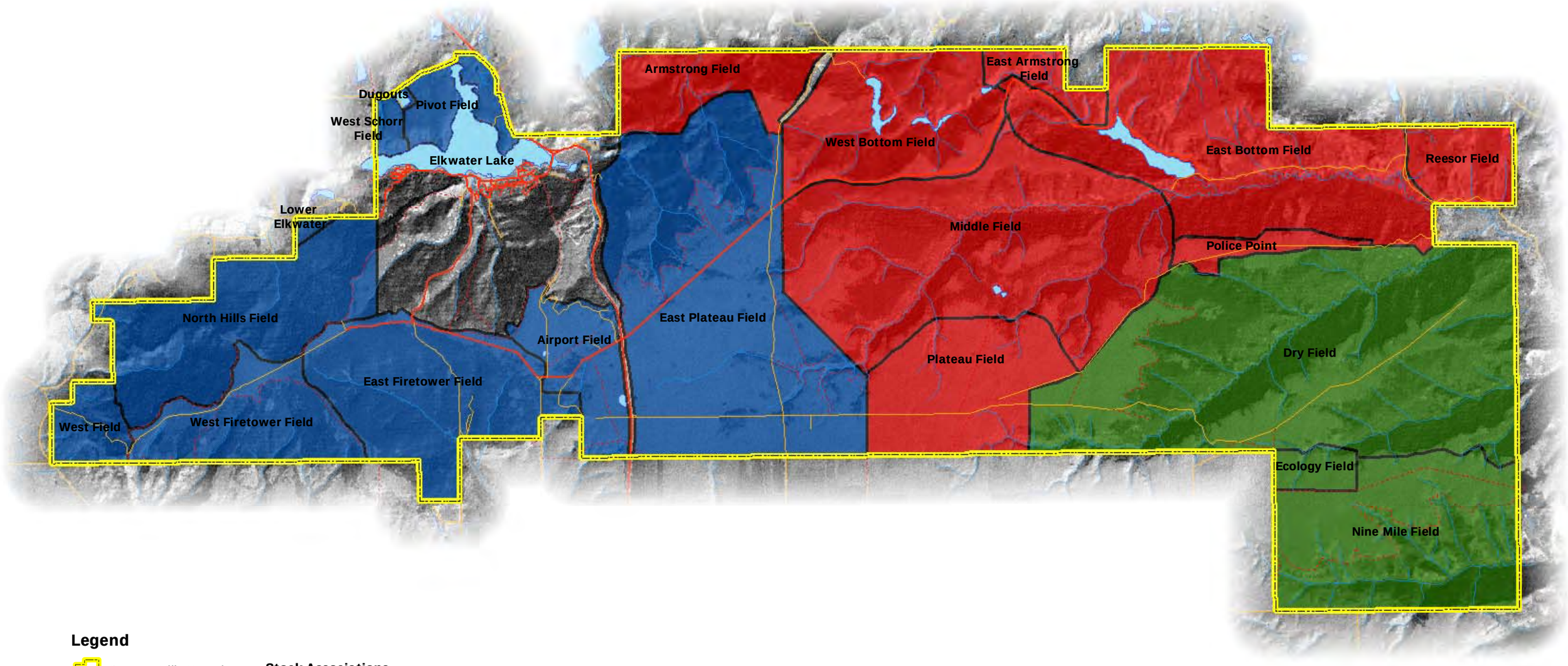
Map 8. Cypress Hills Provincial Park: Vegetation Cover



Map 9. Cypress Hills Provincial Park: Tracked Vascular Plants and Rare Plant Communities



Map 10. Cypress Hills Provincial Park: Domestic Grazing



Legend

- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Waterbodies
- Watercourses

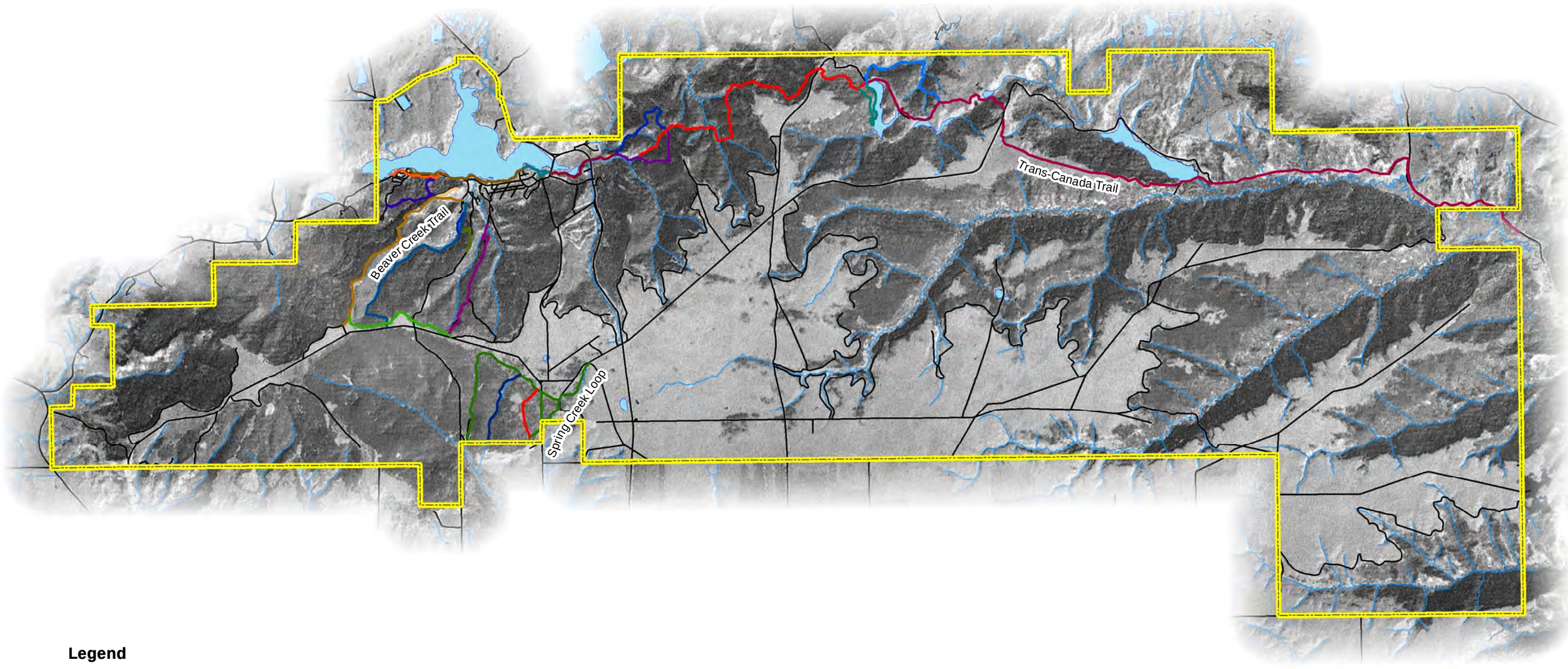
Stock Associations

- Medicine Lodge Stock Association
- Battle Creek Stock Association
- Fox Stock Association

0 0.5 1 2 3 4 Kilometres

N

Map 11. Cypress Hills Provincial Park: Existing Trail Network



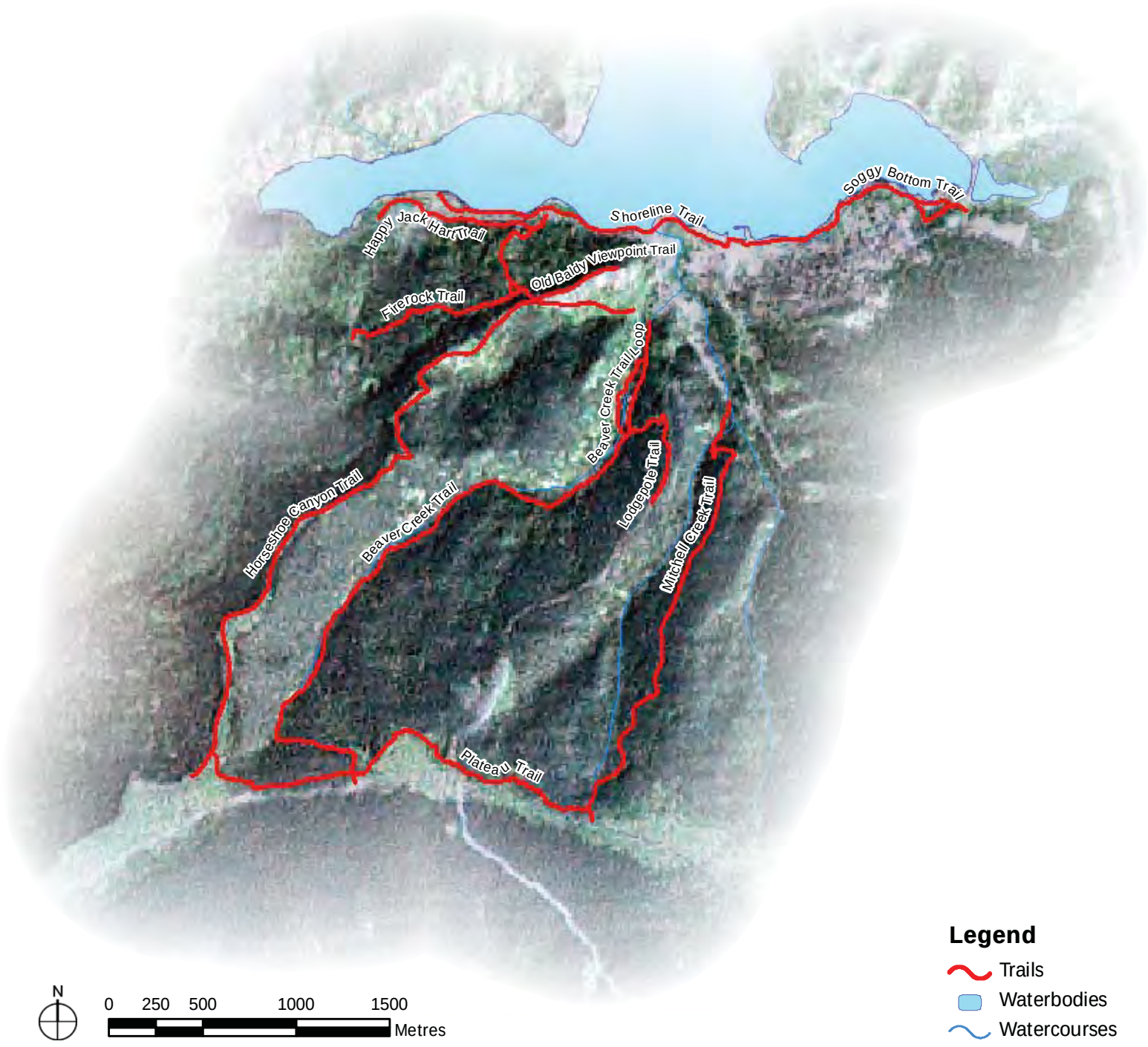
Legend

- Cypress Hills Boundary
- Roads
- Waterbodies
- Watercourses
- Beaver Creek Loop Trail
- Beaver Creek Trail
- Firerock Trail
- Happy Jack Hart Trail
- Highline Trail
- Horseshoe Canyon Trail
- Lakeside Trail
- Lodgepole Trail
- Mitchell Creek Trail
- Old Baldy ViewpointTrail
- Plateau Trail
- Ressler Trail
- Rodeo Loop Trail
- Salus Trail
- Shoreline Trail
- Soggy Bottom Trail
- Spring Creek Loop
- Spruce Coulee Trail
- Streamside Trail
- Sunset Trail
- Trans Canada Trail

0 0.5 1 2 3 4 Kilometres

N

Map 12. Beaver Creek Trail System



Map 13. Spring Creek Cross-Country Ski Trail System

N

0 250 500 1000 1500

Metres

Legend

Ski Trails

Waterbodies

Watercourses

Map 14. Spruce Coulee and Trans-Canada Trail System

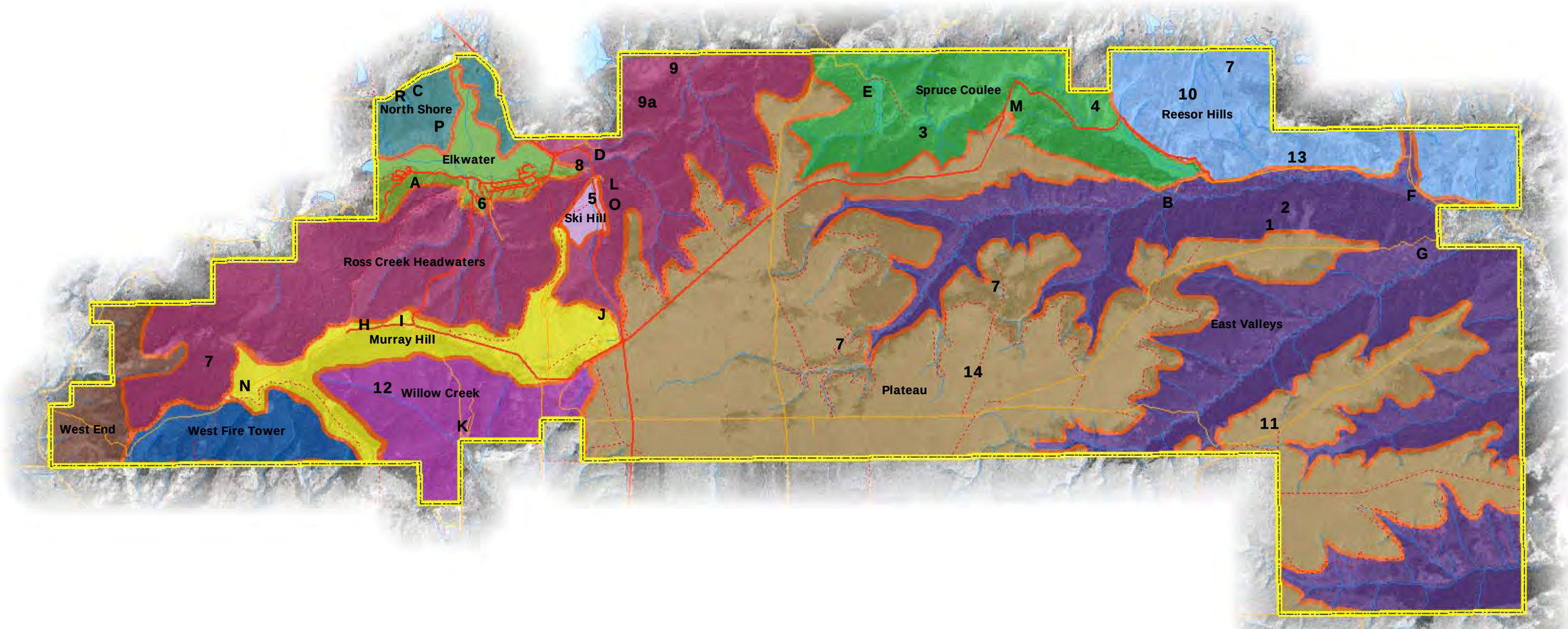
Legend

Trails
Waterbodies
Watercourses

0 0.5 1 2 3 Kilometers

N

Map 15. Cypress Hills Provincial Park: Landscape Management Units and Zoning



Legend

- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Watercourses
- Waterbodies

Landscape Units

- East Valleys
- Elkwater
- Murray Hill
- North Shore
- Plateau
- Reesor Hills
- Ross Creek Headwaters
- Spruce Coulee
- West End
- West Fire Tower
- Willow Creek
- Ski Hill

Visitor Services and Facility Zone

- A Elkwater Townsite
- B Reesor Lake Campground
- C Lagoon Area
- D Rodeo Grounds
- E Spruce Coulee Campground
- F Battle Creek Campground
- G Graburn Campground
- H Horseshoe Canyon Viewpoint
- I Tom Trott Memorial Forestry Museum
- J Highway 41 Group Camp
- K Willow Creek Group Camp
- M Reesor Lake Viewpoint
- N Head of the Mountain (Future)
- O Main Group Camp
- P Pivot Field
- R Waste Transfer Station

Historic / Cultural Zone

- L Stampede Site

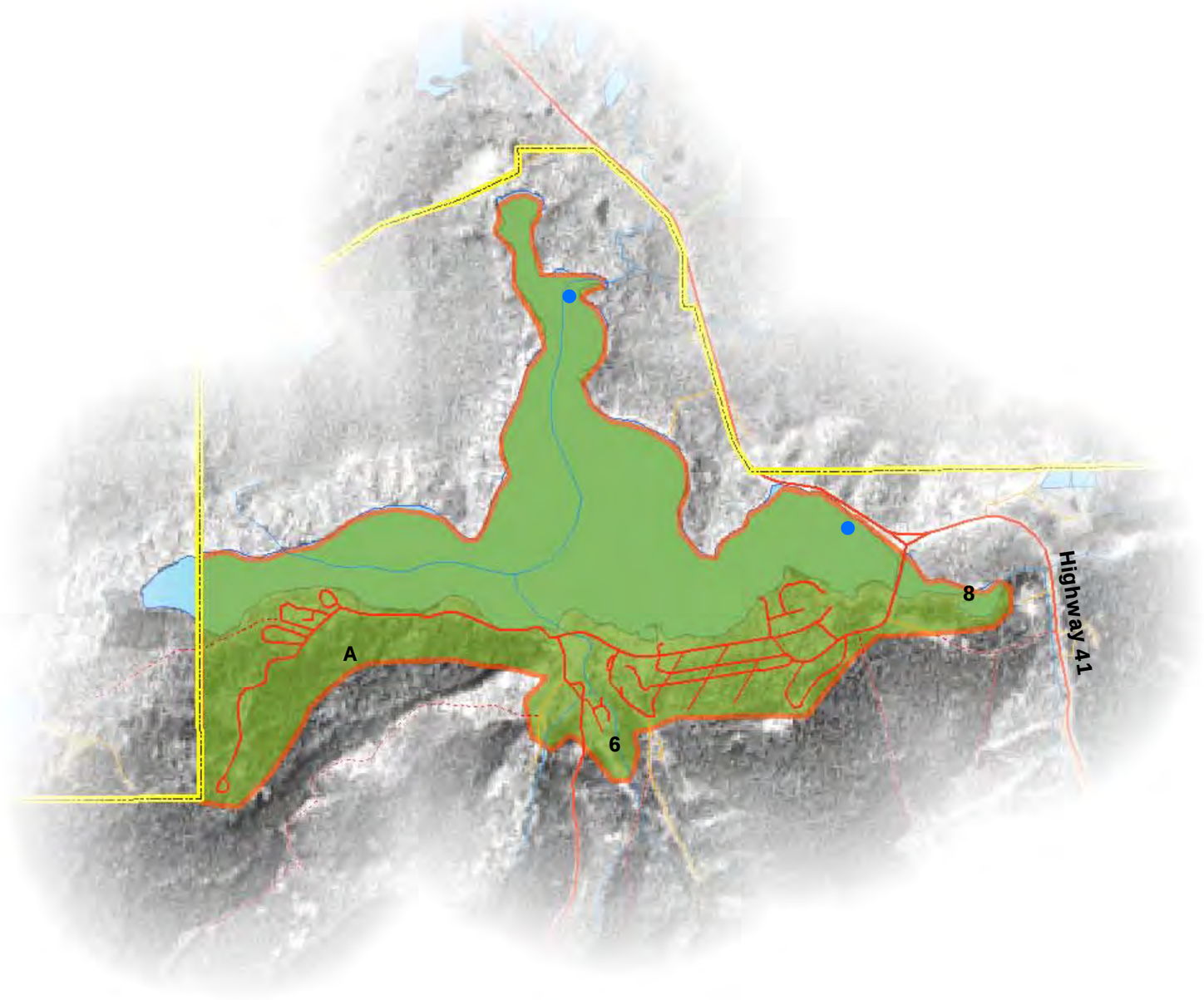
Preservation Zone

- 1 Police Point Slump
- 2 White Spruce Stand
- 3 Spruce Coulee Wetlands
- 4 Reesor Lake Wetlands
- 5 Ski Hill Orchid Site
- 6 Elkwater Lake Orchid Site
- 7 Conglomerate Cliffs
- 8 Elkwater Lake Bird Nesting Area
- 9 White Birch Stand
- 9a White Birch Single Tree
- 10 Reesor Lake Hills
- 11 Survival Tree
- 12 Willow Creek Wetlands
- 13 Battle Creek Pothole
- 14 Middle Field Pothole

0 0.5 1 2 3 4 Kilometres

N

Map 16. LMU 1: Elkwater Landscape Management Unit



Legend

- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Watercourses
- Waterbodies
- Elkwater
- Wetland Complex
- A Elkwater Townsite
- 6 Elkwater Lake Orchid Sites
- 8 Causeway Wetlands / Elkwater Lake Bird Nesting Area

0 0.5 1 2 Kilometres

N

Map 17. LMU 2: North Shore Landscape Management Unit

Legend

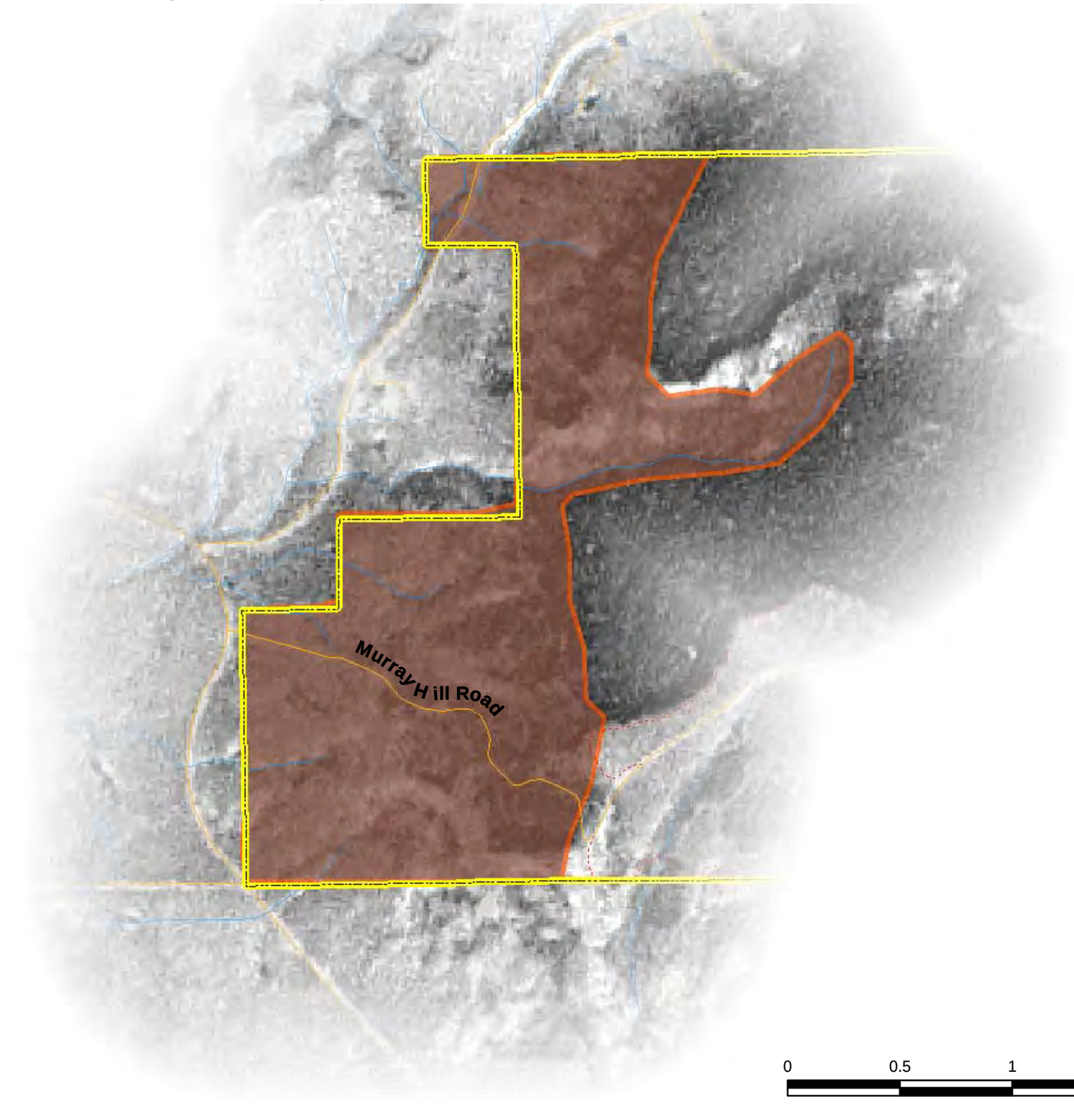
- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Watercourses
- Waterbodies
- North Shore

- Information Pulloff
- C Lagoon Area
- P Pivot Field
- R Waste Transfer

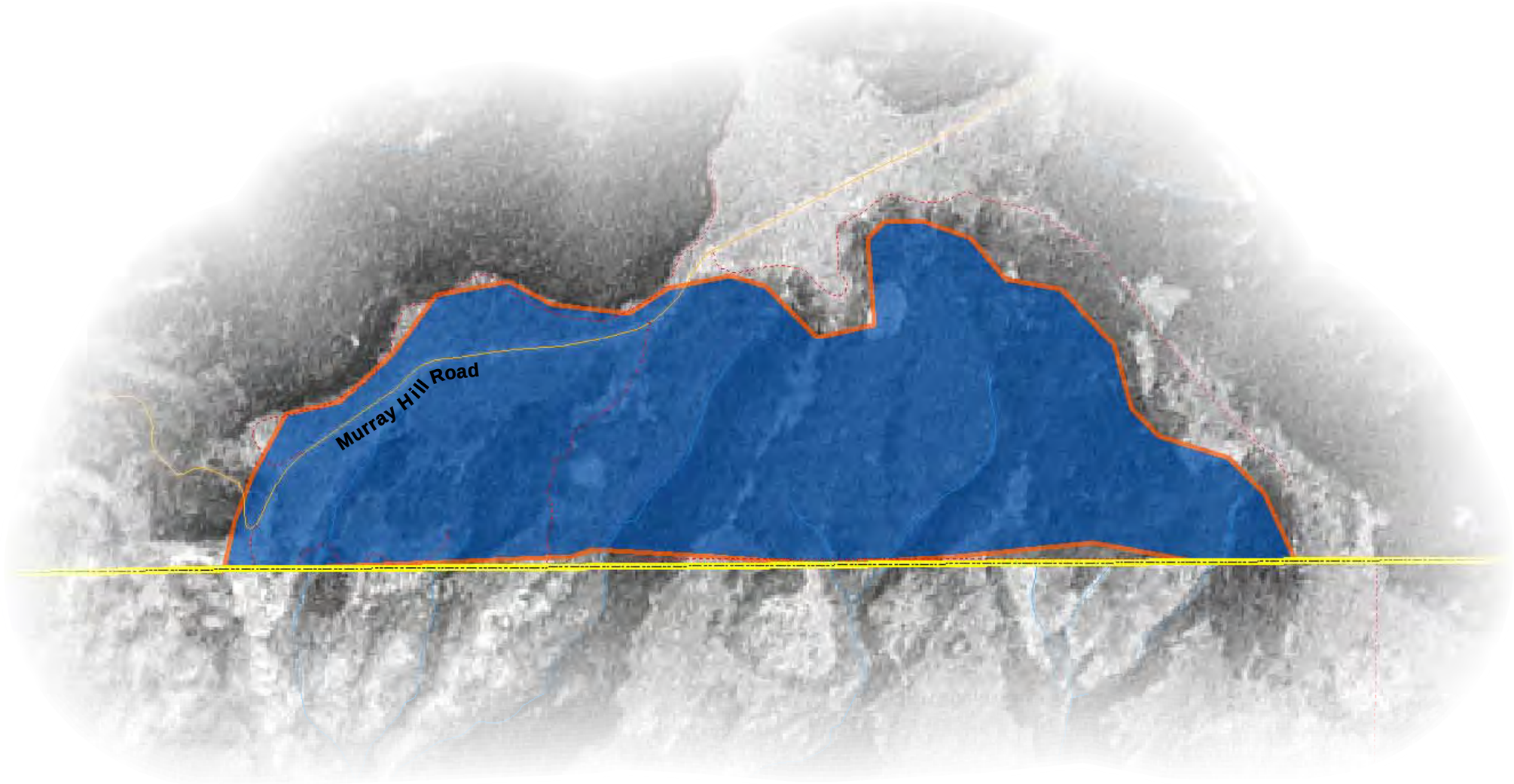
0 0.5 1 2 Kilometres

N

Map 18. LMU 4: West End Landscape Management Unit



Map 19. LMU 5: West Fire Tower Landscape Management Unit



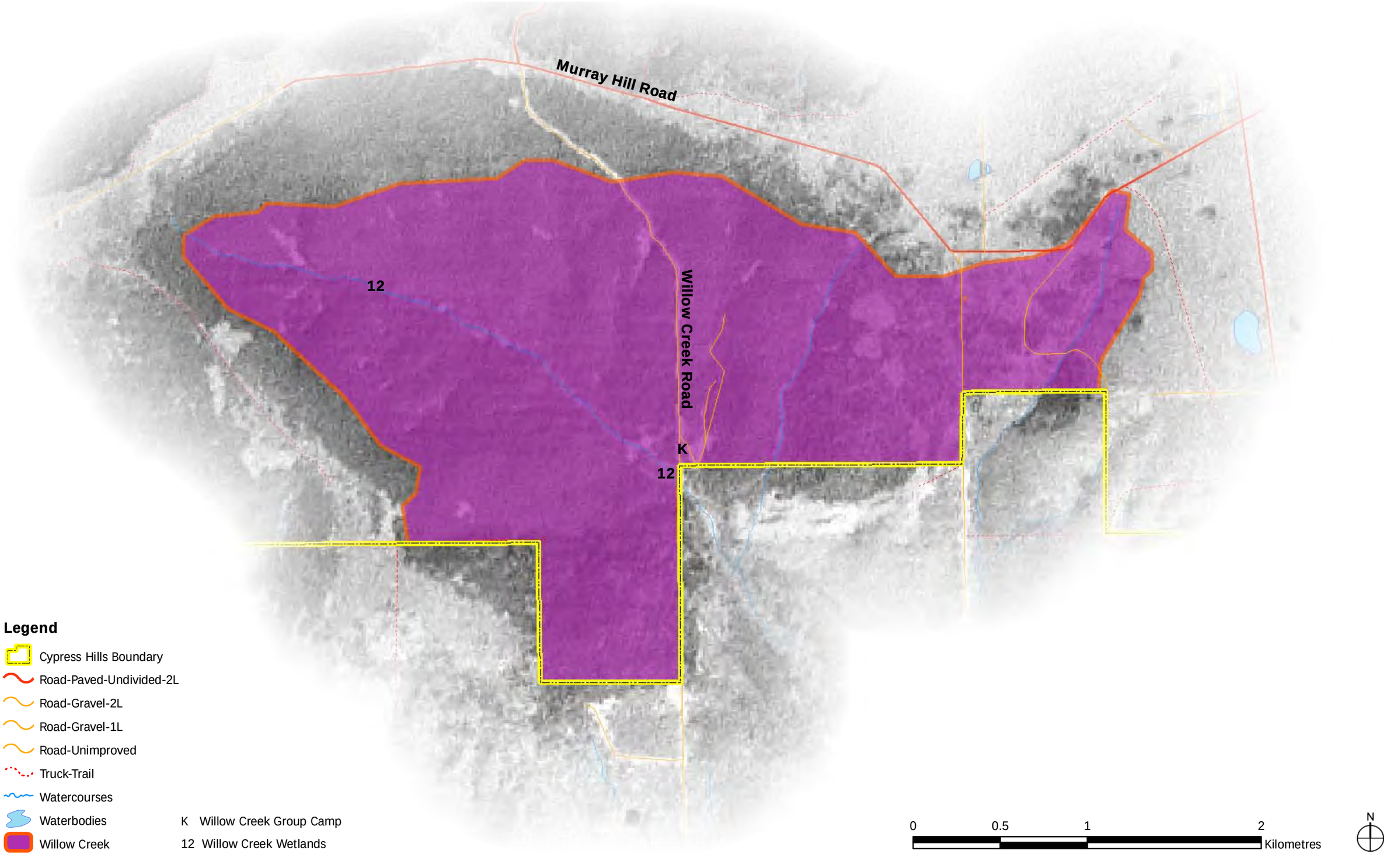
Legend

- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Watercourses
- Waterbodies
- West Fire Tower

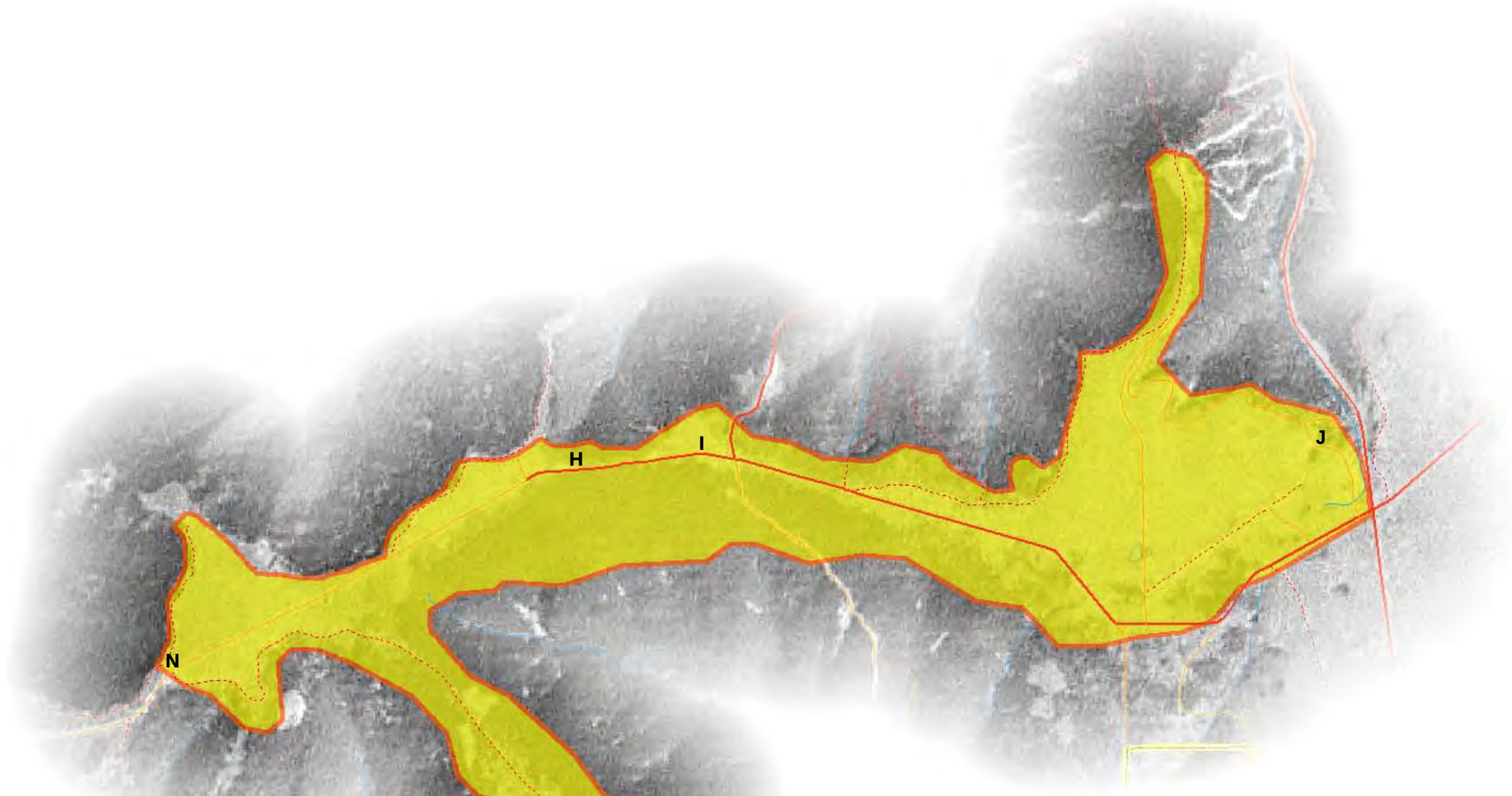
0 0.5 1 2 Kilometres

N

Map 20. LMU 6: Willow Creek Landscape Management Unit



Map 21. LMU 7: Murray Hill Landscape Management Unit



Legend

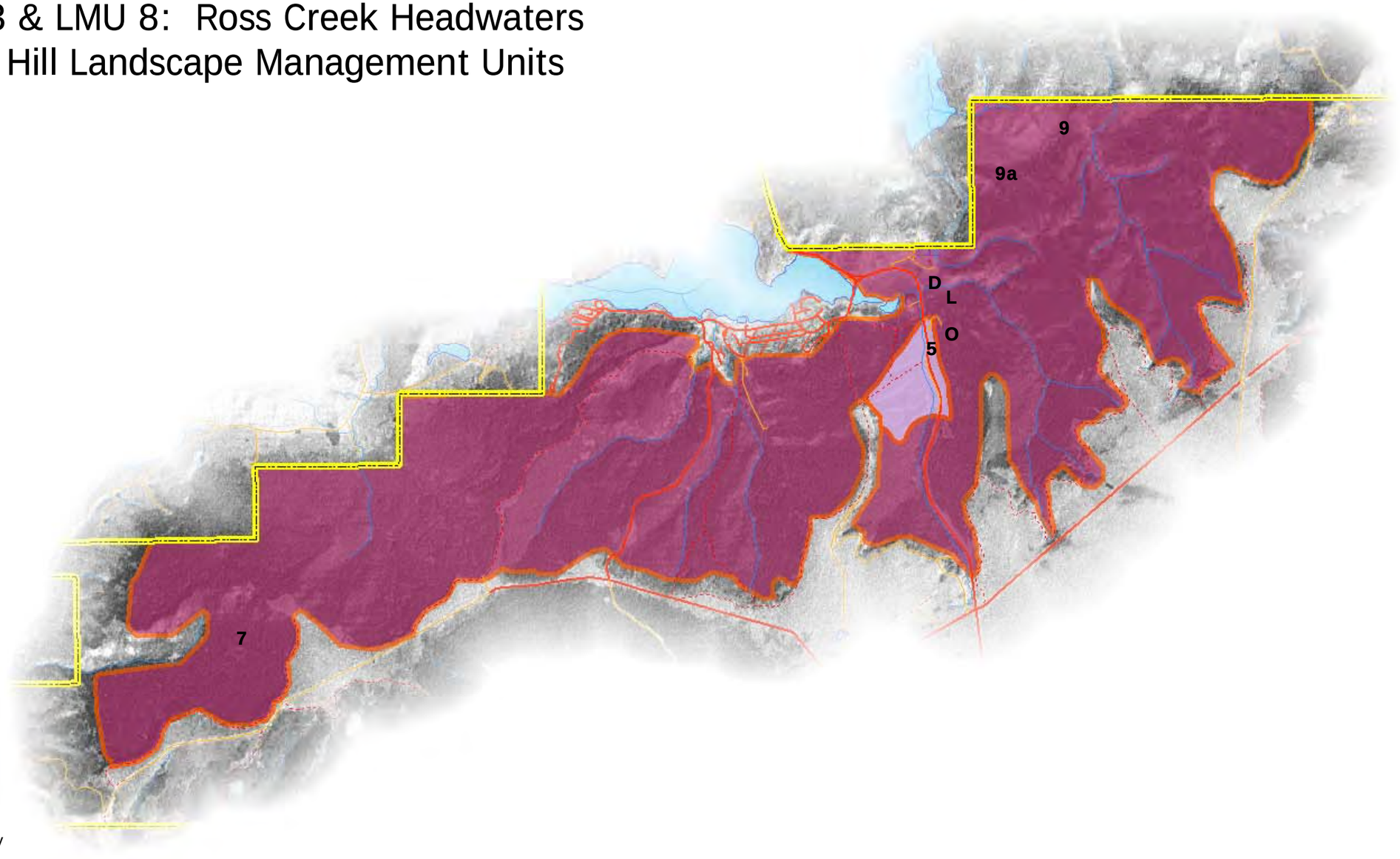
- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Watercourses
- Waterbodies
- Murray Hill

H Horseshoe Canyon Viewpoint
I Tom Trott Memorial Forestry Museum
J Highway 41 Group Camp
N Head of the Mountain

0 0.5 1 2 Kilometres

N

Map 22. LMU 3 & LMU 8: Ross Creek Headwaters & Ski Hill Landscape Management Units



Legend

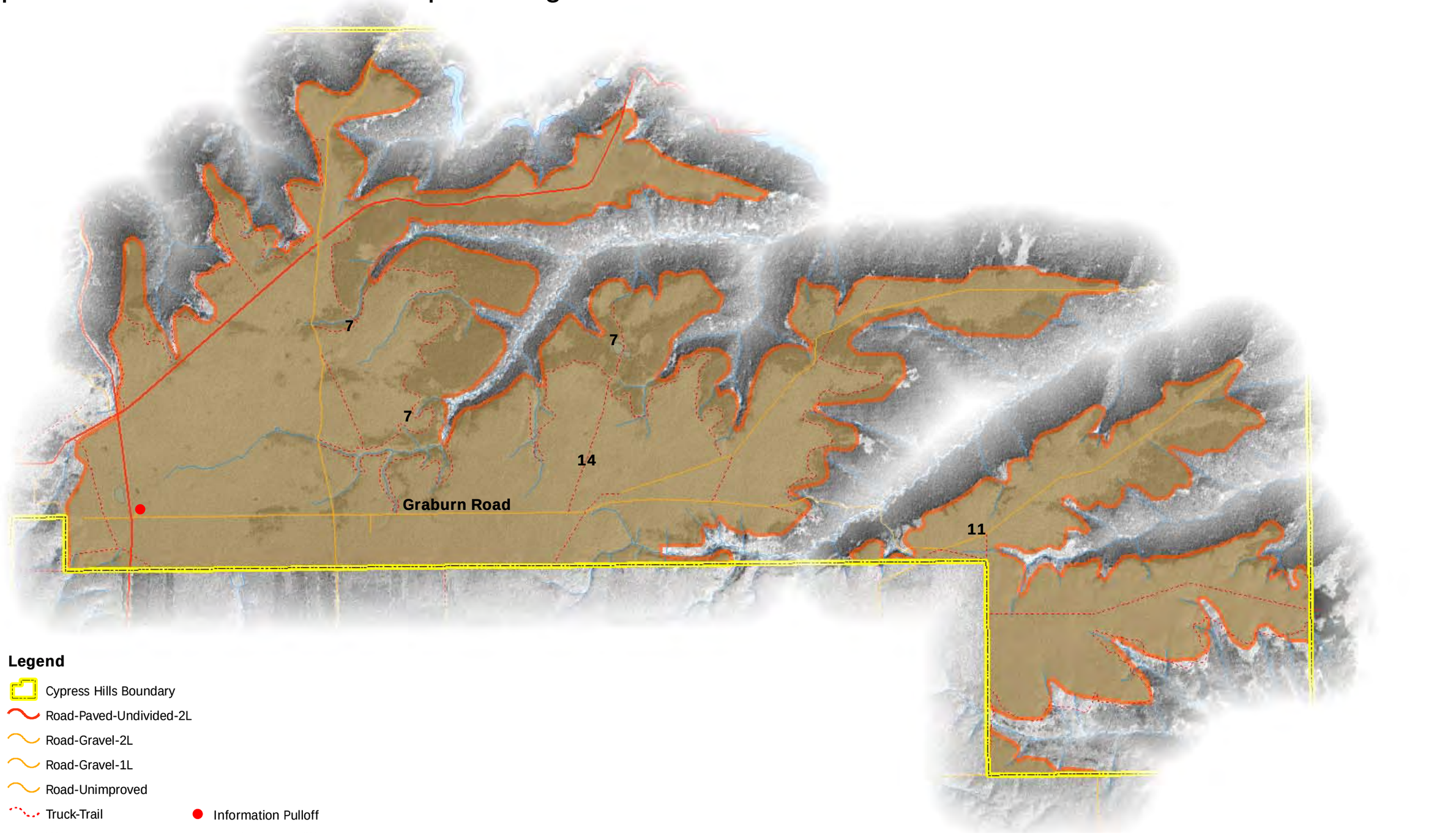
- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Watercourses
- Waterbodies
- Ski Hill
- Ross Creek Headwaters

D Rodeo Grounds
L Stampede Archaeology Site
O Main Group Camp
5 Ski Hill Orchid Site
7 Conglomerate Cliffs
9 White Birch Stand
9a White Birch Single Tree

0 0.5 1 2 Kilometres

N

Map 23. LMU 9: Plateau Landscape Management Unit



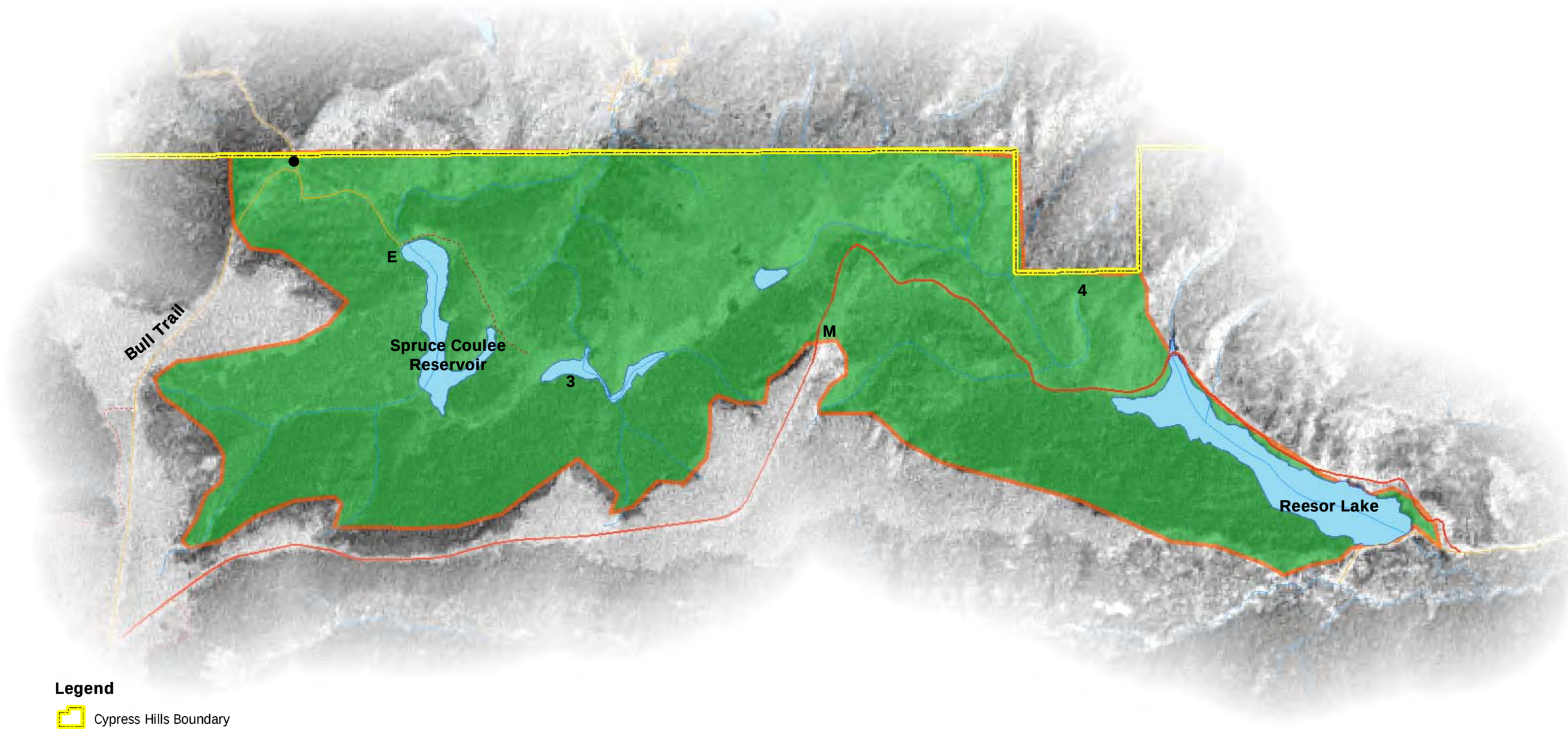
Legend

- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Watercourses
- Waterbodies
- Plateau
- Information Pulloff
- 7 Conglomerate Cliffs
- 11 Survival Tree
- 14 Middle Field Pothole

0 0.5 1 2 Kilometres

N

Map 24. LMU 10: Spruce Coulee Landscape Management Unit



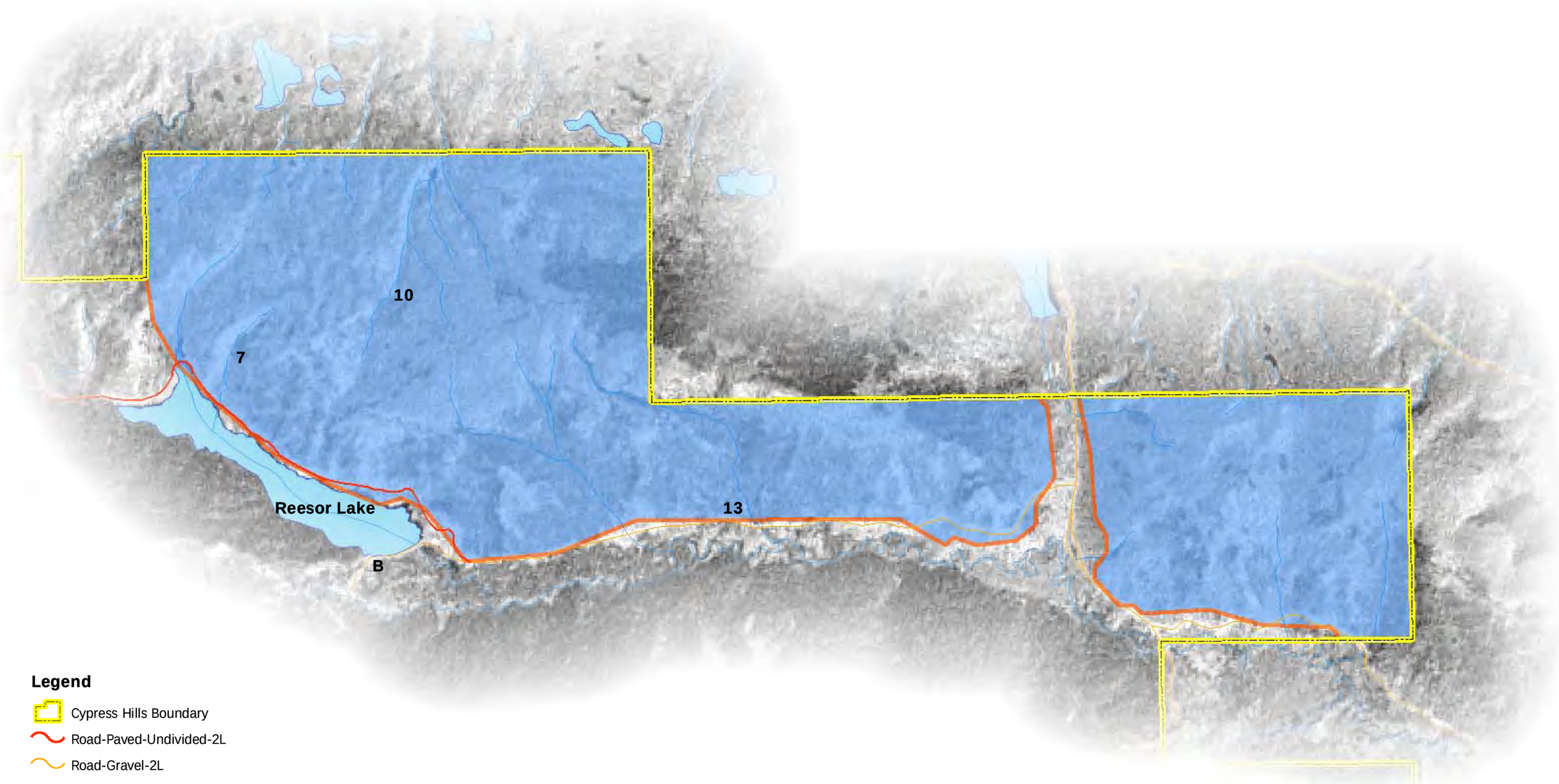
Legend

- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Watercourses
- Waterbodies
- Spruce Coulee
- Access Point
- E Spruce Coulee Campground
- M Reesor Lake Viewpoint
- 3 Spruce Coulee Wetlands
- 4 Reesor Lake Wetlands

0 0.5 1 2 Kilometres

N

Map 25. LMU 11: Reesor Hills Landscape Management Unit



Legend

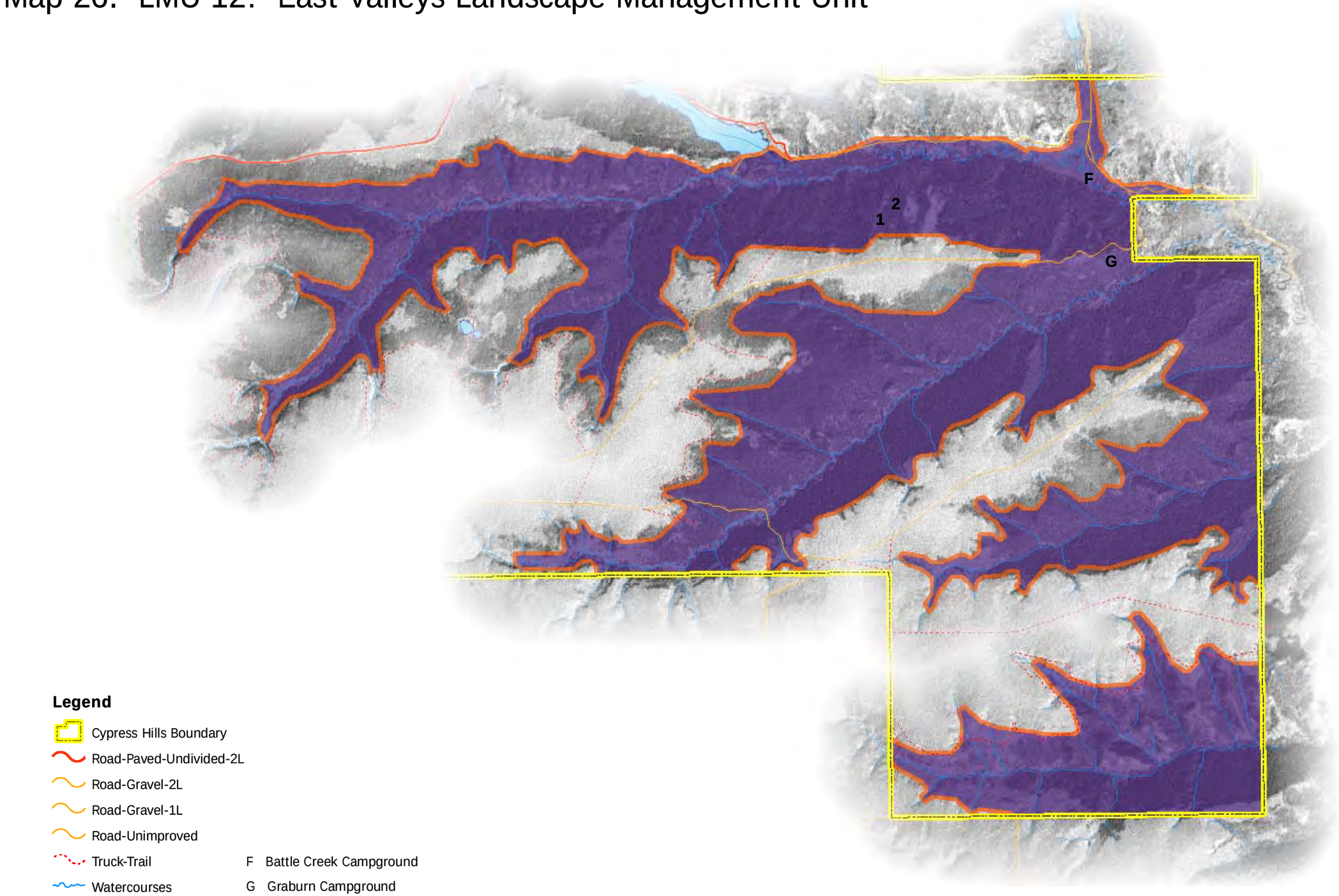
- Cypress Hills Boundary
- Road-Paved-Undivided-2L
- Road-Gravel-2L
- Road-Gravel-1L
- Road-Unimproved
- Truck-Trail
- Watercourses
- Waterbodies
- Reesor Hills

B Reesor Lake Campground
7 Conglomerate Cliffs
10 Reesor Lake Hills
13 Battle Creek Pothole

0 0.5 1 2 Kilometres

N

Map 26. LMU 12: East Valleys Landscape Management Unit



APPENDIX A: CHRONOLOGICAL HISTORY OF THE CYPRESS HILLS

1700s-1800s The fur trade in western Canada focused on the transitional zone between the prairie and forest with the North Saskatchewan River used as a main transportation artery. Several short-term and generally unsuccessful attempts were made to trade in southern Alberta.

1859 The most noteworthy account of European knowledge of the area prior to the 1870s was written by Captain John Palliser, who found the Hills “a perfect oasis in the desert we have traveled”.

1860s-1870s The discovery of gold in Montana brought prospectors to that area and whiskey traders to the Cypress Hills.

1873 The times of lawlessness of the late 1860s and early 1870s culminated in the Cypress Hills Massacre at Farwell’s and Solomon’s Posts. This led to the establishment of the North West Mounted Police (NWMP) by Sir John A. MacDonald.

1875 Fort Walsh was established and subsequently became the NWMP’s western headquarters in 1878.

1**876-1882** Sitting Bull and 3000-5000 Lakota Sioux took refuge after defeating General Custer’s army in the Battle of the Little Bighorn. Good relations established by the NWMP’s James Walsh.

1879 Constable Graburn was the first NWMP to be killed while on duty. The Graburn Cairn is set in his memory.

1883 Fort Walsh was closed, and few inhabitants remained within the Hills. By this time, Aboriginal groups were no longer residing in the Cypress Hills as there was nothing to eat due to the depletion of wildlife.

1883 The Canadian Pacific Railway was extended to Maple Creek, bringing settlers, both ranchers and farmers, to the region. Settlers would travel 95 km to the Cypress Hills in search of firewood, fence posts and hay. Free-roaming bison were eliminated from the Hills, creating a huge grassy fuel buildup.

1883 The Louis Sands Sawmill at Elkwater Lake opened the first commercial forestry operation in Cypress Hills.

1885 and **1889** Major fires destroyed most of the Cypress Hills forest. Much of the unburned forest was cut shortly thereafter. Ranchers first settled and then took title to land in the Hills.

1900-1912 Operation of the Rutherford Sawmill at Elkwater Lake.

1905 The *Saskatchewan Act* and the *Alberta Act* were adopted by the Canadian government and the two new provinces joined Canada.

1906 Depletion of the sparse forests of the Canadian prairies, including the Cypress Hills, coupled with increased interest in the conservation movement, led to the passing of the *Forest Reserves Act*. A 47 km^2 reserve was established in the southern half of Township 8, Range 3 under this Act.

1910 As more ranchers settled in the area, existing ranchers saw the need to establish leases and to eliminate the free pasture available to those who wanted to graze their animals. They requested the issuance of leases and formed stock associations which are still active in the Hills today: the Cypress Hills Stockmen Association in the Saskatchewan portion of the West Block and the Fox, Battle Creek and Medicine Lodge Stock Associations in the Elkwater Block of Alberta. Many of the present-day members are descendants of the original settlers.

1911 Under the Forest Reserves and Parks Act, which superseded the 1906 Act, the Dominion Forest in the Cypress Hills was expanded from 47 km^2 to approximately 490 km^2. Of this area, 207 km^2 were in Alberta and designated the 'Elkwater Block'. Until 1930, the Cypress Hills were designated as a Dominion Forest under the authority of the Canadian Department of the Interior. Today, with minor boundary changes, the 1911 Elkwater Block coincides with the boundaries of Alberta's Cypress Hills Provincial Park.

1913 A subdivision survey for 336 lots was completed on the south shore of Elkwater Lake and roadways were constructed and gravelled.

1924 Fort Walsh designated a site of national historic significance.

1929 The land beside the south shore of Elkwater Lake was recommended for designation as a park. Although Elkwater became a popular picnicking and camping area in the 1920s, little development in the subdivision occurred until the 1930s.

1930 With the Transfer of Resources Act, the control of the Dominion Forest was passed to the Province. The regulations and policies of the forest were not significantly modified with this transfer of authority. Both the federal and provincial forestry regimes addressed reforestation, regulated timber harvesting, fire protection, and regulated grazing and haying. Grazing was also seen as a means of reducing fire hazard. The grazing associations gained prominence in the administration of the reserves by, for example, recommending grazing procedures, the number of cattle allowed to graze in the reserve, and hunting controls.

1931 The Saskatchewan government created a Cypress Hills Provincial Park consisting of the Centre Block.

1947 Administration of the Elkwater Townsite was transferred to the Provincial Parks Board.

1951 Cypress Hills Provincial Park was established in Alberta by O.C. No. 183/86, consisting of the Alberta portion of the West Block (the Elkwater Block). The park area included all lands held in the forestry reserve within Alberta: 20 450.85 ha or 50 532.86 acres. As funds became available, development of recreational facilities, construction of municipal services in the Townsite, paving of roads, and other capital developments occurred. The Parks Advisory Board was instrumental in recommending priorities for development.

1952 Construction of a dam on Elkwater Lake for Ducks Unlimited which controls the water level of the lake.

1955 Reesor Lake Reservoir: Prior to 1960, the lake was two small, separate water bodies, called Twin Lakes. In 1960, a dam was constructed across the southeast end of the valley where the two lakes were located. Water was diverted into the reservoir from Battle Creek, raising the water level and thus creating a single lake.

1959 Spruce Coulee Reservoir was created by the Prairie Farm Rehabilitation Authority to provide a water supply for downstream users. The reservoir is popular for canoeing, kayaking and fishing for stocked brook trout (*Salvelinus fontinalis*). It is also one of the best bird watching areas in the province.

1967 Ski chalet built and converted to Cypress Hills Visitor Centre. Commercial timber cutting operations were suspended but domestic grazing was allowed to continue.

1976 The Saskatchewan West Block (formerly a Forest Reserve) was incorporated by the Saskatchewan government into Cypress Hills Provincial Park-Saskatchewan.

1980 Letter of Understanding between Department of Recreation and Parks and Battle Creek Stock Association, Fox Stock Association and Medicine Lodge Stock Association.

1989 An official agreement was signed between the Alberta and Saskatchewan governments to form Cypress Hills Interprovincial Park (CHIP) – the first park of its kind in Canada.

1996 Fort Walsh National Historic Site of Canada becomes an official partner of CHIP.

2004 designation of Cypress Hills Dark Sky Preserve through the three Interprovincial Park managing government agencies in partnership with the Royal Astronomical Society of Canada.

2007 New Cypress Hills Visitor Centre opens for year-round visitor services programming under the Centennial Legacy Visitor Centre project (2005).

APPENDIX B: HISTORY OF PLANNING FOR THE CYPRESS HILLS AREA

Several management plans and policy frameworks have been created for the Cypress Hills Provincial Park and surrounding lands:

Master Plan for Cypress Hills Provincial Park (1981) – outlined initiatives that were very relevant and necessary to the management of the park at that time. The plan presented concerns and recommendations for resource management and protection, outdoor recreation development, and regular operations that were essential to the achievement of the purposes of the park.

Forest Management Plan (1987)

Elkwater Townsite Development Plan (1988) – based on primarily recreational pursuits and few year-round residents; substantial expansion of cottages or visitor services are allowed in the policy.

Alberta/Saskatchewan Interprovincial Parks Memorandum of Understanding (1989) – defined the terms of the agreement between the two adjacent provincial parks to become partners in maintaining an Interprovincial Park.

Municipal Development Plan (1994) and Land Use Bylaw 95/19, Cypress County – policies allow for a separation distance for proposed county residential districts from Park boundaries, but this distance or how it is measured is not specified. No specific policy designation that separates rural areas surrounding the Park to other rural areas in the County. Permitted uses in areas surrounding the park include farming and dwellings; discretionary uses include farm-related uses, confined livestock feeding and operations, and surface mineral extraction.

Cypress Hills Provincial Park Management Plan – First Draft (1995), Second Draft (1999) and Third Draft (2000) – developed and brought to public consultation.

Cypress Hills Fringe Area Structure Plan (Bylaw 2003/03) (2003), Cypress County – plan policy area covers the Fringe Area, 278 km^2 surrounding, but not including, the park. This area is treated differently than the other areas of Cypress County. Emphasizes ecological and heritage (ranching) concerns, future road construction is minimized, including for oil and gas exploration. Emphasis on the preservation of high-quality native rangelands and on protecting the viewscapes of the park. Main concern is rural residential development.

Heritage Appreciation Development Plan (2004) – offers guidance to all park staff in the delivery priorities of heritage appreciation (HA) services in the park. In addition to providing a thorough exploration of significant features and resources in and adjacent to the park, it evaluates and makes recommendations of those that should be profiled to the public through a variety of services and media. A series of program statements offer guidance for the future direction of a broad range of VS programs, within CHIP and beyond.

Bylaw Amendment for Wind Energy Facilities (Bylaw 2005/03) (2005), Cypress County – small-scale wind energy facilities (SWEF; <25 kW and <20 m in height) are in-line with Fringe Area objectives, and are a permitted use. Wind energy facilities (WEF) that link into the grid are a discretionary use.

Forest and Fire Management Strategy (March 2009) – This report addresses the evolution of wildfire as a historic and fundamental agent of forest and grassland renewal and evaluates the current wildfire threat to both human and ecological values.

The Historic Resource Values (HRV) refer to the following designations:

- HRV 1 (Provincial Historic Resource) – Alberta Tourism, Parks and Recreation owns a portion of the entire Section;

- HRV 2 (Registered Historic Resource) – usually applied to standing structures of archaeological/historical significance;

- HRV 3 (Significant Historic Resource) – may be a candidate for designation as a Provincial Historic Resource or Registered Historic Resource;

- HRV 4 (Previously Recorded Historic Resource) – requires avoidance or additional study; refers to identified historical resource sites for which recommendations of 'impact avoidance' or 'further mitigative work prior to disturbance' have been made but not yet fulfilled; *Historical Resources Act* clearance is only granted for these types of sites after the completion of further historical resource fieldwork;

- HRV 5 (High Potential Lands) – lands that contain topographic characteristics that have demonstrated high probability for the presence of historical resources; and,

- HRV 0 (Low Potential Historic Resource Site) – land/sites with little or no archaeological interpretive potential; often includes historic resource sites that have already received *Historical Resources Act* clearance, sites that were completely mitigated during the Historical Resources Impact Assessment stage, or sites that are located in disturbed contexts or possess few features or elements that would assist in interpretation.

APPENDIX C: BIRD SPECIES BY HABITAT TYPE

Species living in the pine, spruce and aspen forests are often montane species. These include, among others: dusky flycatcher (*Empidonax oberholseri*), orange-crowned warbler (*Vermivora celata*), red-naped sapsucker (*Sphyrapicus nuchalis*), pine grosbeak (*Pinicola enucleator leucura*), pine siskin (*Carduelis pinus*), Clark's nutcracker (*Nucifraga columbiana*), evening grosbeak (*Coccothraustes vespertinus*), hairy woodpecker (*Picoides villosus*), black-capped chickadee (*Parus atricapillus*), red-breasted nuthatch (*Sitta canadensis*), and white-crowned sparrow (*Zonotrichia leucophrys*; Baresco and Reynolds 2000, Dickinson 2000, EcoLeaders 2004, Saskatchewan Museum of Natural History nd.). Western wood-peewee (*Contopus sordidulus*), ruffed grouse (*Bonasa umbellus*) and wild turkey (*Meleagris gallopavo*) prefer aspen stands. Ruffed grouse were introduced to the park in 1922 and wild turkey were introduced in 1962 (Dickinson 2000). Bobolink (*Dolichonyx oryzivorus*) and common poor-will (*Phalaenoptilus nuttallii*) nesting sites have been recorded within the park.

Some species have strong preferences as to stand type: yellow-rumped warbler (*Dendroica coronata*), warbling vireo (*Vireo gilvus*), dark-eyed (pink-sided) junco (*Junco hyemalis mearnsi*), house wren (*Troglodytes aedon*) and hermit thrush prefer mature aspen stands. Younger stands are populated by MacGillivray's warbler (*Oporornis tolmiei*), chipping sparrow (*Spizella passerina*), song sparrow (*Melospiza melodis*) and lazuli bunting (*Passerina amoena*). Birds that prefer forest edges and forest/shrub habitats include species such as lazuli bunting, common poor-will, bluebirds (*Sialia* spp.), tree swallow (*Tachycineta bicolor*), yellow-bellied sapsucker and black-headed grosbeak (Dickinson 2000, EcoLeaders 2004).

The most abundant grassland birds within the park are savannah sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), Sprague's pipit (*Anthus spragueii*) and upland sandpiper (*Bartramia longicauda*; Hull 2002). Other grassland species include vesper sparrow (*Poecetes gramineus*), Baird's sparrow (*Ammodramus bairdii*), Brewer's sparrow (*Spizella breweri*), brown-headed cowbird (*Molothrus ater*), horned lark (*Eremophila alpestris*) and chestnut-collared longspur (*Calcarius ornatus*). The park also contains dancing grounds of sharp-tailed grouse (*Tympanuchus phasianellus*; Hull 2002).

The park's wetlands are home to species such as ring-necked duck (*Aythya collaris*), red-winged blackbird (*Agelaius phoeniceus*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), Canada goose (*Branta canadensis*), solitary sandpiper (*Tringa solitaria*), spotted sandpiper (*Actitis macularia*), belted kingfisher (*Ceryle alcyon*), marsh wren and great blue heron (*Ardea herodias*; Baresco and Reynolds 2000, Dickinson 2000, EcoLeaders 2004). Bobolink are also found along the park's shorelines.

Site-specific characteristics also determine the suitability of a site to various species. Site surveys conducted within the park identified locations of different species within

different habitats. Differences in wildlife species composition were found for different sites of the same habitat, emphasizing the conservation value of a variety of sites. Species found at surveyed sites are shown in the following table.

Sample of bird species by habitat and site in Cypress Hills Provincial Park (adapted from Baresco and Reynolds 2000).

Habitat	Site	Species in Common to all Sites	Species Unique to Site
Aspen/Aspen-Conifer Forest	Spruce Coulee	house wren, American robin, warbling vireo, song sparrow, white-crowned sparrow, brown-headed cowbird	*Accipiter* spp., ruffed grouse, hairy woodpecker, northern flicker, red-breasted nuthatch, ruby-crowned kinglet, ovenbird, McGillivray's warbler, western tanager, dark-eyed junco
	Elkwater		tree swallow, northern rough-winged swallow, cliff swallow, black-billed magpie, western wood-peewee, yellow-headed blackbird
	Reesor Hills		red-tailed hawk, mourning dove, yellow-rumped warbler
Grassland	Reesor Hills		savannah sparrow, vesper sparrow, Sprague's pipit
Marshes	Spruce Coulee	red-necked grebe, red-winged blackbird	killdeer, great blue heron, spotted sandpiper, ring-billed gull, belted kingfisher, *Accipiter* spp., eastern kingbird, marsh wren, ruby-crowned kinglet, chipping sparrow, dark-eyed junco
	Elkwater		canvasback, redhead, bufflehead, ruddy duck, American coot, Swainson's hawk, black-billed magpie, cedar waxwing, clay-coloured sparrow
Creek Valleys	Battle Creek – main valley	American robin, brown-headed cowbird, cedar waxwing	white-crowned sparrow
	Battle Creek – northern arm		red-breasted nuthatch, chipping sparrow, dusky flycatcher

APPENDIX D: LIST OF MAMMALS FOUND IN CYPRESS HILLS PROVINCIAL PARK

Mammals commonly found in forested habitats include red squirrel, porcupine (*Erethizon dorsatum*), pine marten, mice, voles, shrews and cottontail rabbit (*Sylvilagus nuttallii*). Relict disjunct populations of montane species include snowshoe hare (*Lepus americanus*), least chipmunk (*Eutamias minimus*) and Gapper's red-backed vole (*Clethrionomys gapperi*; Dickinson 2000). Beaver prefer aspen forests; it is often possible to locate areas previously populated by aspen by the presence of old beaver dams (EcoLeaders 2004). Weasels and raccoons are present in the park, as are coyote, fox and bobcat. Muskrat (*Ondatra zibethicus*), beaver and moose all forage on and utilize wetland habitat.

Small mammal species of the fescue grasslands on the park plateau include the northern pocket gopher (*Thomomys talpoides*), thirteen-lined ground squirrel (*Spermophilus tridecemlineatus*), and meadow vole (*Microtus pennsylvanicus*). In the mixedgrass habitats in the lower reaches of the park are other mammal species including Richardson's ground squirrel (*Spermophilus richardsonii*), white-tailed jackrabbit (*Lepus townsendii*), red fox (*Vulpes fulva*), coyote (*Canis latrans*), striped skunk (*Mephitis mephitis*) and American badger (*Taxidea taxus*). Swift fox (*Vulpes velox*) have been observed adjacent to park boundaries in the mixed grass prairie south of the park (Dickinson 2000). Occasionally pronghorn (*Antilocapra americana*) are present in the park during the summer months (Dickinson 2000). Elk and other ungulates graze on the fescue grasslands and browse on shrub communities throughout the park and surrounding ranchlands.

APPENDIX E: PRIORITY FAUNAL SPECIES

Priority faunal species, including SARA species and provincially rare species found within the park (adapted from Dickinson 2000, SRD 2005, ANHIC 2006).

Species (Common Name)	Federal SARA Ranking	Provincial Ranking	Status in Park
Birds			
piping plover	endangered	Track S2B, At Risk	extremely rare
mountain plover	endangered	Track S1B, At Risk	extremely rare
burrowing owl	endangered	Track S2B, At Risk	extremely rare
loggerhead shrike	threatened	Watch S3B, Sensitive	extremely rare
Sprague's pipit	threatened	Watch S4B, Sensitive	common
northern goshawk	-	-, Sensitive	rare
long-billed curlew	special concern	Watch S3B, Sensitive	rare
western grebe	-	Watch S3B, Sensitive	common
white pelican	-	Track S2B, Sensitive	rare
double-crested cormorant	-	Watch S3B, Secure	rare
American bittern	-	Watch S3S4B, Sensitive	rare
great blue heron	-	Watch S3B, Sensitive	common
black-crowned night heron	-	Watch S2B, Sensitive	extremely rare
trumpeter swan	-	Track S3B, At Risk	extremely rare
wood duck	-	Track SAB, Secure	extremely rare
red-breasted merganser	-	Track SAB, Secure	rare
turkey vulture	-	Track S2S3B, Sensitive	extremely rare
ferruginous hawk	-	Watch S3B, At Risk	rare
golden eagle	-	Track S3B, Sensitive	rare
prairie falcon	-	Watch S3B, Sensitive	rare
sharp-tailed grouse	-	Watch S4, Sensitive	rare in some years, common in others depending on population cycles
upland sandpiper	-	Watch S3B, Sensitive	rare
red-necked phalarope	-	Track SAB, Secure	extremely rare
Forster's tern	-	Watch S2S3B, Sensitive	extremely rare
black tern	-	Watch S3B, Sensitive	common
short-eared owl	-	Watch S3B, May Be At Risk	extremely rare
brown creeper	-	Track S3S4, Sensitive	rare
Cape May warbler	-	Track S2B, Sensitive	extremely rare
American tree sparrow	-	Track SAB, Secure	common
Baird's sparrow	-	Watch S3B, May Be At Risk	rare
Cassin's finch	-	Track S2B, Secure	extremely rare
common poor-will	-	Track S1	significant to park and area
Mammals			
American badger	-	Watch S4, Sensitive	uncommon to rare
swift fox	endangered	Track S1, At Risk	very rare; transient

prairie shrew	-	Watch S3, Secure	undetermined
little brown bat	-	Track S5, Secure	undetermined
big brown bat	-	Track S4S5, Secure	unconfirmed
hoary bat	-	Track S2B, Sensitive	unconfirmed
long-eared bat	-	Track S2, Sensitive	unconfirmed
western small-footed bat	-	Track S2, Sensitive	unconfirmed
silver-haired bat	-	Track S3B, Sensitive	unconfirmed
long-legged bat	-	Track S2, Undetermined	unconfirmed
Richardson's ground squirrel	-	Watch S5, Secure	localized
sagebrush vole	-	Track S3, Secure	unconfirmed
bobcat	-	Track S3, Sensitive	rare
cougar	-	-	significant to park and area
Amphibians			
northern leopard frog	special concern	S2S3, At Risk	confirmed
tiger salamander	-	Watch S4	-
Reptiles			
bullsnake	-	Track S3, Sensitive	-
painted turtle	-	Track S1, Sensitive	-
red-sided garter snake	-	Track S3, Sensitive	-
wandering garter snake	-	Track S3S4, Sensitive	-
Lepidoptera (Butterflies and Moths)			
Hutchin's checkerspot	-	S1, -	confirmed
woodland skipper	-	S2, Undetermined	-
Rocky Mountain dotted blue	-	S2, Sensitive	-
arrowhead blue	-	S2, Sensitive	-
Odonata (Dragonflies and Damselflies)			
blue-eyed darner	-	S1, Undetermined	-
twelve-spotted skimmer	-	S1, Undetermined	-
striped meadowhawk	-	S2S4, Undetermined	-
Pacific forktail	-	S2S3, Undetermined	-
pronghorn clubtail	-	S1, Undetermined	-
lance-tipped darner	-	S1S2, Secure	-

Specific areas of significance include:

Site	Size	Importance
Critical Bird Nesting Areas within the Elkwater Lake Facility Zone	~ 10 ha	provides important wetland bird habitat
Spruce Coulee Reservoir Area		provides diversity of habitat for a number of different breeding Bird Families (e.g., lakeside marsh and welands, mixed-wood forest, aspen forest, spruce forest and meadow habitat)
Reesor Lake Hills	~ 60 ha	provides critical elk winter range habitat
Murray Hill		provides critical elk winter range habitat
Nine Mile		provides critical elk winter range habitat

APPENDIX F: MAJOR VEGETATION COMMUNITIES

Major vegetation communities of Cypress Hills Provincial Park (adapted from Saskatchewan Museum of Natural History nd., ARC 2001, Strauss 2001, EcoLeaders 2004).

Community	Ecological Characteristics	Location(s) within Park	Representative Species
Lodgepole pine forest	sparse, open understory	mesic zone between grassland and spruce forest mineral soils fire-disturbed sites	lodgepole pine (*Picea contorta*) pinesap (*Monotropa hypopithys*) pine-drops (*Pterospora andromeda*)
White spruce forest	often grows with aspen supports a rich understory with mosses, grasses and herbs represents a self-reproducing climax community	valley bottoms, north-facing slopes moist, cool sites, especially near springs and streams organic soil content	white spruce (*Picea glauca*; most likely a hybrid with Engelman spruce) red-osier dogwood (*Cornus stolonifera*) bunchberry (*Cornus canadensis*) stiff clubmoss (*Lycopodium annotinum*)
Aspen forest	can be in pure or mixed stands, e.g., with balsam poplar in wetter sites often a thick understory reproduces through suckers and seed	at border of pine forest on the plateau north slopes at lower elevations more protected south slopes organic soil content	trembling aspen (*Populus tremuloides*) white birch (*Betula papyfera*) balsam poplar (*Populus balsamifera*) pincherry (*Prunus pensylvanica*) northern gooseberry (*Ribes oxyacanthoides*) western Canada violet (*Viola canadensis*)
Fescue grassland	climax community, slow to establish but persists covers 40% of park area	higher moisture, higher elevation sites typically on the top of the plateau	**Grasses:** foothills rough fescue (*Festuca campestris*) – dominant timber oatgrass (*Danthonia intermedia*) bluebunch fescue (*Festuca idahoensis*) awned wheatgrass (*Agropyron subsecundum*) June grass (*Koeleria cristata*) **Forbs:** silvery lupine (*Lupinus argenteus*) three-flowered avens (*Geum triflorum*) wild strawberry (*Fragaria virginiana*) northern bedstraw (*Galium boreale*) common yarrow (*Achillea millefolium*)

			Shrubs: shrubby cinquefoil (*Potentilla fruticosa*)
Mixedgrass prairie	association of mixed grasses and forbs	dominant grassland on lower plateau and drier areas (i.e., west and south-facing slopes) including shallow-to-gravel areas	**Grasses:** western porcupine grass (*Stipa curtiseta*) spear grass (*Stipa comata*) blue grama (*Bouteloua gracilis*) June grass (*Koeleria cristata*) northern wheat grass (*Agropyron dasystachyum*) green needlegrass (*Stipa viridula*) **Forbs:** early yellow locoweed (*Oxytropsis sericea*) golden bean (*Thermopsis rhombifolia*) wild bergamot (*Monarda fistulosa*) pasture sage (*Artemisia frigida*)
Wetlands	creek banks, often consists of wooded banks with understory of hydrophilic mosses pond, lake and marsh banks often covered by wetland sedges and grasses	low, poorly-drained areas often adjacent to lakes or streams	willow (*Salix* spp.) balsam poplar (*Populus balsamifera*) white birch (*Betula papyfera*) white spruce (*Picea glauca*) bog sedge (*Carex simulata*) cattail (*Typha latifolia*) common duckweed (*Lemna minor*) common wood rush (*Luzula multiflora*) dewey sedge (*Carex deweyana*) giant bur-reed (*Sparganium eurycarpum*) great bulrush (*Scirpus acutus*) water foxtail (*Alopecurus aequalis*) water sedge (*Carex aquatilis*)

APPENDIX G: RARE VASCULAR PLANTS FOUND IN CYPRESS HILLS PROVINCIAL PARK

Rare vascular plants found in Cypress Hills Provincial Park (1999 survey; adapted from Bradley and Ernst 2000, Gould 2006, Gould, pers. comm.).

Species	Common Name	Rank (ANHIC[1], SRD rankings)	Number of Occurrences	Location
Agrostis exarata	spike redtop	S2, G5 May Be At Risk	4	hydric-subhydric riparian sites on the plateau
Aster eatonii	Eaton's aster	S2, G5	1	
Barbarea orthoceras	American yellow rocket (American wintercress)	- Sensitive	13	moist depressions and drainages throughout the park
Botrychium hesperium	western grape fern	SU, G3G4 Undetermined	1	
Botrychium michiganense		SU, G1	1	
Botrychium minganense	Mingan grape fern	S2S3, G4 Undetermined	1	on an exposed gravel ridge top in the eastern portion of the park
Botrychium pallidum		S1, G3 May Be At Risk	1	
Botrychium paradoxum	paradoxical grape fern	S1, G2 May Be At Risk	1	
Botrychium pedunculosum		S1, G2G3 May Be At Risk	1	
Botrychium simplex	dwarf grape fern	S2, G5 May Be At Risk	1	
Carex backii	Back's sedge	S2, G4 May Be At Risk	1	in a hawthorn shrub thicket on a south-facing slope east of Reesor Lake
Carex hookerana	Hooker's sedge	S2, G4? Sensitive	2	upper Battle Creek valley
Carex petasata	pasture sedge	S1S2, G5 May Be At Risk	2	upper Battle Creek valley
Carex platylepis	broad-scaled sedge	S1S2, G4?	2	subhydric riparian sites in the central plateau

Carex saximontana	Rocky Mountain sedge	S1, G5 May Be At Risk	1	
Chenopodium incanum	goosefoot	S1, G5 May Be At Risk	1	along shore of a stock pond in western portion of park
Ellisia nyctelea	waterpod	S2, G5 May Be At Risk	2	in dense hawthorn shrub thickets on south-facing slopes east of Reesor Lake and along Battle Creek
Erigeron radicatus	dwarf fleabane	S2, G3 Sensitive	3	on exposed gravel ridge tops in the eastern portion of the park
Juncus confusus	few-flowered rush	S2, G2 Sensitive	6	in seasonally wet depressions and in upper drainages of central and eastern plateau
Juncus nevadensis	Nevada rush	S1, G5 May Be At Risk	1	
Lilaea scilloides	flowering quillwort	S1, G5? May Be At Risk	1	in shallow open water of a semi-permanent wetland on the plateau at the headwaters of Battle Creek
Lithophragma glabrum	rockstar	S2, G4G5 May Be At Risk	4	in mesic meadows and open woodlands in eastern portion of park
Lomatium cous	biscuit root	S1S2, G5 May Be At Risk	17	on shallow soils over gravels and cobbles on the plateau and upper drainages in eastern portion of park
Malaxis monophylla	white adder's-mouth	S2, G5 Sensitive	1	
Mimulus guttatus	yellow monkeyflower	SU, G5	11	in hydric-subhydric riparian sites associated with cobble-bed springs and streams
Monotropa hypopithys	pinesap	S2, G5 May Be At Risk	7	in lodgepole pine forests on the plateau
Oenothera flava	low yellow evening-primrose	S2, G5 May Be At Risk	2	on exposed cobbles along Murray Hill road and on south-facing slope of upper Graburn Creek
Osmorhiza longistylis	smooth sweet cicely	S2, G5 May Be At Risk	4	in aspen woodland and hawthorn shrub thickets on mid to lower south-facing slopes east of Reesor Lake
Pterospora andromeda	pine drops	- Sensitive	15	in lodgepole pine forests on ridges and on the plateau

Ranunculus glaberrimus	early buttercup	S2, G5 May Be At Risk	11	on shallow soils over gravels and cobbles in moist meadows and upper drainages in the eastern portion of the park
Rorippa curvipes var *truncata*	blunt-leaved yellow cress	S1S2, G5 May Be At Risk	1	

[1]Rank: G=global, S=Alberta

G1 S1: < 5 occurrences or only a few remaining individuals.

G2 S2: 6-20 occurrences or with many individuals in fewer occurrences.

G3 S3: 21 -100 occurrences may be rare and local throughout its range, or in a restricted range (may be abundant in some locations or may be vulnerable to extirpation because of some factor of its biology).

G4 S4: apparently secure under present conditions, typically >100 occurrences but may be fewer with many large populations; may be rare in parts of its range, especially peripherally.

G5 S5: demonstrably secure under present conditions, > 100 occurrences, may be rare in parts of its range, especially peripherally.

GNR SNR: unranked or under review

GH SH: historically known, may be relocated in the future.

GNA SNA: conservation status not applicable (includes exotic species)

G? or S?: not yet ranked

_?: rank questionable

Additional sites of conservation significance include:

Site	Size	Importance
White Spruce Stand	~ 10 ha	contains the largest and oldest white spruce trees found in the park to date this stand escaped the fires of the late 1800s
Orchid Communities – Ski Hill / Highway 41 springs / Spruce Coulee	~ 0.5 ha and possibly 15 ha	contains several species of orchids including the Franklin's lady slipper
Orchid Communities within the Elkwater Lake Facility Zone	~ 2 ha (combined)	several important sites have been recognized within this zone
White Birch Stand	~ 2.5 ha (combined)	the white birch stand found in the Cypress Hills is the most southeasterly known occurrence of white birch in the province of Alberta
Survival Tree	~ 0.5 ha	this tree is an important contemporary cultural feature

The following table includes rare ecological communities for Cypress Hills that are proposed for addition to the ANHIC Tracking List in the spring of 2007. Note that the last two communities are the most important for the park since they relate to the Montane Subregion of Cypress Hills, which includes the plateau grasslands. The last ecological community is probably the most significant, since this is the standard vegetation type found within the plateau grassland. Within the province, the shrubby cinquefoil/Foothills rough fescue-intermediate oatgrass ecological community is only found within the Cypress Hills.

Name	Natural Region	Type	No. of Plots	Location/ Habitat	Track-ing	Proposed Rank	Comments	Recommendations
Festuca hallii - Koelana macrantha - Agropyron dasystachyum	Mixedgrass	MGA07	2	Cypress Upland	Y	S1S2	reference type for upper elevation shallow-to-gravel and gravel range sites restricted range, not reported elsewhere	add to Tracking List rank S1S2
Festuca hallii - Muhlenbergia cuspidata	Mixedgrass	MGA08	3	Cypress Upland	Y	S1S2	reference type for upper elevation thin breaks restricted range, not reported elsewhere	add to Tracking List rank S1S2
Festuca hallii - Stipa curtiseta - Carex	Mixedgrass	MGA01	28	Cypress Upland	remove from list	change rank from S2S3 to S4	most common fescue type currently lumped with *Festuca hallii- Stipa curtiseta*	recognize subtypes re-rank S4 and remove from Tracking List
Foothills fescue (*Festuca campestris*) - western porcupine grass (*Stipa curtiseta*)	Cypress Hills (CH) Montane	I1.	10	Cypress Hills (CH) type of thin breaks and gravel range sites	Y	S2S3	similar to a Mixedgrass / N fescue / C parkland type dominated by *F. hallii* (MGA 1) documented in Cypress Hills, may also occur in the Granum area	track rank S2S3

Name	Natural Region	Type	No. of Plots	Location/ Habitat	Track-ing	Proposed Rank	Comments	Recommendations
Shrubby cinquefoil (*Potentilla fruticosa*)/ Foothills fescue (*Festuca campestris*) - intermediate oatgrass (*Danthonia intermedia*)	CH Montane	I2.	37	CH type of loamy and shallow-to-gravel range sites on the plateau	Y	S2S3	*Potentilla fruticosa* cover may increase with grazing pressure combination of *Festuca campestris*-*Danthonia intermedia* is unique to the CH	track rank S2S3 with I3 as subtype

APPENDIX H: SERVICES AVAILABLE IN CAMP-GROUNDS AND GROUP USE AREAS IN CYPRESS HILLS PROVINCIAL PARK

Campground	Drive-In Sites	Walk-In Sites	Random Camping	Self-Registration	Check-In Station	Picnic Tables	Picnic Shelter	Kitchen / Meeting Room	Firepits
Regular Campsites									
Old Baldy	X				X	X			X
Battle Creek	X	X		X		X	X		X
Beaver Creek	X				X	X			X (group)
Elkwater	X				X	X	X		X
Ferguson Hill	X				X	X			X
Firerock	X				X	X			X
Lodgepole	X				X	X			X
Reesor Lake	X	X		X		X	X		X
Spruce Coulee		X		X		X	X		X
Upper Graburn	X			X		X	X		X
Lakeview	X				X	X	X		X
Group Campsites									
Highway 41 Group Camp			X	?		X	X		X
Willow Creek Group Camp	X			?		X	X		X
Main Group Camp	X	X		?		X		X	fireplace outside

Campground	Waste Disposal Area	Water Taps	Water Pump	Telephone	Playground	Vault Toilets	Flush Toilets	Showers	Dumping Station	Electrical Hook-Ups	Water Hook-Ups	Reservation Required	Winter Camping
Regular Campsites													
Old Baldy	X	X				X	X	X	X	X	X		
Battle Creek	X	X				X							
Beaver Creek	X	X		X	X	X	X	X	X	X	X	X	
Elkwater	X	X		X	X	X	X	X	X	X	X		X
Ferguson Hill	X	X		X	X	X							
Firerock	X	X		X	X	X				X			
Lodgepole	X	X		X	X	X						X	
Reesor Lake	X	X		X	X	X							
Spruce Coulee	X	X				X							X
Upper Graburn		X				X							
Lakeview	X	X	X		X	X	X	X	X	X	X		
Group Campsites													
Highway 41 Group Camp	X		X			X						X	
Willow Creek Group Cam	X		X			X						X	
Main Group Camp	X	X				X						X	

APPENDIX I: MARKET STRATEGY THEMES

Marketing strategy themes for Cypress Hills Interprovincial Park and Fort Wash National Historic Site (adapted from Alberta Community Development 2001, 2005).

Theme	Description
Tactics / Strategy	• Cypress Hills Park is open four seasons in the year - primary emphasis: 'shoulder season' periods mid May to late June and September - secondary emphasis: "off-season" winter opportunities throughout the park excluding Fort Walsh • Uniqueness • Themes – Canada's first and only Interprovincial Park, oasis in the desert; Cretaceous/Tertiary boundary; geologically unique in the Canadian plains
Key Market Areas	• In-park visitors • Local area residents • Southern/Central Saskatchewan and Alberta • Northern Montana • Organized tour groups • School/youth groups • Drive-by traffic • National • International
Action Plan: Specific Activities	• In-park visitors - organize peak season interpretive program exchanges between the three CHIP sites - promote programming, special events and other activities - static display from Fort Walsh to be installed at the Centre Block and Elkwater Lake Visitor Centres - handout park programming materials at entry gates/registration stations - develop and install CHIP map signs at key locations - organize tourism 'FAM' day for CHIP contractors, buisiness operators and concessionaries

Theme	Description
	• Local area residents - launch a diversified marketing campaign to increase public awareness and support for implementation of the Cypress Hills Dark-Sky Preserve program - joint participation, organization and publicity of Parks Day - utilize frequent and strategic public service announcements/promotional activities - provide orientation and training to CHIP staff - announce upcoming park events in the community newsletters (Spring in the Hills/ Winter in the Hills) and local newspapers - contribute newspaper articles to the Medicine Hat News - advertise at the following community events: Medicine Hat Environment Week and Medicine Hat Stampede Parade - present slide series at Medicine Hat Public Library (based on Fish Creek Program). One presentation per month in October, November, January, February and March) • Southern and central Saskatchewan and Alberta - continue involvement with The Great Canadian Fossil and Old Fort Trails initiatives - be responsive to electronic and print media inquiries and requests for promotion of CHIP - contribute newspaper articles to the Regina Leader-Post, Calgary Herald and Lethbridge Herald • Northern Montana - continue involvement with The Great Canadian Fossil and Old Fort Trails initiatives - provide information packages for use by The Great Canadian Fossil and Old Forts Trails partners - Invite tourism related contacts to participate in the jointly organized ‘fam’ tours • Organized tour groups - prepare group ecotourism packages - invite specific groups to certain weeks. Groups could include: Saamis Immigration, Seniors Condo’s (Club Sierra), and Adult Learning Council - organize Saturday bus tours during summer months (July 1 to September 5) - organize mid-week bus tours during fall and winter months (September 4 to December 31) • School/youth groups - joint regional mailout of school/youth program booking information - joint participation a the Southwest Alberta,/Regina/Saskatoon Teacher’s Conventions, Feb/Mar - investigate attending additional teacher conventions in Northern Montana, spring or fall • Drive-by traffic - improve highway signing along the #1 Trans-Canada Highway (TCH), #21 and #41 - provide CHIP information to the two provincial and two municipal tourist centres along the #1 TCH

Theme	Description
	• National - contact the Weather Channel regarding promotion of the CHIP through use of park images - contact Discovery Channel regarding use of their identity with park promotions • International - update the CHIP website

APPENDIX J: TRAIL FEATURE MATRIX FOR CYPRESS HILLS PROVINCIAL PARK

(adapted from Oldman River Regional Services Commission 2005)

Trail	General Location	Trail Position	Single Use Hiking	Hiking / Biking	Cross-Country Skiing / Biking	Wheelchair Accessible	Asphalt Paved	Gravel Paved	Natural Trail	Boardwalks	Crossings	Culverts	Bridge Improvements	
Beaver Creek Trails														
Soggy Bottom	West Area	Bottom		X		X	X			X				
Shoreline	West Area	Bottom		X		X	X			X				9
Happy Jack Hart	West Area	Across slope		X					Vegetated					
Firerock	West Area	Across slope / bottom	X	X					Vegetated					
Old Baldy Viewpoint	West Area	Plateau	X						Vegetated					
Horseshoe Canyon	West Area	Bottom		X					Vegetated					
Beaver Creek	West Area	Across slope / bottom	X						Bare soil		3			9
Beaver Creek Loop	West Area	Bottom	X						Bare soil					
Lodgepole	West Area	Bottom	X						Bare soil					
Plateau	West Area	Ridges		X					Vegetated					
Mitchell Creek	West Area	Across slope	X						Bare soil				1	1
Spring Creek Trails														
Spring Creek Loop	Southwest	Bottom			X				Vegetated		3	4		
Ressler Trail	Southwest	Bottom			X				Vegetated					
Salus Trail	Southwest	Bottom			X				Vegetated					
Spruce Coulee Trails														
Sunset	West Area	Bottom			X				Vegetated			1	1	
Rodeo Loop	East Area	Bottom			X				Bare Soil					
Highline	East Area	Across slope			X				Bare Soil					
Spruce Coulee	East Area	Across slope / bottom		X	X				Vegetated (0.8 km) / bare soil (6.5 km)		5		5	
Lakeside Loop	East Area	Bottom	X						Bare Soil		1 (middle)			
Streamside	East Area	Across Slope	X						Vegetated		1 (trailhead)			
Trans Canada														
Trans Canada Trail	East Area	Across slope / bottom / plateau	X	X					Vegetated (14.13 km) / bare soil (2.2 km)					

Log Bridges or Corduroys	Hazardous Tread	Fences / Gates	Connects to Picnic Area	Toilets on Trail Route	Part of Trans Canada Trail	Width (m)	Length (km)	Elevation Gain	Difficulty	Notes
					X	> 2	1.09 km loop	Less than 20 m	Easy	Connects to Sunset and Shoreline Trails. Features open fields, forest and marsh.
9					X	> 2	2.6	Less than 20 m	Easy	Connects West End Day Use Area to East End Day Use Area. Follows Elkwater Lake shoreline.
	Erosion / unstable side slopes					> 1	1.04	Less than 20 m	Easy	Connects to Firerock Trail.
	Obscacle					1	1.8	46 m	Moderate	Connects West End Day Use Area to Firerock Campground; trail connection to Horseshoe Canyon Trail and Old Baldy Viewpoint. Features open fields, glacial erratics, spruce and poplar forest. Challenging for mountain bikes.
	Severe rutting and erosion at start of trailhead as well as 1.06 km to 2.1 km from Horseshoe viewpoint					Narrow tread: foot	0.5	?	Moderate	Connects to Fierock and Horseshoe Canyon Trails. Features open fields and mixed forests, views over Elkwater Lake, townsite and surrounding countryside.
						> 1	4.2	190 m	Strenuous	Connects to Firerock and Old Baldy Viewpoint Trails and forms large loop with Beaver Creek and Mitchell Trails via Plateau Trail. Features open fields and mixed forest, views over Elkwater Lake, townsite, surrounding countryside and Horseshoe Canyon landslide. Trail follows abandoned road.
9	Severe creekbed erosion in places	Livestock				> 1	4.2	229 m	Moderate - Strenuous	Connects Beaver Creek Campground to Horseshoe Canyon viewpoint; joins in with Lodgepole Trail forms small loop with Beaver Creek Loop Trail and large loops with Horseshoe Canyon and Mitchell Trails via Plateau Trail. Features spruce and poplar forest, beaver dams and fields. Some bumpy and wet areas on trail; not recommended for mountain bikes.
2	Ustable					1	0.5	229 m	Strenuous	Connects with Beaver Creek and Lodgepole Trails.
					X	Narrow tread: foot	0.8	71 m	Strenuous	Connects Lodgepole Campground to Beaver Creek and Beaver Creek Loop Trails.
	Erosion causing exposed tree roots for first 700 m of trail	Livestock				> 1	2.6	Less than 20 m	Easy	Provides access to Tom Trott Memorial Forestry Museum and connects Horseshoe Canyon, Beaver Creek and Mitchell Trails. Features Horseshoe Canyon viewpoint.
1	Severe erosion throughout trail. Most prominent at halfway mark for 60 m					Narrow tread: foot	2.7	174 m	Moderate - Strenuous	Connects Elkwater and Ferguson Hill Campgrounds to Murray Hill Road; trail connection to Horseshoe Canyon and Beaver Creek Trails via Plateau Trail. Features mixed forest and views of Elkwater Lake. Not recommended for mountain bikes.
	Severe erosion on west side of trail / rutting (northeast) / unstable (northwest; northeast)	2 livestock / 2 park access control paralleling road				> 2	8	Less than 20 m	Easy	Connects to Ressler, Salus and Golf Course Road Trails. Warm-up shelter at Willow Creek Group Camp.
	Rutting in northern portion					> 2	1.7	Less than 20 m	Easy	Connects to Spring Creek Loop, Salus and Golf Course Road Trails. Warm-up shelter at Willow Creek Group Camp.
						> 2	1.1	Less than 20 m	Easy	Connects to Ressler, Spring Creek Loop and Golf Course Road Trails. Warm-up shelter at Willow Creek Group Camp.
	Unstabke (middle)				X	> 1	1.6	50 m?	Moderate	Connects Park Administration Office and Soggy Bottom Trail to Spruce Coulee Trailhead. Features views of waterfowl habitat and groomed cross-country ski trail. Some rough areas on trail.
		1 park access control (west side)				1	2.2	Less than 20 m	Easy	Connects to Sunset Trail; connects to Highline and Spruce Coulee Trails to form 2 alternate loops. Features mixed forest and groomed cross-country ski trail. Recommended for experienced mountain bikers and skiers.
	2 erosion spots (halfway; east)	2 livestock (west)					1.9	77 m	Moderate	Connects to Sunset Trail; joins in with Rodeo Loop Trail and Spruce Coulee Trail to form 2 alternate loops. Features lodgepole pine forest and groomed cross-country ski trail.
	Erosion / rutting predominant throughout length of trail / unstable (middle)	4 livestock / 2 park access control (east)			X	1 > 2	7.3	126 m	Moderate - Strenuous	Connects to Rodeo Loop Trail, Highline Trail and Spruce Coulee Campground. Features open fields, mixed forest, beaver ponds and groomed cross-country ski trail (first 1.6 km). Recommended for experienced mountain bikers and skiers. Trail follows abandoned road.
	Severe lakeside erosion along whole east side					Narrow tread: foot	2.09 km loop	Less than 20 m	Easy	Loop trail from Spruce Coulee Campground. Features spruce and lodgepole pine forest, follows Spruce Coulee Reservoir shoreline. Not recommended for mountain bikes.
4 (trailhead, middle, east)	3 erosion spots (1 west; 2 east)	1 livestock (junction with Spruce Coulee and Trans Canada Trails)				1	2.8	80 m?	Moderate - Strenuous	Connects Spruce Coulee Campground to Trans Canada Trail; forms loop with Trans Canada Trail. Features spruce forest, trail follows stream. Not recommended for mountain bikes.
1 (west)	2 erosion spots (west)	2 livestock / 3 park access control			X	> 1	16.4	127 m	Moderate - Strenuous	Connects Reesor Lake Campground to Reesor Lake Viewpoint and Spruce Coulee Campground; forms loop with Streamside Trail. Features views of surrounding countryside, mixed forest and grassland. Trail follows abandoned road for part of route.