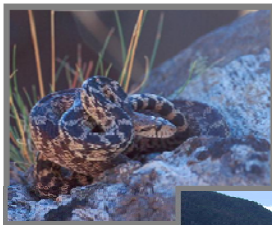


Okanagan Region

# MANAGEMENT DIRECTION STATEMENT

September 2009



for Boothman's Oxbow  
Provincial Park

**Front Cover photos:**

K.J. Baric, 2007 (top right, middle, bottom left), J. Hobbs, 2008 (top left, bottom right).

# Boothman's Oxbow Provincial Park Approvals Page

## Foreword

This management direction statement for Boothman's Oxbow Provincial Park provides management direction until such time as a more detailed management plan may be prepared. The park was established to protect significant wetland, riparian and grassland ecosystem values and maintain important habitat for provincially listed species at risk, including red-listed Tiger Salamander and Lewis's Woodpecker. In addition, the park provides easily accessible wildlife viewing, recreational and educational/interpretation opportunities.

## Approvals:



Scott Benton, Executive Director  
Parks and Protected Areas Division

Date: 09/28/09



## Table of Contents

<b>1.0 Introduction .....</b>	<b>1</b>
1.1 Purpose of the Management Direction Statement.....	1
1.2 Setting and Context.....	1
<b>2.0 Protected Area Attributes.....</b>	<b>5</b>
2.1 Conservation.....	5
2.2 Tourism and Outdoor Recreation.....	6
2.3 Cultural Heritage.....	6
2.4 Economic Contribution.....	7
<b>3.0 Significance in the Protected Area System .....</b>	<b>7</b>
3.1 Special Natural Features .....	7
3.2 Special Recreational Features .....	7
3.3 Cultural Heritage Significance.....	8
<b>4.0 Land Use, Tenures and Interests.....</b>	<b>8</b>
4.1 Access.....	8
4.2 Recreation, Guide/Outfitting and Trapping Tenures.....	8
4.3 Utility Corridors.....	8
4.4 Adjacent Patterns of Land Use.....	8
4.5 Other Tenures/Permits .....	9
4.6 Management Commitments .....	9
4.7 Private and Public Stakeholder Interests.....	10
4.8 Other Agency Interests .....	10
<b>5.0 Relationship with First Nations.....</b>	<b>11</b>
<b>6.0 Relationship with Local Government .....</b>	<b>11</b>
<b>7.0 Park Role Statement.....</b>	<b>11</b>
<b>8.0 Priority Management Issues, Objectives and Strategies .....</b>	<b>12</b>
<b>9.0 Zoning Plan .....</b>	<b>14</b>
9.1 Special Feature Zone.....	14
9.2 Nature Recreation Zone .....	14
<b>10.0 Consultation and Future Planning.....</b>	<b>18</b>

## List of Maps/Tables

Map 1: Context.....	3
Map 2: Overview, Attributes and Proposed Facilities .....	4
Map 3: Zoning Map.....	15
Table 1: Appropriate Activities and Facilities Matrix .....	16

## Appendices

Appendix 1: Provincial and National Designations for Boothman’s Oxbow Park Documented/Anticipated Listed Species .....	19
Appendix 2: Provincial Species at Risk Nomenclature .....	20
Appendix 3: Provincially Listed Species at Risk (Flora).....	21
Appendix 4: Provincially Listed Ecological Communities at Risk .....	24
Appendix 5: Provincially Listed Species at Risk (Fauna) .....	26
Appendix 6: BC Parks Conservation and Recreation Goals.....	28
Appendix 7: BC Parks Zoning Framework .....	29

# Boothman's Oxbow Provincial Park Management Direction Statement

## 1.0 Introduction

### 1.1 Purpose of the Management Direction Statement

A management direction statement (MDS) provides strategic management direction for a protected area that does not have a full management plan. An MDS does not necessarily negate the need for future more detailed management plans. A management direction statement also describes protected area values, management issues and concerns; a management strategy focused on immediate priority objectives and strategies; and direction from other planning processes. While strategies may be identified in the MDS, the implementation of all these strategies is subject to funding and funding procedures. In addition, all development associated with these strategies within the park is subject to the BC Parks' Impact Assessment Policy. This management direction statement is intended to provide direction and guidelines for managing Boothman's Oxbow Provincial Park for the foreseeable future.

### 1.2 Setting and Context

- Boothman's Oxbow Provincial Park (43 hectares comprised of 36 hectares of upland and 7 hectares of foreshore) is located east of the City of Grand Forks (population 4,132) and south of Highway #3. This park was identified for protection through the West Kootenay-Boundary Land Use Plan Goal 2 process<sup>1</sup> and legally designated as a Class A provincial park on May 31, 2007.
- The park has significant riparian, grassland and wildlife values, including a rare riparian black cottonwood ecological community and numerous provincially red- and blue-listed animal species. Approximately 1,300 metres of the park's southern boundary is riparian frontage along the Kettle River.
- Situated within the Southern Okanagan Highlands Ecoregion, the biogeoclimatic subzone/variant represented within Boothman's Oxbow Provincial is PPdh1 (PPdh1 Ponderosa Pine dry hot *Kettle* variant). A small portion of the park area incorporates the Kettle River.
- With neighbouring Gilpin Grasslands Provincial Park, Boothman's Oxbow assists in providing contiguous protection of wildlife habitat in a region of the province where much of the land has been cultivated for agriculture and developed for residential purposes.

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<sup>1</sup> The Goal 2 process was used to identify smaller areas totalling 10,500 hectares in the West Kootenay-Boundary Land Use Plan area that protect natural, cultural and recreational features of provincial significance. Many Goal 2 areas have yet to be legally designated as provincial parks or protected areas.

- The park complements natural and recreational features found in other Kootenay-Boundary provincial parks, specifically Gilpin Grasslands, Gladstone, Granby, Christina Lake and Jewel Lake.
- Boothman's Oxbow Provincial Park is described in Schedule D of the *Protected Areas of British Columbia Act*.



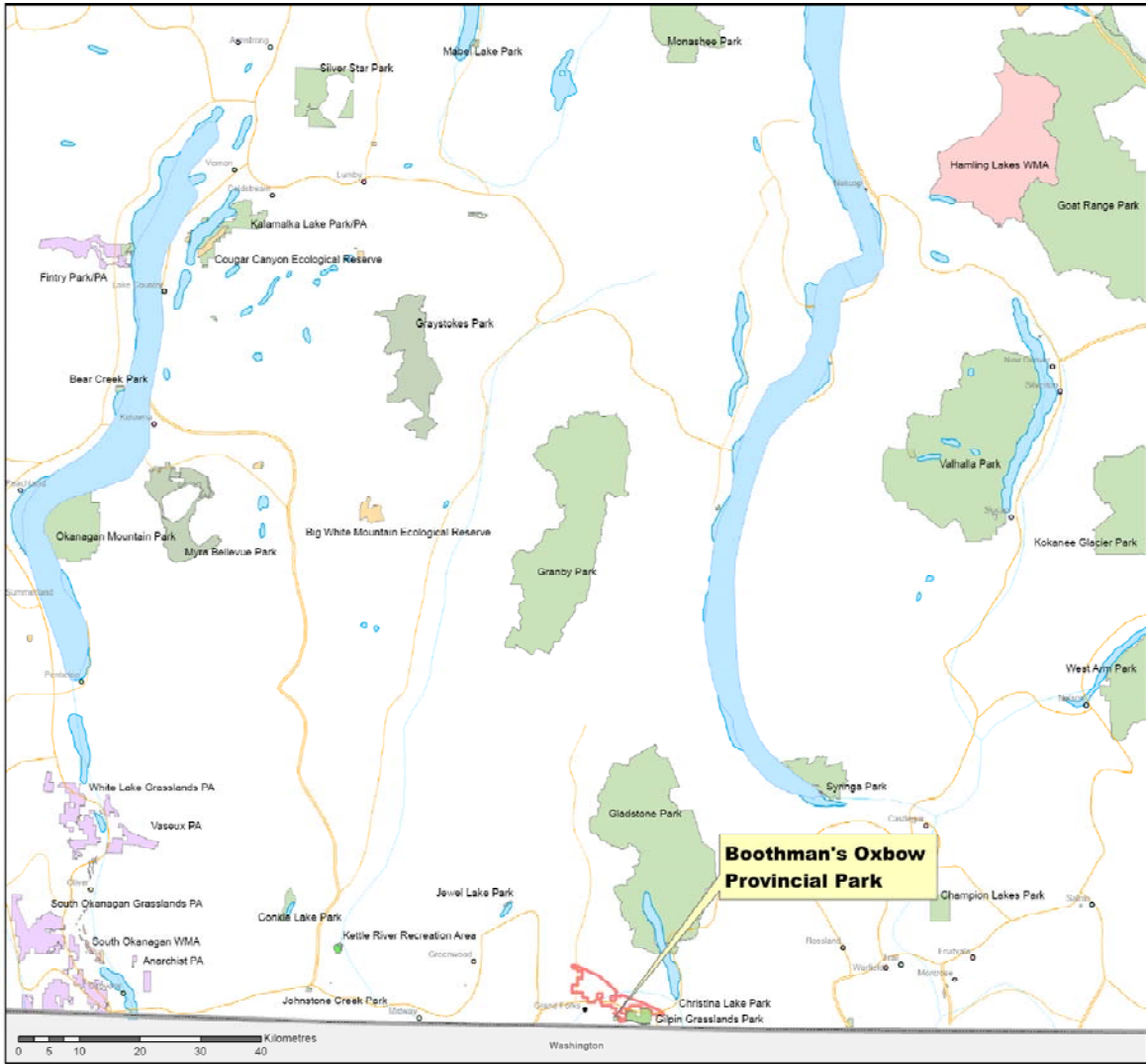
**Boothman's Oxbow Provincial Park includes sensitive riparian areas.**



**Many species utilize the grassland areas of Boothman's Oxbow Provincial Park.**

Map 1: Context

## Boothman's Oxbow Provincial Park: Context



- Provincial Parks
- Ecological Reserves
- Protected Areas
- Recreation Areas
- Wildlife Management Areas
- Proposed Gilpin-Morrissey WMA
- Rivers
- Lakes



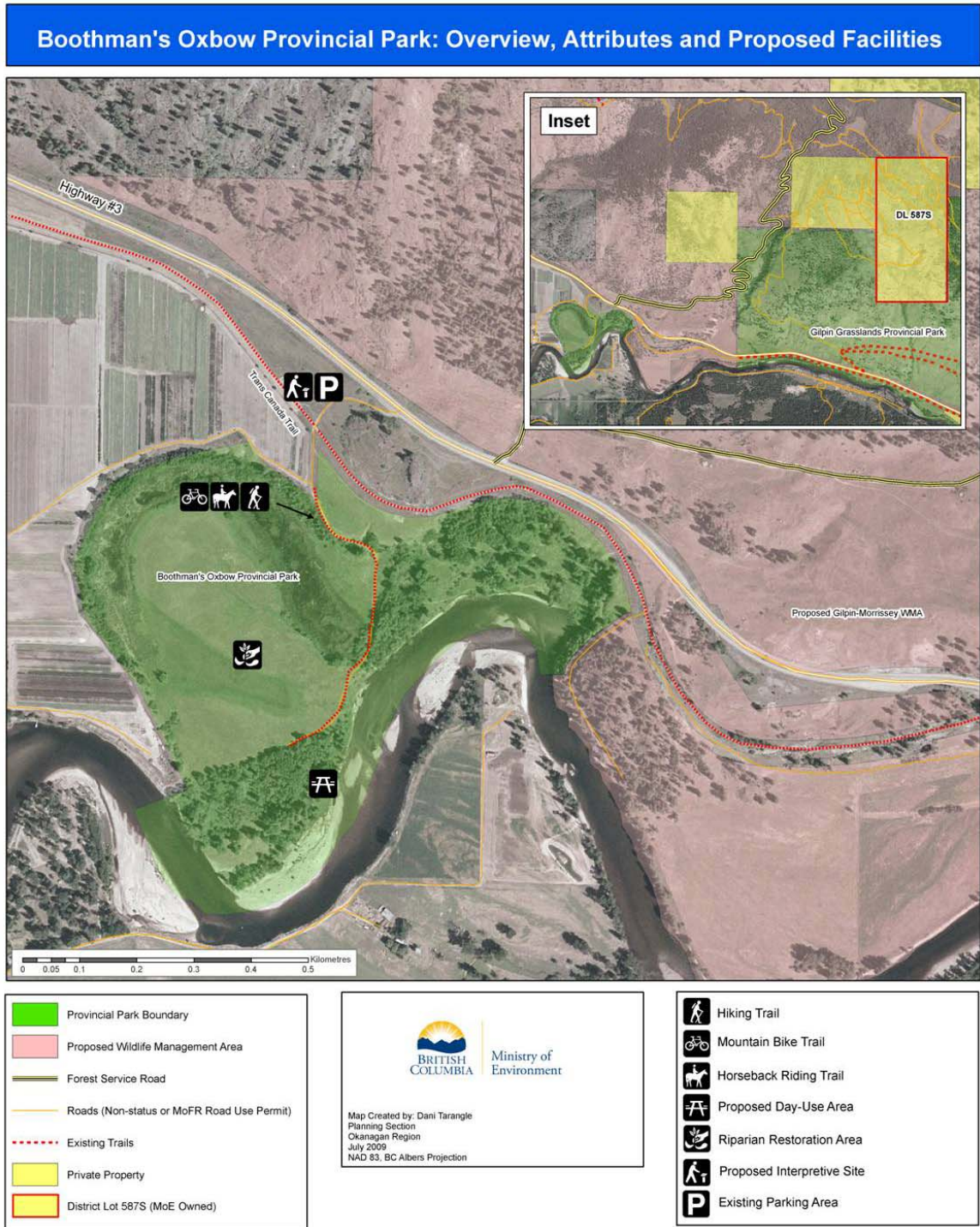
**BRITISH COLUMBIA** Ministry of Environment

Map Prepared By: Dahl J. Tarangle  
 Planning Section, Okanagan Region  
 Ministry of Environment  
 July 2008  
 NAD 83, BC Albers Projection





**Map 2: Overview, Attributes and Proposed Facilities**



## 2.0 Protected Area Attributes

### 2.1 Conservation

- Rocky Mountain Elk (transplanted east of Christina Lake in the 1970s), Mule Deer and White-tailed Deer are known to frequent the park landscape.
- Many Great Basin<sup>2</sup> species, though more common in the United States, are rare in Canada, and occur only in extreme southern regions of British Columbia (e.g., Kettle, South Okanagan, and Similkameen valleys). Many resident park species reflect this unique climate-based distribution.
- Documented red-listed (provincially endangered or threatened) wildlife species utilizing riparian habitat within the park include Tiger Salamander, Great Basin Spadefoot and Lewis's Woodpecker. The riparian habitat found in this park is consistent with habitat for red-listed Western Screech-owl and blue-listed (provincially vulnerable) Western Skink and Western Painted Turtle. Blue-listed Western Rattlesnake, Gopher Snake and Racer (another snake species) occur nearby and undoubtedly use the area for hunting. Red-listed Badgers have been sighted in the area and likely use the area occasionally, hunting Northern Pocket Gophers and red-listed Great Basin Pocket Mice. Several species of bats forage over the wetland.<sup>3</sup>
- The riparian oxbow area is important habitat for nesting birds. Water levels in the oxbow, which historically have been dependent upon seasonal flooding, and have been declining recently due to channel realignment of the Kettle River, are supplemented in most years by a pumping system operated by Ducks Unlimited Canada (DUC) (see Section 4.5).
- One red-listed riparian ecological community (trembling aspen – black cottonwood/common snowberry/common horsetail) is located within the biogeoclimatic subzone represented by this park.
- The Kettle River system provides excellent habitat for a variety of fish species, both native and introduced. Native species include the red-listed Speckled Dace, the blue-listed Chiselmouth, Rainbow Trout, Mountain Whitefish, Burbot, Redside Shiner, Northern Pikeminnow, Lake and Peamouth chubs, Prickly and Slimy sculpins, and Longnose and Largescale suckers. In Canada, the Speckled Dace is found only in the Kettle River system. This species has been documented both east and west of the Boothman's Oxbow Provincial Park frontage. Species introduced into the system include Eastern Brook Trout, Brown Trout, Kokanee and Common/European Carp.<sup>4</sup>
- This park protects 43 hectares, or 0.26%, of British Columbia's 16,504 provincial PPd1 biogeoclimatic subzone hectares (and 0.32% of the 13,324.5 PPd1 biogeoclimatic subzone hectares within the South Okanagan Highlands Ecoregion). This particular biogeoclimatic zone is known for its high occurrence of red-listed plant species.

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<sup>2</sup> The Great Basin is a large, arid region of the Pacific Northwest. Although primarily situated in the United States, the basin extends northward to include portions of the southern interior of British Columbia.

<sup>3</sup> For complete information on provincial and federal at risk species designations refer to Appendix 1.

<sup>4</sup> Fish distribution information obtained from the "Field Key to the Freshwater Fishes of British Columbia" by J.D. McPhail and R. Carveth (University of British Columbia, 1993).

- Gilpin Grasslands Provincial Park is located 2.5 kilometres to the east and the proposed Gilpin-Morrissey WMA (approximately 3,890 hectares) lies primarily to the north and east of the park, complementing the park's wildlife and habitat connectivity values.

## 2.2 Tourism and Outdoor Recreation

- The area is a popular recreation destination for many Grand Forks residents and area visitors who engage in swimming, angling, kayaking, picnicking, hiking and wildlife appreciation.
- Elk and White-tailed Deer are frequently found within the park grazing on the lush grasses around the oxbows. They provide viewing and photo opportunities for both local residents and visitors.
- The Trans Canada Trail lies adjacent to the park (700 metres from the north-eastern border), attracting a variety of non-motorized recreational enthusiasts (i.e., hikers, mountain bikers, and horse riders). There is also a Trans Canada Trail parking area directly adjacent to the park.
- An existing 600 metre trail into the centre of the park provides hiking, bicycling, and horse riding access, allowing nature enthusiasts an excellent vantage point to view the oxbow prior to accessing the Kettle River.
- The park's close proximity to Christina Lake (a high use summer season destination) makes Boothman's Oxbow an attractive day use outing for tourists.



Ducks Unlimited signage within the park.

## 2.3 Cultural Heritage

- Prior to colonial times, the area was frequented by people from the Sinixt<sup>5</sup> and Okanagan nations.
- There are two known archaeological sites (Borden unit classification) within the park boundary.

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<sup>5</sup> The Sinixt (or Arrow Lakes People) have been regarded as an extinct First Nations since 1956 and are not formally recognized by the Province as part of the formal treaty/land claim process. Descendants of the Sinixt people live in Idaho, Washington, and British Columbia.

## 2.4 Economic Contribution

- The local guide outfitting business, which utilizes the park for client based hunting opportunities, adds economic diversity to the local community. The protection of the scenic and regionally significant riverfront, riparian, and grassland features potentially enhances tourist activity (e.g., length of stay and accommodation, retail purchasing associated with outdoor equipment) in nearby Grand Forks and Christina Lake.

## 3.0 Significance in the Protected Areas System

### 3.1 Special Natural Features

- Sightings of, and wetlands for, provincially red-listed and federally endangered amphibians occur within the riparian areas of the park.
- Provincially red-listed birds of special concern federally are known to breed in the park's cottonwood stands.
- Contains terrain and vegetation features favoured by arid grassland reptile species that are considered to be of special concern provincially and either threatened or of special concern federally.
- Combined with nearby Gilpin Grasslands Provincial Park, the park provides low elevation habitat connectivity for a variety of species, and maintains important riparian values and ecological communities along the Kettle River.
- Protects some of the remnant terrestrial features (i.e., late seral stage<sup>6</sup> grasslands) of both the Southern Okanagan Highlands Ecoregion and the PPdh1 biogeoclimatic subzone.

### 3.2 Special Recreational Features

- Close proximity to the City of Grand Forks and easy access via the Trans Canada Trail make it an attractive day use area for visitors and local community residents.
- Opportunities to view and appreciate unique plant and animal species (many of which are provincially or federally significant) are provided against the backdrop of picturesque riparian and grassland ecosystems.
- Foreshore areas along the Kettle River are a popular destination for anglers, swimmers, and non-motorized watercraft users (e.g., kayakers, canoeists).
- The park is an excellent staging or day use area for hiking, horse riding and mountain biking opportunities, especially for users of the Trans Canada Trail. Trans Canada Trail signage currently exists outside the park, adjacent to the parking area.

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<sup>6</sup> Seral stages are an accepted method for categorizing grassland development. Typically, early seral stages are characterized by grass species that tend to increase in abundance and vigour following disturbance. Over time they are replaced by late seral stage, or "climax" grasses. Native grasslands at or near potential natural condition are characterized by an abundance of mid to late seral grasses.

### 3.3 Cultural Heritage Significance

- Contains two registered archaeological sites.
- Park is situated within the asserted territory of the Okanagan Nation Alliance.
- Protection of the park's land base ensures that traditional use sites remain intact for perpetuity.

## 4.0 Land Use, Tenures and Interests

### 4.1 Access

- Currently, an approximately 600 metre rough gravel road leads into the park.

### 4.2 Recreation, Guide/Outfitting and Trapping Tenures

- The park is located within one Guide/Outfitter territory (Cert. No. 800630) and one Trapping territory (TR0815T001).

### 4.3 Utility Corridors

- Two utility corridors exist in the park under statutory right of way. A Terasen (formerly Inland Natural Gas) pipeline passes under the northern boundary of the park (Plan A1921). A Fortis power line enters approximately 300 metres into the park to provide electricity for the Ducks Unlimited Canada pump system (KAP 74326).

### 4.4 Adjacent Patterns of Land Use

- The City of Grand Forks is located approximately three kilometres west of the park. The park is a popular recreational destination for the local community.
- Cattle grazing tenures authorized under the *Forests and Range Practices Act* exist for adjacent pasture lands to the east of the park, and north of Highway #3. The "Boothman" pasture (east of the park) is tenured temporarily to different users, while Mehma Ranch (tenure #RAN073397) has grazing rights on the Overton-Moody Range Unit (north of the park).
- The trans-provincial Crowsnest Highway (Highway #3) exists in close proximity to the northeast boundary of the park.
- The Trans Canada Trail (the former Victoria, Vancouver and Eastern Railway corridor) parallels the northeast park boundary, south of Highway #3.
- A Telus fibre optics line and a Terasen gas pipeline (which crosses the northern boundary of the park before passing under Highway #3) exist north of the park, adjacent to Highway #3.
- Ten kilometres east of the park, a proposed run-of-the river hydro electric dam (Cascade Heritage Power Park) above Cascade Falls on the Kettle River is currently under review.



- Other private land abuts the park, specifically DL 331 to the east; and DL 449, which is across the Kettle River to the south. These lands are largely developed, incorporating both agricultural and residential use.
- A proposed Wildlife Management Area (approximately 3,890 hectares) is located to the north and east of the park.
- Several Borden registered archaeological sites (protected under the *Heritage Conservation Act*) exist in close proximity to the park boundaries.
- Early European explorers, traders and settlers passed through the general area on their way to and from the settlement at Kettle Falls in Washington. Similarly, the Dewdney Trail, whose construction eastward from Fort Hope was spurred on by gold rushes in Rock Creek and Wild Horse Creek, was completed by 1865 and became the basis for the Crowsnest Highway (Hwy #3).<sup>7</sup> Remnants of the Dewdney Trail (i.e., old trail surface, rock piles, discarded metal) can be found adjacent to the park.
- Remnant sections a rock retaining wall constructed in 1913 by the Department of Public Works as part of road upgrades lies adjacent to the eastern border of the park.

#### 4.5 Other Tenures/Permits

- Ducks Unlimited Canada (DUC) has obtained a Park Use Permit to continue supplementing oxbow water levels to increase nesting habitat for birds. Historically DUC operated and maintained a surface-supply pump that obtained water from the Kettle River. Annual efficacy of the program varied because of ongoing river realignment. Under authorization from BC Parks, DUC is working towards establishing a groundwater pump system. A groundwater pump would improve reliability, reduce costs and allow for greater restoration of disturbed areas.
- A small apiary (bee keeping) site is located within the park. The site was operated under approval from the Ministry of Forests and Range prior to park establishment.

#### 4.6 Management Commitments

Boothman's Oxbow Provincial Park was originally identified as a 'Goal 2' site following the West Kootenay-Boundary Land Use Plan. General management strategies for protected areas identified during the land use planning process include:<sup>8</sup>

- To develop comprehensive park master plans, over time, for each new protected area in order to ensure the maintenance of the conservation, recreation and cultural heritage values within the new protected areas.
- To recognize the legal rights of pre-existing tenure holders and landowners within newly established parks in the region, and to deal fairly with those interests.

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<sup>7</sup> Dewdney Trail information obtained from Nelson & District Museum, Archives, Art Gallery & Historical Society website: <http://www.virtualmuseum.ca/Exhibitions/Dewdney/english/history/index.php>. Accessed August 17, 2009.

<sup>8</sup> For more information on strategies/objectives for protected areas established under the West Kootenay- Boundary Land Use Plan see [http://ilmbwww.gov.bc.ca/lup/lrmp/southern/kootenay/implementation\\_strat/4.htm](http://ilmbwww.gov.bc.ca/lup/lrmp/southern/kootenay/implementation_strat/4.htm).

- To protect key park values (i.e., red- and blue-listed species, sensitive flora and wildlife habitat) and adjacent private property, as appropriate, from natural occurrences in protected areas.
- To maintain ecosystem representation and ensure protection of key representative features.
- To ensure protection of key species and their habitats.
- To maintain recreation opportunities.
- To plan and manage parks in a manner which reflects the cultural heritage of the area.

#### **4.7 Private and Public Stakeholder Interests**

- *Grand Forks Wildlife Association*
  - Interest: Provide local expertise and knowledge on fish and wildlife resources and assist in management efforts on Crown land.
- *Boundary Naturalists*
  - Interest: Conduct field trips for birding and botany, participate in the Christmas Bird Count and provide input on conservation issues. The group is a member of BC Nature.<sup>9</sup>
- *Christina Lake Stewardship Society*
  - Interest: Dedicated to the conservation of Christina Lake's watershed and natural resources. Issues the society engages in include forest health, fish species, aquatic plants, species at risk, water quality and lake and stream monitoring.
- *Ducks Unlimited Canada (DUC)*
  - Interest: Dedicated to the conservation of Canada's wetlands for over 65 years, the group conducts research, delivers education programs and works towards policy changes that increase wetland and environmental conservation. DUC has an ongoing oxbow water supplementation project in this park (see Section 4.5 ).

#### **4.8 Other Agency Interests**

- The Regional District of Kootenay Boundary (matters relating to tourism, private in-holdings and connectivity).
- Integrated Land Management Bureau (focus on adjacent land tenure management, Crown land disposition and implementation/monitoring of the Kootenay Boundary Land Use Plan).
- Ministry of Forests and Range (matters relating to range/forestry tenure).
- Ministry of Tourism, Culture and the Arts (implementation and coordination of the Recreation Trail Strategy<sup>10</sup> which is associated with the Trans Canada Trail).

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<sup>9</sup> BC Nature is a federation of local natural history groups and represents 50 local nature clubs throughout BC.

## 5.0 Relationship with First Nations

- The Okanagan Nation Alliance (ONA) supported the creation of the park acknowledging that there was a need for greater protection of environmental values in the area. However, the nature of aboriginal rights and title on the property are not mutually agreed upon between the ONA and the Province of British Columbia.
- Management of, and any further management planning for, the park will require ongoing consultation with First Nations. Aboriginal rights will be honoured and protected subject to conservation, health and safety concerns. Consultation with First Nations will be conducted before implementing any of the management strategies that potentially may affect First Nations interests.

## 6.0 Relationship with Local Government

- Ongoing consultation with the City of Grand Forks is required to ensure the local community needs are considered, and where appropriate, addressed within the management of Boothman's Oxbow Provincial Park.

## 7.0 Park Role Statement

The primary role of Boothman's Oxbow Provincial Park is to protect unique wetland and river frontage along the Kettle River, and important grassland areas. The park provides essential wildlife habitat for a variety of provincially designated red- and blue-listed species, including the endangered Tiger Salamander.

Together with neighbouring Gilpin Grasslands Provincial Park, which retains a remnant grassland ecosystem and distinctive riparian area long the Kettle River, Boothman's Oxbow serves as an important ecological benchmark in an era of climate change and intensified adjacent land use activity and development.

The secondary role of the park is to provide low impact, compatible recreation and interpretation opportunities within a scenic area of the Kettle River valley. The park also contains significant heritage qualities which increase the cultural value of the area for First Nations, the local community and visitors.

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<sup>10</sup> For more information on this initiative see the Background Report (Phase 1) at [http://www.tsa.gov.bc.ca/sites\\_trails/docs/Provincial\\_Trails\\_Strategy/Trail\\_Strategy\\_Background\\_Report\\_May23.pdf](http://www.tsa.gov.bc.ca/sites_trails/docs/Provincial_Trails_Strategy/Trail_Strategy_Background_Report_May23.pdf).



## 8.0 Priority Management Issues, Objectives and Strategies

Issue	Objective	Strategies
<p>Past and current land use activities have impacted the grassland, riparian and river ecosystems</p>	<p>Conserve natural ecosystems</p>	<ul style="list-style-type: none"> <li>• Develop and implement an Ecosystem Management and Restoration Plan for the park with emphasis on maintaining and restoring native riparian and grasslands values and controlling invasive weed spread.</li> <li>• Monitor and assess grassland, forest, and riparian ecosystem health through species inventories and by accumulating ecological baseline data.</li> <li>• Support establishment of a groundwater pump system for oxbow water supplementation by Ducks Unlimited Canada (DUC).</li> <li>• Permit motorized access along the identified gravel road for pump operation and maintenance by DUC as required.</li> <li>• Monitor off-road use and utilize enforcement and compliance tools when appropriate. Use fencing/barriers and signage to prevent further damage to grasslands and sensitive areas.</li> <li>• Rehabilitate/restore damaged areas and protect from incidental off-road vehicle use.</li> <li>• Identify areas where known range use impacts exist and mitigate these impacts using restorative measures.</li> <li>• Support initiatives that reduce wildlife mortality along Highway #3 and encourage safe wildlife movement in the Kettle River corridor.</li> <li>• Post signage notifying users of prohibition on overnight use (i.e., no camping).</li> </ul>

Issue	Objective	Strategies
Access to, and enhancement of, recreational opportunities	Ensure recreational access and activities (existing or proposed) do not negatively impact conservation values in the park	<ul style="list-style-type: none"> <li>• Study the feasibility of installing small scale day-use facilities along the Kettle River (as identified in Map 2). Ensure riverfront areas remain intact and protect high fishery values.</li> <li>• Prevent unauthorized motor vehicle use of the identified gravel road by gating the road at the park boundary and posting appropriate signage.</li> <li>• Preserve suitable access to the riverfront area for non-motorized recreational use.</li> <li>• Monitor visitor access and parking next to the Trans Canada Trail to determine whether current parking facilities are sufficiently sized and located to avoid congestion and adjacent grassland area degradation.</li> <li>• Support MoE Fisheries activities that promote high quality recreational fishery values within the park.</li> </ul>
Significant cultural heritage features	Protect existing heritage values within the park and explore options at protecting additional areas adjacent to the park	<ul style="list-style-type: none"> <li>• Buffer known First Nation’s traditional use archaeological sites from current recreational activities using Special Feature zoning.</li> <li>• Work with First Nations to determine traditional uses.</li> <li>• Ensure continued access to First Nation’s traditional use opportunities and identify cultural values.</li> <li>• Investigate the possibility of extending park boundaries to incorporate the historic rock retaining wall constructed by the Department of Public Works (circa early 1900s).</li> </ul>
Land uses existed prior to park establishment	Recognize/ensure continuance of pre-existing authorized land uses	<ul style="list-style-type: none"> <li>• Ensure that interest holders for land uses authorized under provincial statutes prior to park establishment (e.g., utility right of ways and tenures) obtain a Park Use Permit.</li> </ul>

## **9.0 Zoning Plan**

The Parks and Protected Areas Division uses zoning as a tool to assist in the planning and management of a provincial park. In general terms, zoning divides a park into logical units for management. It applies uniform and consistent management objectives based on natural, cultural and recreational values, and existing and projected patterns of access and recreation use in relation to specific conservation goals. The zones reflect the intended land use, the degree of human use, and levels of management and development permitted. The spectrum includes five zoning options: Intensive Recreation, Nature Recreation, Special Feature, Wilderness Recreation and Wilderness Conservation.

Boothman's Oxbow Provincial Park is separated into two management planning zones (Map 3): Special Feature and Nature Recreation. This zoning is intended to concentrate and focus recreation use to areas which can support current and future public use without detrimentally impacting the park's sensitive ecosystems.

### **9.1 Special Feature Zone:**

The objective of this zone is to protect and present significant natural or cultural resources, features or processes because of their special character, fragility and heritage values.

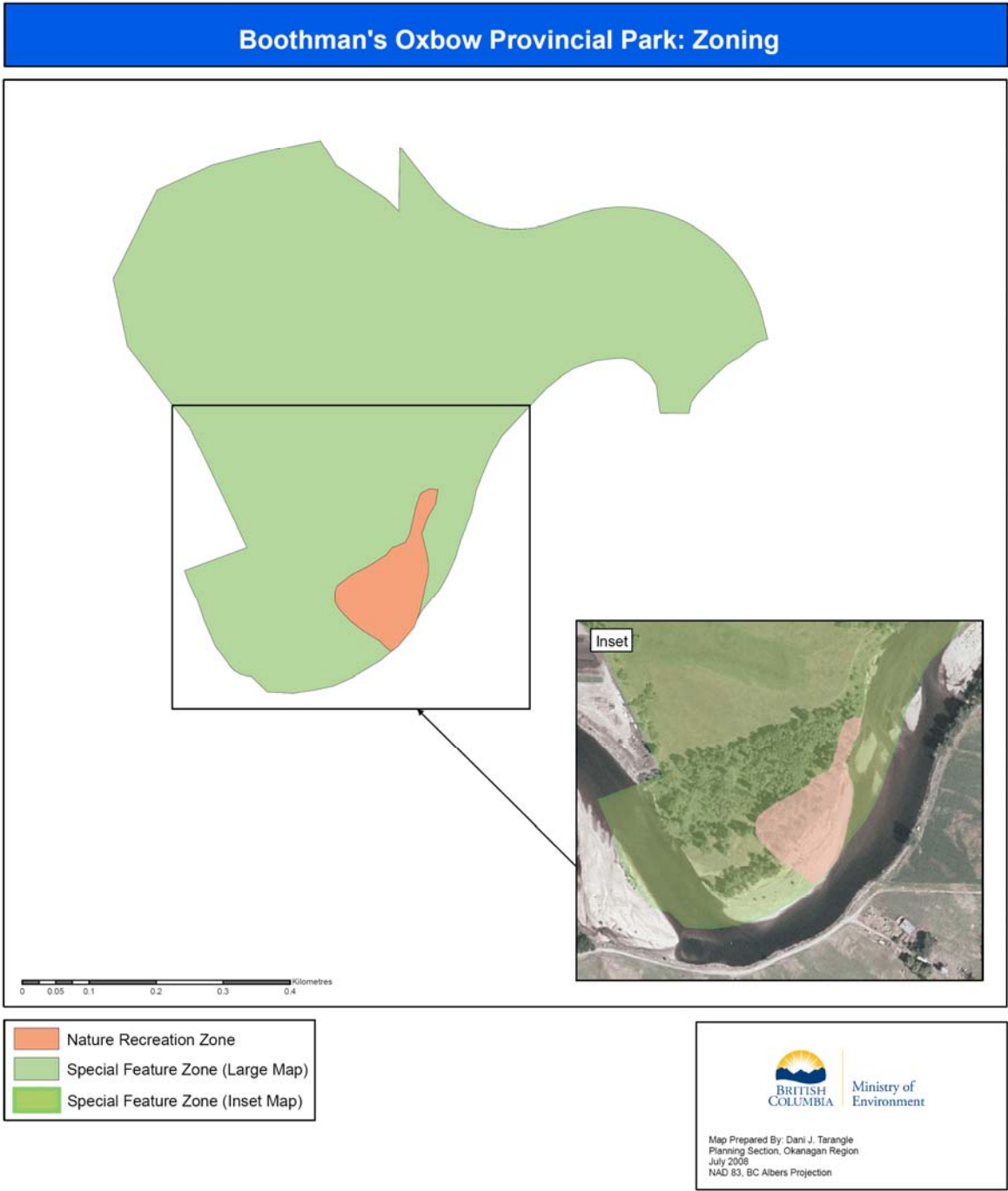
The area encompassing the Special Feature Zone represents a total of 41.3 hectares (96% of the park). A large percentage of the park is a Special Feature Zone owing to its sensitive wetland, riparian and grassland habitats, known species at risk (i.e., red- and blue-listed) and significant cultural heritage values. No facilities for the public will be provided in this zone (apart from interpretive displays) and recreation opportunities are restricted to sightseeing and nature and heritage appreciation (refer to Appendix 7).

### **9.2 Nature Recreation Zone:**

The objective of this zone is to protect scenic values and to provide for recreation opportunities in a largely undisturbed natural environment.

The area encompassing the Natural Recreation Zone is approximately 1.7 hectares (4% of the park). This zone includes a riverfront area along the southern border of the park that is a popular swimming destination for both Grand Forks locals and area visitors. Future picnic/day use facilities are projected for this location. As per the BC Parks Zoning Framework (Appendix 7), any future facilities are intended to be visually compatible with the natural setting.

**Map 3: Zoning Map**



**Table 1: Appropriate Activities and Facilities Matrix**

ACTIVITY/FACILITY	APPROPRIATE IN THE NATURE RECREATION ZONE	APPROPRIATE IN THE SPECIAL FEATURE ZONE	COMMENTS
<b>Activity</b>			
Angle Guiding	Y	Y	
River Shore Activities (e.g., swimming)	Y	Y	
Boating (power)	Y	Y	Ensure power boating does not negatively impact park values. Discourage high horsepower boats from using foreshore areas.
Boating (non-power)	Y	Y	
Camping – backcountry	N	N	
Camping – auto or boat accessible	N	N	
Campfires	N	N	
Commercial Recreation (facility-based)	N	N	
Commercial Recreation (no facilities)	M	M	Future commercial nature appreciation activities may be permitted provided activities do not have a negative impact on the park's conservation values.
Exotic Insect/Disease Control	M	M	
Filming (commercial)	M	M	
Fire Management (prescribed fire management)	Y	Y	As per Ecosystem Management and Restoration Plan
Fire Management (prevention)	Y	Y	
Fire Management (suppression)	Y	Y	
Fishing	Y	Y	
Fish Stocking and Enhancement	M	M	
Forest Insect/Disease Control	Y	Y	
Grazing (domestic livestock)	N	N	
Guide Outfitting	Y	Y	
Hiking/Backpacking/Walking	Y	Y	Designated trail only
Horse/Non-Exotic Pack Animal Use	Y	Y	Designated trail only
Hunting	Y	Y	
Mechanized Off-road Access (non-motorized – i.e., mountain biking)	Y	Y	Designated trail only
Motorized Off-road Access (not snowmobiles – i.e., 4x4, motorcycles)	N	N	
Alien Invasive Weed Control	Y	Y	

ACTIVITY/FACILITY	APPROPRIATE IN THE NATURE RECREATION ZONE	APPROPRIATE IN THE SPECIAL FEATURE ZONE	COMMENTS
<b>Activity</b>			
Off-road Access (non-mechanical – dog sleds, horse sleds)	N	N	
Scientific Research (manipulative activities)	M	M	
Scientific Research (specimen collection)	M	M	
Skiing (cross-country trails)	Y	Y	Designated trail only
Snowmobiling	N	N <sup>2</sup>	For tenured trapping use only
Trapping	Y	Y	
<b>Facility</b>			
Boat Launches	N	N	
Picnic Areas (walk-in access and serviced)	Y	N	As identified
Camp Sites (other)	N	N	
Communication Sites	N	N	
Interpretation and Information Buildings	Y	Y	
Roads and Parking Lots	N/A	N/A	As identified adjacent to park
Trails (hiking, cross-country skiing, mountain biking, horse riding)	Y	Y	As identified
Utility Corridors (power/transmission lines and other rights-of-way)	N <sup>2</sup>	N <sup>2</sup>	
Water Control Structures	N <sup>2</sup>	N <sup>2</sup>	Ducks Unlimited infrastructure only

### Legend for the Matrix of Appropriate Activities and Facilities

Y	Appropriate
N	Not appropriate
N <sup>1</sup>	Not appropriate except for expressed management purposes as identified in the Management Plan
N <sup>2</sup>	Not appropriate, but if the specific activity or facility existed at the time of establishment of the protected area, it is normally appropriate for it to continue
M	May be appropriate
N/A	Not applicable

## **10.0 Consultation and Future Planning**

The Parks and Protected Areas Division of the Ministry of Environment is accountable for planning, administration and management of the park through the application of regulations and policies.

Revisions or updating of this management direction statement will be coordinated by the Parks and Protected Areas Division with involvement of other agencies, the Regional District of the Kootenay Boundary, the City of Grand Forks, First Nations government, and various stakeholders as required.

## Appendix 1: Provincial and Federal Designations for Boothman's Oxbow Park Documented/Anticipated Listed Species

Species	Status		
	Provincial <sup>11</sup>	COSEWIC <sup>12</sup>	SARA Schedule
<b>Amphibians</b>			
Great Basin Spadefoot	Blue	Threatened	Listed
Tiger Salamander	Red	Endangered	Listed
<b>Birds</b>			
Lewis's Woodpecker	Red	Special Concern	Listed
Western Screech Owl <i>macfarlanei</i> subspecies	Red	Endangered	Listed
<b>Fish</b>			
speckled dace	Red	Endangered	Listed
<b>Mammals</b>			
Badger	Red	Endangered	Listed
Bighorn Sheep	Blue	-	-
Great Basin Pocket Mouse	Red	-	-
<b>Reptiles</b>			
Gopher Snake <i>deserticola</i> subspecies	Blue	Threatened	Listed
Racer	Blue	Special Concern	Listed
Western Painted Turtle	Blue	Special Concern	Listed
Western Rattlesnake	Blue	Threatened	Listed
Western Skink	Blue	Special Concern	Listed
<b>Ecological Communities</b>			
trembling aspen – black cottonwood / common snowberry / common horsetail	Red		

<sup>11</sup> BC CDC – Conservation Data Centre. This provincial entity assesses the status of species in BC. Inclusion on the red or blue list makes a species eligible for legal listing under the BC *Wildlife Act*, but does not itself convey any legal status or protection. For information on the definitions and development of red and blue lists, refer to Appendix 2.

<sup>12</sup> COSEWIC – Committee on the Status of Endangered Wildlife in Canada. This federal entity provides science-based recommendations for legal listing under the *Species at Risk Act* (SARA). The federal “legal list” is Schedule 1 of SARA.



## Appendix 2: Provincial Species at Risk Nomenclature

**Red List:** Includes any ecological community, and indigenous species and subspecies that is extirpated, endangered, or threatened in British Columbia. Extirpated elements no longer exist in the wild in British Columbia, but do occur elsewhere. Endangered elements are facing imminent extirpation or extinction. Threatened elements are likely to become endangered if limiting factors are not reversed. Red-listed species and sub-species have – or are candidates for – official Extirpated, Endangered or Threatened Status in BC. Not all red-listed taxa will necessarily become formally designated. Placing taxa on these lists flags them as being at risk and requiring investigation.

**Blue List:** Includes any ecological community, and indigenous species and subspecies considered to be of special concern (formerly vulnerable) in British Columbia. Elements are of special concern because of characteristics that make them particularly sensitive to human activities or natural events. Blue-listed elements are at risk, but are not Extirpated, Endangered or Threatened.

The Red and Blue lists serve two purposes:

1. To provide a list of species for consideration for more formal designation as Endangered or Threatened, either provincially under the British Columbia Wildlife Act, or federally by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
2. To help inform the setting of conservation priorities for species/ecological communities considered at risk in British Columbia. The rankings highlight species and ecological communities that have particular threats, declining population trends, or restricted distributions that indicate that they require special attention. These lists serve as a practical method to assist in making conservation and land-use decisions and prioritize research, inventory, management, and protection activities. For example, Operational Planning Regulations in the *Forest and Range Practices Act* use the Red and Blue lists in the development of the list of Identified Wildlife.

Red and Blue lists have been produced since 1992.

Further information on the development of the Red and Blue lists visit:

BC Conservation Data Centre Species Explorer. <http://www.env.gov.bc.ca/atrisk/toolintro.html>.  
B., S. Cannings, D. Fraser and W.T. Munro. 1994. Provincial lists of species at risk. Pp. 16-23 in Biodiversity in British Columbia. L.E. Harding and E. McCullum (eds.), Canadian Wildlife Service, Delta, B.C.

### Appendix 3: Provincially Listed Species at Risk (Flora)

#### Red- and blue-listed plant species for the Arrow Boundary Forest District

Scientific Name	English Name	Global Rank	Prov Rank	COSEWIC	BC Status
<i>Agastache urticifolia</i>	nettle-leaved giant-hyssop	G5	S3		Blue
<i>Agoseris lackschewitzii</i>	pink agoseris	G4	S2S3		Blue
<i>Apocynum x floribundum</i>	western dogbane	GNA	S2S3		Blue
<i>Arabis holboellii</i> var. <i>pinetorum</i>	Holboell's rockcress	G5T5?	S2S3		Blue
<i>Arnica longifolia</i>	seep-spring arnica	G5	S2S3		Blue
<i>Aster ascendens</i>	long-leaved aster	G5	S1S3		Red
<i>Astragalus microcystis</i>	least bladderly milk-vetch	G5	S1		Red
<i>Astragalus vexilliflexus</i> var. <i>vexilliflexus</i>	bent-flowered milk-vetch	G4T4	S2S3		Blue
<i>Bidens vulgata</i>	tall beggarticks	G5	S1		Red
<i>Botrychium simplex</i>	least moonwort	G5	S2S3		Blue
<i>Brickellia grandiflora</i>	large-flowered brickellia	G5	S1	NAR (May 1996)	Red
<i>Brickellia oblongifolia</i> ssp. <i>oblongifolia</i>	narrow-leaved brickellia	G5T5	S2		Red
<i>Carex adusta</i>	lesser brown sedge	G5	S1		Red
<i>Carex amplifolia</i>	bigleaf sedge	G4	S2S3		Blue
<i>Carex epapillosa</i>	blackened sedge	GNR	S1S3		Red
<i>Carex lenticularis</i> var. <i>lenticularis</i>	lakeshore sedge	G5T5	S2		Red
<i>Carex pedunculata</i>	peduncled sedge	G5	S2S3		Blue
<i>Carex scoparia</i>	pointed broom sedge	G5	S2S3		Blue
<i>Carex scopulorum</i> var. <i>bracteosa</i>	Holm's Rocky Mountain sedge	G5T3T5	S2S3		Blue
<i>Carex scopulorum</i> var. <i>prionophylla</i>	saw-leaved sedge	G5T3?	S1S2		Red
<i>Carex vulpinoidea</i>	fox sedge	G5	S2S3		Blue
<i>Castilleja tenuis</i>	hairy owl-clover	G5	S1		Red
<i>Cheilanthes gracillima</i>	lace fern	G4G5	S2S3		Blue
<i>Chenopodium atrovirens</i>	dark lamb's-quarters	G5	S1		Red
<i>Clarkia rhomboidea</i>	common clarkia	G5	S1		Red
<i>Coreopsis tinctoria</i> var. <i>atkinsoniana</i>	Atkinson's coreopsis	G5T5	S1		Red
<i>Crepis occidentalis</i> ssp. <i>pumila</i>	western hawksbeard	G5T5	S1		Red
<i>Cryptantha ambigua</i>	obscure cryptantha	G4	S3		Blue
<i>Cyperus squarrosus</i>	awned cyperus	G5	S3		Blue
<i>Delphinium sutherlandii</i>	Sutherland's larkspur	GNR	S2S3		Blue
<i>Dicentra uniflora</i>	steer's head	G4?	S2S3		Blue
<i>Dryopteris cristata</i>	crested wood fern	G5	S2S3		Blue
<i>Eleocharis elliptica</i>	Slender spike-rush	G5	S2S3		Blue

<i>Epilobium glaberrimum</i> ssp. <i>fastigiatum</i>	smooth willowherb	G5T4T5	S2S3		Blue
<i>Epilobium leptocarpum</i>	small-fruited willowherb	G5	S2S3		Blue
<i>Epipactis gigantea</i>	giant helleborine	G4	S2S3	SC (May 1998)	Blue
<i>Ericameria bloomeri</i>	rabbitbrush goldenweed	G4	SH	DD (May 1997)	Red
<i>Erysimum asperum</i>	prairie rocket	G5	S1		Red
<i>Floerkea proserpinacoides</i>	false-mermaid	G5	S2S3	NAR (May 1984)	Blue
<i>Gayophytum ramosissimum</i>	hairstem groundsmoke	G5	S1		Red
<i>Gentiana affinis</i>	prairie gentian	G5	S2S3		Blue
<i>Gilia tenerrima</i>	slender gilia	G5	S1		Red
<i>Glycyrrhiza lepidota</i>	wild licorice	G5	S2		Red
<i>Gymnocarpium jessoense</i> ssp. <i>parvulum</i>	Nahanni oak fern	G5T4	S3		Blue
<i>Halimolobos whitedii</i>	Whited's halimolobos	G3?	S2		Red
<i>Hesperochiron pumilus</i>	dwarf hesperochiron	G4	S1		Red
<i>Hesperostipa spartea</i>	porcupinegrass	G5	S2		Red
<i>Heterocodon rariflorum</i>	heterocodon	G5	S3		Blue
<i>Hypericum scouleri</i> ssp. <i>nortoniae</i>	western St. John's-wort	G5T3T5	S2S3		Blue
<i>Idahoia scapigera</i>	scalegod	G5	S2		Red
<i>Impatiens ecalcarata</i>	spurless touch-me-not	G3G4	S2S3		Blue
<i>Isoetes minima</i>	midget quillwort	G1G2	S1		Red
<i>Juncus confusus</i>	Colorado rush	G5	S1		Red
<i>Lappula occidentalis</i> var. <i>cupulata</i>	western stickseed	G5T5	S1		Red
<i>Lepidium densiflorum</i> var. <i>pubicarpum</i>	prairie pepper-grass	G5T4	S1		Red
<i>Lewisia triphylla</i>	three-leaved lewisia	G4?	S2S3		Blue
<i>Ligusticum verticillatum</i>	verticillate-umbel lovage	G4G5	S2S3		Blue
<i>Linanthus septentrionalis</i>	northern linanthus	G5	S3		Blue
<i>Lotus unifoliolatus</i> var. <i>unifoliolatus</i>	Spanish-clover	G5T5	S2S3		Blue
<i>Megalodonta beckii</i> var. <i>beckii</i>	water marigold	G4G5T4	S3		Blue
<i>Melica bulbosa</i> var. <i>bulbosa</i>	oniongrass	G5TNRQ	S2		Red
<i>Melica smithii</i>	Smith's melic	G4	S2S3		Blue
<i>Melica spectabilis</i>	purple oniongrass	G5	S2S3		Blue
<i>Mertensia paniculata</i> var. <i>borealis</i>	tall bluebells	G5T3T4	S2S3		Blue
<i>Mimulus breviflorus</i>	short-flowered monkey-flower	G4	S1		Red
<i>Mimulus breweri</i>	Brewer's monkey-flower	G5	S2S3		Blue
<i>Mimulus suksdorfii</i>	Suksdorf's monkeyflower	G4	S1		Red
<i>Olsynium douglasii</i> var. <i>inflatum</i>	satinflower	G4G5T3T4	S1		Red
<i>Polemonium occidentale</i> ssp. <i>occidentale</i>	western Jacob's-ladder	G5?T5?	S2S3		Blue
<i>Polystichum lemmonii</i>	Lemmon's holly fern	G4	S1S2	T (May 2003)	Red
<i>Potentilla diversifolia</i> var. <i>perdissecta</i>	diverse-leaved cinquefoil	G5T4	S2S3		Blue

<i>Potentilla nivea</i> var. <i>pentaphylla</i>	five-leaved cinquefoil	G5T4	S2S3		Blue
<i>Pyrola elliptica</i>	white wintergreen	G5	S2S3		Blue
<i>Pyrocoma carthamoides</i> var. <i>carthamoides</i>	Columbian goldenweed	G4G5T4	S2		Red
<i>Ribes oxycanthoides</i> ssp. <i>cognatum</i>	northern gooseberry	G5T4	S1		Red
<i>Rubus nivalis</i>	snow bramble	G4?	S2		Red
<i>Rumex paucifolius</i>	alpine sorrel	G5	S2S3		Blue
<i>Salix boothii</i>	Booth's willow	G5	S2S3		Blue
<i>Scirpus pallidus</i>	pale bulrush	G5	S1		Red
<i>Scrophularia lanceolata</i>	lance-leaved figwort	G5	S2S3		Blue
<i>Scutellaria angustifolia</i>	narrow-leaved skullcap	G5	S2S3		Blue
<i>Scutellaria angustifolia</i> ssp. <i>micrantha</i>	small-flowered skullcap	G5T3T5	S2S3		Blue
<i>Senecio hydrophiloides</i>	sweet-marsh butterweed	G4G5	S1		Red
<i>Senecio hydrophilus</i>	alkali-marsh butterweed	G5	SH		Red
<i>Senecio megacephalus</i>	large-headed groundsel	G4	S2S3		Blue
<i>Solidago gigantea</i> ssp. <i>serotina</i>	smooth goldenrod	G5TNR	S1		Red
<i>Sphaeralcea coccinea</i>	scarlet globe-mallow	G5?	S1		Red
<i>Sporobolus compositus</i> var. <i>compositus</i>	rough dropseed	G5T5	S3		Blue
<i>Stellaria obtusa</i>	blunt-sepaled starwort	G5	S2S3		Blue
<i>Stellaria umbellata</i>	umbellate starwort	G5	S2S3		Blue
<i>Thalictrum dasycarpum</i>	purple meadowrue	G5	S2S3		Blue
<i>Trichostema oblongum</i>	mountain blue-curls	G5	S1		Red
<i>Trifolium cyathiferum</i>	cup clover	G4	S1		Red
<i>Valeriana edulis</i> ssp. <i>edulis</i>	edible valerian	G5T5	S1		Red
<i>Viola septentrionalis</i>	northern violet	G5	S1S3		Red

## Appendix 4: Provincially Listed Ecological Communities at Risk

### Red- and blue-listed ecological communities for the Arrow Boundary Forest District

Scientific Name	English Name	Prov. Rank	BC Status
<i>Abies lasiocarpa</i> / <i>Rhododendron albiflorum</i> / <i>Valeriana sitchensis</i>	subalpine fir / white-flowered rhododendron / sitka valerian	S3	Blue
<i>Abies lasiocarpa</i> / <i>Vaccinium membranaceum</i> / <i>Xerophyllum tenax</i>	subalpine fir / black huckleberry / bear-grass	S3?	Blue
<i>Alnus incana</i> / <i>Cornus stolonifera</i> / <i>Athyrium filix-femina</i>	mountain alder / red-osier dogwood / lady fern	S3	Blue
<i>Alnus incana</i> / <i>Equisetum arvense</i>	mountain alder / common horsetail	S3	Blue
<i>Anemone occidentalis</i> - <i>Carex nigricans</i>	western pasqueflower - black alpine sedge	S2	Red
<i>Artemisia tridentata</i> / <i>Pseudoroegneria spicata</i> - <i>Balsamorhiza sagittata</i>	big sagebrush / bluebunch wheatgrass - arrowleaf balsamroot	S2	Red
<i>Carex lasiocarpa</i> / <i>Drepanocladus aduncus</i>	slender sedge / common hook-moss	S3	Blue
<i>Deschampsia cespitosa</i> Community	tufted hairgrass Community	S3	Blue
<i>Dulichium arundinaceum</i> Herbaceous Vegetation	three-way sedge	S2	Red
<i>Equisetum fluviatile</i> - <i>Carex utriculata</i>	swamp horsetail - beaked sedge	S3	Blue
<i>Eriophorum angustifolium</i> - <i>Carex limosa</i>	narrow-leaved cotton-grass - shore sedge	S3	Blue
<i>Juncus balticus</i> - <i>Carex praegracilis</i>	Baltic rush - field sedge	S3	Blue
<i>Menyanthes trifoliata</i> - <i>Carex lasiocarpa</i>	buckbean - slender sedge	S3	Blue
<i>Picea engelmannii</i> x <i>glauca</i> / <i>Ribes lacustre</i>	hybrid white spruce / black gooseberry	S3	Blue
<i>Picea engelmannii</i> x <i>glauca</i> / <i>Ribes lacustre</i> / <i>Aralia nudicaulis</i>	hybrid white spruce / black gooseberry / wild sarsaparilla	S3?	Blue
<i>Pinus contorta</i> / <i>Alnus viridis</i> ssp. <i>sinuata</i> / <i>Calamagrostis rubescens</i>	lodgepole pine / Sitka alder / pinegrass	S3	Blue
<i>Pinus ponderosa</i> / <i>Pseudoroegneria spicata</i> - <i>Lupinus sericeus</i>	ponderosa pine / bluebunch wheatgrass - silky lupine	S2	Red
<i>Pinus ponderosa</i> / <i>Symphoricarpos albus</i> / <i>Poa</i> spp.	ponderosa pine / common snowberry / bluegrasses	S2	Red
<i>Populus balsamifera</i> ssp. <i>trichocarpa</i> / <i>Symphoricarpos albus</i> - <i>Rosa</i> spp.	black cottonwood / common snowberry - roses	S1S2	Red
<i>Populus tremuloides</i> - <i>Populus balsamifera</i> ssp. <i>trichocarpa</i> / <i>Symphoricarpos albus</i> / <i>Equisetum arvense</i>	trembling aspen - black cottonwood / common snowberry / common horsetail	S1	Red
<i>Pseudoroegneria spicata</i> - <i>Balsamorhiza sagittata</i>	bluebunch wheatgrass - arrowleaf balsamroot	S2	Red
<i>Pseudoroegneria spicata</i> - <i>Koeleria macrantha</i>	bluebunch wheatgrass - junegrass	S2	Red
<i>Pseudotsuga menziesii</i> / <i>Calamagrostis rubescens</i> - <i>Arctostaphylos uva-ursi</i>	Douglas-fir / pinegrass - kinnikinnick	S3	Blue
<i>Pseudotsuga menziesii</i> / <i>Calamagrostis rubescens</i> - <i>Linnaea borealis</i>	Douglas-fir / pinegrass - twinflower	S3	Blue
<i>Pseudotsuga menziesii</i> - <i>Larix occidentalis</i> / <i>Calamagrostis rubescens</i>	Douglas-fir - western larch / pinegrass	S2	Red
<i>Pseudotsuga menziesii</i> / <i>Mahonia nervosa</i> / <i>Cryptogramma acrostichoides</i>	Douglas-fir / dull Oregon-grape / parsley fern	S2?	Red

<i>Pseudotsuga menziesii</i> / <i>Penstemon fruticosus</i> - <i>Calamagrostis rubescens</i>	Douglas-fir / shrubby penstemon - pinegrass	S3	Blue
<i>Pseudotsuga menziesii</i> - <i>Pinus ponderosa</i> / <i>Physocarpus malvaceus</i>	Douglas-fir - ponderosa pine / mallow ninebark	S1	Red
<i>Pseudotsuga menziesii</i> - <i>Pinus ponderosa</i> / <i>Pseudoroegneria spicata</i> - <i>Calamagrostis rubescens</i>	Douglas-fir - ponderosa pine / bluebunch wheatgrass - pinegrass	S3	Blue
<i>Puccinellia nuttalliana</i> - <i>Hordeum jubatum</i>	Nuttall's alkaligrass - foxtail barley	S2	Red
<i>Salix maccalliana</i> / <i>Carex utriculata</i>	MacCalla's willow / beaked sedge	S3	Blue
<i>Salix sitchensis</i> / <i>Carex sitchensis</i>	Sitka willow / Sitka sedge	S3	Blue
<i>Selaginella densa</i> - <i>Pseudoroegneria spicata</i> - <i>Collinsia parviflora</i>	compact selaginella - bluebunch wheatgrass - small-flowered blue-eyed Mary	S3	Blue
<i>Thuja plicata</i> / <i>Paxistima myrsinites</i> - <i>Lonicera utahensis</i>	western redcedar / falsebox - Utah honeysuckle	S3	Blue
<i>Thuja plicata</i> - <i>Tsuga heterophylla</i> / <i>Equisetum arvense</i>	western redcedar - western hemlock / common horsetail	S3	Blue
<i>Trichophorum cespitosum</i> / <i>Campylium stellatum</i>	tufted clubrush / golden star-moss	S2S3	Blue
<i>Tsuga heterophylla</i> / <i>Symphoricarpos albus</i>	western hemlock / common snowberry	S2	Red
<i>Tsuga heterophylla</i> / <i>Vaccinium myrtilloides</i> - <i>Paxistima myrsinites</i>	western hemlock / velvet-leaved blueberry - falsebox	S1	Red

## Appendix 5: Provincially Listed Species at Risk (Fauna)

### Red- and blue-listed fauna species for the Arrow Boundary Forest District

Scientific Name	English Name	Global Rank	Prov Rank	COSEWIC	BC Status
<i>Acipenser transmontanus</i> pop. 2	White Sturgeon (Columbia River population)	G4T3T4Q	S1	E (Nov 2003)	Red
<i>Acrocheilus alutaceus</i>	Chiselmouth	G5	S3S4	NAR (May 2003)	Blue
<i>Ambystoma tigrinum</i>	Tiger Salamander	G5	S2	E (Nov 2001)	Red
<i>Anguispira kochi</i>	Banded Tigersnail	G5	S3		Blue
<i>Anodonta nuttalliana</i>	Winged Floater	G3G4Q	S3S4		Blue
<i>Ardea herodias herodias</i>	Great Blue heron, <i>herodias</i> subspecies	G5T5	S3B,S4N		Blue
<i>Argia emma</i>	Emma's Dancer	G5	S3S4		Blue
<i>Argia vivida</i>	Vivid Dancer	G5	S2		Red
<i>Asio flammeus</i>	Short-eared Owl	G5	S3B,S2N	SC (May 1994)	Blue
<i>Botaurus lentiginosus</i>	American Bittern	G4	S3B		Blue
<i>Calopteryx aequabilis</i>	River Jewelwing	G5	S1		Red
<i>Catherpes mexicanus</i>	Canyon Wren	G5	S3	NAR (May 1992)	Blue
<i>Chrysemys picta</i> pop. 2	Western Painted Turtle - Intermountain - Rocky Mountain Population	G5TNR	S3	SC (Apr 2006)	Blue
<i>Coluber constrictor</i>	Racer	G5	S3S4	SC (Nov 2004)	Blue
<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat	G4	S3		Blue
<i>Cottus confusus</i>	Shorthead Sculpin	G5	S2S3	T (May 2001)	Blue
<i>Cottus hubbsi</i>	Columbia Sculpin	G4Q	S3	SC (May 2000)	Blue
<i>Crotalus oreganus</i>	Western Rattlesnake	G5	S3	T (May 2004)	Blue
<i>Cryptomastix mullani</i>	Coeur d'Alene Oregonian	G4	S3S5		Blue
<i>Dolichonyx oryzivorus</i>	Bobolink	G5	S3B		Blue
<i>Eumeces skiltonianus</i>	Western Skink	G5	S2S3	SC (May 2002)	Blue
<i>Euphydryas gillettii</i>	Gillette's Checkerspot	G2G3	S2		Red
<i>Fisherola nuttalli</i>	Shortface Lanx	G2	SH		Red
<i>Fossaria truncatula</i>	Attenuate Fossaria	G3Q	S3		Blue
<i>Gonidea angulata</i>	Rocky Mountain Ridged Mussel	G3	S1	SC (Nov 2003)	Red
<i>Gulo gulo luscus</i>	Wolverine, <i>luscus</i> subspecies	G4T4	S3	SC (May 2003)	Blue
<i>Hemphillia camelus</i>	Pale Jumping-slug				Blue
<i>Ovis canadensis canadensis</i>	California Big Horn sheep	G4	S3		Blue
<i>Hirundo rustica</i>	Barn Swallow	G5	S3S4B		Blue
<i>Icteria virens</i>	Yellow-breasted Chat	G5	S1S2	E (Nov 2000)	Red
<i>Macromia magnifica</i>	Western River Cruiser	G5	S3		Blue
<i>Martes pennanti</i>	Fisher	G5	S2S3		Blue
<i>Megascops kennicottii macfarlanei</i>	Western Screech-Owl, <i>macfarlanei</i> subspecies	G5T4	S1	E (May 2002)	Red

<i>Melanerpes lewis</i>	Lewis's Woodpecker	G4	S2B	SC (Nov 2001)	Red
<i>Myotis thysanodes</i>	Fringed Myotis	G4G5	S2S3	DD (May 2004)	Blue
<i>Neotamias ruficaudus simulans</i>	Red-tailed Chipmunk, <i>simulans</i> subspecies	G5T4T5	S3		Blue
<i>Oncorhynchus clarkii lewisi</i>	Cutthroat Trout, <i>lewisi</i> subspecies	G4T3	S3	SC (Nov 2006)	Blue
<i>Oreohelix strigosa</i>	Rocky Mountainsnail	G5	S3S4		Blue
<i>Oreohelix subrudis</i>	Subalpine Mountainsnail	G5	S3S4		Blue
<i>Otus flammeolus</i>	Flammulated Owl	G4	S3S4B	SC (Nov 2001)	Blue
<i>Ovis canadensis</i>	Bighorn Sheep	G4	S2S3		Blue
<i>Perognathus parvus</i>	Great Basin Pocket Mouse	G5	S2		Red
<i>Physella columbiana</i>	Rotund Physa	G2	S1		Red
<i>Picoides albolarvatus</i>	White-headed Woodpecker	G4	S1	E (Nov 2000)	Red
<i>Pituophis catenifer deserticola</i>	Gopher Snake, <i>deserticola</i> subspecies	G5T5	S3	T (May 2002)	Blue
<i>Plethodon idahoensis</i>	Coeur d'Alene Salamander	G4	S3	SC (Nov 2001)	Blue
<i>Progne subis</i>	Purple Martin	G5	S2S3B		Blue
<i>Pyrgus communis</i>	Checkered Skipper	G5	S3		Blue
<i>Rangifer tarandus</i> pop. 1	Caribou (southern population)	G5T2Q	S1	T (May 2000)	Red
<i>Rhinichthys osculus</i>	Speckled Dace	G5	S1	E (Apr 2006)	Red
<i>Rhinichthys umatilla</i>	Umatilla Dace	G4	S2	SC (May 1988)	Red
<i>Salvelinus confluentus</i>	Bull Trout	G3	S3		Blue
<i>Spea intermontana</i>	Great Basin Spadefoot	G5	S3	T (Apr 2007)	Blue
<i>Sphyrapicus thyroideus thyroideus</i>	Williamson's Sapsucker, <i>thyroideus</i> subspecies	G5TU	S2B	E (May 2005)	Red
<i>Stagnicola apicina</i>	Abbreviate Pondsail	G5	S2S3		Blue
<i>Stylurus olivaceus</i>	Olive Clubtail	G4	S1S2		Red
<i>Taxidea taxus</i>	Badger	G5	S1	E (May 2000)	Red
<i>Tympanuchus phasianellus columbianus</i>	Sharp-tailed Grouse, <i>columbianus</i> subspecies	G4T3	S2S3		Blue
<i>Ursus arctos</i>	Grizzly Bear	G4	S3	SC (May 2002)	Blue
<i>Vallonia cyclophorella</i>	Silky Vallonia	G5	S3		Blue



## **Appendix 6: BC Parks Conservation and Recreation Goals**

### **Goal 1: Representativeness**

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

### **Goal 2: Special Features**

To protect the special natural, cultural heritage and recreational features of the province, including rare and endangered species and critical habitats, outstanding or unique botanical, zoological, geological and paleontological features, outstanding or fragile cultural heritage features, and outstanding outdoor recreational features such as trails.

### ***BC Parks Conservation Goals***

#### **Goal 1: Landscapes**

To conserve B.C.'s natural diversity by protecting viable, representative examples of our 139 ecosections.

#### **Goal 2: Special Features**

To protect B.C.'s key natural and cultural features. These have been identified as physical, biological or cultural elements and evaluated as to abundance, significance and value in terms of conservation, education and recreation.

### **BC Parks Recreation Goals**

#### **Goal 1: Tourism Travel Routes**

To provide parks and services which enhance tourism travel routes.

#### **Goal 2: Outdoor Recreation Holiday Destinations**

To provide park attractions which serve as or improve key destinations for outdoor recreation holidays.

#### **Goal 3: Backcountry**

To provide outstanding backcountry recreation opportunities throughout the province.

#### **Goal 4: Local Recreation**

To ensure access to local outdoor recreation opportunities for all residents of this province.

## Appendix 7: BC Parks Zoning Framework

Protected Areas Zone Descriptions			
	Intensive Recreation	Nature Recreation	Special Feature
<b>Objective</b>	To provide for a variety of readily-accessible, facility-oriented outdoor recreation opportunities.	To protect scenic values and to provide for backcountry recreation opportunities in a largely undisturbed natural environment.	To protect and present significant natural or cultural resources, features or processes because of their special character, fragility and heritage values.
<b>Use Level</b>	Relatively high density and long duration types of use.	Relatively low use but higher levels associated with nodes of activity or access.	Generally low.
<b>Means of Access</b>	All-weather public roads or other types of access where use levels are high (see "Impacts" below).	Motorized (powerboats, snowmobiles, all-terrain vehicles) and non-motorized (foot, horse, canoe, bicycles). Aircraft and motorboat access to drop-off and pick-up points will be permitted.	Various; may require special access permit.
<b>Location</b>	Contiguous with all-weather roads and covering immediate areas, modified landscapes or other high-use areas.	Removed from all-weather roads but easily accessible on a day-use basis. Accessible by mechanized means such as boat or plane.	Determined by location of special resources; may be surrounded by or next to any of the other zones.
<b>Size of Zone</b>	Small, usually less than 2,000 hectares.	Can range from small to large.	Small, usually less than 2000 hectares.
<b>Boundary Definition</b>	Includes areas of high facility development in concentrated areas.	Boundaries should consider limits of activity and facility areas relative to ecosystem characteristics and features.	Area defined by biophysical characteristics or the nature and extent of cultural resources (adequate to afford protection).
<b>Recreation Opportunities</b>	Vehicle camping, picnicking, beach activities, power-boating, canoeing, kayaking, strolling, bicycling, historic and nature appreciation, fishing, snow play, downhill and cross-country skiing, snowshoeing, specialized activities.	Walk-in or boat-in camping, power-boating, hunting, canoeing, kayaking, backpacking, bicycling, historic and nature appreciation, fishing, cross-country skiing, snowmobiling, river rafting, horseback riding, heliskiing, helihiking and specialized activities.	Sightseeing, historic and nature appreciation. May be subject to temporary closures or permanently restricted access.
<b>Facilities</b>	May be intensely developed for user convenience. Campgrounds, landscaped picnic or play areas, trail accommodation or interpretative buildings, boat launches, administrative buildings, service compounds, gravel pits, disposal sites, woodlots; parking lots, etc.	Moderately developed for user convenience. Permitted: trails, walk-in or boat-in campsites, shelters, accommodation buildings, facilities for motorized access (docks, landing strips, fuel storage, etc.)	Interpretative facilities only; resources are to be protected.
<b>Impacts on Natural Environment</b>	Includes natural resource features and phenomena in a primarily natural state, but where human presence may be readily visible as both recreation facilities and people using the zone. Includes areas of high facility development with significant impact on concentrated areas.	Area where human presence on the land is not normally visible. Facility development limited to relatively small areas. Facilities are visually compatible with natural setting.	None: resources to be maintained unimpaired.
<b>Management Guidelines</b>	Oriented to maintaining a high-quality recreation experience. Intensive management of resource and control of visitor activities. Operational facilities designed for efficient operation while unobtrusive to park visitors.	Oriented to maintaining a natural environment and high-quality recreation experience. Visitor access may be restricted to preserve the recreation experience or to limit impacts. Separation of less compatible recreational activities and transportation modes. Designation of transportation may be necessary to avoid potential conflicts (e.g., horse trails, cycle paths, hiking trails).	High level of management protection with ongoing monitoring. Oriented to maintaining resources and, where appropriate, a high-quality recreational and interpretative experience. Active or passive management, depending on size, location and nature of the resource. Visitor access may be restricted to preserve the recreation experience and to limit impacts.
<b>Examples of Zoning</b>	Campground in Rath Trevor Beach Park; Gibson Pass ski area in E.C. Manning Park.	Core area in Cathedral Park; North beach in Naikoon Park.	Botanical Beach tidepools in Juan de Fuca Park; Sunshine Meadows in Mt. Assiniboine Park.

## Protected Areas Management Planning Zone Descriptions

	<b>Wilderness Recreation</b>	<b>Wilderness Conservation</b>
<b>Objective</b>	To protect a remote, undisturbed natural landscape and to provide backcountry recreation opportunities, depending on a pristine environment where air access may be permitted to designated sites.	To protect a remote, undisturbed natural landscape and to provide unassisted backcountry recreation opportunities, depending on a pristine environment where no motorized activities will be allowed.
<b>Use Level</b>	Very low use to provide solitary experiences and a wilderness atmosphere. Use may be controlled to protect the environment.	Very low use to provide solitary experiences and a wilderness atmosphere. Use may be controlled to protect the environment.
<b>Means of Access</b>	Non-mechanized & non-motorized. May permit low-frequency air access to designated sites; foot, canoe and horse access may be permitted.	Non-mechanized & non-motorized; foot, canoe and horse access may be permitted.
<b>Location</b>	Remote, not easily visited on a day-use basis.	Remote, not easily visited on a day-use basis.
<b>Size of Zone</b>	Large, greater than 5,000 hectares.	Large, greater than 5,000 hectares.
<b>Boundary Definition</b>	Defined by ecosystem limits and geographic features. Boundaries will encompass areas of visitor interest for specific activities supported by air access.	Defined by ecosystem limits and geographic features.
<b>Recreation Opportunities</b>	Backpacking, canoeing, kayaking, river rafting, nature and historic appreciation, hunting, fishing, cross-country skiing, snowshoeing, horseback riding, specialized activities (e.g., caving, climbing).	Backpacking, canoeing, kayaking, river rafting, nature and historic appreciation, fishing, cross-country skiing, snowshoeing, horseback riding, specialized activities (e.g., caving, climbing).
<b>Facilities</b>	Minimal facility development for user convenience and safety, and protection of the environment e.g., trails, primitive campsites. Some basic facilities at access points, e.g., dock, primitive shelter.	None.
<b>Impacts on Natural Environment</b>	Natural area generally free of evidence of human beings. Evidence of human presence is confined to specific facility sites. Facilities are visually compatible with natural setting.	Natural area generally free of evidence of human beings.
<b>Management Guidelines</b>	Oriented to protecting a pristine environment. Management actions are minimal and not evident. Managed to ensure low visitor use levels. Visitor access may be restricted to protect the natural environment and visitor experience.	Oriented to protecting a pristine environment. Management actions are minimal and not evident. Managed to ensure low visitor use levels. Visitor access may be restricted to protect the natural environment and visitor experience.
<b>Examples of Zoning</b>	Quanchus Mountains Wilderness in Tweedsmuir Park; Wilderness Zone in Spatsizi Park.	Upper Murray River watershed within Monkman Park; Garibaldi Park Nature Conservancy Area.