Syringa Park

Management Plan

April 2017

BRITISH COLUMBIA | BC Parks

All photos contained within this management plan are credited to BC Parks (unless otherwise stated). Cover photo credit to Dave Heagy (BC Parks)

This document replaces the Syringa Park Management Direction Statement approved in 1999.

Syringa Park Management Plan

Approved by:

_____ May 2, 2017____

John Trewhitt
Regional Director
BC Parks - Kootenay Okanagan

Date

_____ May 1, 2017____

David Ranson
Executive Director
BC Parks - Provincial Services Branch

Date

Vision Statement

This Vision Statement describes the future state and management regime that is desired for Syringa Park over the next 25 to 50 years. The park vision provides long-term direction for park managers, while aiding them in making decisions regarding current issues. It is based on prevailing environmental and socio-economic attitudes concerning protected areas. It is, however, dynamic and conceptual and therefore allows for change due to evolving ideas regarding conservation and recreation and evolving ecosystems due to climate changes.

Syringa Park has a rich mosaic of open forests and grasslands along its lower slopes connected to the larger, steeply contoured, wilderness landscape beyond the park boundaries. Active ecosystem restoration projects involving managing forest ingrowth and prescribed burning have assisted in restoring and maintaining the important ecological values of the park.

The park continues to serve an important connectivity role, with many wildlife species, some of which are considered 'at risk' such as Bighorn Sheep, utilizing the habitat within the park yet moving freely beyond the park. Fresh water tributaries, such as Syringa and Tulip creeks, which have turbulent beginnings at higher elevations in the park, have created scenic features at lower, more easily accessible locations. These highly sensitive riparian areas of the park continue to be managed in a manner that highlights their importance, but minimizes human impacts and interference with natural processes.

Along the park's shoreline of Lower Arrow Lake, destination beaches, campgrounds and day use areas provide a wide range of recreational opportunities reflecting the continued popularity for local residents and tourists.

This management plan affirms BC Parks' commitment to embrace First Nation communities as partners in securing the rich cultural history and honouring and protecting the natural values at Syringa Park. The park and surrounding landscape are culturally and spiritually significant to First Nations. By embracing First Nations as partners, archaeological sites and traditional use sites will benefit from improved protection and park visitors will benefit from enhanced education and interpretation activities that celebrate First Nations cultural heritage and values.

Table of Contents

List of Figures:

List of Plates:

List of Tables:

1.0 Introduction

1.1 Management Plan Purpose

The purpose of this management plan is to guide the management of Syringa Park. This management plan:

- articulates the key features and values of Syringa Park;
- identifies appropriate types and levels of management activities;
- determines appropriate levels of use and development;
- establishes a long-term vision and management objectives for Syringa Park; and
- responds to current and predicted threats and opportunities by defining a set of management strategies to achieve the management vision and objectives.

1.2 Planning Area

Syringa Park, 4,499 hectares, is located in southeastern British Columbia in the Norns Range of the Selkirk Mountains on the north shore of Lower Arrow Lake (Figure 1). Lying about 19 kilometres west of Castlegar (the closest major community), the park is accessible by a paved road (Broadwater Road) off Highway 3A. The name of the park is derived from the creek that flows through the park near its easterly boundary. “Syringa”, often referred to as Mock Orange, is a low-lying shrub, which grows in the area.

Lower Arrow Lake is one of four (Revelstoke, Kinbasket, Upper Arrow and Lower Arrow) reservoir lakes formed by the dams on the Columbia River. While Lower and Upper Arrow lakes were originally two separate water bodies, the construction of the Hugh Keenleyside Dam in the 1960s resulted in the lakes becoming one 230 kilometre long lake for most of the year. At times of lower water levels, the two lakes become distinct again as they are joined by a narrow channel. Maximum water levels are about 12 metres above previous natural water levels.

The Hugh Keenleyside is the last dam on the Columbia River before the international border. While water levels on the Arrow Lake Reservoir can fluctuate annually as much as 20 metres, Syringa Park is not as affected by fluctuating water levels during summer, but during February to March when water levels are the lowest of the year, the fluctuating water levels create a substantial shoreline/low watermark.

Syringa Park is a popular holiday destination area offering a range of recreational opportunities, with the main activities being camping, boating and hiking. There are three other provincial parks (Beaver Creek, Champion Lakes and Nancy Greene) within about 40 kilometres of Syringa Park providing similar types of recreational opportunities.

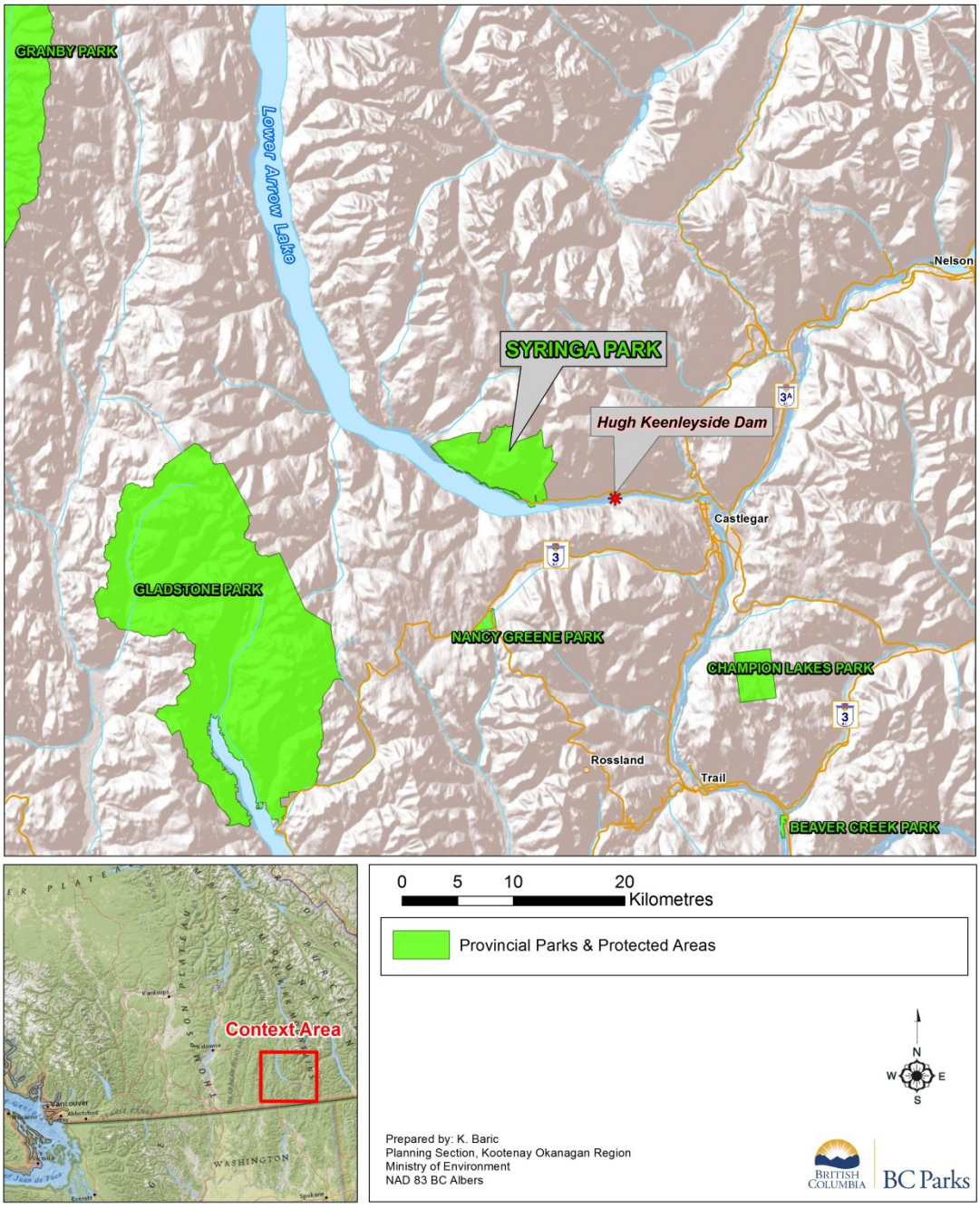

Figure 1: Provincial/Regional Context Map of Syringa Park.

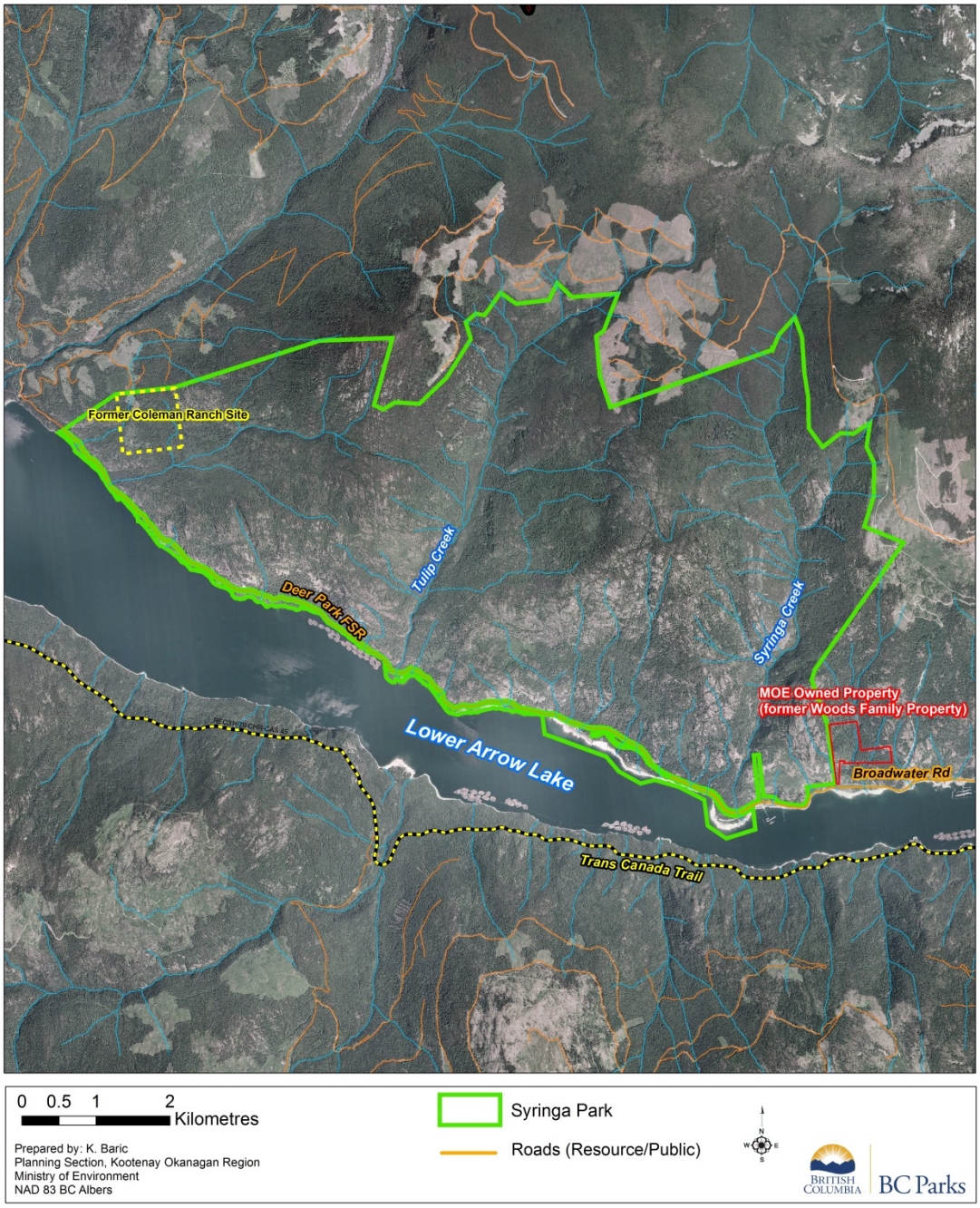

Figure 2: Detailed Context Map of Syringa Park.

Figure 3: Foreshore boundary context of Syringa Park.

The boundaries of Syringa Park include approximately 33 hectares of foreshore fronting the areas with recreational development (see Figure 2). The park has about 11 kilometres of lakefront with several beaches and a moderately sloping upland containing two major drainages (Tulip and Syringa creeks).

Broadwater Road is excluded from the park boundaries. The Deer Park Forest Service Road begins near the campground entrance and is not in the park boundary. It provides access through the park for industry as well as for residents living in the community of Deer Park about 14 kilometres to the west. The headwaters of Tulip and Syringa creeks are not included in the park boundaries and are part of the Crown forest/timber harvesting land base. Previous logging has occurred adjacent to the northern boundary of the park.

There is a large lakeshore condominium/marina development along the southeastern boundary just outside the park. This side of the park also has an adjacent conservation property (35 hectares) that the Province acquired in 2015 from the Nature Conservancy of Canada (NCC). These Ministry of Environment (MOE) lands, previously owned by The Land Conservancy of BC and formerly known as the Wood's Family property, enhance protection of the dry forest ecosystems along Lower Arrow Lake and conserve habitat for Bighorn Sheep (see Figure 4).

1.3 Legislative Framework

Class A parks are Crown lands dedicated to the preservation of their natural environments for the inspiration, use and enjoyment of the public. Development in Class A parks is limited to that which is necessary to maintain the park's recreational values. Commercial resource extraction or development activities are not permitted (e.g., logging, mining or hydroelectric development).

Syringa Creek Park was originally established as a Class A park in November 1968 by Order in Council 3610/68 and included 151 hectares. In 1982, the Province, working with BC Hydro, expanded Syringa Creek Park to create more opportunities for camping, picnicking and boat launching on Lower Arrow Lake. The addition, by Order in Council 2222/82, included 74 hectares of upland and foreshore around Syringa Creek.

A subsequent major park boundary addition occurred in 1995 from the protected area recommendations of the West Kootenay-Boundary Land-Use Plan. It added 4,191 hectares to the park, which significantly enhanced protection of species at risk and archaeological values as well as expanded recreational opportunities. The park addition changed the focus of the park to be more multi-purpose with emphasis on protecting conservation values. The park name was also changed from Syringa Creek Park to Syringa Park in 1995.

A former 64 hectare private ranch property once owned by the Coleman family is situated within the northwest portion of the park (see Figure 2). BC Hydro assumed ownership of the property in the 1960s around the time that the nearby Hugh Keenleyside Dam was constructed. In 1992, the property was transferred from BC Hydro to MOE as compensation for lost wildlife values associated with the flooding of the Lower Arrow Lake. The property was formally added to the park in 1995 as part of the implementation of the West Kootenay-Boundary Land- Use Plan. The property contains management direction provided by BC Hydro (Fish and Wildlife Compensation Program) and is largely focussed on maintaining wildlife values.

Another addition of 22.88 hectares occurred in April 2014, bringing the area of the park to the current 4,499 hectares. Syringa Park is named and described in Schedule C of the *Protected Areas of British Columbia Act.*

1.4 Management Commitments/Agreements

The Keenleyside Dam is included in the Columbia River Treaty (1964), an agreement between the United States and Canada on the development and operation of dams in the upper Columbia River basin for power and flood control benefits in both countries. Fluctuating water levels have caused impacts to a broad range of land uses/activities both within and outside the park, including use by wildlife. The Treaty has no end date, but after 60 years (2024), either country can terminate most of the treaty provisions with the exception of flood control. Currently, British Columbia is seeking to continue the treaty with some modifications including developing measures to benefit ecosystems.

A 51,519 hectare Section 15 Order in Council (OIC) Reserve (issued under the provisions of the *Land Act*) covers those portions of the Arrow lakes that are affected by the network of dams on the Columbia River system. The OIC was established in 1960 and pre-dates the establishment of the park. The OIC ensures that land within the reserve area cannot be alienated/withdrawn for disposition.

The current OIC interest holder is the Ministry of Forests, Lands and Natural Resource Operations; however, day to day operations/oversight of the Arrow Lakes reservoir is carried out by BC Hydro. A portion of the park's foreshore boundary overlaps the OIC reserve. This dual designation provides assurances that incompatible uses along this portion of the lake are covered both by *Park Act* and *Land Act* provisions.

Figure 4: Map of eastern park boundary - Ministry of Environment owned property (former Woods Family Property) and nearby marina development.

Plate 1: Syringa Park day use area.

Plate 2: Main beach area of Syringa Park (photo credit: RAP Park Contracting).

1.5 Management Planning Process

A management plan considers current information on natural values, cultural values, and recreation opportunities within a park and resource activities occurring on surrounding lands.

The first step for the draft Syringa Park Management Plan was a review of previous planning documents and the collecting of updated background information on the natural and cultural values and recreation opportunities of the park.

The key concerns relevant to the park include future park boundary modifications (i.e., to include key access roads and infrastructure), managing for future recreational use, deploying ecosystem restoration, the spread of invasive plants, protecting archaeological sites and wildland urban interface fire management.

The second step was the development of a draft management plan for posting on the BC Parks website for the public and First Nations to review and provide comments. Consultation occurred with nine First Nations through referrals and meetings. A subsequent refined draft was completed and referred again to First Nations to ensure specific interests and concerns were adequately addressed within the management plan.

1.6 Existing Permits and Authorizations

The Broadwater Road right-of-way lies inside the park boundaries but is excluded from the park. Currently, the Ministry of Transportation and Infrastructure has administrative jurisdiction of the right-of-way. The following are active park use permits within the park:

- BC Hydro (land use occupancy) for structural maintenance/repairs on the concrete ramp-boat launch.
- Fortis BC (land use occupancy) for distribution/power lines.
- Trapping territory (TRO415T002). For public safety, trappers do not operate in high use areas of the park.
- E. Lees and Associates Consulting Ltd. (research permit).
- Wildsight (commercial recreation).
- RAP Park Contracting (campground operations).

Plate 3: Broadwater Road at the intersection of Deer Park FSR (gatehouse in the distance).

1.7 Relationship with First Nations

Syringa Park lies within the Ktunaxa Territory, the Okanagan Nation and the Secwépemc Nation.

The Ktunaxa Territory covers the Kootenay region and extends into the United States. In British Columbia, the Ktunaxa Nation Council includes four Indian bands: -aqam (St. Mary's Indian Band), -akink'umasnuqi?it (Tobacco Plains Indian Band), akisq'nuk (Columbia Lake Indian Band) and Yaqan nu? kiy (Lower Kootenay Indian Band). The Ktunaxa Kinbasket Treaty Council is currently negotiating a Treaty with the Government of Canada and the Province of British Columbia.

In 2005, the Ktunaxa Nation Council signed a Memorandum of Understanding (MOU) with the Province to establish an effective government-to-government working relationship for the management of provincial parks in their traditional territory. The MOU identified several areas for working cooperatively at a strategic level including: sharing information; changing park boundaries; participation in management planning; and the development of economic and capacity building opportunities.

A Strategic Engagement Agreement (SEA) with the Ktunaxa Nation Council and the Province signed in 2010, fosters a positive and respectful government-to-government relationship to work creatively and collaboratively for meaningful consultation and accommodation. The former MOU committee evolved into a SEA sub-committee.

The Okanagan Nation territory extends from the Okanagan Valley into the West Kootenays, as far north as the Wood River in the Rocky Mountains and south into the United States. The Okanagan Nation Alliance is composed of seven Indian bands and the Colville Confederated Tribes in the United States. Five member Indian bands (Okanagan Indian Band, Osoyoos Indian Band, Penticton Indian Band, Upper Nicola Indian Band and Lower Similkameen Indian Band) have asserted traditional territories that encompass Syringa Park.

The Secwépemc Nation territory extends from the Fraser River to the Rocky Mountains and from the upper Fraser River in the north to the Canada-US Border in the south. There are two tribal councils and 17 Indian bands that compose the Secwépemc Nation with four Indian bands (Shuswap Indian Band, Splats'in, Neskonlith Indian Band and Adams Lake Indian) having asserted traditional territories that encompass Syringa Park. A Reconciliation Framework Agreement with five Secwépemc Nation member Indian bands (i.e., Tk'emlups, Skeetchestn, Adams Lake, Splats'in, and Shuswap) signed with the Province in 2013 establishes an effective government-to-government working relationship for shared decision-making. The Reconciliation Framework Agreement identifies many broad areas of engagement for various government agencies and has specific direction for consultation on park management.

2.0 Values and Roles of the Park

2.1 Significance in the Protected Areas System

The Columbia River is the largest river in British Columbia by water volume and the fourth largest by water volume in North America. Syringa Park is the largest protected area on the Columbia River (Arrow Lakes Reservoir) in British Columbia and it protects the second largest area (1,453 hectares) of a rare ecosystem known as the Very Dry Warm Interior Cedar - Hemlock - Warm Phase biogeoclimatic subzone variant (ICHxwa).[1]

The primary role of the park is to protect the ecosystems, species and habitats of the Columbia River Valley in the Selkirk Foothills Ecosection.[2] Syringa Park conserves many of the natural and cultural values characteristic of the Columbia River Valley affected by dam construction including old growth forests, fish and wildlife, species at risk and cultural heritage sites.

A secondary role of the park is to provide a range of recreational opportunities for the public and visitors to enjoy the natural and cultural features of the park. Syringa Park provides a wide range of recreational opportunities and is a popular vacation destination for residents and tourists making it the most frequently visited provincial park along the Columbia River.

2.2 Biodiversity and Natural Heritage Values

Selkirk Foothills Ecosection

The Selkirk Foothills Ecosection sits at a transition between two geographic features: the Okanagan Highlands to the west and the Selkirk Mountains to the east. Consisting of mainly granitic and sedimentary rocks, the prominent rounded mountain peaks of the ecosection reflect the effects of continental glaciation. Syringa Park does not contain any mountain peaks, but these features of the ecosection are represented in Gladstone and Granby provincial parks to the west. The park contains a range of habitats and natural features from the Columbia River valley bottom to elevations as high as 1,780 metres, including canyons, cliffs, steep water courses, beaches, grasslands and forests.

Ecosystem Representation

Of the six biogeoclimatic zones that can be found in the Kootenays, two (Engelmann Spruce - Subalpine Fir and Interior Cedar - Hemlock) can be found in the park. Of the fourteen different biogeoclimatic (BEC) subzone variants in the Selkirk Foothills

[1] A biogeoclimatic zone is a geographic area in British Columbia classified as having similar patterns of energy flow, vegetation and soils because of a broadly homogenous macroclimate. The subzone variant is a more detailed and site specific classification subset of the biogeoclimatic zone.

[2] Ecosection is an area with minor physiographic and macroclimatic or oceanographic variations under the Ecoregion Classification system used to stratify British Columbia's terrestrial and marine ecosystems.

Ecosection, there are four represented within the park: the Moist Hot Engelmann Spruce - Subalpine Fir (ESSFmh), the Dry Warm Interior Cedar - Hemlock (ICHdw1), the Moist Warm Interior Cedar - Hemlock (ICHmw5) and the Very Dry Warm Interior Cedar - Hemlock - Warm Phase (ICHxwa).

The following table shows the level of representation for each zone and subzone variant. The ICHxwa is one of the rarest BEC subzones in the Selkirk Foothills Ecosection covering 19,052 hectares or about 2% of the ecosection. Syringa Park protects over 41% of this subzone province-wide (see Table 1).

Forest ecosystems are subject to ongoing natural processes including wildfires, windstorms, insects and disease, and landslides. These natural processes affect vegetation composition and forest health. Vegetation in the park lies in four of the five natural disturbance types[3] that occur in British Columbia (see Figure 5), ranging from NDT1, where disturbance like fires is rare, to NDT4 where natural fires are normally frequent enough to maintain the existing ecosystem. The NDT 4 covers the ICHxwa including grasslands and open forests.

Biogeoclimatic (BEC) Zone	BEC subzone/variant (BECS)	Area of BECS in the park (hectares)	Total area of BECS protected in B.C. (hectares)	% of Total BECS protected in B.C. contributed by the park	Total % of BECS protected in B.C.
Engelmann Spruce - Subalpine Fir	ESSFmh	394	5,493	7	11
Interior Cedar - Hemlock	ICHdw1	1,479	10,359	14	5
	ICHmw5	1,587	12,951	12	7
	ICHxwa	1,453	3,501	41	18

Table 1: Ecosystem representation within Syringa Park.

[3] Natural Disturbance Types are the historic patterns (frequency and extent) of fire, insect, wind, landslides and other natural processes in an area.

Plate 4: Syringa Park foreshore and steep mountain cliff terrain.

Plate 5: Prescribed fire management/fuel reduction within Syringa Park.

Plate 6: Young Bighorn Sheep utilizing the steep cliff terrain alongside the Deer Park FSR.

Plate 7: Road deactivation in the Tulip Creek area of the park.

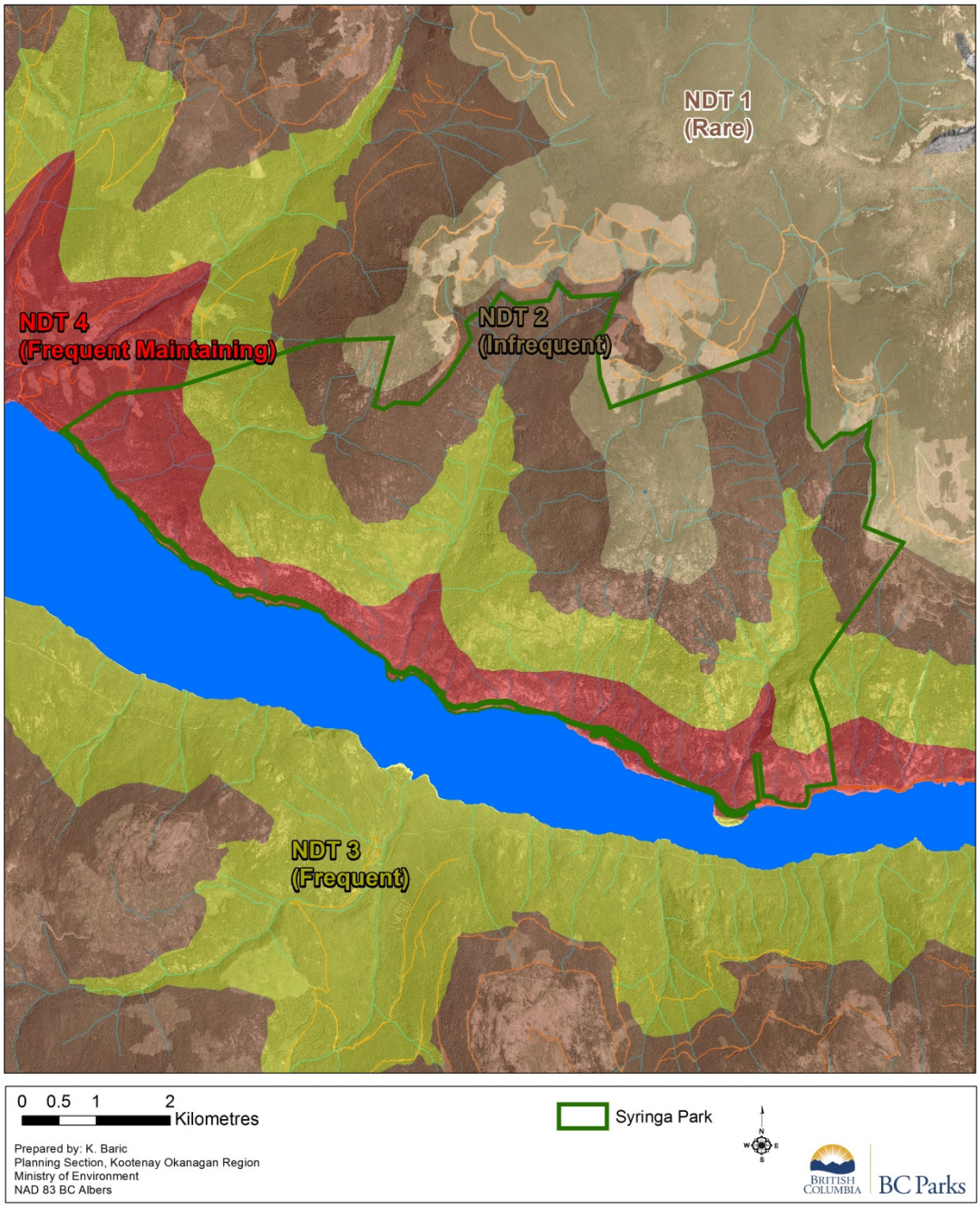

Figure 5: Map of Natural Disturbance Types distributed within and external to the park.

Climate Change

It is now generally recognized that increasing atmospheric "greenhouse gases" are causing long-term shifts in climate patterns. In the southern interior of British Columbia, the trend is toward warmer, drier summers and more precipitation in winters (primarily as rain, rather than snow). The exact effects of such climate change on any ecosystem are impossible to predict with a high degree of confidence; and this holds true for the biogeoclimatic zones in Syringa Park. More extreme weather events will most likely occur over the landscape.

It is possible, given that the ICHxwa biogeoclimatic subzone is already the result of a hot, dry climate, that this particular subzone may be less vulnerable to predicted climate changes. However, it is postulated that grassland extent in the province will generally increase (more frequent droughts will favour grasses over trees). Species response to localized climate change effects will vary (e.g., the other BEC zones expected to move to higher elevations). Drier soils and an increase in drought, along with more frequent and severe fires, may make grasslands more resilient while limiting the regeneration of dry forest species such as Ponderosa Pine and Interior Douglas-fir, but at higher elevations these species may persist.

Fish and Wildlife

The large estimated number of wildlife species (Appendix 2) reflects the variety of habitats and mild climate of the ICHxwa. An estimated 376 wildlife species (8 amphibian; 7 reptile; 293 bird; 68 mammal)[4], of which 57% are considered forest dwellers, may occur in the ICHxwa. There are about 94 red-listed (endangered) species and 163 blue-listed (special concern) species in the Interior Cedar- Hemlock Zone[5].

Syringa Park has a number of blue-listed species at risk known to occur in the park including: Grizzly Bear, Bighorn Sheep (introduced), Canyon Wren, Great Blue Heron, White-throated Swift, Wild Licorice, Least Moonwort, Hall's Willowherb and one red-listed species (White Sturgeon) that may on occasion pass through the foreshore area of the park. Coeur d'Alene Salamanders near Tulip Creek Falls were once red listed (endangered) but reassessed to a yellow-listed (not at risk) species. Rubber Boas are in the park and were once a blue-listed species but recently reassessed and placed as a yellow-listed species. Environment Canada still considers Rubber Boa a species of Special Concern.[6]

An introduction of Rocky Mountain Bighorn Sheep into the Lower Arrow Lake area occurred in 1985 through a transplant of 37 animals from the east side of Columbia Lake and Stoddart Creek in the East Kootenays. A sudden unexplained decline in Rocky

[4] Wildlife Diversity in British Columbia by Victoria Stevens, 1995

[5] BC Conservation Data Centre

[6] A species of special concern is particularly sensitive to human activities or natural events according to the Committee On the Status of Endangered Species In Canada (COSEWIC).

Mountain Bighorn Sheep populations in the East Kootenays raised the need to establish a separate population in the West Kootenays as a potential repopulation source.[7] As the Lower Arrow Lake area was identified as capable of supporting Bighorn Sheep populations, transplanted Rocky Mountain Bighorn Sheep were placed in Syringa and Tulip creeks.

Besides Bighorn Sheep, four other species of ungulates (Elk, Moose, Mule Deer and White-tailed Deer) use the park; especially the lower elevation habitats, which are high quality winter range. These habitats have faster snowmelt due to slope/south facing aspect and trees of the proper size and spacing to intercept snow to provide warm cover and abundant forage, which is a rare landscape characteristic in the West Kootenays.[8] Of note, the former Coleman Ranch site contains gently sloping terrain and former cleared land for agricultural purposes, which today provides excellent habitat for a range of ungulates.

There are over 15 species of fish in the Arrow Lake Reservoir with the key species of interest being Burbot, Bull Trout (blue listed), Rainbow Trout and Kokanee. The latter two species also occur in Tulip and Syringa creeks.

Plate 8: Ungulate winter range and Bighorn Sheep habitat within the park.

[7] Arrow Lake Rocky Mountain Bighorn Sheep Population Data 1985-1990

[8] Ommundsen, P. 1983. Management Guidelines for Ungulate Winter Range at Lower Arrow Lake, British Columbia: Broadwater to Robson. Unpublished report prepared for Department of Environmental Sciences, Selkirk College, Castlegar, B.C.

2.3 Cultural Values

There are a number of important cultural values in the park associated with First Nations' use of the area. With the raising of water levels in the Columbia River Valley, many of the cultural values of the Columbia River were inundated by flooding. While there are eight known archaeological sites and culturally important locations in the park, there is little visual evidence of them. All are on or near the shoreline and subject to erosion from water movement. The landscape within the park contains geographical features such as alluvial fans and small bays that supported seasonal use (camping, hunting/fishing, plant harvesting) by First Nations dating back thousands of years.

One archaeological site in the park, known as Arrow Rock, was the location of the largest number of pictographs found on the Arrow Lakes Reservoir. Nearly 100 figures painted over six panels covering a 90-metre cliff face depict an assortment of animals and people. Most of the panels unfortunately are submerged but archaeologists documented the site before flooding. One of the panels which was inundated by flooding showed a rare multi-colour pictograph that not only displayed the typical red colour but also black. Fortunately, two panels still survive today and provide a glimpse of what once was an outstanding gallery of pictographs.

The Arrow Rock name is due to the historic record of a number of arrows lodged in a rock crevice at this location. Jesuit priest Pierre-Jean De Smet wrote:

"There we passed under a perpendicular rock, the crevices of which are filled with arrows. The Indians, as they ascend or descend the lake by canoe, have the custom of letting fly an arrow into the crevices of the rock. The origin and the cause of this custom is unknown to me. It is from this that the first voyageurs called these lakes the Arrow Lakes."[9]

2.4 Recreation Values

Syringa Park is one of the primary camping destinations on the Arrow Lakes Reservoir. As the largest park on the Arrow Lakes Reservoir, Syringa Park has a lot to offer park visitors. The major recreation features contributing to this popularity include easy water access to the large reservoir lake; three kilometres of accessible shoreline; many sandy beaches; a grassland/forest ecosystem rich in wildlife; and a landscape rich in cultural history.

The main recreation activities include camping, fishing, boating, swimming and picnicking that occur in the core use area of the park (Figure 6). Syringa Park has two campgrounds with a total of 86 vehicle accessible campsites and a group campground. There is a year-

[9] The Geography of Memory by Eileen Delahanty Pearkes, 1961.

round hiking trail about four kilometres long that climbs the hillside behind the campground loop to viewpoints that overlook Lower Arrow Lake. The trail is fairly steep and considered a moderate hike. While there are no cycling trails in the park and the terrain is too steep for most cyclists, the road network of the park is used by some for cycling. There is a portion of the Trans Canada Trail across Arrow Lake from Syringa Park that offers mountain biking and hiking opportunities on an old railway bed (see Figure 2).

Large parking areas that were developed did not get the anticipated use so some of this under-utilized parking capacity underwent redevelopment into campsites. Today, the main day use area has a 150 car parking lot (down from 220) and includes 250 metres of beach. There are two other day use areas in the park: one serves campers and has 50 metres of beach and a playground while the other is closer to the park entrance and has two boat launches with parking for 85 cars and 150 metres of beach. The boat launches in the park are heavily used, receiving a five-year average of 5,500 launches annually.

Tulip Creek is outside the core use area but is another recreation feature of the park. The lower reaches on the uphill side of the Deer Park Forest Service Road has a small rock canyon with an attractive 20-metre high waterfall that is popular with photographers while the downhill side at Lower Arrow Lake has an informal day use area for beach activities and picnicking.

A more ambitious backcountry hike is available via the Yellow Pine Trail. This four kilometre trail takes visitors through mature yellow pine, past several granite rock outcroppings and offers intermittent views of Arrow Lake from a terraced hillside.

The park is a popular holiday destination with British Columbians making up about 85% of the visitors followed by Albertans at 14%. The majority of visitors (65%) who stay overnight have travel trailers, while those tenting make up about 22%. Most overnight visitors to the park (63%) are repeat visitors and tend to stay more than three nights confirming the holiday destination role that the park plays. While annual campground attendance has fluctuated marginally over the last five years with no clear indication of a trend, the average annual camping attendance for this period has been around 5,000 camping parties.

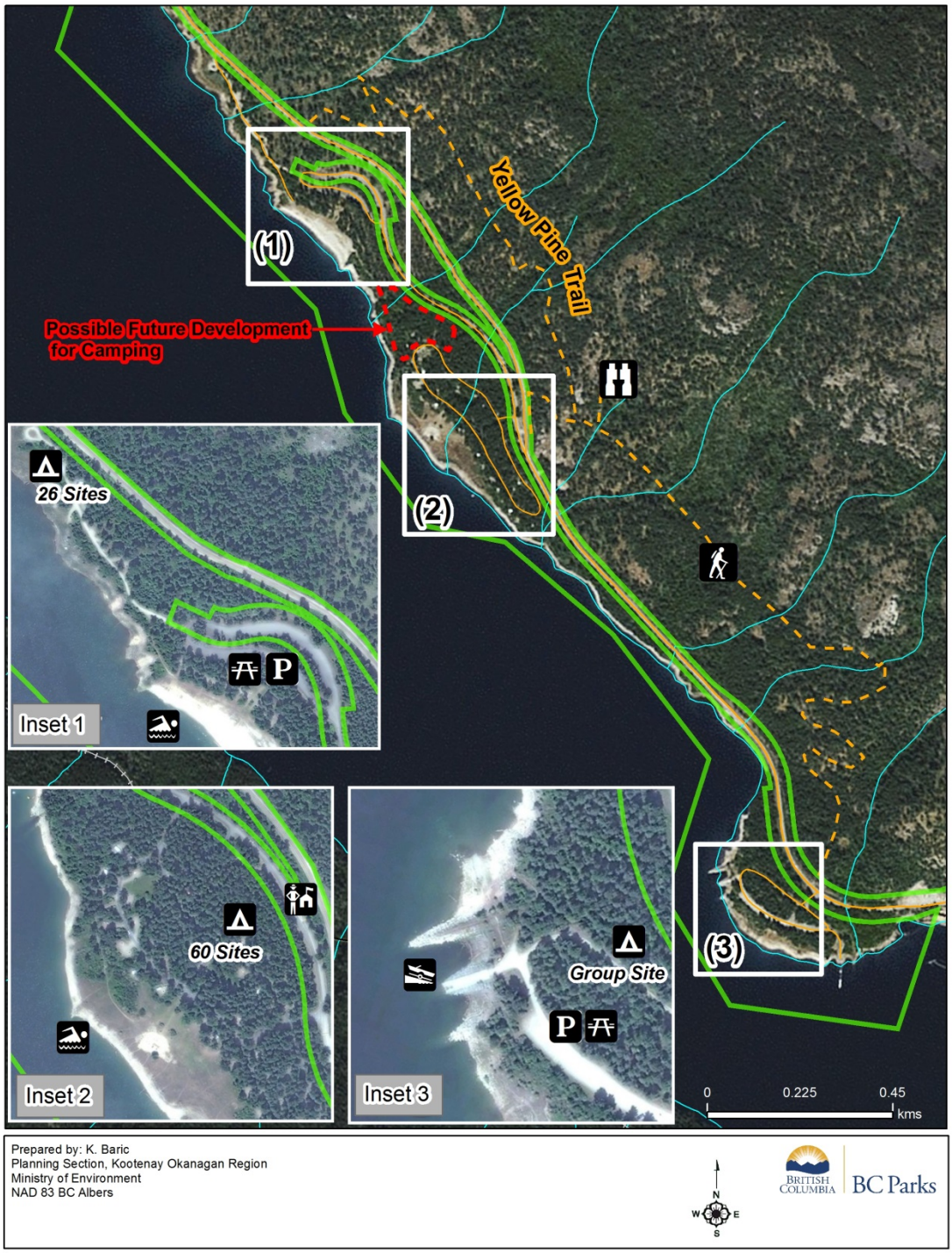

Figure 6: Map of the core use area of Syringa Park.

Plate 9: Concrete boat ramp within Syringa Park (maintained by BC Hydro).

Plate 10: Tulip Creek Falls.

3.0 Management Direction

3.1 Management Objectives and Strategies

3.1.1 Ecosystems

The lower elevation grasslands and open forests of the Very Dry Warm Interior Cedar - Hemlock - Warm Phase (ICHxwa) subzone are highly vulnerable. They are naturally subject to frequent forest stand maintaining fires; however, natural forest succession combined with historic wildfire suppression has resulted in forest in-growth and excessive fuel loading. The latter two can potentially fuel high-intensity fires that could affect the entire ecosystem. Generally, wildlife species in fire-maintained ecosystems are fire adapted to low intensity fires but high intensity fires could displace some animal and plant species. To maintain the values of a fire-maintained ecosystem and prevent intense wildfires and displacement, ecosystem restoration, such as the re-introduction of frequent, low-intensity surface fires or mechanical tree thinning and fuel reduction, is required.

The spread of invasive plants can impact biodiversity, wildlife forage and recreational opportunities. An invasive plant survey conducted in 2015 for Syringa Park showed that Spotted Knapweed is the most commonly found invasive plant in the park followed by Sulphur Cinquefoil, Himalayan Blackberry, Common Burdock, Black Locust and Hoary Alyssum. Roadways, parking lots, beaches and trails are the main areas of infestation. Ongoing management is required for past treated areas.

In 2003, a Vegetation Management Plan to address the need for dry ecosystem restoration in Syringa Park resulted in the treatment of approximately 143 hectares of in-grown forest in the ICHxwa subzone to restore open forest grasslands. However, management direction (e.g., a comprehensive Ecological Restoration Plan) is required to determine the long-term overall strategy for protecting, restoring and managing all of the forest ecosystems in Syringa Park during its predicted transition caused by the effects of climate change.

A common strategy for ecosystem response to climate change has been towards strategies that increase ecosystem resilience. Nevertheless, the lack of a coordinated global response to reduce carbon emissions has moved managers beyond resilience into a strategy of managed ecosystem transformation. Transformation strategies, such as ecological restoration of grasslands and open forests, can help support ecosystem transformation and avoid issues such as the establishment of invasive species.

Urban wildland interface fires are a potential issue that needs management consideration given the close proximity of residential areas and the tendency of the ecosystem to have frequent fires.

Management Objective	Management Strategies
Continue efforts to restore and maintain grasslands and open forest ecosystems in support of ecosystem transformation.	• Develop an Ecological Restoration Plan for the park including updating the approach for restoration and maintenance of dry forest ecosystems. This plan would build upon the existing Vegetation Management Plan and assist in prioritizing future treatment areas and would include management recommendations put forward by the Fish Wildlife and Compensation Program applicable to the Coleman Ranch property. • Continue to implement the Vegetation Management Plan and maintenance activities including tree removal, vegetation management, prescribed burning, and monitoring. • Ensure the Conservation Risk Assessment for the park is up to date and reflects current threats. • Involve First Nations in ecological restoration initiatives, with particular emphasis on Traditional Ecological Knowledge (TEK) when developing prescriptions for vegetation management projects. • Develop a strategy to address the influence of restoration actions on the spread or introduction of invasive plants. • Continue to assess and monitor priority invasive species including Spotted Knapweed, Sulphur Cinquefoil, Himalayan Blackberry, Common Burdock, Black Locust and Hoary Alyssum. • Develop treatments for highest priority invasive plants to eradicate them from the park, as funding is available. • Assess the risk of interface fire along the park boundary and determine appropriate action proportional to the risk. Address interface fire as part of the strategy for the restoration of dry forest ecosystems.

3.1.2 Wildlife

Although the park is located in an area known for abundance of wildlife, there has been very limited information gathered.

There is potential for high bird species diversity to occur in the park, as there are 242 species in the Interior Cedar - Hemlock Zone including 28 species of nesting birds. As inventories in adjacent properties have confirmed the occurrence of 18 nesting bird species, they are likely occurring in the park in similar numbers and using wildlife trees in the park.

The West Kootenay-Boundary Land-Use Plan defined a wildlife connectivity corridor to facilitate wildlife movement from Syringa Park west and north to Valhalla, Kokanee Glacier and Gladstone provincial parks. It is unknown if this corridor is being used.

The Deer Park Forest Service Road, and to a lesser extent the Broadwater Road, may be acting as a barrier for some species and fragmenting their habitat. Species such as Rubber Boa, Coeur d'Alene Salamander and the Northern Alligator Lizard may have difficulty moving between habitats on either side of the road given mortalities observed on the road. Larger wildlife observed are seemingly unaffected by slowly passing vehicles, but are less tolerant of vehicles that stop. Mortality of young Bighorn Sheep (*Ovis canadensis*) had been an issue in the past. Seven auto collision-caused deaths of Bighorn Sheep occurred in the four years after the transplant but improved driver education and signage has significantly reduced these incidences.[10]

The status of the Bighorn Sheep population in the park is unknown. When first transplanted, their numbers grew for four years to a maximum herd size of 69 sheep, but they began to decline after that to a low of 20 in 1992.[11] This decline was consistent with the decline of other ungulate species in the area which was attributed to cougar predation. An intentional reduction of cougar numbers through harvesting occurred in 1992. There have been no studies to confirm the current population of the Bighorn Sheep since then.

Management Objective	Management Strategies
Enhance the knowledge and understanding of the park's wildlife species and their habitats.	• Work with other agencies to collect wildlife and habitat inventory data. • Retain wildlife trees (whenever possible) if the trees may be affected by facilities, recreation or ecosystem restoration. • Work with resource agencies to assess the effectiveness of the connectivity corridor.

[10] Arrow Lakes Bighorn Sheep Update 1992 by Ron Miller, Kootenay Wildlife Services

[11] Ibid.

3.1.3 Species at Risk

As with wildlife, only a small number of the plant species at risk appear to occur in the park. Current information indicates there are 60 red and blue-listed plant species that could potentially occur in the Interior Cedar Hemlock Zone of the park. The lack of information on their occurrence in the park restricts management consideration for all but the known species (e.g., Wild Licorice, Least Moonwort and Hall's Willow Herb). The blue-listed Canyon Wren and White-throated Swift are known to occur within the park.

Management Objective	Management Strategies
Improve information on species of conservation concern including their occurrence and habitat needs.	• Work with appropriate agencies and partners to gather more information about the occurrence of species at risk in the park. • Determine if Wild Licorice, Least Moonwort, Hall's Willow Herb and any other species at risk are occurring in any areas where there is existing or future recreational use or any other management action (e.g., ecological restoration/fuel management). • Establish plots to monitor impacts from human use on species at risk. • Provide public information on trails and at information kiosks to inform visitors and encourage sensitive/low impact use.

Plate 11: Wild Licorice- a blue-listed plant species occurs within Syringa Park (photo credit: Bryan Kelly-McArthur).

3.1.4 Cultural Heritage

Most of the archaeological sites on the Arrow Lake Reservoir are near the shoreline or situated on alluvial fans and, as this area is shared by a high degree of recreational activity, there is high potential in the future for new cultural material to be located.

Management Objective	Management Strategies
Protect cultural heritage and archaeological values existing within the park and work with First Nations to ensure preservation of cultural values in the park.	• Avoid existing archaeological sites when maintaining or providing new facilities as well as activities that trigger ground disturbance. Conduct archaeological overview assessments (AOA) and archaeological impact assessments (AIA), chance find procedures - if required - for those activities requiring soil disturbance in areas of the park not previously disturbed or that have a high likelihood of archaeological values. • For the protection of archaeological values, ensure confidentiality in providing site-specific location information. • When resources are available, and in partnership with First Nations and BC Hydro, perform annual monitoring and surveys of foreshore drawdown (low pool) zones to determine if new archaeological values are present. • In coordination with First Nations, explore interpretive opportunities (kiosks/information panels, site talks) for the public to illustrate the importance of the park and surrounding area to First Nations. • As part of BC Parks' staff oversight of the park operations and maintenance, ensure park operator/campground staff, permittees, contractors and volunteer staff are fully aware and educated in provisions/responsibilities of the *Heritage Conservation Act* and chance find procedures as it applies to the high archaeological/cultural value areas of the park.

Plate 12: The alluvial fan of Tulip Creek within Syringa Park (noting the drawdown zone of the lake).

3.1.5 Recreation

Recreation management over the last few years has primarily focused on strengthening the park as a vacation destination with expansion in camping capacity and associated facilities like washrooms. Although constrained due to landscape, there are still some remaining areas suitable for development within the park for expansion of camping and day-use. The area for potential expansion would likely be limited to the area north of the existing 60-site campground loop, just south of Broadwater Road (see Figure 7).

While the park has diverse water-oriented recreation opportunities like fishing, swimming and boating, it is rather restricted in upland recreational opportunities such as hiking, mountain biking and rock climbing (in the Tulip Creek area). Mountain biking is one of the faster growing recreational activities and many people bring their bikes with them camping. At Syringa Park, however, mountain biking is severely limited by access to appropriate terrain. The only trail in the park is a narrow moderately steep grade used for hiking and nature viewing. Not well known to park visitors, utilization of the Trans Canada Trail (located directly across the lake from the park) can potentially diversify the recreational opportunities in the immediate area. However, access to the trail involves a return trip to Castlegar to cross the Arrow Lake reservoir.

Tulip Creek Falls is one of the major features of the park. It is relatively easy to access because it is only a few hundred metres from the Deer Park Forest Service Road. In the past, public use of the rough trail to the falls was discouraged to protect Coeur D'Alene Salamanders; however, as the population of the species is stable, improved public access is possible. A trail/parking lot could be designed and constructed in an effort to minimize impacts on riparian values.

Management Objective	Management Strategies
Continue to provide a diversity of recreational opportunities and support facilities.	• Retain and improve day use and overnight facilities where appropriate. New campground development would be limited to the existing Intensive Recreation Zone with specific emphasis on the area north of the existing 60-site campground loop and south of Broadwater Road. • Support visitor awareness of recreational opportunities and attractions nearby through information including how to access the Trans Canada Trail. • Consider a more formalized trailhead parking lot to Tulip Creek Falls that minimizes impacts on natural values.

Plate 13: The Coeur D'Alene Salamander.

3.1.6 Potential Park Boundary Additions

Broadwater Road Right-of-Way

A key area that is not included in the boundaries of Syringa Park is the Broadwater Road right of way, which is under the administration of the Ministry of Transportation and Infrastructure (see Figure 7). The right of way includes facilities owned and operated by BC Parks (including the gatehouse, day use parking lots and some campsites). As this part of the right of way only serves the park, it would be prudent to have this area under the legislative authority of the *Park Act* to avoid confusion and ambiguity that overlapping jurisdictions/administration can create.

Former Woods Family Property

The MOE property recently acquired from the Nature Conservancy of Canada (formerly the Woods Family property) requires statutory designation to add the area to Syringa Park. Because the former Woods Family property is irregularly shaped, it is proposed that a portion of Crown land be added to the park to better integrate the addition of the property with the existing park (see Figure 7).

Management Objective	Management Strategies
Complement park values by adding key land areas to the legal boundaries of the park.	• Work with appropriate government agencies to have the administration/ownership of the Broadwater Road right of way transferred to BC Parks. • Recommend that the MOE property acquired from the Nature Conservancy of Canada be added to the park. • Liaise with the Ministry responsible for Crown lands to investigate the possibility of recommending the addition of a small portion of additional land to the park to better integrate the addition of the MOE property with the park boundary.

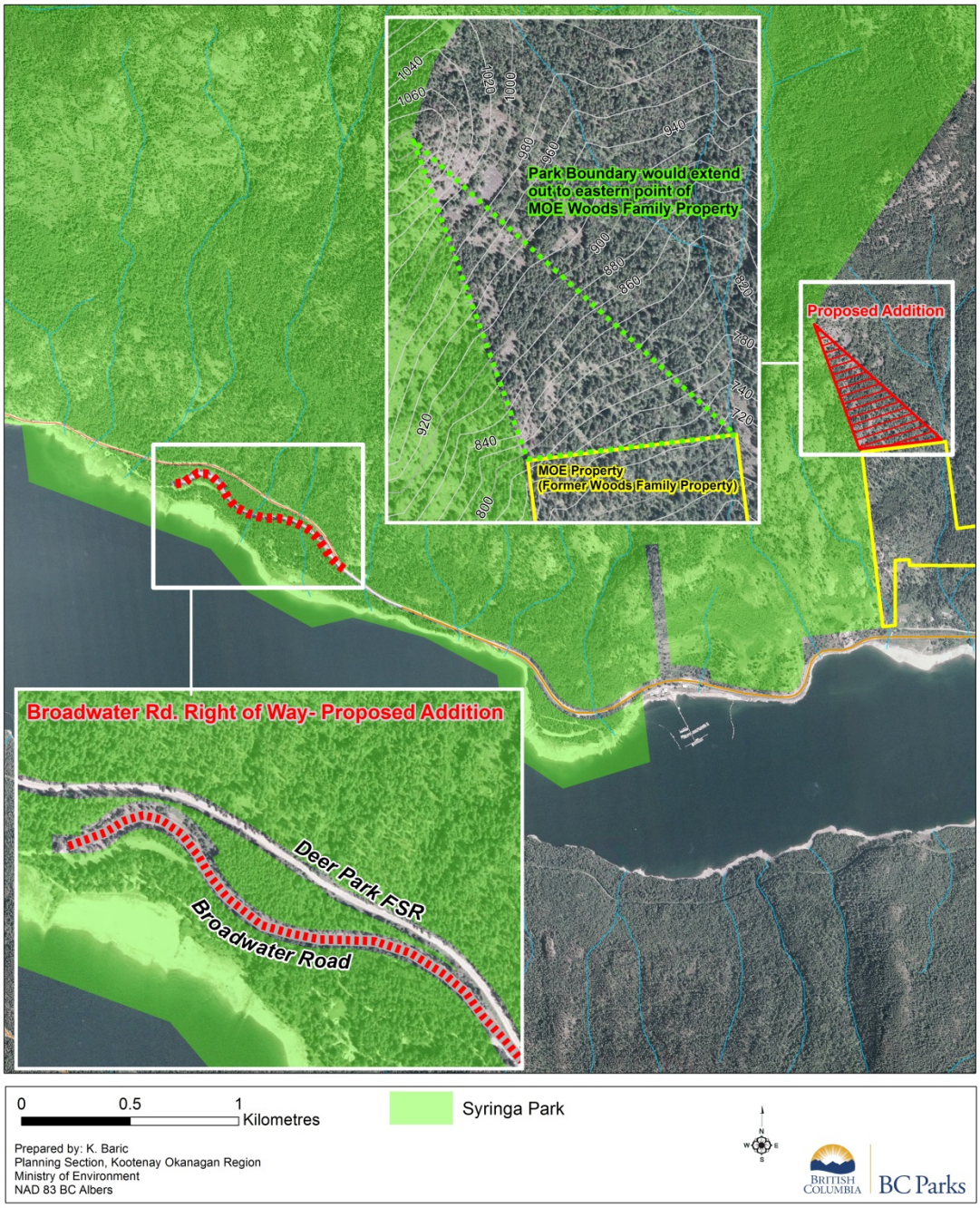

Figure 7: Potential park boundary additions.

3.2 Zoning Plan

In general terms, a zoning plan divides a protected area into logical management units within which certain activities/uses may occur and a particular set of management objectives apply. Zoning physically separates incompatible activities or uses within a park and provides visitors and managers with a quick visual representation and appreciation of how a particular park is managed. Zones are designed to reflect the physical environment, existing patterns of use and the desired level of management and development in a given management unit. There are three zones applied in Syringa Park: Nature Recreation, Intensive Recreation and Special Feature (see Figure 8).

3.3.1 Nature Recreation Zone

Zone Description:

This zone includes all the areas of the park where dispersed recreation occurs along trails and in areas that have a high degree of naturalness. About 98 % or 4,428 hectares of the park are included in this zone. The MOE property addition will be included in the Nature Recreation Zone.

Objective:

To protect scenic values and to provide for dispersed recreation opportunities in a largely undisturbed natural environment.

Management Intent:

The recreation experience in this zone is dependent on a high level of natural qualities where development is subordinate to the natural setting. Appreciation of the natural and cultural values is highlighted by providing trails and interpretation information that enhance the park visitor experience. Future recreational opportunities may include mountain biking if feasible.

3.3.2 Intensive Recreation Zone

Zone Description:

This zone covers all the infrastructure area developed for intensive forms and levels of recreational use. About 1.3 % or 69 hectares of the park are included in this zone. If the Broadwater Road right of way addition occurs, it would be included in the Intensive Recreation Zone.

Objective:

To provide a variety of readily-accessible, facility-oriented recreation opportunities.

Management Intent:

Management of these areas is focused on maintaining high-quality and diverse recreational opportunities. There is intensive management of values, such as hazard trees and invasive plants and the provision of a wide range of facilities and services to enhance park users' experiences, as well as control of impacts.

3.3.3 Special Feature Zone

Zone Description:

This zone covers the Tulip Creek Falls area from the access road to the waterfall. It covers approximately 2 hectares.

Objective:

To protect and present significant natural values, features or processes because of their special character, fragility or natural value.

Management Intent:

The management intent is to support low-impact recreational use by providing facilities such as trails/parking that control public use and is specific to educational or research purposes that protect the Tulip Creek canyon habitat.

Figure 8: Zoning map for Syringa Park.

4.0 Plan Implementation

4.1 Implementation Plan

BC Parks will seek project-specific funding and partners to implement high priority strategies. Specific projects will be evaluated for their priority in relation to the overall protected areas system. Many of the initiatives contemplated are not funded as part of core BC Parks activities so jointly seeking funds or outside partners will be a key aspect of the management plan implementation.

4.2 High Priority Strategies

- Develop an Ecological Restoration Plan for the park including updating the approach for restoration and maintenance of dry forest ecosystems. This plan would build upon the existing Vegetation Management Plan and assist in prioritizing future treatment areas.
- Continue to implement the Vegetation Management Plan and maintenance activities including tree removal, vegetation management, prescribed burning, and monitoring.
- Work with appropriate agencies and partners to gather more information about the occurrence of species at risk in the park.
- In coordination with First Nations, explore interpretive opportunities (kiosks/information panels, site talks) for the public to illustrate the importance of the park and surrounding area to First Nations.
- As part of BC Parks' staff oversight of the park operations and maintenance ensure park operator/campground staff, permittees, contractors and volunteers staff are fully aware and educated in provisions/responsibilities of the Heritage Conservation Act and chance find procedures as it applies to the high archaeological/cultural value areas of the park.
- Work with appropriate government agencies to have the administration/ownership of the Broadwater Road right of way transferred to BC Parks.
- Add the MOE property acquired from the Nature Conservancy of Canada to the park.

4.3 Plan Assessment

In order to ensure that the management direction for Syringa Park remains relevant and effective, BC Parks staff will ensure that the management plan is assessed by BC Parks staff on a regular basis (i.e., at least every 5 years) and this process may involve engagement with First Nations. Minor administrative updates may be identified and

completed at any time (e.g., update protected area details where needed), and will be documented according to BC Parks guidelines. If an internal assessment reveals that the management plan requires updating or substantial new management direction is needed, a formal review by BC Parks may be initiated to determine whether the plan requires an amendment or if a new plan is required. The management plan amendment process or development of a new plan includes consultation with First Nations and an opportunity for public input.

Appendix 1: Appropriate Use Table

The following table summarizes existing and potential future uses in Syringa Park that are and are not appropriate in each zone. This is not an exhaustive list and in the future, others uses may occur in this protected area.

Please note that appropriate uses may be geographically restricted (i.e., only allowed in certain areas of Syringa Park or are only appropriate at certain times of the year). Please ensure your familiarity with the use restrictions as indicated in the table. It is important to review relevant sections of the management plan when interpreting the table.

Appropriate Use Table Legend		
N	**Not an appropriate use**	The use is not appropriate in the indicated zone. If the use currently exists but the management planning process has determined that the use is no longer appropriate in all or part of the protected area, the management plan will include strategies for ending the activity (e.g., phasing out, closing).
Y	**May be an appropriate use**	Some level or extent of this use may be appropriate in the zone indicated. The management plan may provide guidance on the appropriate level of use and may address specific restrictions or planned enhancements (e.g. capacity, designated areas for a particular activity, party size, time of year, etc.). For new or expanded uses, this symbol indicates that the use may be considered for further evaluation. The appropriateness of some activities may not be confirmed until a further assessment (e.g., BC Parks Impact Assessment Process) or evaluation process (e.g., park use permit adjudication) is completed.
N/A	**Not an applicable use in this zone**	It is not feasible for the use to take place in this zone (e.g., mooring buoys in a terrestrial zone).

Activity/Facility	Nature Recreation Zone	Intensive Recreation Zone	Special Feature Zone	Comments
Recreational Activities/Uses				
Boating (human powered and electrical)	N/A	Y	N/A	
Boating (combustion engine)	N/A	Y	N/A	
Camping (designated sites)	N	Y	N	To accommodate special events/specific requests by First Nations, use of areas outside of the Intensive Recreation Zone for camping purposes may occur upon approval by a Park Officer.
Fishing	Y	Y	N/A	
Hiking	Y	Y	Y	
Hunting	Y	N	Y	
Land-based Mechanized Activity (e.g., mountain biking)	Y	Y	N	
Recreation Facilities/Infrastructure				
Boat Launches	N	Y	N/A	
Boat Wharves and Docks	N	Y	N/A	
Campgrounds (vehicle accessed)	N	Y	N	
Picnic Areas (vehicle accessed)	N	Y	N	
Mooring Buoys	N/A	Y	N/A	
Parking Lots	N	Y	Y	
Roads	N	Y	N	
Trails	Y	Y	Y	
Visitor Information Buildings	N	Y	N	
Other Activities/Infrastructure				
Botanical Forest Product Harvest	N	N	N	Except for traditional harvesting/gathering by First Nations (subject to conservation and safety provisions).
Commercial Filming	Y	Y	Y	
Grazing	N/A	N/A	N/A	
Hydro Electric Projects (local run of river)	N	N	N	
Log Storage and Dump Sites	N	N	N	
Trapping	Y	Y	Y	Not in high use areas and under PUP only.
Utility Corridors	Y	Y	N	Limited to current Park Use Permit for distribution line.

Appendix 2: Interior Cedar – Hemlock BGC Zone Wildlife List

Coeur d'Alene Salamander
Leopard Frog
Western Grebe
American White Pelican
Peregrine Falcon subsp. *anatum*
Prairie Falcon
Upland Sandpiper
Forster's Tern
White-headed Woodpecker
Purple Martin
Sage Thrasher
Yellow-breasted Chat
Grasshopper Sparrow
Northern Long-eared Myotis
Northern Pocket Gopher subsp. *segregatus*
Red-tailed Chipmunk subsp. *simulans*
Tailed Frog
Painted Turtle
Rubber Boa
Western Rattlesnake
Double-crested Cormorant
American Bittern
Great Blue Heron
Green-backed Heron
Trumpeter Swan
Long-tailed Duck
Surf Scoter
Turkey Vulture
Bald Eagle
Swainson's Hawk
Gyrfalcon
Sandhill Crane
Lesser Golden-plover
American Avocet
Long-billed Curlew
Short-billed Dowitcher
Red-necked Phalarope
California Gull

Caspian Tern
Barn Owl
Western Screech Owl subsp.*kennicottii*
Short-eared Owl
White-throated Swift
Black-chinned Hummingbird
Lewis' Woodpecker
Yellow-bellied Flycatcher
Canyon Wren
Philadelphia Vireo
Lark Sparrow
Smith's Longspur
Bobolink
Townsend's Big-eared Bat
Wolverine subsp. *luscus*
Fisher
Badger
Grizzly Bear
Bighorn Sheep subsp. *canadensis*
Caribou (southeastern populations)