

PRELIMINARY

MANAGEMENT PLAN

MIRA RIVER PROVINCIAL PARK

CAPE BRETON COUNTY, NOVA SCOTIA

DRAFT

Nova Scotia Department of Natural Resources

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1.0 EXECUTIVE SUMMARY

Located on the Mira River between Sydney and the Fortress of Louisbourg National Historic Site of Canada, Mira River Provincial Park has provided regionally-significant opportunities for outdoor recreation to Nova Scotians and out-of-province visitors for over 40 years. Almost an island in the midst of Mira River, the 86 hectare property provides an attractive setting for a range of nature-based outdoor activities while also protecting important natural and cultural heritage values.

This management plan defines a vision and management philosophy that will guide park management decisions for Mira River Provincial Park over the next 20 years. In addition, the plan establishes a policy and decision-making framework for a major redevelopment of the park which is anticipated to commence in 2009.

Four principal management objectives have been adopted for Mira River Provincial Park. The first is to provide opportunities for a range of regionally-significant nature-based outdoor recreation experiences which complement the site's location on the Mira River. Secondly, the park will provide opportunities for exploration, education and appreciation of the site's heritage values through interpretation, information and outdoor education programs. Thirdly, the park will complement regional and local tourism objectives. Fourthly, the park will protect important natural and cultural heritage features and values.

Management priorities will be directed toward providing opportunities for high quality outdoor recreation activities, along with associated facilities and services, while retaining and enhancing the park's natural and cultural heritage. In keeping with the emphasis on outdoor recreation, the park has been classed as an Outdoor Recreation Park and almost 40 percent its land base is included within a Recreation Development Zone which allows for facility development and more intensive public use. Notwithstanding this emphasis on more intensive types of recreational use and associated facility development (campground, beaches, program areas), the Department remains committed to the protection and enhancement of the park's natural and cultural heritage features and values. To that end, over 60 percent of the park is included within either the Environmental Protection or Resource Conservation zones.

In keeping with the importance placed on providing opportunities for nature-based outdoor recreation activities, Mira River Provincial Park will offer a range of facilities and services. The primary focus of those amenities will be to support destination camping and day-use activities associated with the park's lakeshore setting. A proposed redevelopment of Mira River Provincial Park will include enhancements to existing camping opportunities, development of a park-wide trail system and improvements to the day-use and park entry areas.

The diverse natural and cultural heritage values of Mira River Provincial Park will be interpreted primarily through self-directed opportunities, including brochures, on-site interpretive panels and publications. Live animation has been used on occasion and will continue to be a feature of interpretive and education programming where possible.

Maintaining ecological integrity is an important goal of the park management plan. To that end, the Department will undertake a variety of measures to minimize visitor impacts. Implementation of park zoning, collection of baseline environmental data, monitoring visitor impacts, and implementation of appropriate management techniques will be used to maintain ecological integrity. Implementation of the proposed park redevelopment is anticipated to occur over two phases.

Phase I of park redevelopment is intended to redevelop the existing Peninsula, Freshwater Fen and Open Field camping loops. Phase II includes development of the Brickyard Point camping loop and group use camping area, expansion of the trail system improvements to the day use and park entry areas, a new washroom for Brickyard Point, relocation of the park administration building, improvements to the maintenance yard and realignment of sections of the park road system.

2.0 INTRODUCTION

Mira River Provincial Park, Cape Breton County, is situated on the Mira River, 22 kilometres from Sydney and 17 kilometres from the Fortress of Louisbourg National Historic Site of Canada. Lands were initially acquired for the park in 1962, with major acquisitions occurring in 1968 and 1973. Opened in 1967, the 86 hectare property offers a range opportunities for outdoor recreation activities including camping, picnicking, swimming, canoeing, kayaking, biking and walking. In addition, opportunities exist to interpret the park's natural and cultural heritage features and values. The property was designated under the Provincial Parks Act in 1984.

To ensure management of Mira River Provincial Park is consistent with the intent of the provincial parks program, DNR has prepared this park management plan. Preparation of this plan also coincides with a proposed major redevelopment of the park in 2009.

The plan's purpose is to define a vision and management philosophy that will guide decisions for Mira River Provincial Park over the next 15 to 20 years. In addition, the plan identifies the actions necessary to support that vision and philosophy.

The management plan is based on the Department's legislative mandate under the *Provincial Parks Act and Regulations*, its Provincial Parks Policy, other Provincial and Departmental policies and guidelines, together with the park's heritage and outdoor recreation values. The term heritage values, as used throughout this document, encompasses both cultural heritage and natural environments.

3.0 VISION

The foundation of this park management plan rests on the park vision, a brief statement that presents the broad long-term direction for the park. This vision describes the park management philosophy and what the park will be like in the future.

Vision

Mira River Provincial Park will provide regionally-significant opportunities for a range of nature-based outdoor recreation, interpretation and education activities along with associated facilities and services while conserving and protecting the park's important natural and cultural heritage values.

4.0 PARK VALUES

Mira River Provincial Park contains a range of exceptional park values that are based on the property's location as a peninsula in the midst of the Mira River, the presence of a regionally significant beach and waterway, an archaeological site associated with a former brick yard dating to the early 1700s, existing and proposed walking trails and opportunities for nature-based outdoor recreation, education and tourism.

Natural Heritage

Geology

The Mira River Valley is a dominant topographical feature of southeastern Cape Breton, extending from Framboise Cove northwards to about Marion Bridge and then sweeping eastwards to exit at Mira Bay. The river lies between 320 million year old Carboniferous formations to the north and 500 million year old Cambrian and Precambrian formations to the south. The highly eroded bedrock is covered by a thick layer of glacial till, sands and gravels deposited during the retreat of the last ice age some 15,000 years ago.

Lying in a long narrow valley, possibly along an old fault line, the lower reaches of the river have been dammed by glacial gravels to form a long lake. Along the lower two-thirds of the river, these glacial deposits also formed numerous peninsulas such as the one Mira River Provincial Park occupies. About three kilometres from the mouth of the Mira, the river narrows and cuts a valley through bedrock to reach the Atlantic Ocean.

The carboniferous bedrock to the north of the Mira includes numerous coal seams - evidence of the area's environment 300 million years ago. At that time shallow lakes, bays, swamps and coastal flood plains covered much of the region. Abundant fossils can be found in this coal. These coal seams supported the region's long history of coal mining. South of the Mira, fossils are also imbedded in the Cambrian sandstones and shales.

Marine Environment

The Mira River has a drainage area of approximately 648 square kilometres, with the Gaspereau, Salmon and Trout rivers, along with Black Brook, as its main tributaries. Along the southern part of its course, glacial deposits have interrupted the flow to form a chain of small lakes which are all

less than 15 metres above sea level. Tidal waters move back and forth in the eastern portion of the river, although the influx of salt water any distance beyond the river mouth is limited.

The waters of the Mira River support a variety of fish species including sea trout, shad, perch, American eels, striped bass, mackerel, herring, brook trout, speckled trout, minnows and smelts. Consequently, the river is popular for fishing.

Flora

The forest cover of Mira River Provincial Park is comprised generally of tolerant hardwoods, predominantly sugar maple, on the western-most portion near Joes Point, with a larger portion of mixed woods through the central portion and softwood stands along the western shoreline, around the maintenance yard and immediately south of the northern-most walk-in campsites. Large areas of non-forested areas are associated with the campground. A six hectare wetland is located along the northern-most shoreline. Portions of the park remain relatively undisturbed and in a region with a long history of human development provide an opportunity to explore and appreciate the area's natural heritage.

A thorough inventory of the flora of Mira River Provincial Park has not yet been completed.

Fauna

Due to its small size, long history of human development and use and island-like setting, Mira River Provincial Park is home to a limited number of mammals, including snowshoe hare, red squirrels, voles, moles, bats, field mice and porcupine. Common birds which inhabit the park and surrounding woods and waters include bald eagles, loon, blue heron, Canada goose and a variety of owls, ducks and other waterfowl.

Although having limited wildlife values, the park does provide some relatively natural habitat in an area of increasing human development and use.

Cultural Heritage

The first inhabitants of the area were the Mi'kmaq who established seasonal camps along the Mira River. In the early 1700's, French settlers arrived and soon began clearing the land. In 1727, the French developed a brickyard at what is now known as Brickyard Point in Mira River Provincial Park. These bricks were used in the construction of the nearby Fortress of Louisbourg which had begun in 1719. The brickyard operated on and off until the early decades of the twentieth century. Even today, a walk along the shore at Brickyard Point will reveal scattered bricks that remain from this bygone era.

By 1763 the English gained control of Cape Breton Island. While some French settlers returned to France, many others remained. Later, large numbers of United Empire Loyalists and Scottish immigrants settled in Cape Breton.

The park provides an authentic setting to present the story of aboriginal use of the Mira River. As well, there are visible remnants of early French, and later English, occupation of what is now Mira River Provincial Park.

Outdoor Recreation

Mira River Provincial Park offers a range of opportunities for outdoor recreation activities. Situated on the 55 kilometre-long Mira River, and within a short drive from the greater Sydney area, the provincial park is popular for pleasure boating and other recreational activities including fishing and swimming. The park offers one of only a limited number of freshwater swimming opportunities in proximity to the Sydney area.

The park offers public access to Mira River and provides facilities and services to better enjoy the area's recreational amenities. These facilities and services include a campground, picnic area, unsupervised swimming area, boat launch, picnic area, walking trails, a playground, parking and washrooms.

The proposed redevelopment of Mira River Provincial Park would enhance existing outdoor recreation opportunities and add complimentary opportunities including an expanded system of walking trails, walk-in campsites and off-season parking.

Outdoor Education

A number of opportunities exist at Mira River Provincial Park to enhance public understanding and appreciation of natural and cultural heritage values. Geology and earth history features of interest are evident at the park and surrounding areas and the park offers an excellent location to present the story of the evolution of the region's landscape.

Human history, including pre-contact aboriginal use, early French industry and, later, English settlement and use, can be told from Mira River Provincial Park.

Tourism

Mira River Provincial Park plays an important role in regional tourism efforts. The park provides an accommodation base for campers that is close to the greater Sydney area and the nearby Fortress of Louisbourg National Historic Site of Canada. It also offers one of the best freshwater swimming opportunities in eastern Cape Breton County and access to the Mira River for boating.

5.0 PARK OBJECTIVES

Management objectives for Mira River Provincial Park will focus on providing regionally significant opportunities for outdoor recreation, interpretation and education centred on the park's natural and cultural heritage values and protecting the site's heritage values, including natural processes,

ecological functions, and selected cultural sites. In addition, the park is intended to play an important role in complementing regional tourism objectives.

The following are the key management objectives for Mira River Provincial Park

Outdoor Recreation

To provide high quality nature-based, destination day-use and overnight experiences which emphasize regionally-significant outdoor recreation opportunities, including camping, picnicking, swimming, canoeing, kayaking, biking and walking.

To enhance outdoor recreation experiences, Mira River Provincial Park will provide a range of complimentary facilities and services including a campground, picnic, swimming and day-use areas, washrooms and changerooms and a system of walking trails.

As part of the Department of Natural Resources' commitment to maintaining ecological integrity, the planning, design and construction of park trails and infrastructure will incorporate sustainable development strategies and environmental protection measures. Key aspects of this ecologically sustainable design approach include limited new park development, a requirement that new infrastructure support park goals and objectives and maintaining a portion of the park in a relatively natural condition.

Heritage Appreciation

To provide opportunities for exploration, education, and appreciation of the park's heritage values through interpretive, information, and education programs.

Heritage appreciation programs will emphasize significant natural and cultural heritage features and themes relating to flora, fauna and human settlement and use.

In particular, interpretive and educational programs will focus on earth history and successive human occupations of the park and surrounding areas by aboriginal, French and English peoples.

Protection

To protect biodiversity and natural processes as well as important cultural values of Mira River Provincial Park.

Park management will ensure protection and conservation of important natural and cultural heritage values. In particular, protection efforts will focus on a 6 hectare wetland complex and archaeological features associated with Brickyard Point.

Tourism

To serve as a regionally significant tourism attraction for both Nova Scotians and out-of-province visitors emphasizing high quality coastal recreation opportunities, including both camping and day-use facilities, in close proximity to Fort Louisbourg National Historic Site of Canada.

The park will be managed and promoted to serve both Nova Scotians and out-of-province visitors. In addition, it will complement and enhance regional tourism infrastructure, opportunities and strategies

6.0 PARK CLASSIFICATION

Mira River Provincial Park, by virtue of its outstanding outdoor recreation capabilities, regionally significant beaches and waterway resources, will be managed as an “Outdoor Recreation Park” as defined by the Provincial Parks Regulations. An Outdoor Recreation Park incorporates quality recreational resources capable of supporting a wide variety of outdoor activities and is established to meet the recreational needs of Nova Scotians and out-of-province visitors.

7.0 PARK ZONING

Park zoning allocates park lands and waters on the basis of the importance attached to their protection as heritage resources and to their capability and suitability for recreational use and associated facility and service development. Zoning defines the degree of protection, conservation, and development that may occur within respective park areas. The Provincial Parks Regulations establishes three park zones: Environmental Protection, Resource Conservation, and Recreation Development. The first two are protection oriented, while the third allows for more intensive development and use.

All three zones will be used at Mira River Provincial Park (Figure 1).

Environmental Protection Zone

The Environmental Protection Zone includes park lands or waters that are highly sensitive or contains significant natural or historic resources that require protection. Within this zone, interpretive, educational and scientific activities are permitted where they do not conflict with the underlying protection objectives. At Mira River Provincial Park, a wetland habitat consisting of 6 hectares, or 7 percent of the park, is zoned Environmental Protection.

Resource Conservation Zone

The Resource Conservation Zone includes those park areas which contain significant natural, cultural, and recreational features and landscapes requiring a high standard of conservation. This zone permits activities and land uses that do not conflict with or compromise the inherent natural character and aesthetic qualities of the park. The Resource Conservation Zone at Mira River Provincial Park encompasses 47 hectares, or 55 percent, of the park land base. These lands include most of the park's shoreline, a majority of one of three fingers of land which radiate from the park centre and provide a buffer between the Recreation Development and Environmental Protection zones.

Recreational Development Zone

A Recreational Development Zone includes an area of a park that is capable of supporting the development of facilities and services associated with a range of outdoor recreation activities and more intensive visitor use. This zone is used to focus park facilities and services, as well as public use, within the most appropriate park areas.

Mira River Provincial Park includes 33 hectares, or 38 percent of the park land base, within the Recreation Development Zone. This zone encompasses the campground and day-use areas, along with associated facilities including park roads, administration centre, washrooms, park maintenance building and park programming area.

Special Management Areas

The Resource Conservation Zone and, to a lesser extent the Recreation Development Zone, may also incorporate and protect small, scattered sites with highly sensitive or significant natural or historic sites and features. These sites and features may normally be included within an Environmental Protection Zone but due to their small landbase, are incorporated into the Resource Conservation Zone as Special Management Areas.

One such Special Management Area within the Resource Conservation Zone is Brickyard Point. In consultation with the Nova Scotia Museum, management guidelines will be developed for this archaeological site to ensure park management and potential future interpretive proposals are complementary.

Park trails and roads are subject to the zoning criteria of the area in which they are located.

8.0 ECOLOGICAL LANDSCAPE CLASSIFICATION

The Department of Natural Resources uses an Ecological Land Classification (ELC) system to group geographic areas based on similar ecological criteria, including both biotic and abiotic components.¹ Nova Scotia has been divided into 39 ecodistricts that have been judged distinctive on the basis of broad-scale elevation, macro climate as influenced by elevation, coastal proximity, geology and landforms. Ecodistricts are generally mapped at a 1:250,000 scale and are used by DNR to evaluate ecological representivity. Ecological representivity is important in parks and protected areas planning as a measure of the extent to which those areas encompass ecological variety or biodiversity.

Mira River Provincial Park is situated in the Bras d'Or Lowlands Ecoregion which encompasses the lowland areas around the Bras d'Or Lake and the Sydney Coalfield, Boularderie Island, the Salmon River Valley on the east side of the East Bay Hills and the Mira River valley. Maximum elevation within the park is approximately eighteen metres.

Two ecosystem types occur within the bounds of the park reserve. Well drained, medium textured soils over hummocky terrain cover the entire park with the exception of one small island. The latter is classed as a well drained coarse textured soils over hummocky terrain. The natural forest cover of the predominant ecosystem was dominated by temperate tolerant deciduous forests as found in the relatively undisturbed western-most extension of the park. Much of the park has a long history of disturbance, however, and a large portion of this natural forest cover has been replaced by open fields used for camping.

9.0 MANAGING FOR ECOLOGICAL INTEGRITY

Ecological integrity is a measure of the condition of biodiversity in a given area and means that native species are present at viable levels and the ecological processes are present to support the continued viability of those species. Biodiversity is a fundamental indicator of ecological integrity. Retaining or enhancing the integrity of both terrestrial and aquatic ecosystems will be an important consideration in all park management decisions.

In a more practical manner, an ecological system will be considered to have integrity if:

- its structure and function are intact;
- its native components and processes are likely to persist;
- human use and facilities are compatible with the park ecosystem's finite capacity to sustain use in type, amount and timing.

Ecological integrity must be maintained and, where possible, enhanced, to ensure the sustainability of both the natural environment and the human uses of the park. As a first step, inventories of the flora and fauna at Mira River Provincial Park will be completed so that park managers have an

¹ . Ecological Land Classification for Nova Scotia. Vol. 1 – Mapping Nova Scotia's Terrestrial Ecosystems. Report DNR 2003-2. N.S. Department of Natural Resources, 2003.

understanding of the natural values they are responsible for. The integrity of existing ecosystems will also be evaluated to determine what actions are necessary to maintain or enhance those ecosystems.

Science-based monitoring of ecosystems will also be implemented to provide ongoing information on the health of park ecosystems. A focus of this monitoring will be the impact park visitors have on park values.

10.0 PARK DEVELOPMENT CONCEPT

The park management plan provides a vision and broad policy framework for the provision of opportunities for outdoor recreational and educational activities, the development of associated facilities and services and the protection and conservation of significant and sensitive park features. Under the umbrella of the management plan, the park development concept describes the elements of park development, including their location, inter-relationship and rationale.

Park Development Concept

Park development provides the facilities, infrastructure and appropriate opportunities necessary to achieve the park vision and objectives. In light of the classification of Mira River Provincial Park as an Outdoor Recreation Park, and the consequent emphasis on the provision of high quality opportunities for outdoor recreation activities, the park will offer a range of facilities and services (Figure 2).

Mira River Provincial Park has been in operation since 1967. It currently offers 148 campsites, three unsupervised beaches, boating access to the Mira River for registered campers, a picnic area, walking trails and associated amenities such as a comfort station and change rooms. In 2009 a major redevelopment of park facilities will commence. While this initiative will see the addition of some new facilities and services and the expansion and upgrading of others, the main focus of redevelopment is to enhance the delivery of existing service levels through better organization and design of park elements.

The proposed park re-development will provide enhanced facilities and services that support opportunities for both overnight and day-use activities associated with the park's location in the midst of Mira River.

The following park elements are included in the proposed park re-development (Figure 3).

Park Entry

The park entrance off Brickyard Road will be enhanced through improvements to site distances, signage and landscaping. In addition, a small (8-12) car parking lot will be created to better accommodate off-season use.

Park Trail System

A park-wide trail system is proposed to enhance outdoor recreation opportunities. The trail system will provide a unique range of intensive and extensive opportunities and experiences and will cater to a diverse range of abilities and user groups.

Trail kiosks will be strategically located to inform park users of trail experiences and opportunities. The trail planning process will identify over-riding trail themes, desired experiences and will provide the terms of reference for detailed trail planning and layout. Trail interpretive and directional signage will complete the trail system.

Trail standards will complement park resource opportunities and constraints, but generally a year-round multi-purpose barrier-free non-motorized trail system is envisioned. Cycling will be limited to park roads.

Camping

A range of camping experiences will be provided by upgrading existing camping loops and redefining others. Of particular note is the conversion of one drive-in camping loop to walk-in sites and the conversion of the Brickyard Point picnic loop to a campground loop.

Park Programming / Amphitheatre Area

The proposed program area will offer park interpretation and educational programming. Programming will be accessible to park visitors and the local community. An amphitheatre and adjacent group shelter

Group Camping

A small group camping area is proposed to accommodate 3 groups of 25-30 people each. A common field or program area with toilets will be included.

11.0 OPERATIONAL POLICIES

A park operating plan will be prepared to provide the necessary information required to operate the park on a day-to-day basis. In addition to addressing the following operational policies, the park operating plan will include such topics as budget, staffing, public health and safety, maintenance schedules and enforcement.

The park operating plan will identify requirements necessary to operate Mira River Provincial Park to existing park standards.

Cultural Heritage

Cultural heritage sites and features of particular interest are primarily associated with the former brickyard which dates from the 1700s. In consultation with the Nova Scotia Museum, heritage resource management efforts will focus primarily on the conservation of one area near Brickyard Point. Regardless of the degree of active management, heritage values will be protected by the Provincial Parks Act and provisions of this management plan.

Enforcement

DNR will develop an Enforcement Plan that determines a general level of resources necessary to provide an enforcement presence at Mira River Provincial Park.

Fire Management

As part of fire suppression efforts, a “fire management plan” has been prepared. Key elements of the plan include aggressively fighting all natural fires and an evacuation plan for park users in the event of a fire.

12.0 SPECIAL MANAGEMENT ISSUES

Cemetery

Separate from, but within, Mira River Provincial Park is a cemetery owned and managed by the Catholic Church. Park management will continue to ensure public access to the cemetery and that adjoining park development and use will respect the sanctity of the cemetery.

13.0 IMPLEMENTATION STRATEGY

As part of the Canada - Nova Scotia Infrastructure Stimulus Fund, \$800,000 has been committed for the redevelopment of Mira River Provincial Park. These funds must be expended by March 31, 2011.

This redevelopment will be implemented in two phases. In general, Phase I will see the redevelopment of the existing camping loops. Phase II involves the construction of a new camping loop at Brickyard Point, redevelopment of the day use and programming areas, construction of an off-season parking area and completion of a park-wide trail system.

14.0 PLAN REVIEW

The vision and objectives of this plan are intended to guide the management of Mira River Provincial Park for the next 20 years. The Department of Natural Resources will undertake a review of the park management plan every five years, or sooner if required. In considering any significant deviation from this plan, the Department will provide opportunity for public review and comment.

FIGURE 1 PARK ZONING

FIGURE 2 PARK CONCEPT

FIGURE 3 PARK DEVELOPMENT CONCEPT