

Appendix A

Summary of Background Information

PREFACE

Strathcona-Westmin Provincial Park occupies a small area at the centre of Strathcona Provincial Park. The larger park dominates discussion of the area. The features, concerns and history of Strathcona-Westmin are detailed in documents discussing Strathcona Provincial Park. The following information has been extracted from a very detailed treatment written for preparation of the Strathcona Provincial Park Master Plan. The Master Plan Background Report was prepared by Jean Hnytka in 1990 and the Natural and Human History Themes for Strathcona Provincial Park was prepared by Betty J. Brooks in 1989 and should be consulted if more detailed information is required.

TABLE OF CONTENTS

| | |
|--|----|
| 1. INTRODUCTION | 48 |
| 2. NATURAL RESOURCES | 48 |
| Physiography..... | 48 |
| Climate..... | 49 |
| Biological Resources..... | 49 |
| Vegetation..... | 49 |
| Water Resources..... | 50 |
| Wildlife..... | 51 |
| Fish..... | 53 |
| 3. CULTURAL RESOURCES | 53 |
| Native Peoples and History..... | 53 |
| Park History..... | 54 |
| 4. RECREATIONAL AND VISUAL RESOURCES | 55 |
| Outdoor Recreation Feature Inventory..... | 55 |
| Visual Resources..... | 55 |
| 5. LAND TENURE, OCCUPANCY RIGHTS AND PARK BOUNDARIES .. | 55 |
| Park Boundaries and Government Jurisdiction..... | 55 |
| Park Use Permits..... | 56 |
| Land Tenures..... | 56 |
| Private Inholdings..... | 56 |
| 6. RESOURCE USE AND ACTIVITIES | 56 |
| Introduction..... | 56 |
| Mineral Tenures and Mining Activity..... | 57 |
| History of Park Establishment and Mineral Claims Policy..... | 57 |
| Present Mineral Tenure Status..... | 58 |
| Mining Activity..... | 58 |
| Forest Resources and Forestry Activity..... | 58 |
| Permitted/Licensed Uses..... | 58 |
| Hunting..... | 58 |
| Fishing..... | 58 |
| Trapping..... | 58 |
| 7. VISITOR SERVICES | 59 |
| Access..... | 59 |
| Accommodation and Campgrounds..... | 59 |
| Day use Facilities..... | 59 |
| 8. MARKET AND USE ANALYSIS | 59 |
| Existing Use, User Characteristics and Attitudes..... | 59 |

Strathcona-Westmin Provincial Park (SWPP) is located at the mountainous core of Strathcona Provincial Park. SWPP is 63 km southwest of Campbell River and contains 3,328 ha, 1.5% of the size of Strathcona Provincial Park.

SWPP was established as a separate park unit because of the presence of an operating mine and holds a special status of Class "B" Park. This status differs from Class "A" Park status by allowing specified industrial activities to occur as non-conforming uses while minimizing the impact on other natural and recreational values of the Park.

The mine was established in the mid 60's to extract minerals staked in the early 1900's. Current reserves of ore will keep the mine operating for the foreseeable future. Commodity prices and discovery of new ore reserves will determine how long the mine operates.

SWPP contains special recreational and conservation values. Myra Falls and trail access to backcountry areas are the important recreation features while fish habitat in the lower Thelwood Valley and adjacent elk habitat are important conservation features.

The mine has created the need for special management. The primary issue is long term protection of water quality and restoration of impacted habitats as mining activities are scaled back and lands are no longer required for mining.

The approved master plan for Strathcona Provincial Park provides zoning restriction for lands adjacent to SWPP. The zoning ranges from Wilderness to Nature conservancy. This zoning recognizes the special nature of these lands and their need for protection. The mine represents a conflict with this objective and necessitates special care to ensure that all the negative impacts of mining are minimized.

Physiography

Holland, 1964, classified the province into physiographic units. This system places SWPP into the Outer Mountain Area of the Western System of Canadian Cordillera. The Outer Mountain Area is subdivided into three smaller units; the Park is located in the Insular Mountains subdivision. This unit is further subdivided into subunits and the Park is entirely contained within the Vancouver Islands Mountains subunit.

SWPP lies along the mountainous spine of these mountains in the area of the unit called the Vancouver Island Ranges. This is an area of rugged topography created by Pleistocene uplift and dissection, the dominant feature is Mount Myra(1,808 m).

Two rock types make up the Park's geology. The dominant rock groups are volcanic principally volcanic breccia, tuff and argillite. Small areas of gabbro, peridotite, and diabase are present along the northeast boundary of the Park. The oldest rocks are volcanic flows of the Sicker Group of Palaeozoic origin.

Climate

SWPP has a maritime climate which can be typified by mild temperatures, long cloudy periods, small temperature ranges, heavy precipitation, wet mild winters, cool fairly dry summers and long frost free seasons. SWPP has a mean annual temperature of 9.2 C and mean annual precipitation of 3,080.7 mm. Because of its location in the interior of Vancouver Island, snow is common; mean annual snowfall is 80.6 cm.

Biological ResourcesVegetation

The province has been divided into fourteen (14) zones based on the ecosystem classification system for forest and range lands developed by the Ministry of Forests to describe vegetation patterns for forested lands. Five of these zones are found on Vancouver Island. SWPP has three; Alpine Tundra, Mountain Hemlock and Coastal Western Hemlock.

The vegetation patterns of the Park have been modified by human activities. Reservoir clearing, fire and, mine development have contributed to the present plant community distribution.

Alpine Tundra

This zone is a minor unit and found at high elevation, above 1500 m on the windward side of Vancouver Island. The summit of Mount Myra is the only location that this zone is found in the Park.

The extreme climate and lack of habitat diversity does not support a wide diversity of wildlife species. White tailed ptarmigan have been reported from around Mount Myra.

Mountain Hemlock

Found between 900 m and 1,500 m, the Mountain Hemlock Zone is characterised by an uneven pattern of old growth stands composed largely of mountain hemlock, Amabilis fir and yellow cedar.

Two subzones of this zone are found in SWPP; moist maritime, and at higher elevations, the moist maritime Park land. These subzones are represented by the windward variants of both. The Park land subzone is distinguished by discontinuous cover as compared to the continuously forested cover of the lower elevation subzones.

Heavy snow cover and cool moist winters limit the range of species which use this zone. Most species are not full time residents. Vancouver Island Marmot is found in this zone's Park land or herb meadow habitats; however, none are found in the Park.

Coastal Western Hemlock

This zone is found in valley bottoms and up to 900 m. Two subzones of this zone are found in SWPP; the moist maritime submontane variant and the moist maritime montane variant.

This zone contains one of the most diverse arrays of habitats of any in British Columbia. Species diversity is very high. Important species in Strathcona-Westmin Provincial Park are Black-tailed Deer, Black Bear, wolf, Roosevelt Elk, and beaver.

Water

SWPP includes the lower portion of two major drainage, Myra, Price, and Thelwood Creeks, as well as portions of Buttle Lake.

Both of these drainages have been used for hydro-electric power generation and water supply by Westmin Resources Ltd. The reservoirs for power generation are outside SWPP. Myra Creek is used as a water supply for the mine.

Water quality is a concern as the ore mined in the Park is acid generating and represents a risk to the water quality of the lake and its biological environment. As well milling of the ore on site could present a problem to water quality.

Westmin has taken measures to assure water quality. The systems used to ensure that the water entering the Buttle Lake is uncontaminated require maintenance and monitoring to insure they are functioning properly.

Buttle Lake is located in the watershed that supplies water to the community of Campbell River. Campbell River is a primary salmon producing system. The water quality is therefore very important and sensitive issue. Any use in the watershed which could affect water quality is of major concern.

Wildlife

Undisturbed habitats within SWPP are Ltd.. The most significant habitats were the old growth valley bottom. These have been disturbed by fire, flooding, logging, and mining. Very little of them remains.

Of the remaining habitats, the most important and sensitive are the riparian and estuary areas of the lower Thelwood Valley. These habitats are important to elk, Trumpeter Swans, bears, wolves and beaver.

Large carnivores, especially black bears, are a special concern as they represent a potential threat to humans. The lower elevations of Strathcona-Westmin Provincial Park contain significant habitat suitable for bears. Blood (1987) indicates that bears are abundant in the Park. In the past, garbage has been a problem at the mine site. This issue has been dealt with; however, bears still often come into conflict with humans at the mine. Management planning is required to ensure that bear populations are not put at risk due to human related problems. Recreational activities in the Park will have to be monitored to ensure that conflicts are minimized.

The Wildlife Branch uses a broad classification system, Ecoregions, to describe habitats for the province. SWPP falls into the Leeward Island Mountains Ecoregion of the Eastern Vancouver Island Ecoregion. Important habitat within this ecoregion are flood plains, estuaries, subalpine meadows, southerly aspects, including old growth and young seral stages, avalanche tracks, salmon streams, and seepage sites

Rare and Endangered Species

The province has established a list of species at risk. The list is divided into three categories based on risk. The Red List contains species which are candidates for endangered or threatened status. The Blue List contains species which are sensitive or vulnerable. The third list, Yellow, contains species of management concern.

SWPP does not have a large enough area to contain a complete habitat for any one species. However, several species that are Red-Listed use portions of the Park at least part of the year. These include Trumpeter Swans and Vancouver Island Wolverine.

Blue-Listed species include: Bald Eagle, Marbled Murrelet, Roosevelt Elk, Western Wolverine.

Mammals

Deer, elk, and bears are the most visible species in the Park. However marten, mink, wolf, cougar and beaver have been seen in the area of the Park. A key issue will be to ensure that bear/human conflicts are minimized.

Roosevelt Elk

This is a species of special interest. Historically, elk were present in the valley until the early 1970's. After that time they were not present. Recently, a small population has returned to the Thelwood Valley. They appear to be a non-migratory population and expanding in size. The concern will be to ensure that this population is not disturbed by recreation and industrial activities.

Birds

No specific surveys of the birds in SWPP have been undertaken. Approximately 157 species have been recorded in Strathcona Provincial Park; not all will be present in SWPP. The Friends of Strathcona Provincial Park have for several years conducted spring bird counts in the Park.

Trumpeter Swans

Swans are frequently seen foraging in the estuaries of the Thelwood and Myra Creeks during the winter.

Bald Eagles

Eagles are winter visitors.

White-Tailed Ptarmigan

The White-Tailed Ptarmigan has been reported from the Mount Myra area.

Amphibians and Reptiles

No specific surveys for amphibians and reptiles have been undertaken in SWPP but several species of amphibians, three species of garter snake, and one lizard are reported or expected to occur in Strathcona Provincial Park.

Fish

Three species of salmonoid utilize SWPP; rainbow, cutthroat, and Dolly Varden trout. Thelwood Creek is an important spawning area for cutthroat and rainbow trout. There is a

resident population of trout above Myra Falls.

Sculpins and stickleback are present in SWPP's waters but no detailed inventories of these species have been undertaken.

The primary concern will be to maintain water and habitat quality so these species are not threatened by development.

Native Peoples and History

Aboriginal use is not documented for SWPP. It is probable that First Nations Peoples visited the area.

Park History

The history of Strathcona as well as SWPP is well documented in Baikie(1986). Following is a summary of key dates:

- 1865 James Buttle's exploration and discovery of Buttle Lake
- 1894 Exploration of Buttle Lake by Reverend W. W. Bolton.
- 1909 Exploration of Buttle Lake and Thelwood Drainage by Price Ellison; travelled down Lake and up Price Creek and over a pass to Alberni
- 1911 Creation of Strathcona Provincial Park
- 1913 First addition to the Park
- 1918 ***Strathcona Provincial Park Act*** amended to allow staking of mineral claims
- 1927 Act amended to allow authority to grant water licenses
- 1951 Permission granted to flood Buttle Lake
- 1957 Water level of Buttle Lake begins to rise
- 1959 Western Mines (later to become Westmin Resources Ltd.) establishes mine in the Park
- 1964 Road along Lake developed to access mine site
- 1966 Mine operation commences
- 1967 Mine tailings disposed in Buttle Lake
- 1973 Prospecting and exploration of mineral claims prohibited in provincial parks
- 1980 Discovery of the HW ore body and proposed expansion of mine operations
- 1987 Strathcona Recreation Area created to encompass all mineral tenures in Strathcona Provincial Park
- 1989 Recreation Area cancelled and Class "B" park created over just the Westmin Claim area. Called Strathcona-Myra Park
- 1990 Strathcona-Myra name changed to Strathcona-Westmin

Section Four:**RECREATIONAL AND VISUAL RESOURCES****Outdoor Recreation Feature Inventory**

The outdoor recreation features of SWPP have been mapped (Ministry of Lands, Parks, and Housing, 1984). Several features of high significance were noted in SWPP: the mountains surrounding Buttle lake particularly Mount Myra, Myra Falls, and the lower Thelwood Valley.

Visual Resources

The visual resources have been mapped (Ministry of Lands, Parks, and Housing, 1983). The shoreline and surrounding slopes of Buttle Lake are noted as having a very high scenic distinction rating. Myra Valley has a moderate rating and Thelwood Valley has a very high rating (it is part of the Buttle Lake unit).

**Section Five:
BOUNDARIES**

**LAND TENURE, OCCUPANCY RIGHTS,
AND PARK**

Park Boundaries and Government Jurisdictions

SWPP is a Class “B” Park under the *Park Act*. This designation allows other than conservation and recreation activities where they are not detrimental to the recreational values of the park concerned.

The present boundaries are the result of a long series of boundary changes. The current boundary is coincidental with the extent of Westmin Resources Ltd. mineral rights. These changes are a reflection of changing societal values and the emphasis they place on preservation of natural areas.

Jurisdiction

BC Parks is responsible for all matters including fish and wildlife species under provincial control, management of facilities, signage, refuse, fire control in the Park.

This responsibility is subject to the application of the *Heritage Conservation Act*, *Environment and Land Use Act*, *Waste Management Act* and Section 17 of the *Mineral Tenure Act*.

Federal statutes and regulations apply in the Park.

Park Use Permits

Park Use Permits are required for all commercial activities in the Park. Following is a list of valid Park Use Permits in SWPP.

| Permit | Holder | Purpose |
|---------------|-------------------|--|
| 1261 | Westmin Resources | Thelwood and Jim Mitchell Lake Dams, penstocks, powerhouse and transmission line |
| 1363 | Westmin Resources | Mine site |
| 1364 | Westmin Resources | Hydro-electric power generation, transmission line, and roads |

Land Tenures

The only encumbrances on lands in the Park are either mineral claims or mining leases.

Private Inholding

No fee simple holdings, surface rights exist within SWPP.

Introduction

Both Strathcona and Strathcona-Westmin Provincial Parks have a history of resource use and extraction. These uses either flow from rights granted prior to establishment of the Park or prevailing attitudes at the time of granting rights. Current philosophy is more restrictive.

Mineral Tenures and Mining Activity

History of Park Establishment and Mineral Claims Policy

The Strathcona Provincial Park area has attracted mineral exploration since the turn of the century, the earliest claims still existing were staked prior to Strathcona Provincial Park being established in 1911. The current pattern of claims and leases can be traced through changing government policy as follows:

| | |
|-----------|--|
| pre 1911 | Claims staked |
| 1911-1918 | New staking and exploration not permitted |
| 1918 | <i>Strathcona Provincial Park Act</i> amended to recognize existing claims and to allow further staking. Surface rights were not granted and use of timber was restricted |
| 1939 | Class "A" and "B" parks open to logging and mining under the <i>Forest Act</i> |
| 1949 | Staking allowed in Class "A" Parks by Order-in-Council 2055 |
| 1957 | <i>Strathcona Provincial Park Act</i> repealed. Strathcona Provincial Park established as a Class "A" Park. Prospecting, locating, and mining were allowed subject to conditions |
| 1959 | Western Mines allowed to establish in the Park |
| 1964 | Order-in-Council 659 prevents staking in parks of Class "A" or "B" if less than 5,000 acres |
| 1965 | Lands around the southern end of Buttle Lake reclassified to Class "B" Parks. Permits granted to Western Mines to mine at Myra Creek |
| 1967 | Cream Silver granted permit to explore claims adjacent to Western Mines |

| | |
|------|--|
| | (Westmin Resources Ltd.) in the Park. Western Mines begins discharging tailings into Buttle Lake |
| 1973 | Order-in-Council 1442 excludes prospecting and mining from all parks. Existing claims require a Park Use Permit to continue exploration |
| 1980 | Major expansion of Westmin Mines begun to extract ore from the HW mineral deposits |
| 1985 | Westmin granted Park Use Permit for damming Jim Mitchell Lake for power |
| 1988 | New provincial policy on mineral exploration and mining announced. No new mineral exploration in provincial parks, except Westmin site. No new tenures will be issued and no new logging allowed |

Present Mineral Tenure Status

All of SWPP is covered by some form of mineral tenure. The tenures are a combination of Crown granted claims, mining leases, and mineral claims. All are held by Westmin Resources Ltd.

Mining Activity

SWPP is known to contain a highly favourable environment for copper, lead, zinc, gold and silver. The operating mine is proof of this significance. Current mine operations have a capacity of approximately 3000 tonnes per day.

Current reserves are adequate to continue mining for the next ten to twenty years. The company continues to explore within its claim and lease area and given favourable geology and market conditions, it is expected that this estimate is conservative.

Forest Resources and Forest Activity

There are no forest tenures within SWPP.

Permitted/Licence Uses

Hunting

SWPP is closed to hunting.

Fishing

All rivers and streams entering Buttle Lake are closed to angling. The lake itself is open to angling.

Trapping

No trapping is permitted in SWPP.

Access

SWPP is accessed by a paved highway from Campbell River. A system of roads within the mine site provides access to trailheads within SWPP. An access road along Thelwood Creek provides access to features beyond the Park.

Accommodation and Campgrounds

No designated public accommodation exists in SWPP.

Day Use Facilities

Recreation features are Ltd.. Most facilities are oriented to providing access to features beyond the Park used in Strathcona Provincial Park. Myra falls represents the most significant feature currently by the public.

The mine is a day use feature and offers guided tours.

Existing Use, User Characteristics, and Attitudes

The Park contains day use opportunities for visitors. The features which attract use are Myra Falls, the Lower Thelwood Valley with its riparian and estuary areas and the remaining old growth stands. Trailheads to several backcountry destinations in Strathcona Provincial Park originate from the Park. The mine offers tours of the operation and these provide day use opportunities to park visitors. While not a dependable attraction, viewing of bear, elk, and swans enhances the visitors' experience.