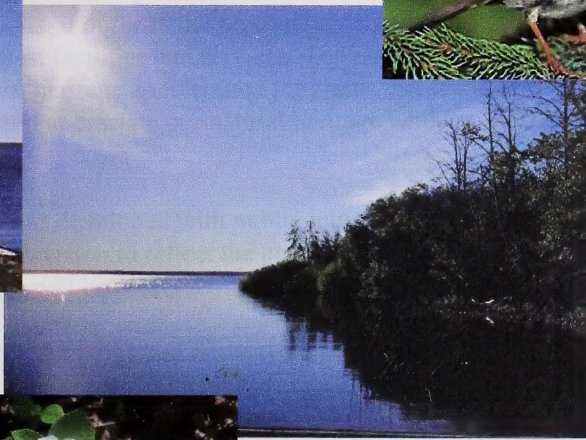


AL 2-2003-51
02

Young's Point Provincial Park and Williamson Provincial Park Management Plan



Alberta

COMMUNITY DEVELOPMENT

PARKS AND PROTECTED AREAS DIVISION

JANUARY 2003

International Standard Book Number: 0-7785-2249-0

For copies of this plan contact:

**Alberta Community Development
Parks and Protected Areas
Box 1140
Valleyview, AB T0H 3N0
Phone 780-524-3362
Fax 780-524-4855**

**Alberta Community Development, Parks and Protected Areas
#1701 Provincial Building
10320-99 Street
Grande Prairie, AB T8V 6J4
Phone 780-538-5265
Fax 780-538-5622**

Preface

The Young's Point Provincial Park and Williamson Provincial Park Management Plan provides a long-term vision and day-to-day guidance for stewardship of the park. The plan was prepared by department staff, within the context of existing legislation and regulations. It outlines the type and extent of outdoor recreation and tourism opportunities, facilities and services. The plan provides direction regarding the delivery of heritage appreciation programs that assist Albertans and visitors to understand and appreciate our natural heritage while ensuring its ongoing preservation.

The management plan was developed with public input and is intended to provide for periodic review and revision to reflect the current thinking of Albertans on how our natural heritage will be preserved for present and future generations.

The Minister responsible for parks and protected areas has authorized the implementation of the management plan and retains the authority to amend or interpret its provisions.

Thank you to those who reviewed the draft management plan, and to those members of the public who participated in its preparation by filling out the survey and attending the open house. Your interest and support for the park is appreciated.

Cover photos: Clara Wakeford and Matthew Wheatley



Digitized by the Internet Archive
in 2015

Table of Contents

PREFACE.....	1
1.0 INTRODUCTION	1
1.1 HISTORY OF PARK ESTABLISHMENT.....	1
1.2 SIGNIFICANCE OF THE PARKS	1
1.3. PURPOSE OF MANAGEMENT PLAN.....	1
1.4.PUBLIC INVOLVEMENT	2
2.0 PARKS OVERVIEW	2
2.1 REGIONAL SETTING AND ACCESS.....	2
2.2 NATURAL HERITAGE OF PARKS.....	2
2.3 CULTURAL HERITAGE OF PARKS	5
2.4 VISITOR USE.....	7
3.0 ROLE IN ALBERTA'S NETWORK OF PROTECTED AREAS	8
3.1 NATURAL REGIONS FRAMEWORK	8
3.2 PARKS AND PROTECTED AREA CLASSIFICATION	10
3.3 PURPOSE AND GOALS FOR PROVINCIAL PARKS	10
3.4 GUIDING PRINCIPLES FOR MANAGEMENT OF PARKS AND PROTECTED AREAS	10
3.5 CONTRIBUTIONS OF BOTH PARKS TO PROVINCIAL OBJECTIVES	11
4.0 ZONING	11
4.1 PRESERVATION ZONE	11
4.2.WILDLAND ZONE.....	12
4.3 NATURAL ENVIRONMENT ZONE	12
4.4 FACILITY ZONE	12
5.0 MANAGEMENT OBJECTIVES AND GUIDELINES	14
5.1 PRESERVATION.....	14
5.2 HERITAGE APPRECIATION	16
5.3 OUTDOOR RECREATION.....	17
5.4 TOURISM	20
5.5 PUBLIC SAFETY	20
6.0 DISPOSITIONS/ OTHER DISTURBANCES IN THE PARKS.....	20
6.1 CURRENT DISPOSITIONS	20
6.2.OTHER DISTURBANCES.....	21
6. 3 MANAGEMENT GUIDELINES FOR OIL AND GAS DISPOSITIONS.....	21
7.0 SURROUNDING LANDS.....	21
7.1 SURROUNDING LAND USE	21
7.2 POTENTIAL ADDITIONS TO PARK.....	22
8.0 REGIONAL COORDINATION	22
8.1 LOCAL COMMUNITY.....	22
8.2 GOVERNMENT AGENCIES	23
9.0 PLAN IMPLEMENTATION.....	23
9.1 IMPLEMENTATION OF MANAGEMENT GUIDELINES.....	23
9.2 PLAN REVIEW.....	24
BIBLIOGRAPHY	25

APPENDIX A BIRDS FOUND IN YOUNGS POINT PROVINCIAL PARK..... 26

APPENDIX B PLANTS FOUND IN YOUNG’S POINT PROVINCIAL PARK 28

APPENDIX C MAMMALS/FISH/AMPHIBIANS/BUTTERFLIES IN YOUNG’S POINT PROVINCIAL PARK..... 34

APPENDIX D WATER LEVELS OF STURGEON LAKE 35

MAPS

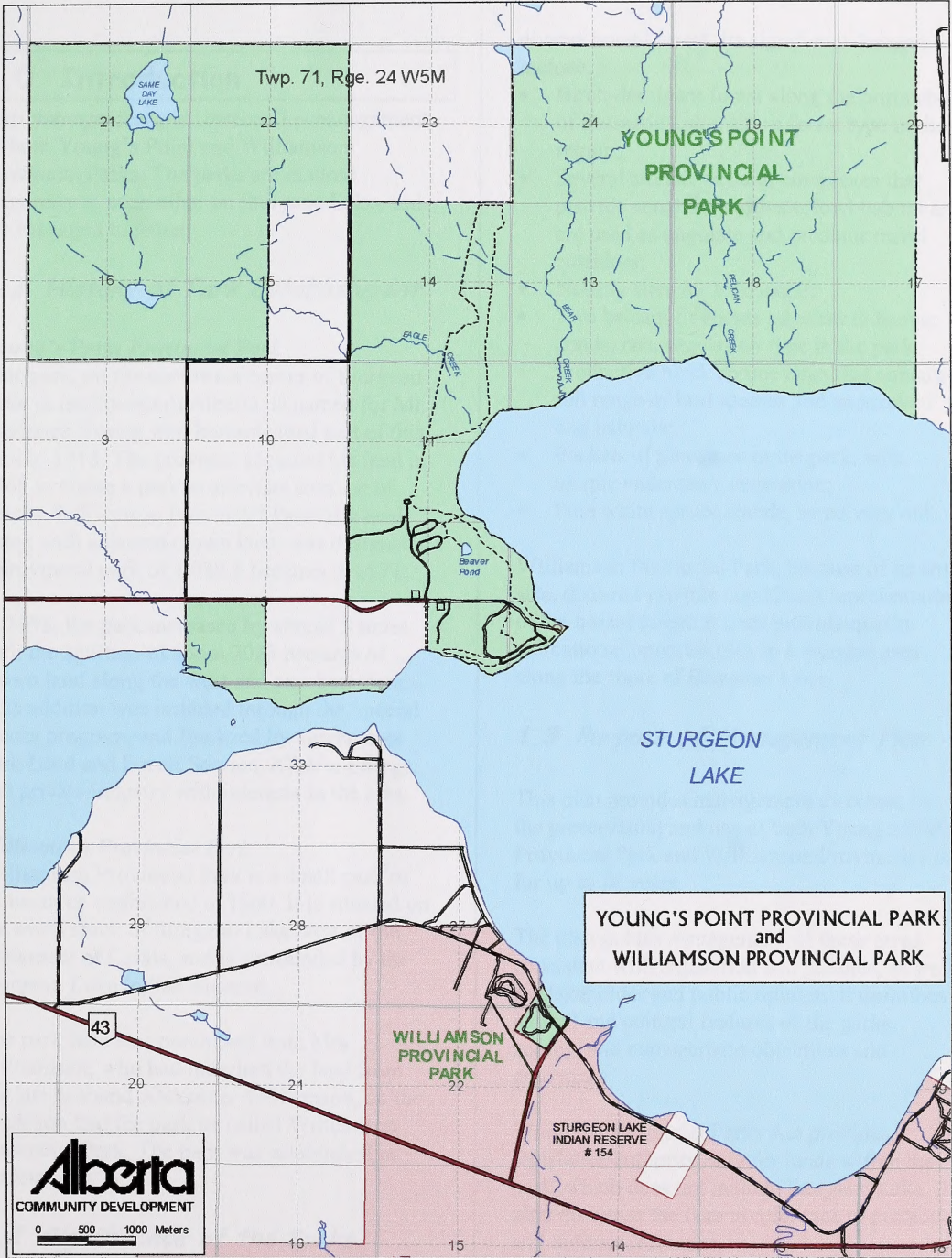
YOUNG’S POINT AND WILLIAMSON PROVINCIAL PARKS iv

VEGETATION MAP OF YOUNG’S POINT PROVINCIAL PARK 5

NATURAL REGIONS MAP OF ALBERTA..... 10

ZONING MAP OF YOUNG’S POINT AND WILLIAMSON PROVINCIAL PARKS..... 13

FACILITIES MAP OF YOUNG’S POINT 18



1.0 Introduction

This management plan directs the management of both Young's Point and Williamson Provincial Parks. The parks are in close proximity to each other on Sturgeon Lake, and are managed together.

1.1 History of Park Establishment

Young's Point Provincial Park

This park, on the northwest corner of Sturgeon Lake in northwestern Alberta, is named for Mr. Frederick Young who homesteaded part of this land in 1918. The province acquired his land in 1968 to create a park to alleviate overuse of nearby Williamson Provincial Park. His land, along with adjacent crown land, was designated a provincial park of 1,089.6 hectares in 1971.

In 1998, the park increased by almost 3 times with the addition of about 2023 hectares of crown land along the west and east boundaries. This addition was initiated through the Special Places program, and finalized by agreements with Land and Forest Service, Alberta Energy, and private industry with interests in the area.

Williamson Provincial Park

Williamson Provincial Park is a small park of 17 hectares established in 1960. It is situated on the south shore of Sturgeon Lake west of the settlement of Calais, and is surrounded by the Sturgeon Lake Indian Reserve.

The park land was purchased from Mrs. Williamson, who had inherited the land from her late husband Alexander Williamson, on the condition that the park be called Williamson Provincial Park. The park was established in November 1960.

1.2 Significance of the Parks

The significance of Young's Point Provincial Park lies mainly in its representation of a

diverse boreal forest. Its significant features include:

- Birch-dominant forest along the north shore of Sturgeon Lake, a rare forest type in the region;
- Several stream/wetland complexes that provide songbird and waterfowl habitat and are used as ungulate and predator travel corridors;
- Nesting sites for bald eagle;
- Two balsam fir stands adjacent to beaver ponds, rare vegetation type in the park;
- Productive black spruce bogs that contain a full range of bird species and an array of bog habitats;
- Pockets of pine, rare in the park, with unique understory vegetation;
- Pure white spruce stands, some very old.

Williamson Provincial Park, because of its small size, does not provide significant representation of the boreal forest. It does provide quality recreational opportunities in a wooded area along the shore of Sturgeon Lake.

1.3 Purpose of Management Plan

This plan provides management direction for the preservation and use of both Young's Point Provincial Park and Williamson Provincial Park for up to 10 years.

The plan guides management of these areas consistent with legislation and policies, as well as stakeholder and public opinion. It describes natural and cultural features of the parks, zoning, and management objectives and guidelines.

While the Provincial Parks Act provides legislative authority only for lands within the park, which does not include Sturgeon Lake, the plan discusses the lake in reference to protection and outdoor recreation.

1.4 Public Involvement

Public involvement in this plan included the following:

- 1997, questionnaires and surveys distributed to the public, and to the Williamson and Young families, about park concerns.
- January 2001 draft plan presented to the Sturgeon Lake Cree Nation Band Council for their review.
- February 2001 open house at Young's Point Provincial Park for public review and comment on the plan.

Family Day at Young's Point Provincial Park



2.0 Parks Overview

2.1 Regional Setting and Access

Both parks are located on Sturgeon Lake, one of the largest lakes in the Peace River country. Valleyview, the nearest town 25 kilometers to the east, services a wide-spread farming community, as well as oil and gas and forestry activities. Grande Prairie, the regional center, is 80 kilometers to the west.

Young's Point Provincial Park, on the northwest side of the lake, is situated at an interface of the

green and white zone. The green zone stretches north from Sturgeon Lake, while areas west of the lake are in the white zone. The recent additions to the park are in the green zone.

Access to Young's Point Provincial Park is 25 kilometers west of Valleyview on Highway 43, and 10 kilometers north and east on a paved road to the park entrance.

Williamson Provincial Park, on the south shore of the lake, is surrounded by the Sturgeon Lake Indian Reservation. Access to the park is 17 kilometers west of Valleyview on Highway 43, and 1.7 kilometers north on a paved road.

2.2 Natural Heritage of Parks

This is a general description of the natural and cultural history of the parks and the surrounding area. More detailed biophysical information of Young's Point Provincial Park can be found in Natural History Themes and Inventory 1999 prepared by Cottonwood Consultants.

Geology, Landforms, Soils and Climate

Three layers of bedrock from the Cretaceous age (about 70-135 million years ago) underlie the park – the Wapiti Formation, the Puskwaskau layer, and the Bad Heart Formation. This bedrock is 100-200 feet below the surface, and is covered by a thick layer of glacial till and clay.

The topography of all the area is generally flat to hummocky moraine. Elevation is about 680 meters above sea level.

Soils close to the lake are mainly Gray Wooded Luvisolic, originally formed from clay deposits. The rest of the upland areas are covered with Gray Wooded soil, a clay or clay loam soil developed under forest vegetation. Organic soils occur in the wetland areas.

The area has a continental climate, characterized by short warm summers and long cold winters. Precipitation is moderate during all seasons.

Snow cover generally lasts about 5 months, beginning in November and ending in April. Winds prevail generally from the west or northwest, and chinooks occur in winter.

Aquatic Systems

The principal hydrological features of Young's Point Provincial Park's are:

- the shoreline of Sturgeon Lake;
- the beaver pond systems near the campgrounds;
- Same Day Lake and its outlet Eagle Creek with large and small beaver pond complexes;
- Bear Creek and its extensive beaver pond complex;
- Pelican Creek, east of Bear Creek.

The creeks are heavily modified by beaver activity, thereby creating a variety of localized habitats. Some sections of the creeks have slightly incised valleys with steep banks.

Sturgeon Lake is the focus of both parks. It is a large hypereutrophic lake, with high levels of chlorophyll and phosphorus that promote extensive algae growth in summer. It also supports abundant aquatic vegetation and a large fish population.

Vegetation

The vegetation in the parks is typical of the boreal forest in this region of Alberta. It is a forest shaped by the effects of fire, which has created a variety of age classes and forest compositions in Young's Point Provincial Park. For instance, the area around Eagle Creek was not burned as recently as other parts of the park, and is consequently a mixedwood forest of an older age with large mature aspen, spruce and pine. The rest of the park has burned more

recently, and much of it is aspen-dominated with scattered spruce and pine.

The biophysical study (Cottonwood 2000) identified 15 vegetation types in Young's Point Provincial Park (see Vegetation Map on next page). The dominant vegetation type is aspen



Same Day Lake, added to park in 1998

dominated woodland. Other deciduous woodland types include aspen with willow, balsam poplar or paper birch.

Mixed woodland of aspen and spruce occurs along the reaches of lower Eagle Creek, and in an area near Same Day Lake. This habitat is the

most diverse in the park, providing the widest variety of requirements for wildlife.

Among the mixed woodland are pockets of pure old growth white spruce. Black spruce dominates the wetlands scattered throughout the park. A few pine stands occur in the eastern part of the park, and one in the western part.

The understory in the aspen and mixed wood types varies with the composition of the forest and the canopy cover, but typically it includes low bush cranberry, prickly rose, red osier dogwood and fireweed. More grasses are in the understory in the drier eastern upland part of the park.

Wet willow-alder-sedge communities predominate along the shore of Sturgeon Lake. They range from dense tangles to open sedge meadows with willow clumps. Succession from sedge meadow to willow and finally to balsam poplar and aspen appears to be slow.

Williamson Provincial Park is mostly mixed wood of aspen and large white spruce.

See Appendix B for list of vegetation found in Young's Point Provincial Park.

Wildlife/Fish

Birds

A total of 158 species of birds have been observed in Young's Point Provincial Park and immediately adjacent portions of Sturgeon Lake (see Appendix A). Of these, the bay-breasted warbler, black-throated green warbler, and Cape May warbler are "sensitive". The trumpeter swan is "at risk" (Alberta Sustainable Resource Development 2000)¹.

Black-throated green warbler



Mammals

Twenty-seven species of mammals have been reported in the parks. See Appendix C for list.

Fish

Sturgeon Lake is one of the most important fishing lakes in the Peace River area, and is managed for sport, domestic, and commercial fishing. The most common species of fish are northern pike, walleye, yellow perch, lake whitefish, burbot, and white sucker. The commercial fishery is for whitefish.

Fish populations have remained stable, and the lake continues to be the highest producer of sports fish in the Peace River country. The economic worth of the recreational and commercial fishery is estimated at about \$1.5 million annually ².

¹ General Status of Alberta Wildlife Species 2000
www.gov.ab.ca/env/fw/status/index.html

² From presentation by Dave Walty, Natural Resources Service, at Sturgeon Lake Management workshop June 1997.

Herpetiles/Lepidoptera/Odonata

Three species of amphibians have been recorded in the park - the wood frog, boreal chorus frog, and boreal toad. Two species of reptiles have been sighted - the red-sided garter snake and the wandering garter snake.

Lepidoptera (butterflies) and odonata (damselflies and dragonflies) observed in the park are listed in Appendix C.

1.3 Cultural Heritage of Parks

Aboriginal

An archaeological assessment in 1977 of Young's Point Provincial Park revealed a few prehistoric or historic artifacts, indicating that the lakeshore might have been occupied sporadically by transient hunters and fishermen.

Before the arrival of the Europeans, the Beaver people inhabited the Peace River country, and probably hunted and fished the area around Sturgeon Lake (Leonard and Lemieux 1992). By the late 1800s, Woodland Cree became dominant in the area as they pushed the Beaver people further northwest.

The Cree traditionally maintained a semi-nomadic existence in small family groups in their search for food, but with the influence of the fur trade their way of life became less nomadic. In 1899 with the signing of Treaty No. 8, their way of life changed again, as they were offered blocks of land for their use. In 1909 the Cree around Sturgeon Lake agreed to live on Sturgeon Lake Indian Reserve #154, which they still occupy.

Trading Post Settlement

By 1883, a Hudson's Bay Company trading post was built in the Cree community located on the shore of Sturgeon Lake. Missionaries began to visit, and set up a Roman Catholic boarding school in 1889. The settlement became known as Calais, after Father Calais who was the second resident missionary.

Young's Point Provincial Park Vegetation Map

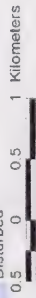


Original map prepared by
C. J. Woodcock
Calgary, Alberta, Canada
March 2000



Projection: UTM Zone 11
Datum: Nad 83

- Vegetation Types**
- Black Spruce Bog
 - Stream/Wetland Complex
 - Deciduous Woodland-Aspen Dominant
 - Deciduous Woodland-Aspen & Willow Dominant
 - Deciduous Woodland-Birch Dominant
 - Deciduous Woodland-Birch & Willow Dominant
 - Deciduous Woodland-Balsam Poplar Dominant
 - Logged-Immature Woodland
 - Logged-Open
 - Mixed Woodland-Aspen Dominant
 - Mixed Woodland-Spruce Dominant
 - Pine or Pine-Aspen Woodland
 - Spruce Woodland
 - Willow Shrubland
 - Disturbed



Other traders maintained posts at Calais - Bredin & Cornwall who sold out to Revillon Freres in 1905, and the N.W.M.P. outpost established in 1898. Calais became part of Sturgeon Lake Indian Reserve in 1909.

Trails

The trails used by settlers probably followed trails used by aboriginal people. The Grouard Trail was one of the first into the Peace River Country. It led along the south shore of Lesser Slave Lake to Grouard. From there it branched west to Sturgeon Lake.

The Spirit River Trail led from Calais northwest towards Spirit River. A portion of this trail goes through Young's Point Provincial Park. Traces of a branch of the Grouard Trail that joined the Spirit River Trail is also in the park.

In 1910 the Edson-Grande Prairie trail was surveyed. This trail came from the south, and traveled along the south shore of Sturgeon Lake, through what is now Williamson Provincial Park. South of the lake a branch of this trail headed southwest to Jasper House (near what is now the town of Jasper). Homesteaders used these trails until the railway reached Grande Prairie in 1916.

Settlement of Valleyview Area

The earliest settlers in the area filed for land around 1918, but the real rush of settlement did not take place until 1928. The town of Valleyview was established in that year, and became the center of an agricultural area. An oil field discovery at Sturgeon Lake in 1952 and the completion of Highway 34 in 1962 contributed to the development of a fairly stable and prosperous community based on agricultural, oil and gas, and forestry resources.

Fred Young

Fred Young was born in 1885 in Lac La Biche. He was a grandson of Reverend George MacDougall, one of the first missionaries to Alberta. When Fred was 16, he worked on the crew that surveyed the proposed Northern

Alberta Railway line to Grande Prairie. It was then he first saw the land that is now Young's Point Provincial Park. He served in World War I, losing a leg and full use of his right arm. As a veteran he applied for and received 160 acres of homestead, 160 acres as a soldier's grant, and bought some, acquiring in all 370 acres of land on Sturgeon Lake in 1918.

In 1921 Fred Young married, then moved to his land on Sturgeon Lake where he and his wife lived for 3 years. He built a two-story log house, and cleared about 10 acres of the land. Eventually the family spent winters off the homestead, and returned in summer. The first house burned down, and was replaced with a clapboard one-room cabin. This is the cabin called Big Horn Lodge which still exists in the park. This cabin became too confining, and a third cottage was built on the point. In 1968 the Young family sold the land to the government to be used for a provincial park.

Alexander Williamson

The land which is now Sturgeon Lake Indian Reserve and Williamson Provincial Park was surveyed in the summer of 1908 by the Dominion Land surveyors. A settler, Ambrose Thomas, had already taken land along Sturgeon Lake, and was allowed a special grant of settlement for Lot #1, which was completely surrounded by reserve land. Mr. Thomas gained patent to this land on February 18, 1918 and here he lived until 1945, when Mr. Alexander Williamson acquired the land from the Thomas estate.

Alexander Williamson was one of the first settlers in the Sturgeon Lake area. He worked as a fire ranger, protecting the timber berths around Sturgeon Lake and Snipe Lake, and as a road foreman. In 1917 he contracted to haul mail and freight between Grande Prairie and Sturgeon Lake, which he continued until 1927. He then bought the Revillon Freres Trading Company's Sturgeon Lake post. The Williamson family until recently operated this as a general store.

1.4 Visitor Use

Facility/Service	Young's Point PP	Williamson PP
Campgrounds	92 sites, 38 power - tap water - comfort stations - showers - playgrounds - firewood	67 sites, 32 power - -tap water - -vault toilets - enclosed shelter - playground - firewood
Group Use campground	25+ sites, 15 power - tap water - vault toilets - enclosed shelter - -playground, volleyball and horseshoe pitches	No group campground
Day Use area	- picnic tables - firepits/firewood - tap water - beach - comfort station/showers	- picnic shelter and tables - fire pits/firewood - tap water - beach - vault toilets - playground, volleyball and basketball courts
Interpretive Programs/Events	Held at interpretive shelter	Annual heritage day in August
Hiking	15 kilometers of trails	
Boating	Boat launch	Boat launch
Fishing	- pike, walleye, perch - fish-cleaning stands	- pike, walleye perch - Fish-cleaning stands
Ice fishing	Sturgeon Lake for whitefish, perch	Sturgeon Lake for whitefish, perch
Ice skating	Large outdoor, lighted rink with shelter, fire pit, firewood	No rink
Cross-country skiing	15 kilometers of groomed trails	No trails
Winter camping	Permitted near boat launch and heated comfort station	
Snowshoeing	Allowed in park except on ski trails	Allowed in park
Winter events	- Winter Fun Day - Family Day in February	No winter events

Table 1: Facilities and Services at Young's Point and Williamson Provincial Parks

Table 1 describes the recreation and heritage appreciation opportunities at Young's Point and Williamson Provincial Parks.

Both parks offer quality camping and day use facilities. An upgrade of Williamson campground has recently been completed. The interpretive shelter at Young's Point has provided a venue for heritage appreciation

events. Both parks provide good access to the boating and fishing opportunities on Sturgeon Lake.

Table 2 provides occupancy of both parks up to the years for which data is available. As for all parks, visitor use fluctuates with the weather. Young's Point campsite use doubled after the development of Big Horn campground in 1992. Campground visitation at Williamson has been

Table 2: Occupancy of Young's Point and Williamson Provincial Parks

Park Occupancy					
	Occupied Campsite Nights		Day Use Party Visits		Group Use
	Young's Point	Williamson	Young's Point	Williamson	Young's Point
2000/2001	1640	881	2388	N/a	487
1999/2000	2697	1381	3300	4650	644
1998/1999	2637	1736	2450	4700	420
1997/1998	3223	1609	4725	6275	355
1996/1997	2763	1509	4025	4525	311
1995/1996	2770	1566	3250	6675	406
1994/1995	2882	1674	3450	3225	451
1993/1994	2698	1967	3225	10150	269
1992/1993	1542	2206	3550	6550	309
1991/1992	1402	2472	3600	8025	82
1990/1991	1246	3262	4100	12375	
1989/1990	680	2940	2555	13372	

declining since 1991, but with the recent campground upgrade it is anticipated that visitation will increase.

High day use numbers at both parks can be attributed to access to fishing in Sturgeon Lake at both parks.

3.0 Role in Alberta's Network of Protected Areas

Young's Point and Williamson Provincial Parks are part of a network of protected areas in Alberta. This section describes the framework on which the network is based, and the role of these provincial parks in it.

3.1 Natural Regions Framework

The Alberta government is committed to protecting the natural diversity of Alberta. To help select which areas of Alberta should be protected, a framework based on natural features has been adopted. This framework is a hierarchy of natural regions, subregions, and natural history themes (Achuff 1994). Natural regions provide the "big picture" of Alberta's landscapes, such as grasslands, mountains, and boreal forest. The subregions and natural history themes are subdivisions of the natural regions, and provide a more specific picture of smaller areas.

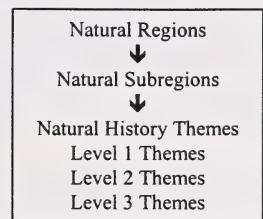
There are six Natural Regions in Alberta. Differences between these regions are readily apparent by their distinct landform features and vegetation.

Each of these Natural Regions has been divided into subregions based on criteria that vary depending on the Natural Region. The Boreal Forest Natural Region is divided into six subregions based on vegetation, geology and landforms.

Subregions are further divided into Level 1, Level 2 and Level 3 Natural History Themes. Level 1 themes are based on easily observed landforms of subregions, such as wetlands and valley/ridges.

Level 2 themes are more specific breakdowns of Level 1 themes. They refer to distinctive vegetation, habitat types or highly visible geological features. Examples of

Level 2 themes for organic wetlands in the Central Mixedwood subregion are bogs, patterned and non-patterned fens, black spruce forests, and shrubbery. Level 3 themes are finer breakdowns of Level 2 themes. They include specific features such as rare plants and animals, and specific landform types.



Young's Point and Williamson Provincial Parks are in the Central Mixedwood subregion. They are the only protected areas located in the disjunct western part of this subregion – most of this subregion is in northeastern Alberta. Level 1 and Level 2 natural history themes and subthemes represented in Young's Point Provincial Park are in Table 3.

3.2 Parks and Protected Area Classification

Protected area legislation makes provision for seven classes of protected areas:

- Ecological Reserves
- Wilderness Areas
- Wildland Parks
- Provincial Parks
- Natural Areas
- Provincial Recreation Areas
- Heritage Rangelands

Each of these classes of protected areas contributes differently to the four goals of preservation, heritage appreciation, outdoor recreation and heritage tourism.

3.3 Purpose and Goals for Provincial Parks

Purpose

Provincial parks preserve and protect natural heritage, while providing opportunities for outdoor recreation, tourism and heritage appreciation, or for any combination of those purposes, that are dependent on and compatible with the protection of the environment.

Goals for Provincial Parks

Preservation

To preserve and protect a system of provincially significant natural landscapes incorporating the greatest possible diversity of natural heritage as well as landscape related prehistorical and historical resources.

Natural History Themes Young's Point Provincial Park	
Boreal Forest Natural Region Central Mixedwood Subregion	
Level 1 Themes	Level 2 Themes
Non-Sandy Upland/Glacial Lake Bed	Deciduous forest Mixedwood forest White spruce forest
Valley/Ridge Floor/Stream	Mixedwood forest Deciduous forest Muskeg stream
Wetland - Mineral	Marsh Swamp Shrubbery White spruce forest
Wetland - Organic	Bog Black spruce forest Shrubbery Tamarack

Table 3: Natural History Themes

Heritage Appreciation

To provide opportunities for exploration, understanding and appreciation of natural heritage supported by a range of interpretative and educational programs.

Outdoor Recreation

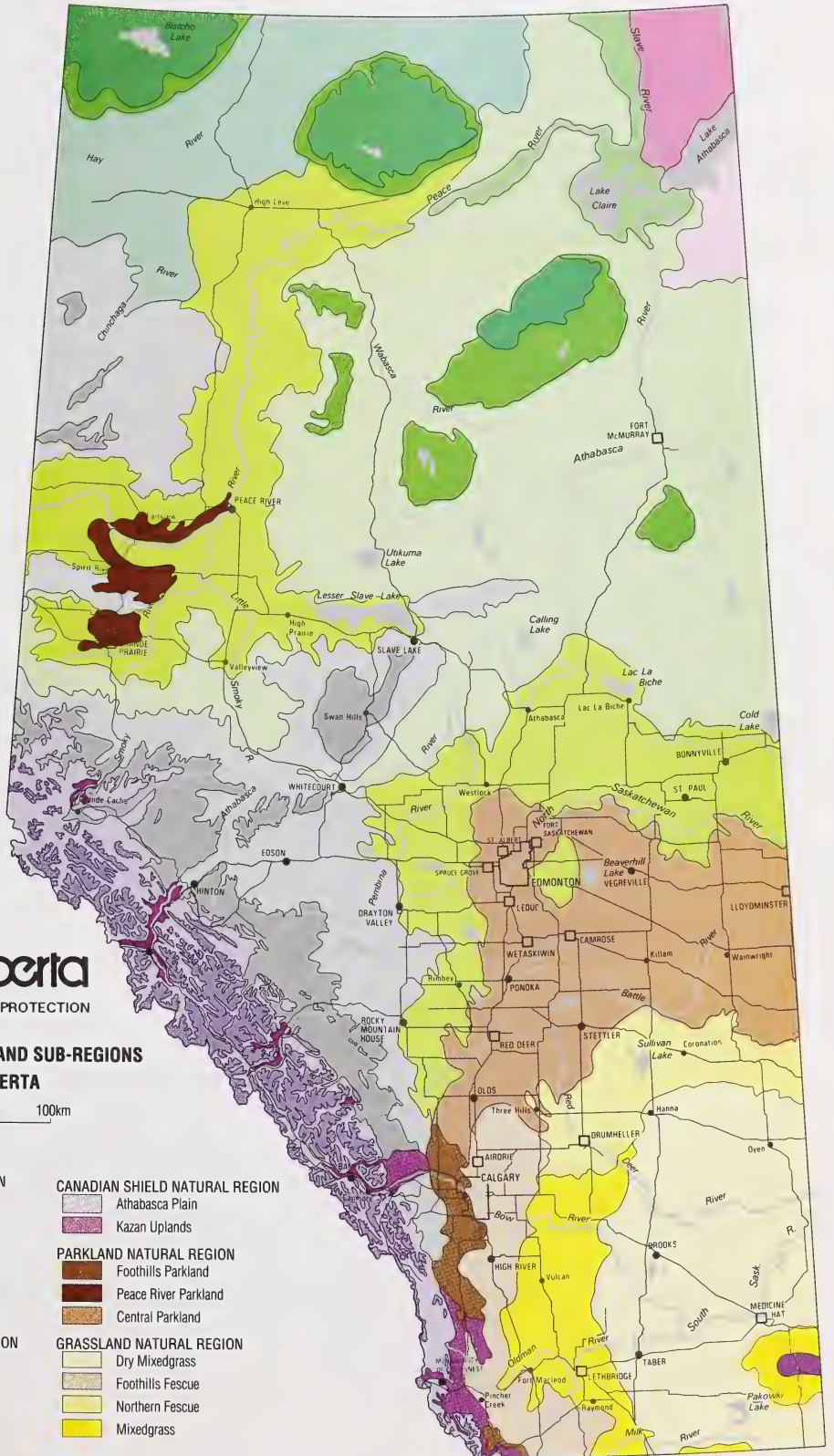
To provide auto access and backcountry opportunities for outdoor recreation, to the extent that the activities are compatible with the preservation of natural heritage values.

Heritage Tourism

To provide opportunities for provincial, national and international visitors to explore and experience Alberta's natural heritage.

3.4 Guiding Principles for Management of Parks and Protected Areas

Ecological Sustainability – Alberta's parks and protected areas will be managed to preserve environmental diversity and ecological integrity through perpetuation of species, biological diversity and the unimpeded functioning of ecological systems and processes.



Alberta

ENVIRONMENTAL PROTECTION

NATURAL REGIONS AND SUB-REGIONS OF ALBERTA

0 50 100km

BOREAL FOREST NATURAL REGION

- Central Mixedwood
- Dry Mixedwood
- Wetland Mixedwood
- Sub-Arctic
- Peace River Lowlands
- Boreal Highlands

ROCKY MOUNTAIN NATURAL REGION

- Alpine
- Sub-Alpine
- Montane

FOOTHILLS NATURAL REGION

- Upper Foothills
- Lower Foothills

CANADIAN SHIELD NATURAL REGION

- Athabasca Plain
- Kazan Uplands

PARKLAND NATURAL REGION

- Foothills Parkland
- Peace River Parkland
- Central Parkland

GRASSLAND NATURAL REGION

- Dry Mixedgrass
- Foothills Fescue
- Northern Fescue
- Mixedgrass

Ecosystem Management –A park or protected area is part of a larger ecosystem. Management of the natural resources in a park will be coordinated with the management of adjacent lands.

Balancing Preservation and Use – The parks and protected areas network will be managed to balance preservation and use. Different classes of protected areas accommodate varying degrees of human activities including outdoor recreation, based upon the degree of protection required for the areas' natural resources.

Environmental Stewardship – Heritage appreciation services facilitate public awareness and understanding of Alberta's natural heritage, as well as the sharing of that knowledge to foster positive attitudes and actions towards our natural heritage and its preservation.

Shared Responsibility – The Government of Alberta recognizes that stewardship of parks and protected areas is a shared responsibility. Partnerships that foster stewardship will be promoted with the private sector, other departments and governments, First Nations, volunteers, not for profit groups and individual citizens in the planning, management and operations of parks and protected areas.

3.5 Contributions of Both Parks to Provincial Objectives

To Preservation

- Protects a large area that is typical of the Central Mixedwood Boreal Forest.
- Provides nesting and feeding habitat for a variety of birds, including woodland birds, shorebirds and waterfowl.
- Provides habitat for a variety of mammals.

To Heritage Appreciation

- Offers opportunity for visitors to learn about a boreal forest

- Provides interpretation and environmental education programs to park visitors and school groups.
- Offers opportunities to learn about the cultural heritage of the region.

To Outdoor Recreation

- Offers access to the best recreational fishing in the Peace River country
- Offers camping and day use opportunities in quality facilities
- Offers opportunities for winter recreation activities

To Tourism

- Offers easily accessible camping facilities to tourists traveling on Highway 43, the major route to the Peace River country from central Alberta.
- Provides economic opportunities for the private sector to deliver services in the parks.

4.0 Zoning

Zoning is a management tool that is applied to ensure long term protection of ecosystems while permitting appropriate visitor activities. It divides the land base into units, or zones. Each zone is managed according to its land characteristics and use potential.

Young's Point Provincial Park is divided into 4 zones. Williamson Provincial Park is one zone. The zoning map shows the locations of the zones.

4.1 Preservation Zone

The preservation zone provides the highest level of protection of natural heritage values in the park. Areas in this zone can be representative of special landscapes or features protected for their intrinsic, educational or scientific values. Use in this zone is not encouraged, but it can accommodate low

impact activities such as hiking, and activities associated with heritage appreciation.

The following areas are preservation zones in Young's Point Provincial Park.

- A buffer area around the water resources in Young's Point Provincial Park, including Same Day Lake, Eagle Creek, Bear Creek, and the creek to the east of Bear Creek. This area includes stands of old growth white spruce, and a balsam fir stand along Bear Creek.
- The shoreline of Sturgeon Lake, except for the shoreline in the facility zone. This shoreline, of about 9 kilometers, is a mixture of small sand beaches and willow and reed covering. It provides the only nesting area in the park for loons, and provides important habitat for fish.
- The only two productive bogs in Young's Point Provincial Park. One is along the west boundary, and the other is between Eagle and Bear Creeks.
- The creek and shoreline in the disjunct southwest part of Young's Point Provincial Park. This is a nesting and feeding area for waterfowl.

4.2. Wildland Zone

This zone is appropriate to large areas of backcountry that are relatively undisturbed and offer backcountry recreation opportunities. Protection of the area is of prime consideration. Rustic facilities such as trails and backcountry campsites are appropriate.

The western section and eastern section of Young's Point Provincial Park are zoned wildland. Preservation of the natural environment and provision of backcountry recreation opportunities will be primary in this area. There are no backcountry developments at present.

4.3 Natural Environment Zone

This zone, which encompasses natural and cultural landscapes, provides opportunities for

the appreciation and enjoyment of natural and cultural values through a variety of outdoor recreational, educational and interpretive opportunities. The intent of this zone is to offer a variety of dispersed opportunities that bring the visitor in closer contact with natural and cultural heritage values of the park.

Appropriate activities include low density activities compatible with the resource such as hiking, nature appreciation and cross-country skiing.

This zone contains the hiking trails in Young's Point Provincial Park, as well as some areas adjacent to the facility zone. It also includes part of the disjunct portion of the park along the lakeshore to the west. The trails and the beaver pond viewing platform are the only facilities in this zone.

4.4 Facility Zone

This zone provides lands capable of supporting a range of moderately intensive to intensive outdoor recreational facilities. It includes campgrounds and day-use areas, interpretive and educational facilities, and park administrative and operational facilities. This zone is intended to accommodate the greatest amount of use in the park. High density recreation activities such as camping, day use activities, beach activities, and interpretation presentations are appropriate activities in this zone. Ground surfaces are hardened with asphalt or gravel to mitigate impacts of visitor use.

The campgrounds, group use area, day use area, boat launch and parking lot, park office and roads in Young's Point Provincial Park are within the facility zone.

All of Williamson Provincial Park is zoned as facility. It is a small size, and its primary intent is to provide opportunities for outdoor recreation.



5.0 Management Objectives and Guidelines

5.1 Preservation

Objectives

- **To protect the landscape, which is representative of the Central Mixedwood Natural Subregion**
- **To allow natural processes to occur with as little interference as possible, particularly in the backcountry areas of Young's Point Provincial Park.**
- **To protect the natural habitat for a variety of wildlife**
- **To support current nesting and staging areas for birds, and encourage others to nest in area**
- **To protect the cultural and historical heritage**
- **To protect sites of significance to local aboriginal groups**

Management Guidelines

In general, management will not interfere with the natural processes in Young's Point Provincial Park. The exceptions to this are wildfire suppression, weed and pest control, and some vegetation and wildlife management. The purpose of interference will be to moderate the impacts of natural processes which may threaten lands around the park or the recreational values in the park.

In Williamson Provincial Park, because of its small size and more modified landscape, there is

not as big an emphasis on letting nature take its course.

Areas of high sensitivity to impacts from visitor use, such as areas containing rare plants, breeding grounds for waterfowl, or the aboriginal ceremonial sites, will be identified and visitor activity discouraged in these areas.

Aquatic Resources

Sturgeon Lake has been tested for water quality since 1986 by Alberta Environment. The testing is done from samples collected by park staff monthly from May to September. The results of the testing show that over time the amount of chlorophyll and phosphorus in the lake has remained stable, although it varies from year to year (see Appendix D). Water quality monitoring will continue on Sturgeon Lake as part of the lake quality monitoring program sponsored by Alberta Environment.



A creek in the backcountry of Young's Point

In compliance with good lakeshore management, the diversity of the shoreline that is within the park, about 11.5 kilometers, will be protected from the impacts of recreational activities. Any development would be above this shoreline (area above high water mark) in the facility zone only, and after consulting with other agencies.

Beaver activity creates cycles of habitat modification that promote diversity in the park. This activity will not be interfered with unless it threatens significant features or facilities.

At Williamson Provincial Park, the west part of the beach area will be left undisturbed because it is good nesting habitat for waterfowl.

Vegetation

In general, the forest communities will be allowed to succeed naturally. For example, aspen may evolve to mixed white spruce/aspen poplar communities and eventually, under certain conditions, to white spruce-dominated communities.

Aging poplar trees in the Big Horn campground at Young's Point Provincial Park are becoming a hazard to visitor safety and property. Many have blown down and, along the shore, some have been removed by beavers. Hazardous trees will be removed. White spruce will be planted in the campground to replace them.

Campsites in Big Horn campground are encroaching on the lake because users are enlarging the sites and creating informal trails to the lakeshore. Planting will be done to discourage these site modifications.

Most of the trees in Williamson Provincial Park are aging – white spruce in the campground and balsam poplar in the day use area. Trees that are hazardous to visitor safety and property will be removed, and replanting done when necessary.

Use of pesticides for control of insects and weeds will follow Parks and Protected Areas legislation and policy. This states that use of pesticides should be restricted to the facility zones, and used when public health or safety is threatened, facilities or vegetation are threatened, or to avoid the spread of weeds unto adjacent private lands.

Tent caterpillar and tortrix³ infestations occur cyclically. These and other infestations will be

³ Large aspen tortrix, *Choristoneura conflictana* (Walker) infested areas of the park in 2001. Similar to tent caterpillars, they defoliate aspen and spin webs. Outbreaks usually last for 2-3 years.

monitored and controlled if needed to protect the natural and recreational values of the park.

Open areas within the facility zone of both parks will continue to be manicured. Other open areas will be left in their natural state.

Vegetation along roads and walking trails will be trimmed to improve the trails for recreational use.

Native species will be used for revegetation of areas. *Native Plant Vegetation Guidelines for Alberta 2001* is a resource.

Wildfire

Wildfire is a natural process in a boreal forest. However, to protect natural and recreational values, as well as adjacent lands, all wildfires within both Young's Point and Williamson Provincial Parks will be suppressed, as per park policy. Parks and Protected Areas staff provide initial fire attack; any further fire suppression is managed by Sustainable Resource Development, Forest Protection Division. Initial fire control equipment is located in both parks.

A Fire Control Plan is maintained in consultation with Sustainable Resource Development, Forest Protection Division, and will be reviewed and updated as required.

The use of prescribed burning could be considered at Young's Point Provincial Park in order to maintain forest diversity. Any burning would be planned with Forest Protection Division.

Wildlife

The focus of wildlife management will be the protection of habitat for the wide variety of wildlife in the parks. Any management action will be considered for its effect on this habitat and on the wildlife that live there.

Young's Point Provincial Park provides critical wintering range for ungulate species. The shrub/willow areas provide food and the denser coniferous areas provide shelter. Cross-country

ski trails pass through some of these areas. Skiing activity at this point is minimal and not disturbing, but care will be taken to ensure that ungulates are not stressed by winter recreation users.

The area is natural habitat for black bears. They continue to be sighted, and their activity will be monitored, particularly within the facility zones. A Bear Management plan has been prepared which will be updated as required. Bear awareness will continue to be a strong component of public education.

In recent years the lake has been a staging and feeding site for white pelicans and cormorants. Their diet consists of small game fish and bait fish. They do not nest in the area, as there is no suitable habitat. The populations of these bird species will continue to be monitored. In partnership with other groups, the feasibility of establishing nesting and staging areas for them on the lake will be assessed.

Cultural Resources

The Sturgeon Lake Cree Nation may continue to use prayer sites in the park. The sites will not be publicly identified in order to protect their ceremonial significance.

Big Horn Lodge



Big Horn Lodge, cabin built by Fred Young, is still located at Young's Point Provincial Park. The park is working with the family of Fred Young to relocate the lodge next to the interpretation shelter and restore it.

Fred Young's family has donated artifacts that represent the cultural history of Young's Point Provincial Park and the surrounding community, such as arrowheads, bone scrapers and a quilt. These artifacts, and other artifacts of the Young family, could be displayed in the lodge with appropriate security.

A portion of the Spirit River Trail goes through Young's Point Provincial Park. The trail will be identified and protected as a historic feature of the park.

5.2 Heritage Appreciation

Heritage appreciation is the valuing of our natural landscapes and the people who have lived in them. Interpretation programs, environmental education, and information help us to understand and appreciate this heritage.

Objectives

- **To offer opportunities for visitors to experience the boreal forest and to view associated wildlife and vegetation.**
- **To provide environmental education opportunities to groups such as school groups, Scouts, and others.**
- **To work with the Sturgeon Lake Cree Nation to tell about their history and culture.**

Management Guidelines

Heritage Appreciation

Based on the natural history themes and the cultural heritage represented at Young's Point and Williamson Provincial Parks, the following themes are appropriate for interpretation programs and environmental education:

- **Boreal forest ecosystems**
 - diversity of habitats;
 - the role of fire;
 - birds;
 - the role of beaver;

- bear awareness.
- Aquatic/wetland ecosystems
 - eutrophic lakes;
 - waterfowl and shorebirds;
 - fish;
 - pond life.
- Cultural/historical heritage
 - Aboriginal life before European contact
 - fur trade era with HBC/other trading posts at Sturgeon Lake
 - Settlement of the area, trails and transportation routes, local histories.

The park will offer several interpretive programs to the public during the camping season. Requests for other interpretive programs and services will be honored as resources permit.

Cooperation with other agencies and industries, and use of volunteers will be encouraged in the delivery of heritage appreciation programs.

Parks welcome and encourage the Sturgeon Lake Cree Nation to present their heritage at park programs. One example of this is their participation at Heritage Day at Williamson Provincial Park in August.

Making dream catchers at Heritage Day, Williamson Park



An historical/old-timers event is being planned as an annual event in July at Young's Point Provincial Park. The focus of this event will be on the life and times of settlement of the area.

Three interpretative signs have been produced and will be installed at appropriate spots along the trails. The signs describe the forest, the wetlands, and birds of the area. Other self-guided trails will be developed in the park if resources permit.

The Beaver Pond in Young's Point Provincial Park will be maintained for its ecological and heritage appreciation values. The viewing platform allows visitors to easily view the pond's vegetation and wildlife while protecting the shoreline from trampling.

In cooperation with other agencies, public education programs for boaters will be provided.

Parks and Protected Areas staff, as part of normal patrol duties, will educate the public about safe camping and boating practices.

Visitor Information

The park will aim to fulfill a broad range of visitor information needs by:

- keeping a full complement of park and regional information brochures at Young's Point Provincial Park office, at information cubes, and at other appropriate sites in both parks.

making park brochures available at regional tourist centers such as the Valleyview Information Center.

5.3 Outdoor Recreation

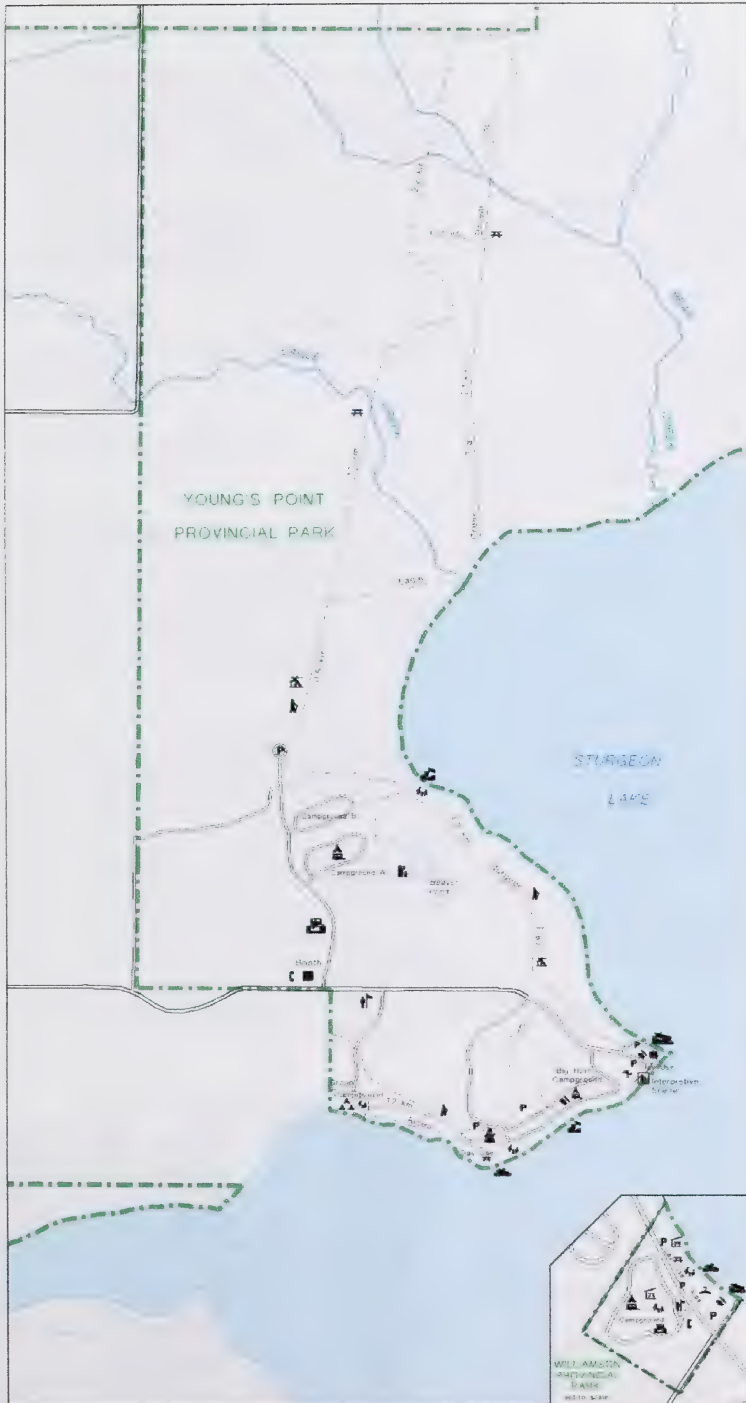
Objectives

- **To continue to provide high quality camping and day use opportunities**
- **To develop backcountry recreation opportunities if there is a demand**
- **To continue to offer good access to fishing in Sturgeon Lake and other water-based recreational opportunities**

**YOUNG'S POINT
PROVINCIAL PARK
and
WILLIAMSON
PROVINCIAL PARK
FACILITIES MAP**



Produced by the Resource Information Unit,
Alberta Sustainable Resource Development © 2002



LEGEND

- Park Office
- Parking
- Playground
- Swimming
- Washrooms
- Boat Launch
- Viewing Platform
- Change House
- Hand Boat Launch
- Picnic Shelter
- Group Camping
- Day Use Area
- Shower Building
- Stabling Area
- Fish Cleaning Station
- Walking Trail
- Cross Country Skiing
- Sewage Date Station

- **To provide opportunities to the private sector in the delivery of facilities and services that are consistent with park objectives**
- **To broaden accessibility of park recreation opportunities to the disabled.**
- **To encourage volunteers to assist with the planning and delivery of park services and programs.**

Management Guidelines

Campgrounds

Both Young's Point and Williamson Provincial Parks will continue to offer quality camping opportunities. The campground at Williamson was upgraded in 2001 to increase the number of power sites and accommodate larger camping units.

Opportunities will continue to be offered to the private sector for maintenance and campground management of the parks.

The group campground at Young's Point can be booked, beginning January 1, for current year's use by groups. The interpretive shelter can also be booked for private use, but park functions will take priority. No liquor is allowed at functions held at the interpretive shelter as it is in a day use area.

Sturgeon Trail in the fall



Trails

The addition of land to Young's Point Provincial Park provides an opportunity for backcountry recreation experiences, including hiking and primitive camping. The development of a backcountry trail system will be considered.

Trail riding is not allowed in provincial parks except on lands approved for that use. The current trail system in the park is used for hikers and bikers in summer, and skiers in winter, and would not be appropriate for trail riding. Parks would consider the possibility of allowing trail riding in the backcountry sections of the park on designated trails. It would also work with other local agencies and groups to provide this recreational opportunity in areas adjacent to the park.

The existing trail system provides an opportunity for a variety of nature-based activities such as bird watching and wildlife viewing, but it is presently under-utilized. Ways to encourage its use will be investigated, including installing interpretative signs.

A connecting trail linking the Big Horn campground and Alces Trail with the Sturgeon Lake Trail will be considered.

Winter activities

Winter recreation opportunities such as skating, snowshoeing, and cross-country skiing on groomed trails will continue to be offered at Young's Point Provincial Park.

The ski trails are groomed for track skiing. Consideration will be given to grooming appropriate sections of the trails for skate skiing.

Water-based Recreation

The swimming areas and the water systems at Young's Point and Williamson Provincial Parks will continue to be tested for recreational water quality.

Since Sturgeon Lake is hypereutrophic, it produces high concentrations of offshore aquatic vegetation that at times deters recreational use. Any management of the vegetation (for instance cutting the weeds in the swimming area) will only be done after application and approval from Alberta Environment and Sustainable Resource Development. Because of the current low water levels, vegetation also grows on exposed lakebed. Any grooming of this in the beach area will also require application and approval.

Any dredging at the boat launch will also need application and approval from Alberta Environment and Sustainable Resource Development.

Blue-green algae blooms occur on Sturgeon Lake in the right conditions, generally late summer. The algae forms a scum which is unattractive for recreationists and can be toxic if ingested. Notices at the park and radio announcements inform visitors of blue-green algae occurrences and appropriate behavior⁴.

5.4 Tourism

Objectives

- **To support tourism related opportunities for heritage appreciation and outdoor recreation in the park.**
- **To ensure that the park's natural features remain sustainable so that the park will continue to provide these opportunities in future.**

Management Guidelines

Both parks cater to visitors from local and regional communities, as well as to international travelers. At present much of the attraction of the parks focuses on fishing in Sturgeon Lake. However, Young's Point Provincial Park offers

other outstanding opportunities such as camping, hiking, cross-country skiing, bird watching, and nature appreciation. Marketing of the park to tourists will promote all the heritage appreciation and outdoor recreation opportunities that the park offers.

5.5 Public Safety

A public road divides the campground at Williamson Provincial Park from the day use area and beach. This road receives a considerable amount of local traffic, creating a concern for visitor safety. Ways of improving safety of visitors along this road will be investigated.

Conservation Officers are, and will continue to be, trained for problem wildlife control, enforcement, initial fire attack training, and search and rescue activities on land and water.

An Emergency Operation Plan is in place for the park to deal with all emergency public safety situations that may occur.

Park staff will continue to support public safety through education and enforcement activities on regular patrols.

6.0 Dispositions/ Other Disturbances in the Parks

6.1 Current Dispositions

Dispositions in the parks include easements, mineral surface leases, license of occupation, pipeline agreements, and Registered Fur Management Areas.

Oil and Gas

Most of Young's Point Provincial Park is under petroleum and natural gas agreements. In the old section of the park, agreements have a no surface access addendum. In the new section, leases sold previous to addition to the park will be honored.

⁴ For more information see <http://www.hc-sc.gc.ca/ehp/ehd/catalogue/general/iyh/algea.htm>

Two pipelines go through the park addition. An Emergency Plan has been developed with the pipeline company to deal with gas leaks or other hazards. An Emergency Plan has also been prepared for emergencies resulting from the gas plant to the north of the park.

Registered Fur Management Areas

The new section of the park contains parts of three Registered Fur Management Areas (RFMAs). The existing traplines will be managed according to Parks and Protected Areas policy.

6.2. Other Disturbances

There are three abandoned wellsites in Young's Point Provincial Park. One is now used as a day use car park close to the hiking trails. The other two are in the addition to the park, and will be reclaimed.

Cutlines from seismic operations are evident throughout all of Young's Point Provincial Park. Those cutlines located in the original park area are re-vegetating naturally, except for those used as hiking trails. The new addition has more cutlines, particularly in the western part. These will be allowed to re-vegetate, except those which may be used for hiking trails.

6.3 Management Guidelines for Oil and Gas Dispositions

Existing oil and gas agreements prior to park designation will be honoured. Petroleum and natural gas agreements sold after park designation will have a no surface access addenda as a condition of sale.

The development of oil and gas agreements will need to address the impacts of development on the park environment. This planning will be done in cooperation with Parks and Protected Areas, and will need their approval before development begins. Parks and Protected Areas may deem that the plans require public consultation and review prior to development of a lease.

In general, development will be done with the least environmental impact. Sensitive areas may require more detailed assessment and mitigation of impact. For instance, corridors through wetlands will be constructed to preserve the drainage patterns.

Geophysical exploration (seismic activity) that is not connected to existing commitments will not be permitted in the park. Conditions for geophysical exploration of existing commitments will include, but not be limited to the following:

- Seismic lines must be hand cut with a maximum width of 1.5 meters.
- Existing linear disturbances will be used whenever possible.
- In environmentally sensitive areas, exploration will be allowed to proceed only if no surface disturbance will occur.

Industrial access will be planned so as not to impact either significant natural features or recreational potential of the park. Whenever possible, existing access corridors will be used rather than creating new corridors. New corridors will be planned so that they may be useable as recreation trails.

Industrial access for petroleum and natural gas exploration and development will be recommended for winter access only.

Support vehicles will be allowed only on approved, designated routes.

All surface disturbances will be rehabilitated to conform to the surrounding landscapes.

7.0 Surrounding Lands

7.1 Surrounding Land Use

A mixture of crown and private land surrounds Young's Point Provincial Park. On the east and north boundary, and on the northern part of the west boundary, is crown land. This land is in the green zone, and as of now there is no logging

close to the park. There is extensive oil and gas activity east of the park. Private agricultural land borders some of the west and north sides. Williamson Provincial Park is surrounded by Sturgeon Lake Indian Reservation.

On south and east sides of Sturgeon Lake is the Sturgeon Lake Indian Reservation, the community of Calais, cottage subdivisions, a Bible camp, and private resort operations. Cattle ranchers operate around the west end of the lake.

The area in Young's Point Provincial Park previously used for staff housing has now been subdivided from the park and sold.

7.2 Potential Additions to Park

About 161 hectares of land on the west arm of Sturgeon Lake has been donated to the Nature Conservancy by Petro Canada. The Nature Conservancy is negotiating with Parks and Protected Areas to add this land to Young's Point Provincial Park.

The small island in the west arm, just offshore from the land mentioned above, is presently designated as a Natural Area. It is proposed that the island become part of Young's Point Provincial Park.

Two quarters of private land (east half of 15-71-24-W5) are surrounded by Young's Point Provincial Park. Parks and Protected Areas will look at adding these lands to the park if they become available.

8.0 Regional Coordination

Parks and Protected Areas recognizes that parks cannot exist in isolation from their surroundings. It seeks to be a good neighbour with landowners and managers of adjacent lands of both parks, and with the local community.

Objectives

- To coordinate management of the parks with management of adjacent lands
- To cooperate with local agencies, landowners and land managers towards sustainability of Sturgeon Lake and the surrounding communities.

8.1 Local Community

Sturgeon Lake Cree Nation

Members of the Sturgeon Lake Cree Nation have been hired as seasonal workers in the park. Work opportunities in the park will continue to be offered to them.

Local First Nations people participate in Heritage Day, and attend other special events. Parks appreciates and encourages this participation.

The parks have offered heritage appreciation services to the Sturgeon Lake School, and looks forward to developing a working relationship with them.

Parks and Protected Areas will continue to respect Sturgeon Lake Cree Nation traditional spiritual sites in and around Young's Point Provincial Park.

Sturgeon Heights Community

Sturgeon Heights is the nearest community to Young's Point Provincial Park. It has an active community association that works in partnership with the park.

Parks and Protected Areas will continue to encourage local community groups to use the parks for appropriate events, and will assist in these events where possible.

8.2 Government Agencies

The park will continue to cooperate with Alberta Environment to collect lakewater

Native dancer at Heritage Day, Williamson Provincial Park



samples on a regular basis. Park staff also collect water level data for Environment Canada, and participate in the Weather Watch Program that reports severe storms in the area.

Sustainable Resource Development, Land and Forest Division is manager of the crown land surrounding the park. The parks will work with them towards achieving government objectives for park and crown lands.

Both parks will continue to work with the RCMP and Lesser Slave Lake Regional Police Service to provide safety and enforcement services for the park.

A stakeholder committee made up of local anglers, Sturgeon Lake Cree Nation, local store owners, Alberta Fish and Game Association and Fish and Wildlife has been formed to discuss fish and habitat management and regulation options for Sturgeon Lake. Parks and Protected Areas will work with this committee.

A Sturgeon Lake Area Structure Plan Committee has been convened by the MD of Greenview to update the existing Area Structure Plan. Parks and Protected Areas is represented on this committee.

9.0 Plan Implementation

9.1 Implementation of Management Guidelines

Most management guidelines will be carried out through on-going operations in the parks.

The following projects have been identified in the plan. Their implementation will be dependent on staffing and funding resources.

Protection

Bear habitat and behavior study with local high school students.

Assessment of potential nesting and staging areas for pelicans and cormorants on the lake.

Heritage Appreciation

Restoration of Big Horn Lodge.

Installation of interpretation signs, and development of other self-guided interpretation trails in the park.

Seeking partnerships/volunteer participation in delivery of heritage appreciation programs in the park.

Outdoor Recreation

Upgrade of current trail system in the park by surfacing some sections.

Development of backcountry trails in the new addition to Young's Point Provincial Park if there is a demand for them.

9.2 Plan Review

The management plan will be formally reviewed not more than 10 years after approval. Earlier reviews may be required if there are significant events or changes deviating from the intent of the plan.

Parks and Protected Areas will initiate the plan review. Members of the local groups and agencies who helped in its preparation will be asked to participate in the review. The general public will also be given an opportunity to review the amended plan.

The review will:

- Review the objectives and the effectiveness of the management guidelines outlined in this plan;
- Address issues that arise subsequent to the approval of this plan; and
- Revise those sections of the plan which need updating because of changing situations.

Bibliography

Achuff, Peter 1994 *Natural Regions, Subregions and Natural History Themes of Alberta: A Classification for Protected Areas Management (Updated and Revised)*. Edmonton: Alberta Environmental Protection, Parks Services.

Alberta Environment/Alberta Sustainable Resources Development 2000 *The General Status of Alberta Wild Species 2000*. Edmonton

Cottonwood Consultants Ltd. 2000 *Natural History Themes Inventory 1999 – Young's Point Provincial Park*. Calgary: Cottonwood Consultants Ltd.

Debolt and District Pioneer Museum Society 1978 *Across the Smoky* DeBolt, Alberta:

Delisle, G.P. and R.J. Hall 1987 *Forest Fire History Maps of Alberta, 1931 to 1983*. Edmonton: Northern Forestry Centre, Canadian Forestry Service.

Dempsey, Hugh 1986 *Indian Tribes of Alberta* Calgary: Glenbow Museum.

Duchesne, L.F. 1978 *Program Statement for Young's Point Provincial Park*. Edmonton: Alberta Recreation, Parks and Wildlife

Greenlee, G.M. 1973 *Soil Survey of Young's Point Provincial Park and Interpretation for Recreational use*. Edmonton: Alberta Institute of Pedology.

Ives, W.G.H. and H.R. Wong 1988 *Tree and Shrub Insects of the Prairie Provinces*. Edmonton: Northern Forestry Center, Canadian Forestry Service.

Jones, J. F. 1966 *Geology and Groundwater Resources of the Peace River District, Northwestern Alberta*. Edmonton: Research Council of Alberta.

Leonard, David W. and Victoria L. Lemieux 1992 *The Lure of the Peace River country 1872-1914*. Calgary: Detselig Publishers.

McLintock, Mary 1981 *Themes and Historical Resources Inventory and Assessment of Williamson and Young's Point Provincial Parks*. Edmonton: Visitor Services Planning, Alberta Recreation and Parks.

McPherson, R.A. 1974 *Preliminary Report on Geological and Hydrogeologic Investigations of Young's Point Provincial Park*. Edmonton: Quaternary Geosciences Ltd.

Native Plant Working Group. 2001 *Native Plant Revegetation Guidelines for Alberta* Edmonton: Alberta Agriculture, Food and Rural Development and Alberta Environment.

Thompson, B. 1980 *Young's Point Provincial Park Interpretive Plan* Edmonton: Education and Interpretation Section, Outdoor Recreation Planning Branch, Alberta Recreation and Parks.

Van Tighem, K.F. and C.A. Wallis 1973 *An Ecological Survey of Young's Point Provincial Park, Vol I and II*. Edmonton: Provincial Parks Planning, Department of Land and Forest.

Wood, W. J. 1977 *Archaeological Assessment of Selected Provincial Parks – Northwestern Alberta*. Project 77-15

Appendix A

Birds found in Young's Point Provincial Park

This list of 158 birds observed at Young's Point Provincial Park was compiled by Cliff Wallis and Cleve Wershler. Their annotated list is found in Natural History Themes Inventory 1999 – Young's Point Provincial Park.

Loons	
Common Loon	<i>Gavia immer</i>
Grebes	
Eared Grebe	<i>Podiceps nigricollis</i>
Horned Grebe	<i>Podiceps auritus</i>
Pied-billed Grebe	<i>Podilymbus podiceps</i>
Red-necked Grebe	<i>Podiceps grisegana</i>
Western grebe	<i>Aechmophorus occidentalis</i>
Pelicans and Cormorants	
American white pelican	<i>Pelecanus erythrorhynchos</i>
Double-crested cormorant	<i>Phalacrocorax auritus</i>
Herons-like Birds	
Great blue heron	<i>Ardea herodias</i>
Swans, Geese and Ducks	
Trumpeter swan	<i>Cygnus buccinator</i>
Tundra swan	<i>Cygnus columbianus</i>
Canada goose	<i>Branta canadensis</i>
Mallard	<i>Anas platyrhynchos</i>
Gadwall	<i>Anas strepera</i>
Northern pintail	<i>Anas acuta</i>
Green-winged teal	<i>Anas crecca carolinensis</i>
Blue-winged teal	<i>Anas discors</i>
American wigeon	<i>Anas americana</i>
Northern shoveler	<i>Anas clypeata</i>
Redhead	<i>Aythya americana</i>
Ring-necked duck	<i>Aythya collaris</i>
Greater scaup	<i>Aythya marila</i>
Lesser scaup	<i>Aythya affinis</i>
Common goldeneye	<i>Bucephala clangulus</i>
Barrow's goldeneye	<i>Bucephala islandicus</i>
Bufflehead	<i>Bucephala albeola</i>
White-winged scoter	<i>Melanitta deglandi</i>
Surf scoter	<i>Melanitta perspicillata</i>
Ruddy duck	<i>Oxyura jamaicensis</i>
Hooded merganser	<i>Lophodytes cucullatus</i>
Common merganser	<i>Mergus merganser</i>
Red-breasted merganser	<i>Mergus serrator</i>
Birds of Prey	
Northern goshawk	<i>Accipiter gentilis</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Rough-legged hawk	<i>Buteo lagopus</i>

Broad-winged hawk	<i>Buteo platypterus</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>
Northern harrier	<i>Circus cyaneus</i>
Merlin	<i>Falco columbarius</i>
American kestrel	<i>Falco sparverius</i>
Grouse-like Birds	
Spruce grouse	<i>Canachites canadensis</i>
Ruffed grouse	<i>Bonasa umbellus</i>
Crane-like Birds	
Sora	<i>Porzana carolina</i>
American coot	<i>Fulica americana</i>
Shorebirds, Gulls and Terns	
Semi-palmated plover	<i>Charagrius semipalmatus</i>
Killdeer	<i>Charadrius vociferus</i>
Common snipe	<i>Capella gallinago</i>
Spotted sandpiper	<i>Actitis macularia</i>
Solitary sandpiper	<i>Tringa solitaria</i>
Greater yellowlegs	<i>Tringa melanoleucus</i>
Lesser yellowlegs	<i>Tringa flavipes</i>
Pectoral sandpiper	<i>Calidris melanotos</i>
Baird's sandpiper	<i>Calidris bairdii</i>
Least sandpiper	<i>Calidris minutilla</i>
Long-billed dowitcher	<i>Limnodromus scolopaceus</i>
Semi-palmated sandpiper	<i>Calidris pusillus</i>
Western sandpiper	<i>Calidris marui</i>
Wilson's phalarope	<i>Steganopus tricolor</i>
Red-necked phalarope	<i>Lobipes lobatus</i>
Herring gull	<i>Larus argentatus</i>
California gull	<i>Larus californicus</i>
Ring-billed gull	<i>Larus delawarensis</i>
Franklin's gull	<i>Larus pipixcan</i>
Bonaparte's gull	<i>Larus philadelphia</i>
Common tern	<i>Sterna hirundo</i>
Black tern	<i>Chlidonias niger</i>
Owls	
Great horned owl	<i>Bubo virginianus</i>
Barred owl	<i>Strix varia</i>
Great gray owl	<i>Strix nebulosa</i>
Saw-whet owl	<i>Aegolius acadicus</i>

Nightjars	
Common nighthawk	<i>Chordeiles minor</i>
Kingfishers	
Belted kingfisher	<i>Megaceryle alcyon</i>
Woodpeckers	
Northern flicker	<i>Colaptes auratus auratus</i>
Pileated woodpecker	<i>Dryocopus pileatus</i>
Yellow-bellied sapsucker	<i>Sphyrapicus varius</i>
Hairy woodpecker	<i>Dendrocopos villosus</i>
Downy woodpecker	<i>Dendrocopos pubescens</i>
Three-toed woodpecker	<i>Picoides tridactylus</i>
Perching Birds	
Eastern kingbird	<i>Tyrannus tyrannus</i>
Eastern phoebe	<i>Sayornis phoebe</i>
Yellow-bellied flycatcher	<i>Empidonax flaviventris</i>
Alder flycatcher	<i>Empidonax alnorum</i>
Least flycatcher	<i>Empidonax minimus</i>
Western wood pewee	<i>Contopus sordidulus</i>
Olive-sided flycatcher	<i>Nuttalornis borealis</i>
Eastern phoebe	<i>Sayornis phoebe</i>
Eastern kingbird	<i>Tyrannus tyrannus</i>
Northern shrike	<i>Lanius excubitor</i>
Tree swallow	<i>Iridoprocne bicolor</i>
Barn swallow	<i>Hirundo rustica</i>
Cliff swallow	<i>Petrochelidon pyrrhonota</i>
Gray jay	<i>Perisoreus canadensis</i>
Blue jay	<i>Cyanocitta cristata</i>
Black-billed magpie	<i>Pica pica</i>
Common raven	<i>Corvus corax</i>
American crow	<i>Corvus brachyrhynchos</i>
Purple martin	<i>Progne subis</i>
Black-capped chickadee	<i>Parus atricapillus</i>
Boreal chickadee	<i>Parus hudsonicus</i>
Red-breasted nuthatch	<i>Sitta canadensis</i>
Brown creeper	<i>Certhia familiaris</i>
House wren	<i>Troglodytes aedon</i>
American robin	<i>Turdus migratorius</i>
Hermit thrush	<i>Catharus guttata</i>
Swainson's thrush	<i>Catharus ustulata</i>
Golden-crowned kinglet	<i>Regulus satrapa</i>
Ruby-crowned kinglet	<i>Regulus calendula</i>
Bohemian waxwing	<i>Bombycilla farrula</i>
Cedar waxwing	<i>Bombycilla cedrorum</i>
Starling	<i>Sturnus vulgaris</i>
Solitary vireo	<i>Vireo solitarius</i>
Red-eyed vireo	<i>Vireo olivaceus</i>
Philadelphia vireo	<i>Vireo philadelphicus</i>
Warbling vireo	<i>Vireo gilvus</i>
Black-and-white warbler	<i>Mniotilta varia</i>
Tennessee warbler	<i>Vermivora peregrina</i>

Orange-crowned warbler	<i>Vermivora celata</i>
Yellow warbler	<i>Dendroica petechia</i>
Magnolia warbler	<i>Dendroica magnolia</i>
Cape May warbler	<i>Dendroica tigrina</i>
Yellow-rumped warbler	<i>Dendroica coronata coronata</i>
Black-throated green warbler	<i>Dendroica virens</i>
Bay-breasted warbler	<i>Dendroica castanea</i>
Blackpoll warbler	<i>Dendroica striata</i>
Palm warbler	<i>Dendroica palmarum</i>
Ovenbird	<i>Seiurus aurocapillus</i>
Northern waterthrush	<i>Seiurus novaboracensis</i>
Connecticut warbler	<i>Oporornis agilis</i>
Mourning warbler	<i>Oporornis philadelphia</i>
Wilson's warbler	<i>Wilsonia pusilla</i>
Common yellowthroat	<i>Geothlypis trichas)</i>
Canada warbler	<i>Wilsonia canadensis</i>
American redstart	<i>Setophaga ruticilla</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Baltimore oriole	<i>Icterus galbula</i>
Rusty blackbird	<i>Euphagus carolinus</i>
Common grackle	<i>Quiscalus quiscula</i>
Brown-headed cowbird	<i>Molothrus ater</i>
Western tanager	<i>Piranga ludoviciana</i>
Pine grosbeak	<i>Pinicola enucleator</i>
Rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>
Evening grosbeak	<i>Coccothraustes vespertina</i>
Purple finch	<i>Carpodacus purpureus</i>
Pine siskin	<i>Spinus pinus</i>
American goldfinch	<i>Spinus tristis</i>
Red crossbill	<i>Loxia curvirostra</i>
White-winged crossbill	<i>Loxia leucoptera</i>
Common redpoll	<i>Carduelis flammea</i>
Hoary redpoll	<i>Carduelis flammea</i>
Vesper sparrow	<i>Poocetes gramineus</i>
Dark-eyed junco	<i>Junco hyemalis hyemalis</i>
Snow bunting	<i>Plectrophenax nivalis</i>
American tree sparrow	<i>Spizella arborea</i>
Chipping sparrow	<i>Spizella passerina</i>
Clay-colored sparrow	<i>Spizella pallida</i>
White-throated sparrow	<i>Zonotrichia albicollis</i>
Fox sparrow	<i>Passerella iliaca</i>
Lincoln's sparrow	<i>Melospiza lincolni</i>
Swamp sparrow	<i>Melospiza georgiana</i>
Le Conte's sparrow	<i>Ammodramus lecontei</i>
Song sparrow (B)	<i>Melospiza melodia</i>

Appendix B

Plants found in Young's Point Provincial Park

This list of vascular plants was compiled by Cliff Wallis and Cleve Weschler of Cottonwood Consultants. An annotated list is found in Natural History Themes Inventory 1999 – Young's Point Provincial Park.

Trees	
Balsam fir	<i>Abies balsamea</i> (L.) P. Mill
Paper birch	<i>Betula papyrifera</i>
Tamarack	<i>Larix laricina</i> (du Roi) K. Koch
White Spruce	<i>Picea glauca</i> (Moench) Voss
Black spruce	<i>Picea mariana</i> (P. Mill.) B.S.P.
Lodgepole pine	<i>Pinus contorta</i> Dougl. Ex Loud.
Balsam poplar	<i>Populus balsamifera</i> L.
Quaking aspen	<i>Populus tremuloides</i> Michx.
Shrubs	
American green alder	<i>Alnus crispa</i> (Ait.) Pursh
Speckled alder	<i>Alnus incana</i> ssp. <i>rugosa</i> (du Roi) Clausen
Saskatoon serviceberry	<i>Amelanchier alnifolia</i> (Nutt.) Nutt. Ex M. Roemer.
Swamp birch	<i>Betula pumila</i>
Leatherleaf	<i>Chamaedaphne calyculata</i> (L.) Moench
Bunchberry dogwood	<i>Cornus canadensis</i> L.
Red osier dogwood	<i>Cornus sericea</i> ssp. <i>Sericea</i> L.
Beaked hazelnut	<i>Corylus cornuta</i> Marsh.
Bog Labrador tea	<i>Ledum groenlandicum</i> Oeder
Limber honeysuckle	<i>Lonicera dioica</i> L.
Twinberry honeysuckle	<i>Lonicera involucrata</i> Banks ex Spreng.
Pin cherry	<i>Prunus pennsylvanica</i> L.f.
Chokecherry	<i>Prunus virginiana</i> L.
Skunk currant	<i>Ribes glandulosum</i> Grauer
Northern black currant	<i>Ribes hudsonianum</i> Richards
Prickly currant	<i>Ribes lacustre</i> (Pers.) Poir.
Canadian gooseberry	<i>Ribes oxycanthoides</i> L.
Red currant	<i>Ribes triste</i> Pallus
Prickly rose	<i>Rosa acicularis</i> Lindl..
Wood's rose	<i>Rosa woodsii</i> Lindl.
American red raspberry	<i>Rubus idaeus</i> L.
Bebb willow	<i>Salix bebbiana</i> Sarg.
Pussy willow	<i>Salix discolor</i> Muhl..

Sandbar willow	<i>Salix exigua</i> Nutt.
Blueberry willow	<i>Salix myrtilifolia</i> Anderss.
Bog willow	<i>Salix pedicellaris</i> Pursh
Meadow willow	<i>Salix petiolaris</i> Sm.
Diamondleaf willow	<i>Salix planifolia</i> Pursh
MacKenzie's willow	<i>Salix prolixa</i> Anderss.
Balsam willow	<i>Salix pyrifolia</i> Anderss.
Autumn willow	<i>Salix serissima</i> (Bailey) Fern.
Russet buffaloberry	<i>Shepherdia canadensis</i> (L.) Nutt
Greene mountainash	<i>Sorbus scopulina</i> Greene
Common snowberry	<i>Symphoricarpos albus</i> (L.) Blake
Western snowberry	<i>Symphoricarpos occidentalis</i> Hook.
Common blueberry	<i>Vaccinium myrtilloides</i>
Mooseberry viburnum	<i>Viburnum edule</i> (Michx.) Raf.
Low Shrubs	
Bog rosemary	<i>Andromeda polifolia</i> L.
Kinnikinnick	<i>Arctostaphylos uva-ursi</i> (L.) Spreng
Small bog cranberry	<i>Oxycoccus microcarpus</i>
Dwarf raspberry	<i>Rubus arcticus</i> ssp. <i>acaulis</i> (Michx.) Focke
Cloudberry	<i>Rubus chamaemorus</i> L.
Dwarf red blackberry	<i>Rubus pubescens</i> Raf.
Dwarf blueberry	<i>Vaccinium caespitosum</i> Michx.
Velvetleaf huckleberry	<i>Vaccinium myrtilloides</i> Michx.
Small cranberry	<i>Vaccinium oxycoccus</i> L.
Lingonberry	<i>Vaccinium vitis-idaea</i> L.
Ferns	
Common ladyfern	<i>Athyrium filix-femina</i> (L.) Roth
Rattlesnake fern	<i>Botrychium virginianum</i> (L.) Sw.
Brittle bladder fern	<i>Cystopteris fragilis</i> (L.) Bernh
Spinulose woodfern	<i>Dryopteris carthusiana</i> (Vill.) H.P. Fuchs
Western oakfern	<i>Gymnocarpium dryopteris</i> (L.) Newman

Horsetails	
Field horsetail	<i>Equisetum arvense L.</i>
Water horsetail	<i>Equisetum fluviatile L.</i>
Dwarf scouring rush	<i>Equisetum scirpoides Michx.</i>
Woodland horsetail	<i>Equisetum sylvaticum L.</i>
Clubmosses	
Stiff clubmoss	<i>Lycopodium annotinum L.</i>
Running clubmoss	<i>Lycopodium clavatum L.</i>
Ground cedar	<i>Lycopodium complanatum L.</i>
Rare clubmoss	<i>Lycopodium obscurum L.</i>
Grasses	
Rough bentgrass	<i>Agrostis scabra Willd.</i>
Creeping bentgrass	<i>Agrostis stolonifera L.</i>
Shortawn foxtail	<i>Alopecurus aequalis Sobol.</i>
American sloughgrass	<i>Beckmannia syzigachne (Steud.) Fern</i>
Fringed brome	<i>Bromus ciliatus L.</i>
Smooth brome	<i>Bromus inermis Leyss</i>
Bluejoint	<i>Calamagrostis canadensis (Michx.) Beauv.</i>
Drooping woodreed	<i>Cinna latifolia</i>
Slender wheatgrass	<i>Elymus trachycaulus (Link) Gould ex Shinners</i>
Creeping quackgrass	<i>Elytrigia repens (L.) Desv. Ex B.D. Jackson</i>
Fowl mannagrass	<i>Glyceria striata (Lam.) A.S. Hitchc.</i>
Foxtail barley	<i>Hordeum jubatum L.</i>
Downy ryegrass	<i>Leymus innovatus (Beal) Pilger</i>
Roughleaf ricegrass	<i>Oryzopsis asperifolia Michx.</i>
Reed canary grass	<i>Phalaris arundinacea L.</i>
Timothy	<i>Phleum pratense L.</i>
Annual bluegrass	<i>Poa annua L.</i>
Kentucky bluegrass	<i>Poa pratensis L.</i>
Fowl bluegrass	<i>Poa palustris L.</i>
False melic	<i>Schizachne purpurascens (Torr.) Swallen</i>
Sedges	
Water sedge	<i>Carex aquatilis Wahlenb.</i>
Slough sedge	<i>Carex atherodes Spreng.</i>
Bebb's sedge	<i>Carex bebbii Olney ex Fern.</i>
Silvery sedge	<i>Carex canescens L.</i>
Northern sedge	<i>Carex concinna R. Br.</i>
Sedge	<i>Carex crawfordii Fern.</i>
Lesser panicled sedge	<i>Carex diandra Shrank</i>
Softleaf sedge	<i>Carex disperma Dewey</i>
Mud sedge	<i>Carex limosa L.</i>
Ryegrass sedge	<i>Carex loliacea L.</i>
Smallwing sedge	<i>Carex microptera Mackenzie</i>
Clustered field sedge	<i>Carex praegracilis W. Boott</i>

Meadow sedge	<i>Carex praticola Rydb.</i>
Ross' sedge	<i>Carex rossii Boott</i>
Sartwell's sedge	<i>Carex sartwellii Dewey</i>
Manyhead sedge	<i>Carex sychnocephala Carey</i>
Threeseeded sedge	<i>Carex trisperma Dewey</i>
Northwest Territory sedge	<i>Carex utriculata Boott</i>
Needle spikerush	<i>Eleocharis acicularis (L.) roemer & J.A. Schultes</i>
Common spikerush	<i>Eleocharis palustris (L.) Roemer & J.A. Schultes</i>
Northland cottonsedge	<i>Eriophorum brachyantherum Trautv. & C.A. Mey</i>
Tussock cottongrass	<i>Eriophorum vaginatum L.</i>
Bulrush	<i>Schoenoplectus tabernaemontani (K.C. Gmel.) Palla</i>
Panicles bulrush	<i>Scirpus microcarpus J.&K. Presl</i>
Rushes	
Baltic rush	<i>Juncus balticus Willd.</i>
Poverty rush	<i>Juncus tenuis Willd.</i>
Water Plants	
American water plantain	<i>Alisma plantago-aquatica L.</i>
Water arum	<i>Calla palustris L.</i>
Northern water starwort	<i>Callitriche hermaphroditica L.</i>
Vernal water starwort	<i>Callitriche palustris L.</i>
Common mare's tail	<i>Hippuris vulgaris L.</i>
Common duckweed	<i>Lemna minor L.</i>
Star duckweed	<i>Lemna trisulca L.</i>
Variiegated yellow pond-lily	<i>Nuphar lutea ssp. Variegata (Dur.) E.O. Beal</i>
Arumleaf arrowhead	<i>Sagittaria cuneata Sheldon</i>
Broadfruit burreed	<i>Sparganium eurycarpum Engelm. ex Gray</i>
Broadleaf cattail	<i>Typha latifolia L.</i>
Forbs	
Common yarrow	<i>Achillea millefolium L.</i>
Siberian yarrow	<i>Achillea sibirica Ledeb.</i>
Red baneberry	<i>Actaea rubra (Ait.) Willd.</i>
Muskroot	<i>Adoxa moschatellina L.</i>
Blue giant hyssop	<i>Agastache foeniculum (Pursh) Kuntze</i>
Prostrate pigweed	<i>Amaranthus albus L.</i>
Western pearly everlasting	<i>Anaphalis margaritacea (L.) Benth. & Hook.f.</i>
Riparian thimbleweed	<i>Anemone virginiana var. riparia (Fern.) Boivin</i>
Field pussytoes	<i>Antennaria neglecta Greene</i>
Rosy pussytoes	<i>Antennaria rosea Greene</i>
Spreading dogbane	<i>Apocynum androsaemifolium</i>

Tower rockcress	<i>Arabis glabra</i> (L.) Bernh.
Ginsengs	<i>Araliaceae</i>
Wild sarsparilla	<i>Aralia nudicaulis</i> L.
Chamisso arnica	<i>Arnica chamissonis</i> Less.
Heartleaf arnica	<i>Arnica cordifolia</i> Hook.
Biennial wormwood	<i>Artemisia biennis</i> Willd.
Lindley's aster	<i>Aster ciliolatus</i> Lindl.
Showy aster	<i>Aster conspicuus</i> Lindl.
Western willow aster	<i>Aster lanceolatus</i> ssp. <i>Hespeius</i> (Gray) <i>Semple & Chmielewski</i> .
Smooth aster	<i>Aster laevis</i> L.
Purple-stemmed aster	<i>Aster puniceus</i> L.
American milkvetch	<i>Astragalus Americanus</i> (Hook.) M.E. Jones.
Nodding beggartick	<i>Bidens cernua</i> L.
Rape mustard	<i>Brassica rapa</i> L.
Floating marsh marigold	<i>Caltha natan Pallas ex</i> <i>Georgis</i>
Yellow marsh marigold	<i>Caltha palustris</i> L.
Fairyslipper orchid	<i>Calypso bulbosa</i> (L.) Oakes
Bluebell bellflower	<i>Campanula rotundifolia</i> L.
Shepherd's purse	<i>Capsella bursa-pastoris</i> (L.) <i>Neduj.</i>
Pennsylvania bittercress	<i>Cardamine pensylvanica</i> <i>Muhl. ex Willd.</i>
Scarlet Indian paintbrush	<i>Castilleja miniata</i> Dougl. ex <i>Hook.</i>
Nodding chickweed	<i>Cerastium nutans</i> Raf.
Lambsquarters	<i>Chenopodium album</i> L.
Iowa golden saxifrage	<i>Chrysosplenium iowense</i> <i>Rydv.</i>
Bulb-bearing water-hemlock	<i>Cicuta bulbifera</i> L.
Western water hemlock	<i>Circuta douglasii</i> (DC.) <i>coul. & L.</i>
Small enchanter's nightshade	<i>Circaea alpina</i> L.
Canadian thistle	<i>Cirsium arvense</i> (L.) Scop.
Elk thistle	<i>Cirsium foliosum</i> (Hook.) DC.
Narrowleaf mountain trumpet	<i>Collomia linearis</i> Nutt.
Purple marshlocks	<i>Comarum palustre</i> L.
Summer coralroot	<i>Corallorrhiza maculata</i> (Raf.) <i>Raf.</i>
Yellow coral-root	<i>Corallorrhiza trifida</i> Chatelain
Scrambled eggs	<i>Corydalis aurea</i> Willd.
Sparrowegg lady's slipper	<i>Cypripedium passerinum</i> <i>Richards.</i>
Narrow-leaf hawksbeard	<i>Crepis tectorum</i> L.
Sierra larkspur	<i>Delphinium glaucum</i> S. Wats.

Roughfruit fairy bells	<i>Disporum trachycarpum</i> (s. <i>Wats.) Benth. & Hook. f.</i>
American dragonhead	<i>Dracocephalum parviflorum</i> <i>Nutt.</i>
Fireweed	<i>Epilobium angustifolium</i> L.
Glandular willowweed	<i>Epilobium ciliatum</i> ssp. <i>Glandulosum</i> (Lehm.) Hock & <i>Raven</i>
Marsh willowherb	<i>Epilobium palustre</i> L.
Philadelphia fleabane	<i>Erigeron philadelphicus</i> L.
Wormseed wallflower	<i>Erysimum cheiranthoides</i> L.
Virginia strawberry	<i>Fragaria virginiana</i> Duchesne
Woodland strawberry	<i>Fragaria vesca</i> L.
Northern bedstraw	<i>Galium boreale</i> L.
Threepetal bedstraw	<i>Galium trifidum</i> L.
Fragrant bedstraw	<i>Galium triflorum</i> Michx.
Autumn dwarfgentian	<i>Gentianella amarella</i> (L.) <i>boerner</i>
False toadflax	<i>Geocaulon lividum</i> (Richards.) Fern.
Bicknell's geranium	<i>Geranium bicknellii</i> Britt.
Yellow avens	<i>Geum allepicum</i> Jacq.
Largeleaf avens	<i>Geum macrophyllum</i> Willd.
Purple avens	<i>Geum rivale</i> L.
Marsh cudweed	<i>Gnaphalium uliginosum</i> L.
Lesser rattlesnake plantain	<i>Goodyera repens</i> (L.) R.Br. ex <i>Ait. f.</i>
American spurred gentian	<i>Halenia deflexa</i> (Sm.) Griseb.
Common cowparsnip	<i>Heracleum maximum</i> Bartr.
White hawkweed	<i>Hieracium albiflorum</i> Hook.
Narrowleaf hawkweed	<i>Hieracium umbellatum</i> L.
Western touch-me-not	<i>Impatiens noli-tangere</i> L.
Flatspine stickseed	<i>Lappula occidentalis</i> (S. Wats.) Greene
Creamy pea-vine	<i>Lathyrus ochroleucus</i> Hook.
Common blue lettuce	<i>Latua pulchella</i>
Wood lily	<i>Lilium philadelphicum</i> L.
Twinflower	<i>Linnaea borealis</i> L.
Heart-leaved twayblade	<i>Listera cordata</i> (L.) R. Br. ex <i>Ait. f.</i>
Tufted loosestrife	<i>Lysimachia thyrsifolia</i> L.
Canada beadruby, also wild lily of the valley	<i>Maianthemum canadense</i> <i>Desf.</i>
Feathery false Solomon's seal	<i>Maianthemum racemosum</i> (L.) Link
Starry false Solomon's seal	<i>Maianthemum stellatum</i> (L.) <i>Link</i>
Threeleaf false Solomon's seal	<i>Maianthemum trifolium</i> (L.) <i>Sloboda</i>
Disc mayweed	<i>Matricaria discordea</i> DC.
Narrowleaf cowwheat	<i>Melampyrum lineare</i> Desr.

Wild mint	<i>Menta arvensis</i> L.
Tall bluebells	<i>Mertensia paniculata</i> (Ait.)G.Don
Naked miterwort	<i>Mitella nuda</i> L.
Bluntleaf sandwort	<i>Moehringia lateriflora</i> (L.)Fenzl
Single delight	<i>Moneses uniflora</i> (L.) Gray
Sidebells wintergreen	<i>Orthilia secunda</i> (L.) House
Bluntseed sweetroot	<i>Osmorhiza depauperata</i> Phil.
Northern grass-of-Parnassus	<i>Parnassia palustris</i> L.
Arctic sweet coltsfoot	<i>Petasites frigidus</i> var. <i>palmatus</i> (Ait.) Cronq.
Arrowleaf sweet coltsfoot	<i>Petasites sagittatus</i> (Banks ex Pursh) Gray
Sweet coltsfoot	<i>Petasites X vitifolium</i> Greene (pro sp.)
Common plantain	<i>Plantago major</i> L.
Northern green orchid	<i>Platanthera hyperborea</i> (L.)Lindl.
Large roundleaved orchid	<i>Platanthera orbiculata</i> var. <i>orbiculata</i> (Pursh) Lindl.
Curly knotweed	<i>Polygonum lapathifolium</i> L.
Brook cinquefoil	<i>Potentilla rivalis</i> L.
Liverleaf wintergreen	<i>Pyrola asarifolia</i> Michx.
Greenflowered wintergreen	<i>Pyrola chlorantha</i> Sw.
Snowline wintergreen	<i>Pyrola minor</i> L.
Littleleaf buttercup	<i>Ranunculus abortivus</i> L.
Gmelin's buttercup	<i>Ranunculus gmelinii</i> DC
Lapland buttercup	<i>Ranunculus lapponicus</i> L.s
Longbeak buttercup	<i>Ranunculus longirostris</i> Godr.
Macoun's buttercup	<i>Ranunculus macounii</i> Britt.
Celeryleaf buttercup	<i>Ranunculus sceleratus</i> L.
Bog yellowcress	<i>Rorippa palustris</i> (L.) Bess.
Western dock	<i>Rumex aquaticus</i> var. <i>fenestratus</i> (Greene) Dorn
Golden dock	<i>Rumex maritimus</i> L.
Narrow-leaved dock	<i>Rumex mexicanus</i>
Mexican dock	<i>Rumex salicifolius</i> var. <i>mexicanus</i> (Meisn.) C.L. Hitchc.
Maryland sanicle	<i>Sanicula marilandica</i> L.
Marsh skullcap	<i>Scutellaria galericulata</i> L.
Marsh fleabane	<i>Senecio congestus</i> (R.Br.) DC
Desert groundsel	<i>Senecio eremophilus</i> Richards
Balsam groundsel	<i>Senecio pauperulus</i> Michx.
Common groundsel	<i>Senecio vulgaris</i> L.
Mountain-eyed grass	<i>Sisyrinchium montanum</i> Greene
Hemlock water parsnip	<i>Sium suave</i> Walt.

Canada goldenrod	<i>Solidago canadensis</i> L.
Field sowthistle	<i>Sonchus arvensis</i> L.
Hooded ladies tresses	<i>Spiranthes romanzoffiana</i> Cham.
Marsh hedge nettle	<i>Stachys palustris</i> L.
Northern starwort	<i>Stellaria calycantha</i> (Ledev.) Bong.
Longleaf starwort	<i>Stellaria longifolia</i> Muhl.ex Willd.
Longstalk starwort	<i>Stellaria longipes</i> Goldie
Common dandelion	<i>Taraxacum officinale</i> G.H.Weber ex Wiggers
Purple meadowrue	<i>Thalictrum dasycarpum</i> Fisch.&Ave-Lall.
Fewflower meadowrue	<i>Thalictrum sparsiflorum</i> Turcz.ex Fisch.& C.A. Mey.
Veiny meadow rue	<i>Thalictrum venulosum</i> Trel.
Field pennycress	<i>Thlaspi arvense</i> L.
Arctic starflower	<i>Trientalis europaea</i> L.
Alsike clover	<i>Trifolium hybridum</i> L.
Red clover	<i>Trifolium pratense</i> L.
White clover	<i>Trifolium repens</i> L.
Stinging nettle	<i>Urtica dioica</i> L.
American speedwell	<i>Veronica americana</i> Schwein.ex Benth.
Neckweed	<i>Veronica peregrina</i> L.
American vetch	<i>Vicia americana</i> Muhl.ex Willd.
Hookedspur violet	<i>Viola adunca</i> Sm.
Creepingroot violet	<i>Viola canadensis</i> var. <i>rugulosa</i> (Greene) C.L. Hitchc.
Marsh violet	<i>Viola palustris</i> L.
White violet	<i>Viola renifolia</i> Gray
Mosses	
Aulacomnium moss	<i>Aulacomnium palustre</i> (Hedw.) Schwagr.
Brachythecium moss	<i>Brachythecium salebrosum</i> (Web.&Mohr) Schimp. In B.S.G.
Star campylium moss	<i>Campylium stellatum</i> (Hedw.)c.Jens.
Ceratodon moss	<i>Ceratodon purpureus</i> (Hedw.) Brid.
Tree climacium moss	<i>Climacium dendroides</i> (Hedw.) Web.&Mohr
Dicranum moss	<i>Dicranum flagellare</i> Hedw.
Dicranum moss	<i>Dicranum fuscenscens</i> Turn.
Undulate dicranum moss	<i>Dicranum polysetum</i> Se.
Dicranum moss	<i>Dicranum scoparium</i> Hedw.
Undulate dicranum moss	<i>Dicranum undulatum</i> Brid.
Eurynchium moss	<i>Eurhynchium pulchellum</i>

	(Hedwl) Jenn
Splendid feather moss	<i>Hylocomium splendens</i> (Hedw.) Schimp. In B.S.G.
Leptobryum moss	<i>Leptobryum pyriforme</i> (Hedw.) Schimp. in B.S.G.
Imprichitia moss	<i>Limprichtia revolvens</i> (Sw.) Loeske
Toothed plagiomnium moss	<i>Plagiomnium cuspidatum</i> (Hedw.) T. Kop.
Schreber's big red stem moss	<i>Pleurozium schreberi</i> (Brid.) Mitt.
Pohlia moss	<i>Pohlia nutans</i> (Hedw.) Lindb.
Polytrichum moss	<i>Polytrichum commune</i> Hedw.
Polytrichum moss	<i>Polytrichum juniperinum</i> Hedw.
Polytrichum moss	<i>Polytrichum strictum</i> Brid.
Naugehyde liverwort	<i>Ptilidium pulcherrimum</i> (G.Web.) Hampe
Knight's plum moss	<i>Ptilium crista-castrensis</i> (Hedw.) De Not.
Pylaisiella moss	<i>Pylaisiella polyantha</i> (Hedw.) Grout
Sanionia moss	<i>Sanionia uncinata</i> (Hedw.) Loeske
Sphagnum	<i>Spagnum capillifolium</i> (Ehrh.) Hedw.
Sphagnum	<i>Sphagnum fuscum</i> (Schimp.) Klinggr.
Sphagnum	<i>Sphagnum squarrosum</i> Crome
Sphagnum	<i>Sphagnum warnstorffii</i> Russ.
Thuidium moss	<i>Thuidium recognitum</i> (Hedw.) Lindb.
Liverworts	
Marchantia	<i>Marchantia polymorpha</i> L.
Lichens	
Horsehair lichens	<i>Bryoria fuscescens</i> (Gyelnick) Brodo & D. Hawksw.; <i>Byroria</i> <i>glabra</i> (Mot.) Brodo & D. Hawksw.; <i>Bryoria lanestris</i> (Ach.) Brodo & D. Hawksw.
Orange lichen	<i>Caloplaca holocarpa</i> (Hoffm.) Ex Ach.) M. Wade
Concolor lemon lichen	<i>Candelaria concolor</i> (dickson) Stein
Cetraria lichen	<i>Cetraria ericetorum</i> Opiz
raindeer lichen	<i>Cladina arbuscula</i> (Wallr.) Hale & Culb; <i>Cladina mitis</i> (Sandst.) Hustich; <i>Cladina</i> <i>rangiferina</i> (L.) Nyl.

Star reindeer lichen	<i>Cladina stellaris</i> (Opiz) Brodo
Cup lichen	<i>Cladonia bacillaris</i> Ny.
Boreal cup lichen	<i>Cladonia borealis</i> S. Stenroos
Cip lichen	<i>Cladonia cenotea</i> (Ach.) Schaerer
Cup lichen	<i>Cladonia cervicornis</i> ssp. <i>Verticillata</i> (Hoffm.) Ahti
Cup lichen	<i>Cladonia chlorophaea</i> (Florke ex Sommerf.) Sprengel
Cup lichen	<i>Cladonia coniocraea</i> auct.
Cup lichen	<i>Cladonia cornuta</i> (L.) Hoffm.
Cup lichen	<i>Cladonia crispata</i> (Ach.) Flotow
Deformed cup lichen	<i>Cladonia deformis</i> (L.) Hoffm.
Cup lichen	<i>Cladonia fimbriata</i> (L.) Fr.
Cup lichen	<i>Cladonia gracilis</i> (L.) Willd.
Cup lichen	<i>Cladonia multiformis</i> .G.Merr.
Cup lichen	<i>Cladonia pleurota</i> (Florke) Schaerer
Cup lichen	<i>Cladonia pyxidata</i> (L.) Hoffm.
Cup lichen	<i>Cladonia scabriuscula</i> (Delise) Nyl.
Cup lichen	<i>Cladonia sulphurina</i> (Michaux) Fr.
Ring lichen	<i>Evernia mesomorpha</i> Nyl.
Flattened snow lichen	<i>Flavocetraria nivalis</i> (L.) Karnefeld & Thell
Tube lichen	<i>Hypogymnia austerodes</i> (Nyl.) Rasanen
Tube lichen	<i>Hypogymnia physodes</i> (L.) Nyl.
Peppermint drop lichen	<i>Icmadophila ericetorum</i> (L.) Zahlbr.
Rim lichen sp.	<i>Lecanora varia</i> (Hoffm.) Ach.
Lecidella lichen	<i>Lecidella euphorea</i> (Florke) Hertel
Exasperated melanelia lichen	<i>Melanelia exasperata</i> (de Not.) Essl.
Shield lichen	<i>Parmelia sulcata</i> Taylor
Ambiguous bran lichen	<i>Parmeliopsis ambigua</i> (wulfen) Nyl.
Felt lichen	<i>Peltigera aphthosa</i> (L.) Willd.
Felt lichen	<i>Peltigera canina</i> (L.) Willd.
Horizontal felt lichen	<i>Peltigera horizontalis</i> (Hudson) Baumg.
Felt lichen	<i>Peltigera leucophlebia</i> (Nyl.) Gyelnick
Felt lichen	<i>Peltigera neckeri</i> Hepp ex Mull. Arg.
Felt lichen	<i>Peltigera rufescens</i> (Weiss)

	<i>Humb.</i>
Wreath lichen	<i>Phaeophyscia orbicularis</i> (Necker) Moberg
Rosette lichen	<i>Physica adscendens</i> (Fr.) H. Olivier
Rosette lichen	<i>Physica aipolia</i> (Ehrh.exHumb.) Furnr.
Ragged lichen	<i>Platismatia glauca</i> (L.) culb.&C.Culb.
Tomentose snow lichen	<i>Stereocaulon tomentosum</i> Fr.
American	<i>Tuckermannopsis americana</i>

tuckermannopsis lichen	(Sprengel) Hale
Lapland beard lichen	<i>Usnea lapponica</i> Vainio
Beard lichen	<i>Usnea subfloridana</i> Stirton
Powdered sunshine	<i>Vulpicida pinastri</i> (Scop.) J.- E. Mattsson & M.J.Lai
Orange wall lichen	<i>Xanthoria fallax</i> (Hepp) Arnold

Appendix C

Mammals/Fish/Amphibians/Butterflies in Young's Point Provincial Park

Mammals

Masked shrew
Arctic shrew
Little brown bat
Snowshoe Hare
Woodchuck
Least chipmunk
Red squirrel
American Beaver
Deer mouse
Southern red-backed vole
Meadow vole
Muskrat
Meadow jumping mouse
Porcupine
Coyote
Gray wolf
Red fox
Black bear
Marten
Fisher
Ermine
Skunk
Wapiti
Mule deer
White-tailed deer
Moose
River otter
Canada lynx
Cougar

Fish in Sturgeon Lake

Spottail shiner
White sucker
Burbot
Yellow perch
Walleye
Northern pike
Lake whitefish

Amphibians

Boreal toad
Boreal chorus frog
Wood frog

Lepidoptera (Butterflies)

Skippers

Arctic Skipper
Roadside Skipper
Dreamy Duskywing

Butterflies

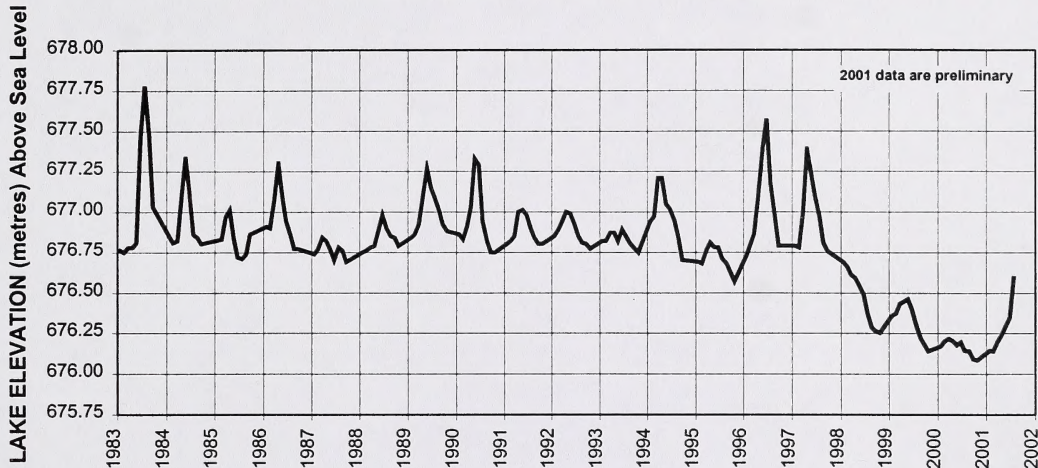
Canadian Tiger Swallowtail
Mustard White
Coral Hairstreak
Brown Elfin
Western Pine elfin
Spring Azure
Silvery blue
Milbert's Tortoise Shell
Compton's tortoise shell
Mourning cloak
Satyr Anglewing
Bog Fritillary
Atlantis Fritillary
Northern Pearl Crescent
White Admiral
Common alpine

Odonata (Dragonflies and Damselflies)

Civil bluet
Circumpolar bluet
Blue Darner
Green Darner
Fourspot Skimmer
Variegated Meadowhawk

Appendix D

MONTHLY MEAN LAKE LEVELS FOR STURGEON LAKE



Average Open-Water Secchi Depth and Concentrations of Chlorophyll a and Total Phosphorus in Sturgeon Lake

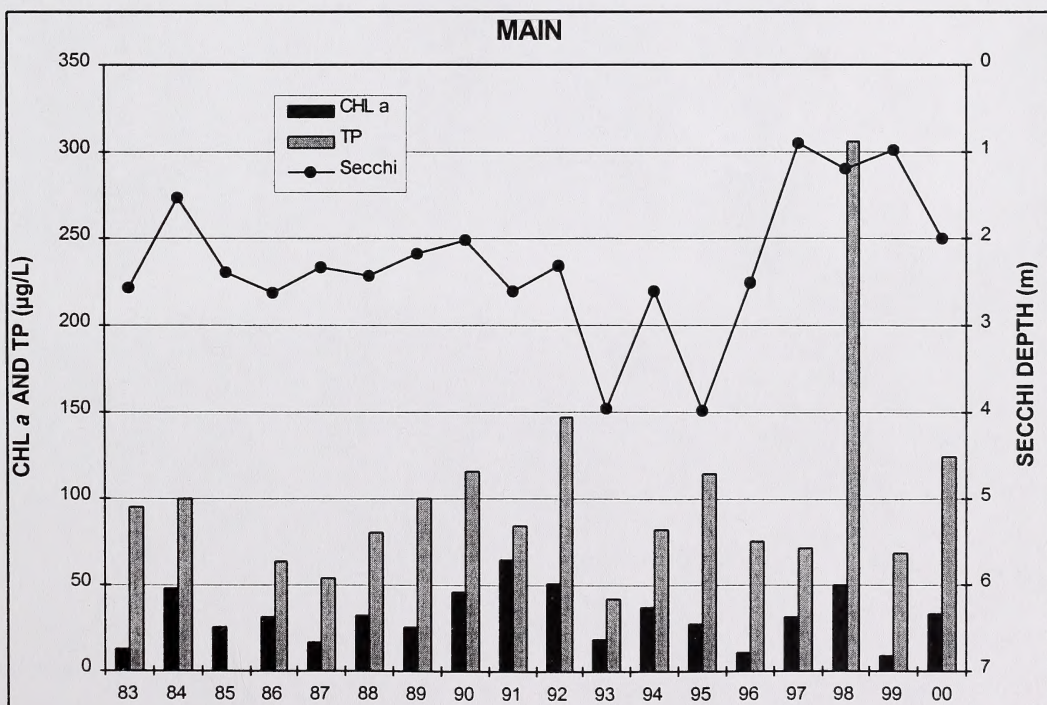




FIGURE 2

FIGURE 2. MONTHLY MEAN AIR LEVELS OF SULPHUR DIOXIDE AT STATION 1

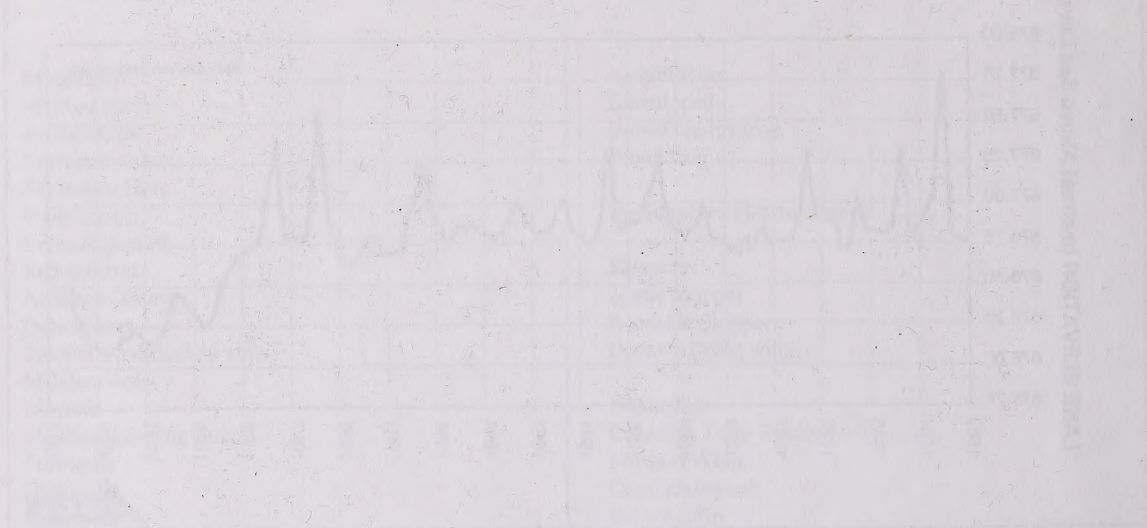


FIGURE 3. AVERAGE QUANTITIES OF SULPHUR DIOXIDE AND CONCENTRATIONS OF CHLOROPHYLL A AND TOTAL PHENOLIC IN GARDNER LAKE

