

# **SEVERN SOUND REMEDIAL ACTION PLAN**

## **SOCIO-ECONOMIC PROFILE OF THE COMMUNITY**

**Prepared for:**  
**Water Planning and Management Branch**  
**Canada Centre for Inland Waters**  
**Environment Canada**  
**(On Behalf of the Severn Sound Remedial Action Plan Team)**

## **FINAL REPORT**

**KEIR**  
**CONSULTANTS INC.**  
**September, 1991**

## TABLE OF CONTENTS

	Page
<b>1.0 Introduction</b>	1-1
1.1 Severn Sound Watershed	1-1
<b>2.0 Socio-Economic History</b>	2-1
2.1 Pre-History	2-1
2.2 Industrial Era	2-2
2.3 Recreation and Tourism	2-3
<b>3.0 Population, Employment and Investment</b>	3-1
3.1 Population	3-1
3.1.1 Population Projections	3-3
3.1.2 Seasonal Population	3-4
3.2 Employment	3-6
3.2.1 Income	3-10
3.3 Investment	3-10
<b>4.0 Existing Use</b>	4-1
4.1 Commercial Shipping	4-1
4.2 Industrial Uses	4-1
4.3 Residential Uses	4-2
4.4 Agricultural Uses	4-2
4.5 Municipal Water Uses	4-3
4.6 Pleasure Boating	4-4
4.7 Sport Fishing	4-6
4.8 Swimming Activity	4-9
4.9 Tourism	4-10
4.10 Linkages	4-16
<b>5.0 Future and Beneficial Uses</b>	5-1
5.1 Future Commercial Shipping	5-1
5.2 Future Industrial Uses	5-1
5.3 Future Residential Uses	5-2
5.4 Future Agricultural Uses	5-3
5.5 Future Municipal Water Uses	5-3
5.6 Future Pleasure Boating	5-5
5.7 Future Sport Fishing	5-5
5.8 Future Swimming Activity	5-6
5.9 Future Tourism	5-7
5.10 Future Linkages	5-7
5.11 Future Aesthetic Values	5-8

## TABLE OF CONTENTS CONTINUED...

	<b>Page</b>
<b>6.0 Costs, Benefits and Funding for Remedial Actions</b>	<b>6-1</b>
6.1 Costs of Pollution	6-1
6.2 Distribution of Costs and Benefits	6-2
6.3 Methods of Financing Remedial Options	6-2
6.3.1 Effluent Charges	6-3
6.3.2 Discharge Controls	6-3
6.3.3 User Pay Schemes	6-4
6.4 Remedial Actions in Light of the Socio-Economic Trends in The Severn Sound Area	6-4

## Bibliography

## LIST OF MAPS

	<b>Following Page</b>
<b>Map 1-1</b> Severn Sound Watershed	1-2
<b>Map 4-1</b> Predominant Land Use	4-1
<b>Map 4-2</b> Marina Concentrations	4-4

## LIST OF TABLES

	<b>Page</b>
<b>Table 3-1</b> Population Growth	3-2
<b>Table 3-2</b> Population Projections	3-4
<b>Table 3-3</b> Permanent and Seasonal Population	3-5
<b>Table 3-4</b> Permanent and Seasonal Dwellings	3-6
<b>Table 3-5</b> Major Industrial Employers	3-8
<b>Table 3-6</b> Selected Metal Producers, Manufacturers and Fabricators	3-9
<b>Table 3-7</b> 1986 Labour Force, Midland C.E.C.	3-9
<b>Table 3-8</b> 1986 Income	3-10
<b>Table 3-9</b> Housing Starts	3-12
<b>Table 4-1</b> Agricultural Transition, Number of Farms	4-3
<b>Table 4-2</b> Agricultural Transition, Farm Acreage	4-3
<b>Table 4-3</b> Vessel Movements, Port Severn Lock Station, 1982-1990	4-5
<b>Table 4-4</b> Sport Fishing in Severn Sound, Summer Creel Surveys	4-7
<b>Table 4-5</b> Sport Fishing in Severn Sound, Winter Creel Surveys	4-8
<b>Table 4-6</b> Origin and Type of Fishermen, 1987 Creel Surveys	4-9
<b>Table 4-7</b> Georgian Lakelands Economic Impacts of Tourism	4-12
<b>Table 4-8</b> Major Tourist Attraction Visitations	4-13
<b>Table 4-9</b> Awenda Provincial Park User Surveys	4-14
<b>Table 4-10</b> Tourist Accommodation, 1988	4-14
<b>Table 4-11</b> Georgian Lakelands Destination Fulfilment	4-15

## LIST OF CHARTS

<b>Chart 3-1</b> Study Area Age Distribution, 1981-1986	3-3
---	-----

## EXECUTIVE SUMMARY

This profile is intended to provide an understanding of the socio-economic relationships that are contributing to change within Severn Sound. This report provides a description of past, present and future uses, and an introduction into costs and benefits of remedial actions. In order to maximize social and economic benefits, these relationships and area experiences require due consideration during the evaluation of remedial options.

Local economic development has historically been centred around Severn Sound. Commercial fishing, lumber ports and ship building provided an impetus for local development and urban growth. The waters of Severn sound have been exploited for man's advantage from the days of the fur trade, to the present. The growth and prosperity that can be attributed to the waters of Severn Sound remain evident today, but unfortunately, growth has been accompanied by excessive phosphorus concentrations and diminished fish communities.

Uses of Severn Sound and its shores continue to evolve. The military, transport and heavy industrial establishments that were responsible for area growth have largely receded in favour of recreation, tourism and light industry. A light industrial base remains today, but uncertain economic conditions, changing international trade and general manufacturing declines have left the local economies susceptible to potential economic loss associated with reliance on a small number of major employers, (Midland/Penetang, Statistics). In order for the local economies to prosper throughout the 1990's and beyond, emphasis must be placed on new diversity in the rapidly growing recreation and tourism sectors.

The waters of Severn Sound have attracted recreation and tourism uses since the late 1800's. Water and land based recreation has been utilized for some time, but recent large scale growth in areas such as the recreational boating market and its associated marina facilities have stimulated area economic growth. Cottages and shoreline development consume virtually every usable piece of waterfront property, and the increased affluence of southern Ontario is expected to continue to boost the local economy through recreational and tourist expenditures. Although recreational condominium investment has yet to establish itself in the area, there are approximately 2,600 condominium units being proposed from Penetanguishene to Victoria Harbour.

Changes in the economic base and social values have lead to a transition in the use of Severn Sound. For the most part, the pleasure craft and sport fishermen have replaced the

commercial freighters and fishing vessels on the sound. Water based recreation has also replaced industrial waterfront requirements. The Severn Sound area has evolved into a significant recreational destination. Cottages, fishing, swimming, camping and boating are current predominant uses.

The study area boasts a seasonal population that is greater than the permanent population, approximately 11,000 seasonal dwellings and in excess of 6,000 boat slips. The magnitude of the seasonal population is evident in the fact that in the rural townships, it out numbers permanent residents by greater than a 2:1 ratio. Recreational boating activity continues to increase in popularity as evidenced by proposals to add 2,600 additional berths within Severn Sound. The ability of the area to sustain and build upon current recreational appeal is dependant on the quality of the natural environment and municipal services, which attracts visitors and residents to the area.

Sewage treatment plants within the study area are nearing capacity and many require capital improvements. Effluent from these plants is a significant cause of deteriorated water quality in Severn Sound. In order for municipalities to continue to grow, and water quality improvements to be realized, capital improvements need to be made at existing plants and new facilities have to be constructed.

The restoration of water quality will be paramount in light of the significant use of the area's natural resources and Severn Sound waters. Swimming in Severn Sound is the most sought after activity and also the activity which places the greatest demands on water quality. As many as 80 per cent of visitors to Beausoleil Island participate in swimming, an activity that is wholly dependant on water quality. Water based and water side recreation remains the principal attraction of the area and as such, unimpaired use will result in substantial local economic benefits, and personal enjoyment of its users.

The shores of Severn Sound support a mixed use community. Although recreation continues to grow in prominence, agricultural and industrial uses are also present. Each of these uses provide economic benefit to the area, but uncontrolled or over development can harm the natural environment. Current trends point to a continued decline in agriculture and industry in favour of recreation. Marginal soils, low commodity prices, operational costs and non-agricultural farm purchases lead to a 13 per cent and 10 per cent decline in the study area's farms and farm acres respectively between 1981 and 1986. Not

withstanding, each use and its effect on the local populations must be considered in the implementation of remedial measures to ensure the greatest economic and social benefits.

Business, industry, residents and tourists all utilize Severn Sound water and reap its benefits, whether through recreation, production or consumption. Selected remedial actions should account for the greatest benefit of all these users and at the same time, employ measures that ensure appropriate recovery of remedial costs from the populations that benefit from or exert pressures on the quality of the Severn Sound environment.

During the production of this report, numerous gaps in the availability of desired data were identified. The Severn Sound study area consists of a multitude of municipalities and as such, available data is not specifically geared towards Severn Sound, its immediate shoreline and activities. Data is often available for an area larger than desired, or does not exist due to the nature or geographical limits of the preferred information. In order to achieve site specific data for analysis, it would be prudent to conduct Severn Sound specific surveys, and to research data at a level of detail that will shed new light on socio-economic characteristics and magnitude of activities that take place on or immediately adjacent to Severn Sound. Additional studies could involve comprehensive fishing, swimming and boating surveys, detailed shoreline population and housing data analysis, and the determination of the local impacts of tourism.

## **1.0 INTRODUCTION**

This socio-economic assessment of Severn Sound has been prepared in order to provide an understanding of the relationship between the uses of Severn Sound and the populations that inhabit its shores. This document provides an appreciation of past, present and future growth, and an introduction to costs and benefits of remedial actions. It is intended that the contents will contribute to decision making that will accentuate benefits when proposed remedial actions are selected.

From the time when fur traders' canoes swept through Severn Sound, the water body has played a leading role in the area's economic and social development. However, the growth created by the water body has in turn detrimentally affected its water quality. Changing attitudes are now demanding that the water quality be improved so future potential can be realized.

### **1.1 Severn Sound Watershed**

Located in central Ontario within the Georgian Lakelands Tourism Area, Severn Sound is the eastern most portion of Georgian Bay. It lies in an east-west orientation and is connected to the larger water body through an inlet between the mainland of Tiny Township and Beausoleil Island (refer to Map 1-1). It is an irregular shape due to a variety of bays on the south and rocky islands and bays to the north. Severn Sound's numerous bays include, Penetang, Midland, Hog, Matchedash and Sturgeon Bays.

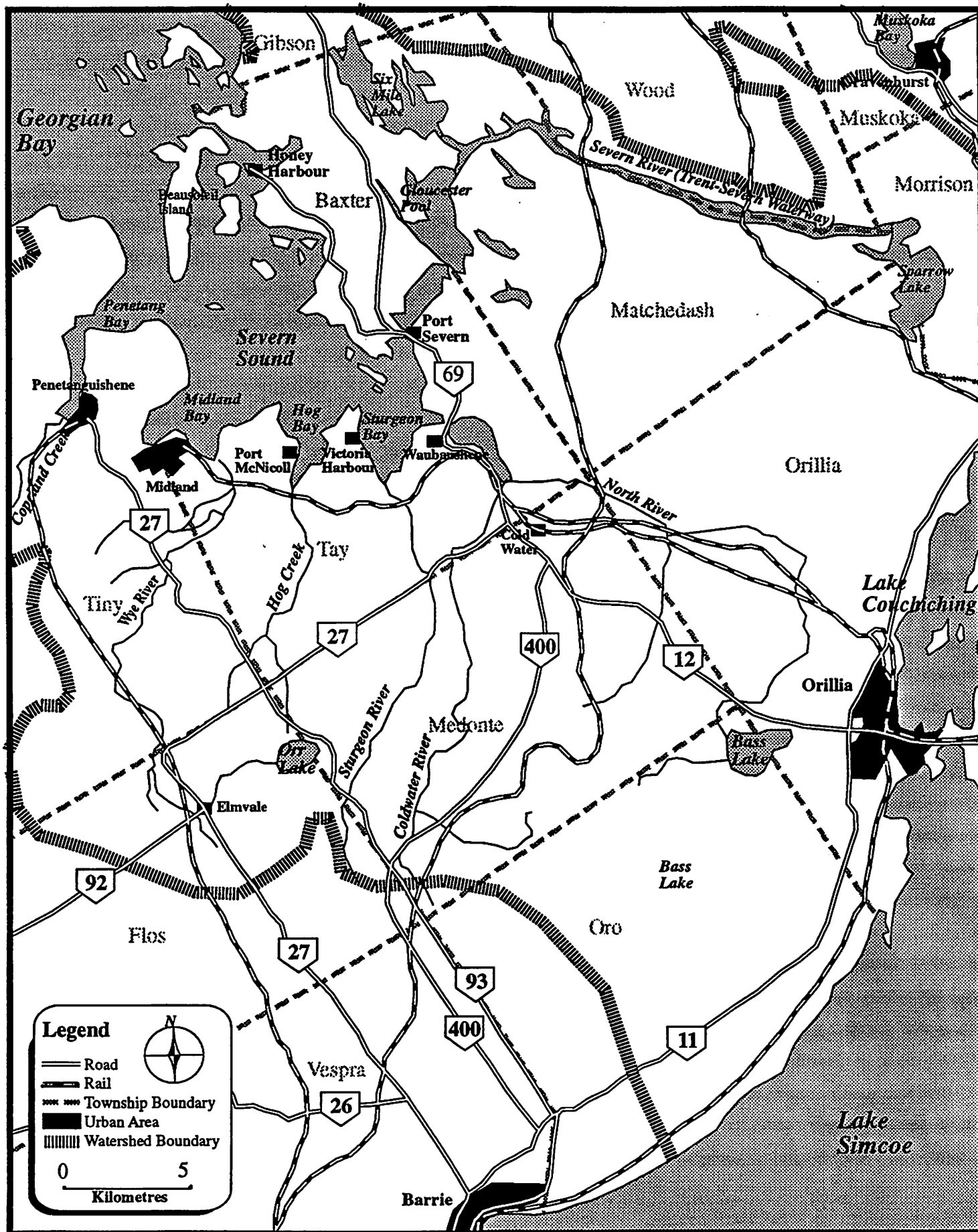
The waters of Severn Sound support a resident warm water and migratory cold water fishery. Walleye, northern pike, black crappie, yellow perch and bass are common species. The waters are currently nutrient enriched and support varying degrees of plant growth and wildlife habitats. Severn Sound is heavily utilized for recreational pursuits such as pleasure boating, sport fishing and swimming. Co-existing with the recreation activity are several other uses which include water supply, waste water disposal, flood control, navigation and hydro power.

The land surrounding Severn Sound lies within Simcoe County and the District of Muskoka. The Towns of Midland and Penetanguishene to the south-west are the largest urban centres. The Villages of Port McNicoll, Victoria Harbour, and the Hamlets of Port Severn and Honey Harbour



are dispersed along the east and north shorelines (refer to Map 1-1). The majority of the waterfront is occupied by cottages, permanent residences and wetlands.

# Map 1-1: Severn Sound Watershed



## **2.0 SOCIO-ECONOMIC HISTORY**

### **2.1 Pre-History**

Prior to the 17th century, the unspoiled waters and shores of Severn Sound were the uncontested domain of the Huron Indians. The Hurons who inhabited the area, were the first to utilize the Severn Sound watershed for transportation, farming and settlements. The dawn of the fur trade with the French would also established the Huron as the initial businessmen of the region. The fur trade was the dominant activity in Huronia in the early 1600's and the initial influence for the French presence in the region. The significance of the Huron fur trade was evidenced by the visit of Samuel de Champlain, the Governor of New France in 1613 to local Indian villages.

French influence in the area expanded in 1639 when French Jesuit missionaries set up missions to the Huron Indians. Between 1639 and 1649 Sainte-Marie, on the east shore of Severn Sound was established as the Jesuit headquarters and base for over sixty missionaries. The efforts of the French and the very existence of the Hurons in the area were shattered in 1649 by the invasion of Iroquois warriors from the south. The surviving Missionaries eventually burned Sainte-Marie and fled to Christian Island. The warfare with the Iroquois and disease served to greatly weaken the Huron tribe and by 1650, the entire population had vanished from the area.

For one hundred and twenty years following the demise of the Hurons, the area remained in the control of the French, yet no further attempts were made to settle the area. During this era, the Iroquois domination had been replaced by the Ojibway members of the Algonquin Tribe and the English had gained control of Canada.

Following the American victory in the War of Independence, the British took an interest in Huronia due to fears of an American invasion. The area from Lake Ontario to Georgian Bay was the shortest land route between the lower and upper Great Lakes. In order to protect against attack from the north, Penetanguishene was selected as a military post to command the upper Great Lakes. The naval base was strengthened during the war of 1812 and as a result, the military presence served as the basis for the town's settlement.

In 1798, the Government of Upper Canada purchased land from the Ojibway, laid out the Townships of Tiny and Tay and opened the region to settlement in 1818. Penetanguishene Road,

built for military purposes between Kempenfeldt Bay and Penetanguishene during the War of 1812, became the main route to the untouched lands surrounding Severn Sound and the site of the first English settlements.

In 1849 and 1888 respectively, the current County of Simcoe and District of Muskoka were formed. Attracted by the availability of inexpensive land, numerous Americans and Europeans arrived to settle within their own ethnic groups. English settlers established themselves throughout the area. A significant French community remained within Tiny Township.

The mid 1800's brought the establishment of the area's first industry. The abundant pine forests gave rise to the lumber industry and the development of mill and transport towns. Penetanguishene, Midland, Waubaushene and Victoria Harbour all had large saw mills and docks for lake transport. The lumber industry was responsible for much of the local prosperity in the 19th century, but the sandy soil beneath the trees left little opportunity for farming once the trees were removed. Clear cutting lead to a depletion of stock and the end of the forest industry.

## **2.2 The Industrial Era**

In the latter part of the 19th century mechanized farm technology permitted widespread establishment of farmsteads. The introduction of the railroad to Midland in 1879 spurred development and the creation of industries. The Port Hope, Lyndsay and Beaverton Railway, later to be renamed the Midland Railway, linked the Midland and Penetanguishene area to the south and brought new wealth to an area that was little more than a collection of shacks at that time. A significant commercial fishery out of Midland was established in 1882. Approximately 30 tons of fish per week were shipped throughout Canada and the U.S.. Catches included sturgeon, lake trout, whitefish and herring. The decline of these fish stocks resulted in the demise of most operations by the 1940's and the sound was officially closed to commercial fishing shortly thereafter, (RAP Stage I, 1988).

Collingwood, Penetanguishene, Midland, Victoria Harbour and Port McNicoll owe much of their early development to shipyards. Ship building was a steady local industry from 1910 to 1950 through military contracts. Following the wars, most yards closed and Collingwood became the focal point of ship building on Georgian Bay. As lumbering and shipbuilding declined, development around Severn Sound was limited for the most part to residential and recreational activity. It was only the Towns of Midland and Penetanguishene that made the successful transition from lumber and ship building to diversified industry.

Midland and Penetanguishene like other Ontario towns, were faced with declining industries in the late 1950's and early 1960's, (Penetanguishene Town Profile). To counteract this trend, they embarked on a program of industrial expansion through the provision of industrial parks and expanded municipal services. The towns were initially successful in attracting a wide array of industries in the auto parts and metals manufacturing/fabricating sectors. Some of the early established industries, recreational boat builders and flour/grain mills were able to stay competitive and remained active through this period.

By the 1980's however, the boat building establishments and mills were in decline. Other industries, although experiencing fluctuations such as the closure of RCA and its subsequent reopening under Mitsubishi, remained healthy.

### **2.3 Tourism and Recreation**

From the late 1800's Simcoe County and the Severn Sound area were known for their natural recreational amenities. Wealthy Americans and Toronto residents came by rail and ship to spend their summers at luxury resorts on the shores of Georgian Bay and cruise the 30,000 islands aboard lake steamers, (What If..., Simcoe County, 1990). The Georgian Bay House at Penetanguishene was one of the first and most popular resorts in the area. One of the area's first tourist attractions involved the odd spectacle of people arriving by boat and train to view the British Canadian Lumber Company, the first building in Ontario to have electric lights.

Only a few cottages dotted the shoreline in the early 1900's, as the area was a playground for a small number of wealthy people from the south, as opposed to local residents who had little time or money for recreation, (What If..., Simcoe County, 1990). The advent of the automobile and quality highways changed the nature of recreational development, as the area became accessible to large numbers of vacationers.

Tourism quickly became a summer phenomenon around the water's edge. It was not until after the Second World War that people became interested in winter activities and a four season tourism industry came into being.

The establishment of provincial highways; particularly Highway 400 were major contributors in opening the area for tourism. Like other recreational areas in central Ontario, Severn Sound owes its development to the increasingly large and wealthy population of the Greater Toronto Area,

shorter work weeks, longer more frequent vacations and increased leisure and awareness of physical fitness. While the Severn Sound area has not experienced the recreational condominium boom that has engulfed the Collingwood area, it has been very productive in the supply of pleasure boat docking and cruising facilities. Severn Sound supports 33 marinas and in excess of 6,000 slips. It is one of the province's premier boating areas. Current proposals from Penetanguishene to Honey Harbour for recreational moorings and residences remain strong.

### **3.0 POPULATION, EMPLOYMENT AND INVESTMENT**

The Severn Sound area is comprised of north-east Simcoe County and the south-western portion of the District of Muskoka. The Severn Sound shoreline accommodates the Towns of Midland and Penetanguishene, Villages of Port McNicoll and Victoria Harbour, Hamlets of Port Severn and Honey Harbour and the predominantly rural lands of Tiny, Tay, Matchedash and Georgian Bay Townships.

#### **3.1 Population**

The townships and urban centres that border Severn Sound supported a permanent population of approximately 36,300 in 1988. Population growth has been slow in recent years with a net gain of 2,107 individuals since 1975. This represents an average annual growth rate of only 0.5 per cent. The Towns of Midland and Penetanguishene experienced slow but steady growth, while the other municipalities have experienced population fluctuations from year to year, as shown in Table 3-1. The largest growth has occurred in Tiny Township and can be largely attributed to new rural subdivisions which grew as dormitory communities for local towns. Approximately 57 per cent of the residents live in urban centres which represent less than 5 per cent of the land area.

Slow growth and declines can be attributed to the recession in the early part of the decade and the out migration of young people in search of job opportunities. Annual average population growth rates have been less than half the provincial average since 1975, (Statistics Canada, 1986 Census).

**TABLE 3-1**  
**Population Growth**

<b>Municipality</b>	<b>1975</b>	<b>1980</b>	<b>1985</b>	<b>1988</b>	<b>ABSOLUTE CHANGE</b>
<b>Simcoe County</b>					
Midland	11,331	11,896	12,049	12,171	840
Penetanguishene	5,408	5,342	5,449	5,533	125
Port McNicoll	1,590	1,952	1,926	1,818	228
Victoria Harbour	1,194	1,080	1,097	1,080	-114
Matchedash Twp.	488	525	498	497	9
Tay Twp.	5,814	6,104	5,995	5,943	129
Tiny Twp.	6,387	6,818	7,245	7,393	1,006
<b>Muskoka District</b>					
Georgian Bay Twp.	2,006*	1,944	1,857	1,890	-116
<b>Total</b>	<b>34,218</b>	<b>35,661</b>	<b>36,116</b>	<b>36,325</b>	<b>2,107</b>

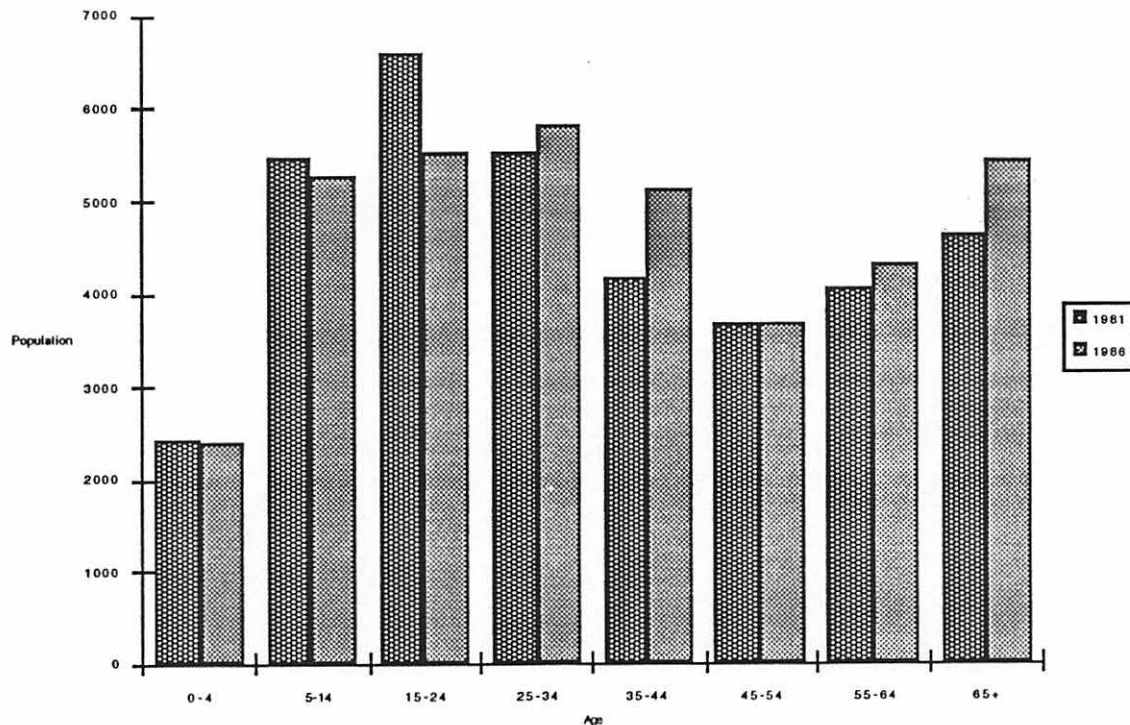
\* 1978 figure

Source: Simcoe County Statistical Information  
Twp. of Georgian Bay, Planning Department

The combined age distribution for the study area municipalities is illustrated in Chart 3-1. The progression from 1981 to 1986 indicates an aging population. The largest reduction has occurred in the 15-24 age category, (19 per cent), while the 35-44 and 65+ categories increased by 23 per cent and 17 per cent respectively. This activity can be attributed to the general aging Ontario population, out migration of youth, seasonal to permanent conversions and older people moving to the region from the Greater Toronto Area.



**Chart 3-1**  
**Study Area Age Distribution**  
**1981-1986**



Source: Statistics Canada, 1981 and 1986 Census.

### 3.1.1 Population Projections

Simcoe County projections forecast population growth in 1989 and 1990 to average 3.3 per cent and then decline to an annual rate of 0.9 per cent for the following five years (refer to Table 3-2). In light of the slow growth evidenced during the prosperous mid 1980's, it seems unlikely that these projections will hold true, especially given the current climate of rising unemployment and general economic decline.

Projections for the Township of Georgian Bay are currently being compiled and thus are unavailable. In general, the township population has been in a state of decline for the last decade and there are limited local employment opportunities. It is therefore expected that population growth will be minimal at best and more likely to show a decline over the next several years.

**TABLE 3-2**  
**Population Projections**

<b>Municipality</b>	<b>1988 Actual</b>	<b>1990 Projection</b>	<b>1995 Projection</b>
<b>Simcoe County</b>			
Midland	12,171	12,573	13,449
Penetanguishene	5,533	5,716	6,114
Port McNicoll	1,818	1,878	2,009
Victoria Harbour	1,080	1,116	1,193
Matchedash Twp.	497	513	549
Tay Twp.	5,943	6,139	6,567
Tiny Twp.	7,393	7,637	8,169
<b>Muskoka District</b>			
Georgian Bay Twp.	1,890	Not Available, Currently Being Prepared for District of Muskoka	

Source: Simcoe County Statistical Information  
Twp. of Georgian Bay, Planning Department

### 3.1.2 Seasonal Population

The two dominant urban centres in the study area are established year round communities and as a result have a small proportion of seasonal residents. Seasonal populations represent only 7 per cent and 5 per cent respectively, of the Midland and Penetanguishene permanent populations. In comparison, the smaller centres of Port McNicoll and Victoria Harbour have respective seasonal populations that equal 39 per cent and 48 per cent of their permanent populations. The largest seasonal populations are situated in areas characterized by extensive shoreline; lakes and rivers, as found in the rural townships of the study area. According to Simcoe County statistics, seasonal residents in Tiny, Tay and Georgian Bay Townships combined, represent 224 per cent of the their permanent populations, (refer to Tables 3-3 and 3-4).

The vast majority of seasonal residents in the Severn Sound area reside in cottages and detached homes. Condominium developments are beginning to be evidenced from Penetanguishene to Victoria Harbour, but the market is yet to have a significant impact. Seasonal residents are continuing to be attracted to the area by its natural beauty and recreational amenities. Although unable to estimate individual cottage construction in the upcoming years, there are currently in excess of 2,600 recreational condominium units proposed for the Penetanguishene to Victoria

Harbour area, (refer to Map 5-2). The actual number of units that will eventually be constructed is currently unknown due to various servicing and environmental constraints. A large number of these projects are likely to proceed with the next economic upswing. Past experiences suggest that a large majority of the units will be occupied by seasonal residents.

**TABLE 3-3**  
**Permanent and Seasonal Population**

<b>Municipality</b>	<b>1981 Permanent Population</b>	<b>1981 Seasonal Population</b>	<b>1986 Permanent Population</b>	<b>1986 Seasonal Population</b>
<b>Simcoe County</b>				
Midland	11,946	Not Available.	12,092	872
Penetanguishene	5,282	To be provided	5,576	261
Port McNicoll	1,880	in addendum by	1,804	705
Victoria Harbour	1,094	way of special	1,168	560
Matchedash Twp.	515	Statistics Canada	523	2,079
Tay Twp.	6,111	data runs.	6,538	3,164
Tiny Twp.	6,912		7,801	14,004
<b>Muskoka District</b>				
Georgian Bay Twp.	2,071	12,373	2,031	18,654
<b>Total</b>	<b>35,811</b>	<b>-</b>	<b>37,533</b>	<b>40,299</b>

Source: Simcoe County Statistical Information  
Twp. of Georgian Bay, Planning Department

**TABLE 3-4**  
**Permanent and Seasonal Dwellings**

<b>Municipality</b>	<b>1981 Permanent Dwellings</b>	<b>1981 Seasonal Dwellings</b>	<b>1986 Permanent Dwellings</b>	<b>1986 Seasonal Dwellings</b>
<b>Simcoe County</b>				
Midland	4,340	Not Available.	4,445	323
Penetanguishene	1,745	To be provided	1,952	90
Port McNicoll	595	in addendum by	608	235
Victoria Harbour	390	way of special	409	193
Matchedash Twp.	185	Statistics Canada	194	770
Tay Twp.	2,075	data runs.	2,330	1,130
Tiny Twp.	2,325		2,736	4,829
<b>Muskoka District</b>				
Georgian Bay Twp.	740	3,639	760	3,807
<b>Total</b>	<b>12,395</b>	<b>-</b>	<b>13,434</b>	<b>11,377</b>

Source: Simcoe County Statistical Information  
Twp. of Georgian Bay, Planning Department

### 3.2 Employment

Industrial employment aided the creation of area towns and villages. Settlers relocated to the area to take part in the lumbering, fishing, grain handling and ship building industries of the day. The majority of these industries no longer exist in the Severn Sound area, but industrial diversification from the 1950's through to the 1980's has given the area an industrial base that although transformed, remains strong. Industrial employment is primarily concentrated in firms along the Midland waterfront and within or adjacent to Midland and Penetanguishene. Port McNicoll and Midland, until recently, were the homes of grain elevators, but these operations succumbed to the reduced commercial role of Severn Sound.

As depicted in Table 3-5, the area supports several large manufacturing employers. The current fortunes of these firms are mixed as both expansion and reduction are occurring. Certain firms have been forced to lay off as many as 350 employees, but others such as Pillsbury and Hughs-Leitz have expanded, while Mitsubishi plans further growth over the next five years. Other firms such as Kindred Industries have been forced to lay off due to the present economy, but anticipate growth due to their entering the U.S. market as a result of Free Trade. Overall, the manufacturing sector has performed in a positive manner. Through the 1980's recession, the Midland Census

Agglomeration which includes Penetanguishene and surrounding areas posted a net loss of only one firm and a net gain of 1,023 jobs (Canadian Markets 1990).

Although the area has a steady industrial base of 50 firms and 5,100 employees, there is cause for future concern. The manufacturing work force is distributed in such a way that 49 per cent of its employment is dependant on just three firms (Midland Economic Strategy, 1991). TRW, Hughs-Leitz and Mitsubishi employee in excess of 2,500 people. In the event that one or more of these firms fail or relocate, the effects on the local manufacturing work force and economy would be devastating. Greater industrial diversity and increased tourism employment is required to reduce the risk of severe economic effects due to individual plant closures.

At present, recessionary effects are materializing in the form of lost employment. Employment related to the automotive industry in particular, is being negatively affected, yet all sectors are reducing employment ranks due to reduced sales.

**TABLE 3-5**  
**Major Industrial Employers**

<b>Manufacturer</b>	<b>Product</b>	<b>1988 Employment</b>	<b>1989 Employment</b>	<b>1990 Employment</b>	<b>1991 Employment</b>
Advanced Monobloc Inc.	alum aerosol cans	190	300	300	200
Techform Products Inc.	auto parts	386	380	380	N/A
Bay Mills Ltd.	fibreglass textiles	190	200	200	200
Fabulous Formals Ltd.	formal wear	160	156	95	83
Hughs-Leitz Canada Ltd.	optical instruments	530	500	350	370
Mitsubishi Electronics	picture tubes	485	600	643	640
Nebs Business Forms	bus. forms	105	125	160	150
Pillsbury Canada Ltd.	dough products	92	115	115	150
TRW Vehicle Safety Systems	auto parts	797	1,159	1,350	1,000
Waltec Plastics	component parts	206	215	250	250
Waltec Sinkware (Kindred)	stainless sinks	160	155	155	134
Ogilvie Mills	baking flour	102	96	96	100

Source: Simcoe County Directory of Manufacturers, County of Simcoe, 1988  
Midland Chamber of Commerce, 1989, 1990  
Keir Consultants Phone Surveys, March 1991

The area contains a significant number of industries involved in the manufacture and fabrication of metal and metal products. A selected list of these industries appears in Table 3-6. The fortunes of these industries are relatively stable, although none of the surveyed industries have plans to

expand. Of particular importance with regard to these industries is the nature of their business and the potential environmental risks due to metallic effluent.

**TABLE 3-6**  
**Selected Manufacturers**  
**and Fabricators**

<b>Manufacturer</b>	<b>Product</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>
Weber Manufacturing	Molds	75	80	70	80
Bruin Engineered Parts	Alum. Parts	44	60	60	50
Dominion Electroplating	Electroplating	14	10	10	8
Kindred Industries	Sinks	160	155	155	134

Source: Simcoe County Directory of Manufacturers, County of Simcoe, 1988  
Midland Chamber of Commerce, 1989, 1990  
Penetanguishene General Information  
Keir Consultants Phone Surveys, March 1991

The Midland Canada Employment Centre Area, which entails most of the area's development, supported a work force of 17,140 persons in 1986. The largest employment sector was manufacturing (33 per cent), while trades and construction also made up a significant portion (15 per cent) of total employment. The second highest employment sector was service at 27 per cent, (Table 3-7).

**TABLE 3-7**  
**1986 Labour Force**  
**Midland Canada Employment Centre Area**

<b>Sector</b>	<b>Employment</b>	<b>Per cent of Total Employment</b>
Agriculture	470	2.7
Fishing, Mining, Forestry	110	0.6
Manufacturing	5,725	33.4
Construction	1,200	7.0
Trade	2,445	14.3
Transport., Utilities and Communication	1,030	6.0
Finance, Insurance and Real Estate	485	2.8
Community and Business Service	4,625	27.0
Public Administration	820	4.8
Other	230	1.4
<b>Total</b>	<b>17,140</b>	<b>100.0</b>

Source: Simcoe County Characteristic Statistics.

### 3.2.1 Income

Individual employment income and household income for the study area have all experienced levels below the Simcoe County and Ontario averages as illustrated in Table 3-8. Income levels generally range from a high of 92 per cent and 81 per cent of Simcoe County and Ontario figures respectively, to a low of 70 per cent and 62 per cent of respective Simcoe County and Ontario income averages. These figures are attributable to the remote rural nature of the area and service related employment.

**TABLE 3-8**  
**1986 Income**

<b>Municipality</b>	<b>Male</b>	<b>Female</b>	<b>Household</b>
Ontario	25,145	13,442	38,022
Simcoe County	21,877	11,811	33,573
Midland	20,270	11,912	30,930
Penetanguishene	17,502	11,761	28,364
Tay	20,261	11,152	31,410
Tiny	20,425	10,923	31,199
Matchedash	17,295	11,817	29,553
Port McNicoll	19,452	10,700	28,098
Victoria Harbour	17,326	11,779	27,978
Georgian Bay	16,428	8,421	23,642

Source: Statistics Canada, 1986 Census, Selected Characteristics for Census Subdivisions

### 3.3 Investment

Industrial, residential and recreational/tourism development in the Severn Sound area vary from one municipality to the next. Industrial investment is continuing to grow as evidenced by an investment of \$4.9 million in industrial expansion in the Town of Penetanguishene alone between 1986 and 1990 (Penetang Building Department, 1991). Although there have been corporate out migrations such as Coca Cola moving its Penetanguishene operations to Barrie, new corporations and expansions at Mitsubishi, Pillsbury and Ogilvie Mills are helping to sustain the local economy.



The Midland/Penetanguishene area has had over 15 new plant openings since 1980. These firms ranged from 1 to 485 employees and created over 650 jobs (Simcoe County Characteristic Statistics, 1990).

Recreation and tourism investment is evident in area resorts such as Honey Harbour's Delawana Inn, Midland's new 60 room Journeys End and the ever increasing number of boat slips and marinas. Marina growth has been as high as 34 per cent per year (RAP, Problem definition, 1988) and current proposals could add up to 2,600 new berths, (see Map 5-2).

Housing starts gained momentum through the 1980's due to economic growth as indicated in Table 3-9. The largest growth in new residential investments occurred in the Township of Tiny. Since 1980, there have been 417 residential lots registered by way of subdivision and 65 lots created by severance in the past three years. Of these new lots, 106 are zoned seasonal residential (Simcoe County Assessment Office, 1991). The increase in dwellings (2.2 per cent per year) is greater than the population increase (1.0 per cent per year). The number of dwellings in 1988 out numbered the permanent population by 172 units. It would therefore be expected that a large number of new dwellings in the township are being occupied by seasonal residents, regardless of zoning. Investment in permanent housing is also occurring, as 301 seasonal dwellings have been converted to permanent residences between 1984 and 1990.

**TABLE 3-9**  
**Housing Starts**

<b>Municipality</b>	<b>1980</b>	<b>1981</b>	<b>1982</b>	<b>1983</b>	<b>1984</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>
<b>Simcoe County</b>									
Midland	7	12	3	23	49	27	97	230	191
Penetanguishene	12	12	7	19	85	57	46	82	74
Port McNicoll	6	3	7	9	12	5	18	29	24
Victoria Harbour	0	0	1	2	1	0	6	14	39
Matchedash Twp.	-	-	-	-	-	-	5	13	-
Tay Twp.	9	13	13	30	30	20	68	17	59
Tiny Twp.	83	119	56	97	97	126	129	213	263
<b>Muskoka District</b>									
Georgian Bay Twp.	45	43	40	53	41	55	56	68	89
<b>Total</b>	<b>162</b>	<b>202</b>	<b>127</b>	<b>231</b>	<b>315</b>	<b>290</b>	<b>425</b>	<b>453</b>	<b>546</b>

Source: Simcoe County Statistical Information  
Twp. of Georgian Bay, Planning Department

The Township of Georgian Bay on the northern shore of Severn Sound has also experienced steady housing growth. Currently there are 344 residential lots in various stages of subdivision approval. Severance activity has also been strong. The township has averaged approximately 34 severances per year between 1980 and 1989 (Georgian Bay Planning Department, 1990).

Although Georgian Bay's population decreased by 2.4 per cent between 1976 and 1986, the number of households increased by 10.5 per cent during that same period. This statistic indicates a substantial growth in seasonal residences.

Residential development in Midland and Penetanguishene has been active in recent years, with the majority of homes being sold to permanent residents. Midland has been the recipient of residential construction valued at \$15.9 million, \$18.1 million and \$19.5 million for the years 1986, 1987 and 1988 respectively. Penetanguishene has received new residential construction valued at \$3.6 million, \$6.8 million and \$10.2 million for the same period (Canadian Markets, 1990, Penetang. Building Department, 1991).

The major deterrent of residential development in all municipalities in the study area is the absence of sewage treatment systems, or lack of additional sewage treatment capacity. The area townships

are limited to estate type developments on septic systems, while urban centres such as Port McNicoll, Midland and Penetanguishene are struggling to cope with sewage plants that are at, or near capacity. Future residential growth in these communities will depend on expanded or more efficient sewage treatment capabilities.

## **4.0 EXISTING USE**

The Severn Sound watershed is a mosaic of residential, commercial, agricultural, industrial and recreational use as illustrated in Map 4-1.

### **4.1 Commercial Shipping**

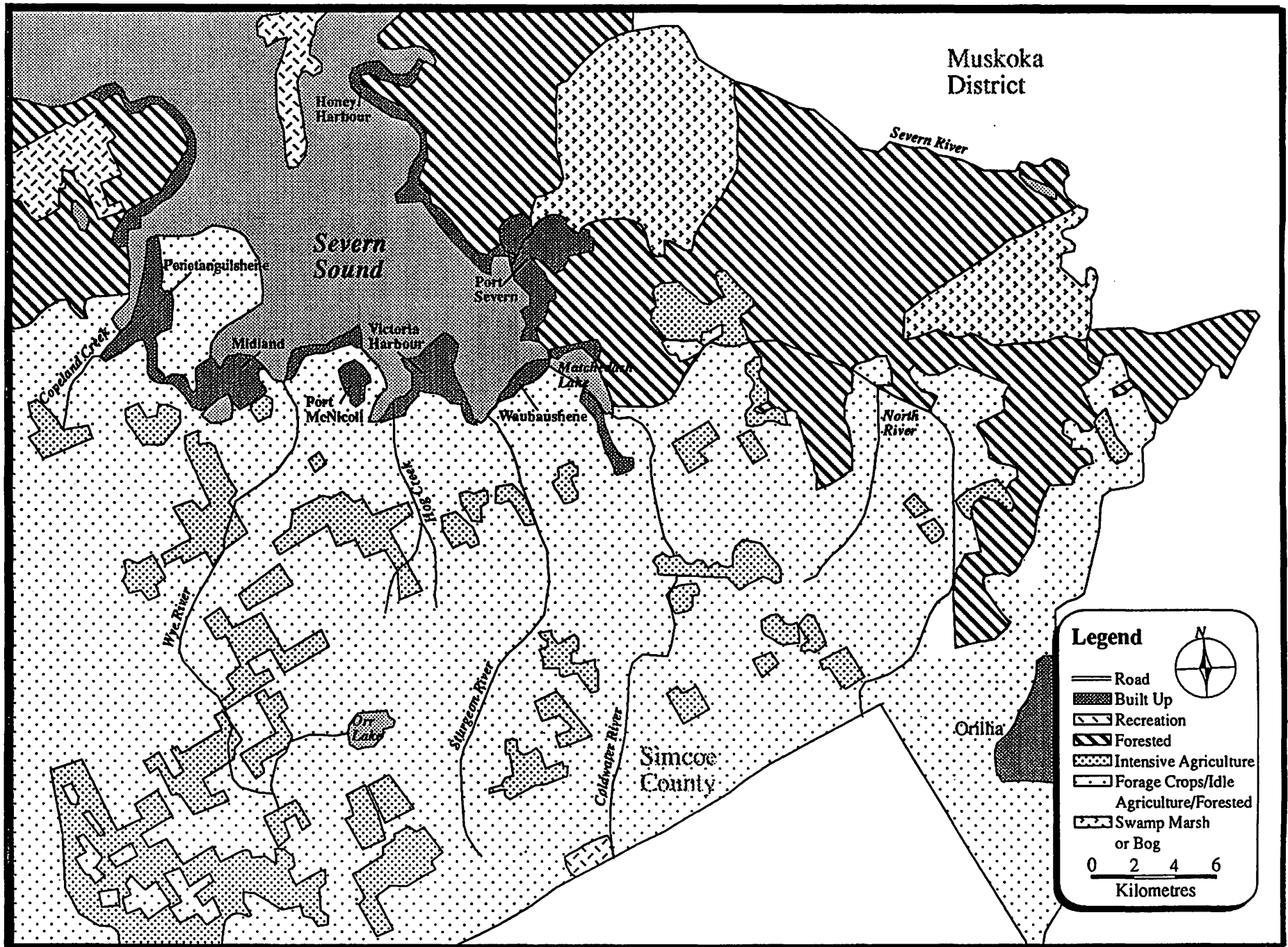
The use of Severn Sound for commercial shipping has continually declined over the past 50 years. The demise of the commercial fishery in the 1940's removed fishing boats, but until recently grain freighters unloaded their cargos at Midland and Port McNicoll. The closure of these grain elevators has caused a further decline in commercial shipping. The last remaining freighters on Severn Sound are those heading into Midland Harbour carrying crushed silica and grain, respectively destined for Unimin Mines and Ogilvie Mills on the waterfront. The other remaining commercial boats on Severn Sound are two tour boats operated out of Midland and Penetanguishene. Penetanguishene 30,000 Island Boat Cruises and Penetang. Midland Coach Lines each operate one Boat providing tours of the 30,000 islands from May to October. The Miss Midland has consistently carried approximately 24,000 passengers per season in recent years, and the M.S. Georgian Queen has averaged approximately 15,000 passengers, (Penetang. Midland Coach Lines, Penetang. 30,000 Island Cruises).

### **4.2 Industrial Uses**

Industrial uses in the study area are for the most part confined to Midland and Penetanguishene. Traditionally, industry located on the waterfront, but since the 1960's they have tended to locate within the towns' industrial parks. Present uses range from small dry industries, to large scale manufacturing of electronic and automobile parts. Industrial operations have ceased on the Penetanguishene waterfront, yet Midland's waterfront remains the home of two active industries in Ogilvie mills and Unimin mines.

Remaining industrial uses and land in urban settings consist primarily of the closed Cargill and Tiffin elevators in Port McNicoll and Midland. CNR rail lines that follow the shoreline from Penetanguishene, through Midland and from Port McNicoll to Matchedash Bay represent a further industrial component.

# Map 4-1: Existing Land Use



Source: Municipal Official Plans

### **4.3 Residential Uses**

From Awenda Provincial Park on the south shore to Beausoleil Island on the north, the Severn Sound shoreline and vicinity is dotted with residences. Wherever environmental conditions and compatible land uses allow, the landscape is developed with seasonal and permanent homes. Cottage and home development can be traced back to the late 1800's when the wealthy of southern Ontario built their retreats. Development has continued since that time and had exhibited increased activity through the 1960's and 1970's, and renewed growth in the mid 1980's. Residential growth in the Township of Tay has a long steady history dating back prior to World War II. In 1986, 18 per cent of the homes were pre-war, while a full 55 per cent were constructed between 1961 and 1980. As Table 3-9 indicated, the 1980's resulted in significant residential growth. This growth was not limited to the urban centres, but also occurred within rural subdivisions that were developed on the shoreline and backlands of the rural townships.

### **4.4 Agricultural Use**

The area surrounding Severn Sound is predominantly rural with significant farm operations dispersed throughout Simcoe County. Farm locations and productivity are limited by area physiography and poor agricultural quality soils. The shallow soil and granite ridges found in the Georgian Bay Fringe have resulted in virtually no agricultural practices within the Township of Georgian Bay. The regions of Simcoe County provide varying degrees of suitable soils and varied topography that have resulted in selected pockets of intense agricultural activity.

Agricultural use in the area is in a state of decline as illustrated by Tables 4-1 and 4-2. Simcoe County and the three townships surrounding Severn Sound have all experienced losses of farm establishments and agricultural acreage. Municipalities have experienced losses ranging from 3 per cent to 22 per cent of farm operations and reductions of 10 per cent to 17 per cent in productive acreage. Marginal soil conditions, rising operating costs, low commodity prices and increased purchases of farms for recreational residential purposes have and are expected to continue to result in agricultural decline.

**TABLE 4-1**  
**Agricultural Transition**  
**Number of Farms**

Municipality	1981 Farms	1986 Farms	Absolute Change	Per cent Change
Simcoe County	3,452	3,007	-445	-13%
Tiny Township	222	174	-48	-22%
Tay Township	113	97	-16	-14%
Matchedash Township	34	33	-1	-3%

Source: Statistics Canada, 1986 Census, Farm Area Classified by Tenure  
 Statistics Canada, 1981 Census, Farms Classified by Size  
 Statistics Canada, Unpublished Data, Mr. Rich Burroughs.

**TABLE 4-2**  
**Agricultural Transition**  
**Farm Acreage**

Municipality	1981 Acres	1986 Acres	Absolute Change	Per cent Change
Simcoe County	609,061	550,073	-58,988	-10%
Tiny Township	27,227	22,712	-4,515	-17%
Tay Township	19,011	17,042	-1,969	-10%
Matchedash Township	6,294	5,437	-857	-14%

Source: Statistics Canada, 1986 Census, Farm Area Classified by Tenure  
 Statistics Canada, 1981 Census, Farms Classified by Size  
 Statistics Canada, Unpublished Data, Mr. Rich Burroughs.

#### 4.5 Municipal Water Uses

Severn Sound currently acts as the source of municipal water for Victoria Harbour, Port McNicoll, Waubaushene, two subdivisions within Tay Township and individual waterfront residences. Five water treatment plants pumped  $1.3 \times 10^3$  m<sup>3</sup>/day to serve a population of approximately 3,000 in 1985 and had a total capacity of  $7 \times 10^3$  m<sup>3</sup>/day. All other communities including Midland and Penetanguishene draw municipal water from wells (RAP, Problem Definition, 1988).

There are eight sewage treatment plants that released  $18 \times 10^3$  m<sup>3</sup>/day of treated effluent into Severn Sound and its tributaries in 1985 (RAP, Problem Definition, 1988). The combined design capacity is  $23 \times 10^3$  m<sup>3</sup>/day and the capacity is now being stretched to its limit. There are three sewage treatment plants in Penetanguishene and one each in Midland, Victoria Harbour and Port McNicoll.

Elmvale and Coldwater, further up the watershed have plants which empty into Severn Sound tributaries. Six of the eight plants provide secondary treatment, while the Penetang, Mental Health Centre sewage plant and Victoria Harbour facilities provide tertiary treatment. The majority of plants are reaching capacity and as such, urban growth potential is being affected.

Penetanguishene, Port McNicoll and Midland have all been required to restrict new development pending the implementation of plans to increase efficiency and plant capacity. Estimates have established the capital cost of upgrading the six secondary plants to tertiary treatment for present and forecast flow requirements to be \$3.5 and \$4.6 million respectively (RAP, Overview Economic Assessment, 1990).

Mitsubishi in Midland is the only direct source industrial contribution. It discharges treated waste water to the Wye River in compliance with MOE guidelines.

#### **4.5 Pleasure Boating**

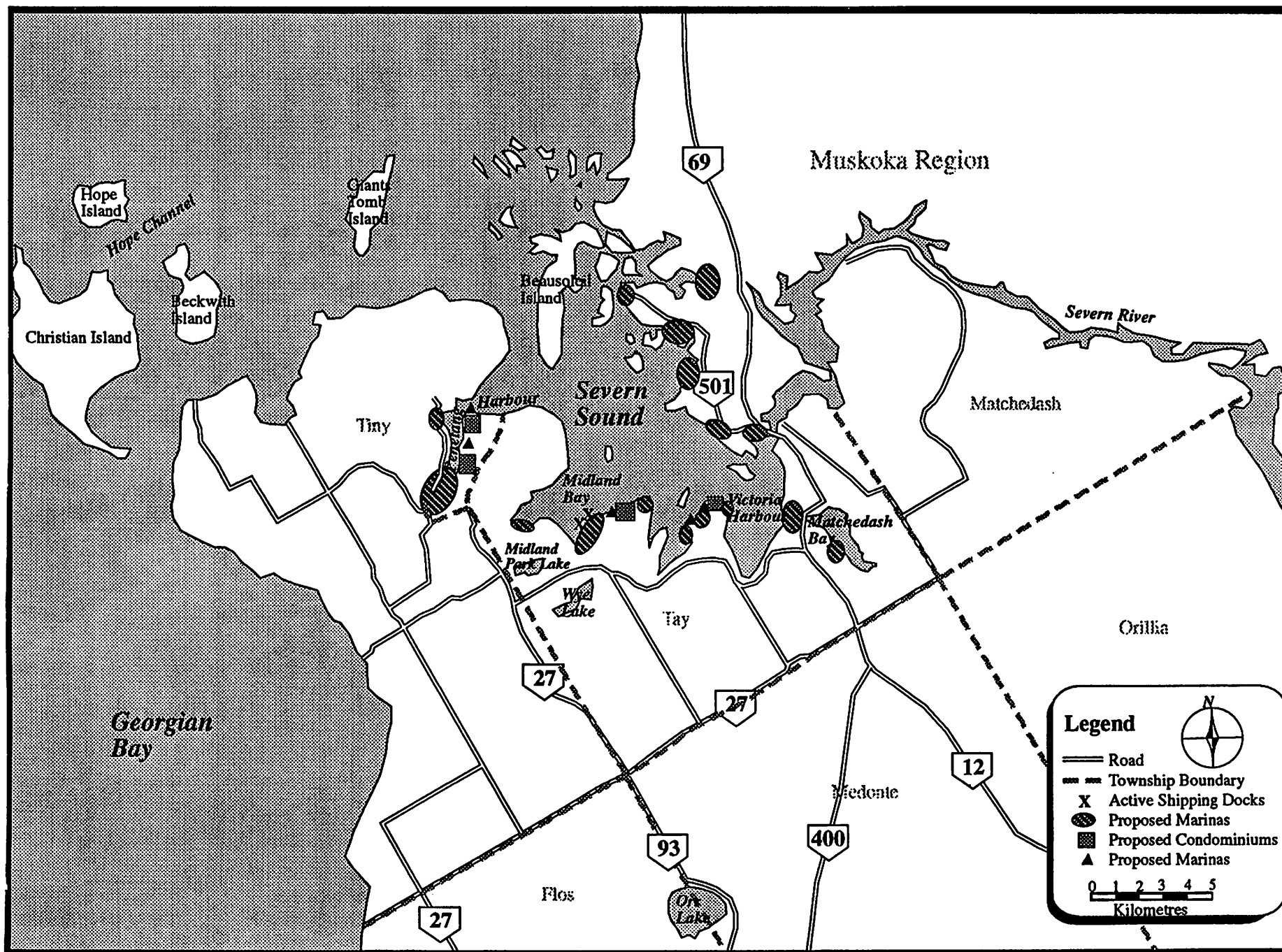
Pleasure boating is an intense activity on Severn Sound. The water body is home of numerous picturesque bays and vistas which are attractive to boaters and it also serves as the link between Georgian Bay and the popular Trent-Severn waterway. Within Severn Sound there are 33 marinas and five federal small craft facilities (refer to Map 4-2). Midland and Penetanguishene have a combined total of approximately 3,100 slips in 7 marinas. The Wye Heritage Marina alone, contributes approximately 1,100 slips (C. Baker, 1991). There are an additional 2,150 slips in the Township of Georgian Bay with 16 marinas between Honey Harbour and Port Severn (Georgian Bay Planning Dept., 1990). Victoria Harbour has 200 slips in its Queen's Cove marina. Three more marinas are located at Waubaushene and one in Port McNicoll. In total, marinas within Severn Sound are estimated to have in excess of 6,000 boat slips. Accurate slip counts are not available, as slip numbers continually fluctuate due to expansions, water conditions and fluctuating water levels (Wideman, 1991). In addition to marinas, there are small craft docks associated with private homes and cottages, and public boat launching facilities.

Wye Heritage Marina is currently marketing condominiums and proposing to add as many as 1,000 additional slips. Low water levels have been causing problems in this marina and dredging will have to be addressed. Additional condominium proposals in Penetanguishene, Midland and Victoria Harbour may add an additional 2,400 slips.

Boating is an extremely popular recreational activity in Severn Sound as evidenced by the large number of existing and proposed boat slips. A good indication of boating activity is provided by



## Map 4-2: Condominium and Marina Development



Parks Canada's annual count of vessel movements through the locks of the Trent-Severn Waterway and boater surveys. As illustrated in Table 4-3, approximately 10,500 vessel movements per year were recorded from 1982 to 1990 at the Port Severn lock station.

**Table 4-3**  
**Annual Vessel Movements**  
**Port Severn Lock Station**  
**1982-1990**

Station	1982	1983	1984	1985	1986	1987	1988	1989	1990	Average
Port Severn	9,969	10,942	10,470	9,452	9,485	10,152	11,574	11,817	11,227	10,565
Increase/ Decrease	---	9.8%	-4.3%	-9.7%	0.4%	7.0%	14%	11.8%	-5.0	6.0%

Source: Parks Canada, 1991.

Analysis of vessel movements indicates a relationship between pleasure boating and the economy. Annual vessel movements have increased six per cent since 1982, but have experienced annual drops by as much as 9.7 per cent. Declines in vessel movements in 1984, 1985 and 1990, tie to corresponding declines in the Ontario economy.

The 1986 Trent-Severn Boater Survey conducted along the entire waterway, indicates that 51 per cent of boaters are permanent or seasonal residents of the area they are boating in. Professionals aged 39 to 49 make up the majority of boaters. The most popular vessels on the Trent-Severn System are cabin cruisers between 6 and 10 meters in length. These cruisers accounted for 39 per cent of the boats surveyed, while larger cruisers represented 11 per cent of the boats. Motor boats with engines over 10 horse power represented 28 per cent of boats and sail boats amounted to only 3 per cent of total boats.

Statistics Canada estimates that approximately 16 per cent of Ontario Households owned at least one boat in 1987. Applying this ratio to the approximately 13,500 permanent dwellings in the study area, would result in a local count of approximately 1,800 crafts. It has also been estimated that the percentage of seasonal households with boats can be as high as 90 per cent (Dillon, 1990). The roughly 11,400 seasonal dwellings in the local area could therefore provide up to an additional 10,250 boats. According to Recreational Boating in Ontario, 1985; boating demand has increased 3.4 per cent per year since 1979 and is expected to continue to grow in Georgian Bay through

1995. This growth rate is estimated to be 2.2 per cent to 2.5 per cent annually (Dillon, 1990).

#### **4.6 Sport Fishing**

Sport fishing is an active year round activity in Severn Sound. An indication of fishing activity and harvests are provided through MNR Creel surveys, (refer to Tables 4-4 and 4-5). Creel surveys are not an indication of total fishing activity and harvest, as not all areas and seasons are surveyed. Creel surveys do however, provide incite into the magnitude of fishing activity and percentage breakdowns, that are felt to be representative of total activity. Currently, there are no available statistics regarding total fishing activity or fishermen within Severn Sound, (Craig, 1991).

In 1985, the Ministry of Natural Resources (MNR) estimated that 17.4 per cent of Ontario's population were anglers. The 1988 area population would therefore have produced an angling market of approximately 6,300 fishermen, based on the Ontario average. Creel surveys, (refer to Table 4-5) have indicated that only 19 per cent of local fishing activity is by local residents. By extrapolating the estimate that approximately 6,300 local fishermen make up 19 per cent of Severn Sound fishing activity, a total Severn Sound fishing population of approximately 33,200 fishermen can be derived. This number is considered to be conservative given the area's recreational nature and fishing opportunities in Severn Sound. The percentage of local residents that fish is likely greater than the provincial average and thus the total fishing population would also be proportionately larger. It is further estimated in the Huronia District Fisheries Management Plan, that use of the area's fishery is expected to increase 15 per cent by the year 2000 based on projected increases in the Ontario population. Of particular note is the 49 per cent increase in ice fishing from 1982 to 1989.

The fishery is currently experiencing problems in the reduction of walleye, the most sought after local game fish. The walleye have all but disappeared in Severn Sound as indicated in recent Creel surveys. In an effort to resurrect the walleye community, the Community Fisheries Involvement Program has been stocking 80,000 fingerlings a year for the past four years, (LaFrance, 1991). Fishing activity had slowed from the late 1970's to the mid 1980's, but has recently showed renewed growth. It is likely that fisherman who sought walleye in the past, have now shifted their efforts to other more abundant fish species. A similar decline plagued the walleye stock of the Bay of Quinte. In 1959 the walleye fishery collapsed, but rebounded in 1978 (Bay of Quinte RAP, 1990). This collapse and rebound may have been linked to the growth and decline of white perch in that area. While the collapse of fish stock can be due to water quality, a natural progression

within the species may also be responsible for the declines and rebounds. Similar to the Quinte experience, the Severn Sound walleye collapse, may be linked to the increase in black crappie numbers. Walleye relationships in the Great Lakes are explored in detail in "Status of Walleye in the Great Lakes.." as prepared for the Great Lakes Fishery Commission in 1989. In contrast to the walleye situation, MNR believe that certain fish species such as bass and trout are being under utilized in the Huronia district, (Huronia Fisheries Management Plan).

Total rod-hours translate into approximately 30,000 angler days per year based on creel survey data that suggests an average fishing day is slightly in excess of 4 hours, (Dillon, 1990). Fishing remains active despite consumption restrictions on some large size walleye, bass, trout and suckers.

**TABLE 4-4**  
**Sport Fishing in Severn Sound**  
**Summer Creel Surveys**

Major Species	1975	1979	1987	1988
Walleye	1,414	744	64	64
Black Crappie	11,673	20,243	8,794	7,349
Northern Pike	10,161	1,855	5,910	5,449
Smallmouth Bass	9,803	6,369	6,938	10,394
Largemouth Bass	2,448	1,991	2,390	2,136
Yellow Perch	3,303	2,461	6,961	7,442
Total Weight Caught (kg)	23,201	14,735	19,357	20,549
Total Effort (Rod Hours)	165,058	105,402	136,821	136,530

Source: MNR, Huronia District

**TABLE 4-5**  
**Sport Fishing in Severn Sound**  
**Winter Creel Surveys**

<b>Major Species</b>	<b>1982</b>	<b>1989</b>
Walleye	784	187
Black Crappie	31,466	8,778
Northern Pike	1,978	2,261
Yellow Perch	7,381	2,236*
Total Weight Caught (kg)	15,272	7,041
Total Effort (Rod Hours)	37,351	55,567

\* Penetang and Midland areas, the main Perch producing areas were not creeled in 1989.  
Source: MNR, Huronia District

Statistics collected on anglers indicate that the fishing population consists of locals, seasonal residents and tourists who utilize all forms of accommodation (refer to Table 4-6). The largest proportion of anglers were local seasonal (25 per cent) and permanent (19 per cent) residents. Anglers from outside the region originated from all points in Ontario, this supports the notion that the area is a recreational destination. The majority of fishermen find accommodation in their own local dwellings or are day trippers who do not require accommodation. Of the non-residents who do require accommodation, they contribute to the local economy through campground fees (14 per cent) and commercial unit rental (10 per cent). Anglers also contribute to the local economy through the purchase of bait, tackle, gas, repairs and boat moorings.

**TABLE 4-6**  
**Origin and Type of Anglers**  
**1987 Summer Creel Survey**

Type of Angler	Number	Origin of Angler	Number
Permanent Resident	1,058	Local	1,081
Non-Permanent Resident	1,402	Ontario	4,400
Day Tripper	1,696	Canada	7
Camper - Prov. Park	53	U.S.	176
Camper - Other	674	Other	14
Camper - Crown Land	49		
Other - Paid	572		
Other - Unpaid	219		
Total Observations	5,674		

Source: MNR Huronia, 1987 Severn Sound Creel Survey

#### 4.7 Swimming Activity

Swimming and water contact sports are highly desirable and possibly represent the highest participation rate of all Severn Sound uses. The high desirability of swimming in Severn Sound places the greatest demands on water quality. Although algal blooms have caused water quality perception problems, there have been no beach closures required due to high bacterial levels according to the local Health Units. Total swimming activity in Severn Sound is perceived to be of a significant magnitude, yet no area specific surveys are available. In order to accurately gauge swimming within Severn Sound, surveys of beaches, campgrounds and private property will need to be carried out.

An indication of the magnitude of swimming occasions within Severn Sound can be achieved through an analysis of swimming activity within the Georgian Bay Islands National Park. The first visitor survey in seventeen years is being under taken during the summer of 1991 at the park. The data is expected to be available in report form in late December of this year, and will include information on the number of park visitors that partake in swimming and water contact activities. The park has averaged 120,000 visitor days over the past five years and of all visitors, a significant

proportion are involved in swimming activities. Based on site observations, it is estimated that approximately 80 per cent of the land based users swim while at the park. There is also a significant amount of casual boaters who moor off shore of the park's sand banks and use the area for swimming, (Gemmell, 1991).

#### **4.8 Tourism**

Tourism is the fourth largest sector in the Ontario economy with \$15 Billion of direct expenditures resulting in \$22 billion in direct and indirect income and 750,000 person years of employment in 1988, (MTR Tourism and the Economy, 1990). Tourism is also a significant part of the Severn Sound economy. The Georgian Lakelands Tourism Association Area that encompasses Grey, Bruce and Simcoe Counties and the District of Muskoka is one of twelve such areas in Ontario and accounted for 13 per cent of resident travellers in 1985. This amounted to 11.3 million visitors (1985 Ontario Travel Survey).

The Severn Sound area lies within the north-east portion of the geographically large Georgian Lakelands Travel Area. As tourism data is not collected on a more localized basis, Georgian Lakelands data has been analyzed. The Georgian Lakelands are characterized by Georgian Bay shoreline, resort and tourist communities and small urban centres. The geographic make up of the Georgian Lakelands is similar to that of Severn Sound and thus the tourism data for the greater area can be viewed as representative of the study area in question. Notwithstanding the aforesaid, a localized tourism study/survey that focuses on the area immediately surrounding Severn Sound, would be beneficial in establishing the degree and type of tourism that occur in the Severn Sound region and its relationship to economic benefits and water usage.

Day travellers to the Georgian Lakelands represented approximately 43 per cent of total tourists to the area. Of these day trip travellers, 51 per cent originated from within the Georgian Lakelands Travel Area and 23 per cent from Metro Toronto. The remaining 57 per cent of travellers remained in the area for one or more nights. The largest portion of over night visitors, (51 per cent) travelled from Metro Toronto. Both same day and overnight visits are highest from July through September, with 31 per cent and 42 per cent of trips respectively occurring in these months. The main purpose of both same day and extended stay visits to the region is for recreation and pleasure (33 per cent and 59 per cent respectively). The second most frequent reason for same day and overnight trips was to, visit friends, (26 per cent and 32 per cent respectively).

The large proportion of private cottages in the area is primarily responsible for the fact that 72 per cent of nights are spent in non-commercial accommodation made up of private cottages and visits to friends. Campsites are responsible for 14 per cent of the accommodation, while commercial accommodation is also used for 14 per cent of all nights. While staying in the region, visitors participate in activities from shopping to visiting historic sites. Shopping and sporting activities rank highest among same day and overnight travellers. More same day travellers chose to shop (29 per cent) than participate in sporting activities (21 per cent). In comparison, 64 per cent of overnight visitors participated in sports, while 33 per cent shopped (Ontario Travel Surveys, 1978).

Occupancy rates at all types of Georgian Lakelands commercial accommodations indicate a very healthy summer season. July and August occupancies have been continually in excess of 80 per cent from 1981 to 1987. These figures reflect the participation in summer based activities such as swimming, boating, fishing and visits to tourist attractions. The remaining months have historically produced occupancies between 40 and 50 per cent, with the exception of November and December which average approximately 35 per cent. The consistent winter and shoulder season, (spring and fall) use reflect the attractiveness of the area for activities that include, skiing, open water and ice fishing, hiking and snow mobiling (MTR Occupancy Monitor, 1988).

While receiving the province's largest share of overnight visits, the Georgian Lakelands experienced the smallest amount of expenditures at \$431.4 million. This relationship is explained by the large number of area cottages and visits to friends. The average expenditure per person per trip of \$38.23 is well below the provincial average of \$48.18. Similarly, the \$42.8 million spent on accommodation in the region reflects just 10 per cent of travel expenditures. Food and beverage expenditures of \$150 million account for 35 per cent of injections. Automotive and retail purchases accounted for 22 per cent and 21 per cent of expenditures respectively.

Economic impact of tourism was estimated by the Ministry of Tourism and Recreation utilizing the 1985 Travel Survey data. Based on the \$461 million in tourism expenditures, MTR has estimated the economic impacts of Georgian Lakelands tourism to reach far beyond the initial expenditure (refer to Table 4-7). In order to aid analysis of Severn Sound tourism and a detailed determination of its economic benefits, it is recommended that a local study be initiated to determine the economic impacts of tourism on the Severn Sound region.



**TABLE 4-7**  
**Georgian Lakelands**  
**Economic Impacts of Tourism, 1985**

<b>Item</b>	<b>Expenditure</b>
<b>Initial Tourism Expenditure</b> (Millions of Dollars)	461
<b>Total Output Generated</b> (Millions of Dollars)	692
<b>Total Income Generated</b>	415
<b>Employment Generated</b> (Person Years)	
Direct	9,800
Indirect/Induced	8,700
<b>Total</b>	18,500
<b>Taxes Generated</b> (Millions of Dollars)	
Provincial	32
Federal	62
Municipal	13
<b>Total</b>	107

Source: Ministry of Tourism and Recreation, Ontario Travel Surveys

Local tourism activity is further bolstered by visitations to local attractions. Tourist attractions other than general recreational uses are centred around Midland and Penetanguishene (refer to Table 4-8). Visits generally increased through the latter 1980's, although the slowing economy of 1990 appeared to effect the number of tourists and attraction visits. Visitations to the Chamber of Commerce is an indication of the number of tourists seeking activities and attractions to visit.

**TABLE 4-8**  
**Major Tourist Attraction**  
**Visitations**

<b>Tourist Attraction</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>
				<b>January-October</b>
Historic Naval and Military Establishments	24,000	23,000	24,110	34,825
Sainte-Marie Among The The Hurons	123,000	118,000	128,991	125,969
Wye March Wildlife Centre	26,534	25,095	36,991	29,175
PMCL Boat Cruises And Bus Trips	34,830	37,514	32,000	36,167
Martyr's Shrine	206,505	240,999	209,881	204,163
Huronina Museum and Indian Village	N/A	16,834	16,603	17,590
Midland Chamber of Commerce	26,588	25,447	28,287	24,423

Source: Midland Chamber of Commerce

Camping excursions are popular within the Georgian Lakelands. Local camping occurs within private campgrounds, Provincial and National Parks. Camper Surveys of Awenda Provincial Park, north of Penetanguishene (refer to Table 4-9), illustrate a six year increase in visitors of 16.5 per cent and a 19 per cent increase in the number of campers. While the average party size and length of stay has remained constant, there has been a 32 per cent increase in occupied camp sites during the peak months of July and August.

**TABLE 4-9**  
**Awenda Provincial Park**  
**User Surveys**

Item	1983	1989
Park ha.	1,792	2,917
Camp Sites	200	200
Visitors	47,419	55,238
Campers	14,186	16,916
Camper Nights	37,000	43,981
Campsites Occupied	11,307	12,154
Avg. Length of Stay	2.6 Days	2.6 Days
Avg. Party Size	3.3 Persons	3.3 Persons
July/Aug Occupancy	47%	79%

Source: MNR, Provincial parks and Recreation Areas Branch, Ontario Provincial Park Statistics

Tourist accommodation in the Severn Sound area numbered 654 rooms/cottages in 1988 and this figure has now recently grown by the new 60 Room Journey's End in Midland. The supply of rooms as depicted in table 4-10 is not abundant given the recreational nature of the area. However, in light of occupancy statistics and the large number of area seasonal homes, the supply is currently adequate to meet demand.

**FIGURE 4-10**  
**Tourist Accommodation, 1988**

Municipality	Rooms	Resort Cottages
Penetanguishene	12	16
Midland	210	1
Victoria Harbour	0	5
Port Severn	109	77
Honey Harbour	154	70
<b>Total</b>	<b>485</b>	<b>169</b>

Source: Georgian Bay Recreational Resort Study, Malone Given Parsons

The measure of success of a tourism/recreation area is its ability to provide desired facilities and activities in a quality manner. In order to maintain and build upon a tourism/recreation base, it is important to have an understanding of the demands of tourist populations and to the degree to which their demands are being met. The Georgian Lakelands travel area is successful in providing desired activities and facilities to the satisfaction of its travellers as depicted in Table 4-11.

The Georgian Lakelands traveller is not seeking high activity or upper class facilities such as amusement parks or elegant restaurants. The area's travellers are seeking outdoor recreational pursuits and activities of a relaxing nature such as strolling, swimming, fishing and camping. While these opportunities are currently being satisfied, it will be important to maintain or improve the quality of these experiences and the resources that make them possible.

**TABLE 4-11**  
**Georgian Lakelands**  
**Destination Fulfilment**

<b>High Importance/Low Satisfaction</b>	<b>High Importance/High Satisfaction</b>
Inexpensive Meals Reduced Rates	Wilderness/Nature Good Place to Stroll Beaches for Swimming Towns, Rural Areas Water Sports National/Provincial Parks Camping/Backpacking Outdoor Sports Hunting and Fishing Budget Accommodation Resort Areas Shopping
<b>Low Importance/Low Satisfaction</b>	<b>Low Importance/High Satisfaction</b>
Mountains Bus/Boat Tours Nightlife/Entertainment Theatres/Festivals Amusement Parks First Class Hotels Sporting Events Elegant Restaurants Indoor Sports Big Cities Gambling	Skiing/Winter Sports Historic Sites

Source: The Ontario Tourism Attitude And Motivation Study, Volume 1, December 1987

#### **4.9 Linkages**

Links to the water have traditionally been through private property, resorts and via concession roads which terminate at the water's edge. Urban links have been few due to the historic industrial use of the waterfront and they now continue to be limited by the development of homes and private marinas on old industrial sites. Municipal beaches and parks have long provided typical links to the water. The advent of central waterfront parks and public marinas have and will continue to provide urban activity areas to draw residents and tourists to the water and boaters to the towns and villages.

## **5.0 FUTURE AND BENEFICIAL USES**

The industrial and commercial uses of Severn Sound have been diminished, or are in a state of decline. Recreational homes, activities and tourism have become the predominant waterfront and water based uses. As industry closes or moves inland and development pressures persist for recreational homes and boating facilities, the Severn Sound area will have opportunities to improve upon the quality and intensity of tourism and recreational attractions.

### **5.1 Future Commercial Shipping**

Commercial shipping has significantly declined in light of economic changes, grain elevator closures and continued pressures on industrial lands from prospective residential and marina developments. With the exception of the freighter presence in Midland Bay, (Unimin and Ogilvie are both expected to receive nine freighters each during the 1991 shipping season with no plans of reduced operations or relocation), commercial shipping in other parts of Severn Sound have ceased. In contrast to commercial shipping, the two sightseeing cruise boats operating in Severn Sound have enjoyed steady business over the years and each has the potential to build upon current ridership, which has averaged approximately 39,000 passengers in recent years. In order to improve ridership, the cruise operators have extended their seasons and are promoting charter cruises to target groups and tour operators, (Penetang Midland Coach Lines/Penetang 30,000 Island Cruises).

Although lake freighters can be a tourist attraction in themselves, their decline will have beneficial effects to water quality and boater safety. The minimal presence of major commercial navigation will significantly reduce the risk of injury and collision between water based recreation and commercial boats. The decline of commercial shipping will also reduce the need for dredging of major ports. Scaled down dredging will in turn, reduce the amount of contaminants that are re-released into the water from bottom silt during dredging operations.

### **5.2 Future Industrial Uses**

Industrial use of the water and surrounding shoreline is expected to continue at its present rate, if not decline. Ogilvie Mills and Unimin will continue their presence on the Midland waterfront. Changes in the manufacturing sector, development pressure and land values may eventually see these last remaining industrial waterfront uses redeveloped for marinas and condominiums, but for the foreseeable future their plans are to remain active. Unlike many industrial towns in Ontario,

Midland and Penetanguishene's industrial bases have remained strong and grown in several areas in recent years. The status quo and some expansions are being forecast by local industries, yet high costs of doing business in Canada may affect the future of foreign based companies. Future development will continue to occur within serviced industrial parks.

Given the high percentage of industrial employment concentrated in TRW, Mitsubishi and Hughs-Leitz (Midland Economic Strategy, 1991). A closure in one of these firms could have serious implications on the health of the local economy.

Stringent MISA regulations will be one of several initiatives that will help improve the environment of Severn Sound. Industry is integral of the area economy and it is expected to continue operations, however by reducing the quantity of effluents being discharged and through additional pre-treatment, it can become more environmentally compatible.

### **5.3 Future Residential Uses**

The recent construction of single family homes and a 16 unit condominium along the Penetanguishene waterfront are only a small example of future residential use. The Severn Sound shoreline is already dotted with residential development on virtually every piece of developable land, yet the future promises more commercial development and intensified residential developments. As ribbon shoreline development may have reached its capacity, developers in the 1980's attempted to take advantage of the growing recreational condominium market, but met with little success. They are now repositioned for the 1990's and plan to develop in a fashion that the area has not experienced before. Cottage and permanent housing construction in the area was strong during the 1980's, but it is recreational water based, marina side condominiums that promise to occupy the 1990's.

New development will only occur if new sewage treatment capacity is gained through the provision of new or expanded treatment plants. Port McNicoll, Midland and Penetanguishene are all attempting to gain new capacity, while the Township of Georgian Bay is studying the introduction of sewage treatment, all in an effort to meet demands of new development.

## **Proposed Condominium Developments**

- . 1,180 lots in the approval process in Georgian Bay and Tay Townships
- . 191 condominiums with 200 boat slips in Victoria Harbour
- . 255 condominiums with 310 boat slips at the Roamer Boat Works in Penetanguishene
- . 60 condominiums and 150 boat slips at Dutchman's Cove in Penetanguishene
- . 1,100 condominium units, 750 boat slips to be added to existing 250 slips and 250,000-500,000 Sq. Ft. of village retail at the old Tiffin grain elevator in Midland

Future residential investment will have several effects. These include: attracting additional Toronto area residents to purchase or rent seasonal and permanent homes; increasing the number of boats and related expenditures; creating jobs through construction and increased services providing large increases to municipal tax bases. Residential development in areas of industrial decline will be especially important in order to offset tax base losses, such as the elevator closure in Port McNicoll. Benefits will be realized by the tourist and seasonal resident through increased selection, and by the local resident through new employment and increased local expenditures.

### **5.4 Future Agricultural Uses**

Agriculture lands have been declining in recent years and this trend is expected to continue. Added costs of small farm operations, moderate capability soils and farm purchases for non-agricultural uses, will contribute to further declines in active farms and acres worked. If low commodity prices persist, farm losses will likely escalate.

### **5.5 Future Municipal Water Uses**

Severn Sound will continue to be used on an increasing flow basis as the receiving body for municipal effluent and will require capital improvements to accommodate growth and improved water quality. According to local officials, the financial burden of new and improved sewage facilities cannot be solely borne by the municipalities and funding requests have been made to the Provincial Government. If the capital costs of improved sewage treatment as detailed in the RAP Remedial Options Discussion Paper and possible plant amalgamations can be accommodated, effluent quality and loads can be improved, yet increased development will result in increased flows. Beneficial municipal use will not only have to include the reduction of phosphorus and bacteria through better treatment at existing sewage plants, but also include the reduction in per capita effluent flows. Per capita effluent reduction will decrease contaminants and treatment plant



flows, while freeing up capacity and allowing for greater efficiency. In order to realize these reductions, improved treatment at existing plants must be practised and capital improvements must be carried out.

One of the most beneficial future municipal uses of the harbour will be the continued decline in the use of Severn Sound for effluent disposal by way of water conservation. Water demand management can be a cost effective remedial action. Water has long been regarded as a free resource and has led to waste and inefficiency in its use. The vast majority of Canadian municipalities charge for water by flat rate or declining blocks which in no way encourages conservation. Local municipalities continue to charge for water use on a flat rate basis and industrial users in Midland are charged by an estimate of water use, with an upset limit. However, plans are under way locally to introduce water metering for all users.

The relationship between water cost and its resultant consumption is direct. Environment Canada in 1988 estimated that for every \$1.00 increase per cubic metre of water used in Ontario, there would be a 21 per cent decline in water consumption, if water is metered. This in turn would create an equivalent loading reduction to sewage treatment plants. Reduced loadings would benefit Severn Sound through reduced emissions, help prevent peak flow upsets, increase the operating life of plant components and increase efficiency (Rivers-Kalinauskas, 1990). Although this study was based upon the large urban centre of Hamilton and reductions in the predominantly rural area that surrounds Severn Sound would not be as significant, the study provides useful information with regards to the relationships between water cost, consumption and sewage plant flows. The relationships identified in this study provide a justification for further study into the potential for water reductions in smaller municipalities. Past disregard for water consumption has resulted in Midland water billings covering only half the cost of providing municipal water and this is no longer acceptable, (D.Baker, 1991).

Midland is taking steps to promote conservation through water metering, graduated cost scales and industrial recycling. The continued use of metering, conservation policies and price as a means to control demand should yield water quality benefits and operational cost savings. While improved effluent quality, reductions in per capita flow, water metering and conservation will augment the goals of RAP, the area population and use of municipal services is expected to grow. Therefore, the bottom line must be improvements to existing municipal sewage facilities and the provision of new ones. Capacity freed up by increased efficiency and reduction in flows will quickly be consumed by new developments being proposed and new capacity must be provided.

## **5.6 Future Pleasure Boating**

With 1.3 million pleasure craft in Ontario and increases between two and four per cent per year, (Dillon, 1990) the opportunities for retaining and increasing Severn Sound's share of the \$1.5 billion, (Dillon, 1990) that is spent annually on boating is positive. The introduction of new marinas will attract more boaters to the area, with the majority expected to be from the Toronto area. The majority of new marinas are of a private nature and efforts must be made to ensure that public and transient slips are developed in order to attract all classes of boaters and allow transient boaters opportunities to dock and explore the surrounding shoreline. Limited municipal transient docking at Midland (100 slips) and Penetanguishene (25 slips) is currently restricting the attraction of tourist boaters. Both these communities have recognized the importance of the tourist sector and are undertaking measures to provide additional slips for transient use.

Average boater expenditures as estimated in the 1988 Marina Operators Survey, amount to \$48.18 per day (Dillon, 1990). Taking into account the large proportion of power boats in Severn Sound, average daily expenditures would more likely be in the order of \$50.60 (Dillon, 1990). Assuming conservative boating activity of only weekend use during June, July and August, local and seasonal residents in combination could be injecting \$14 million into the local economy on an annual basis. Given week day and tourist boating activity, actual economic impacts would likely be far greater. Increases in water quality and marina facilities will attract additional boaters which if all proposed marinas are developed, would yield an additional \$1.6 million per year.

A large portion of boating expenditures are related to mooring charges. The Wye Heritage marina's 1991 rates are approximately \$50.00/ linear foot of slip length. The majority of slips are in the 26 to 32 foot range and carry a seasonal mooring fee of \$ 1,300 to \$1,600. Fees include marina use, shore power and water and outdoor winter storage. The 1991 rates increased approximately 10 per cent over 1990 rates, (Wye Heritage Marina, 1991). The Wye Heritage Marina alone, at full occupancy would generate in excess of \$1.5 million annually in slip revenues and represents approximately 13 per cent of the estimated 8,600 existing and proposed slips within Severn Sound.

## **5.7 Future Sport Fishing**

Sport fishing abounds in Severn Sound and while it is estimated that water quality does not directly affect fishing activity, the presence of desirable fish species will affect local quality and quantity of fishing. The realization of the RAP goal of healthy natural reproducing communities is essential to

future fishing activity. The reduction in availability of desirable fish such as walleye has resulted in less fishing activity in recent years. Fishermen originate from throughout the province, utilize campgrounds and commercial accommodation, own homes in the area and purchase marine and fishing related supplies. New angling growth due to population increases by the year 2,000 could inject an additional \$700,000 into the local economy in excess of the \$870,000 that is already introduced annually, (Huron Fisheries Management Plan, MOE, 1985 Survey of Fishing).

If the decline of preferred fish species is allowed to continue, the reduction in the number of fishermen will have a negative effect on expenditures realized by fishing activity. Utilizing an average consumer surplus of \$29 per angler day, (expressed in 1991 dollars) as estimated by the Ministry of Natural Resources, 1985 fishing survey, and an estimated 30,000 current annual angler days, the negative economic effects of the reduction in the number of anglers would translate into a significant loss of expenditures and employment in the local economy. If preferred species continue to decline, efforts must be made to retain fishing activity by shifting fishermen to other more populous game fish. In addition the unquantifiable aspects of enjoyment and relaxation that are attributed to fishing, would also be detrimentally affected by reductions in fishing activity.

These numbers stress the importance of improving the fish communities in order that fishing activity can be retained and strengthened. Increased launching facilities, shoreline access for non-boating anglers, increased seasons for abundant fish communities and fishing derbies promoting a new cleaner Severn Sound will all aid future fishing growth and area uses. Future development must employ "no net Loss" principles for fish habitat and the creation of new habitat should be encouraged.

## **5.8 Future Swimming Activity**

As swimming is the most desirable use of Severn Sound, it will persist and continue to place demands on improved water quality. Upon improvements in water quality and resultant increases in swimming satisfaction, the number of swimming occurrences will likely increase. Reductions in pollution and algal blooms will encourage swimming in existing locations and potentially open new areas for swimming activity. Associated expenditures on fuel, food and accommodations will complement the economic and tourist base of the area.

## **5.9 Future Tourism**

Tourism is a significant force in the Severn Sound as indicated by its generation of \$15-\$17 million in annual retail sales in Midland alone (Midland Economic Strategy, 1991). In addition to retail sales, tourism will continue to contribute to accommodation, restaurants, marinas and local attractions. As indicated in Table 4-6 in the previous chapter, tourist expenditures in the Georgian Lakelands result in a multiplier of 1.5 in terms of total output. The 1985 Ontario Travel Survey, expressed in 1988 dollars estimates that Ontario travellers spend on average \$61.33 per day (Dillon, 1990). Combining expenditures with the multiplier, yields an economic effect of \$92 per day for each tourist attracted.

Tourism and recreation are economic areas with significant growth potential. The direct and indirect effects of tourism benefit; tourists, residents and the business community. Efforts need to be made, first to protect the resources that are attracting tourism and second to improve the quality and selection of resources and facilities. Severn Sound is endowed with the ability to satisfy the tourism needs of those visiting the area as depicted in the Georgian Lakelands surveys. All efforts must be made to protect the resources that are providing satisfaction for high priority activities and efforts should then be made to improve other facilities that will attract a new tourist sector. The availability of items such as cultural and sporting events, and elegant dining which are not adequately provided, could produce a new culturally oriented tourist sector, (Tourism Attitude and Motivational Study).

## **5.10 Future Linkages**

Future use of Severn Sound will not only depend upon improved water quality and perception of the area, but also upon visibility and accessibility. Water must be accessible from land and vice versa. Physical and emotional links between water and land uses must be established. The desire to be in the area already exists, but will be aided by the introduction of increased environmental quality and local facilities. In order to draw and retain tourists and recreational users, the waters of Severn Sound and its surrounding land uses must be accessible and linked to surrounding uses. Severn Sound also needs to be considered in an ecosystem state, with individual areas linked together by means such as pathway development of abandoned rail lines. Land and water based facilities such as transient slips, launches, ground based parking and trails that link land and water are required to draw users and their related expenditures.

## **5.11 Future Aesthetic Values**

The value of a waterfront environment is demonstrated by recreational use, tourism and pressures for increased waterfront development. Quality aesthetics evoke emotional values towards the area and increase its desirability. The Severn Sound area was first developed for its transportation values, but now its attraction is aesthetic and recreational. An aesthetically pleasing area in terms of water quality, clarity and associated uses will continue to attract tourists, seasonal and permanent residents. Aesthetically pleasing recreational pursuits will draw people to Severn Sound and as a result act as the catalyst for associated land and water based development.

## 6.0 COSTS, BENEFITS AND FUNDING FOR REMEDIAL ACTIONS

The implementation of remedial options will result in both costs and benefits to the towns, villages and townships that line the Severn Sound shores. It is not the purpose of this chapter to try and quantify what these costs and benefits might be, but rather it is an exercise at the introductory level to set out a general framework for undertaking an analysis of the different options and suggest areas that require further study given the changing socio-economic circumstances in the community and expected continued growth of recreation and tourism.

As previous chapters attest, the Severn Sound area is in a state of physical and socio-economic transition. The water body and its beneficial uses to local and tourist populations promises to play a significant role in the future evolution of the adjacent communities and therefore improved water quality is an important asset. It is equally important to note however, that at a certain level there will likely be diminishing benefits from further improvements in water quality. It is also true that at a point the incremental costs of achieving additional water quality improvements will outweigh the benefits.

### 6.1 Costs of Pollution

A simple framework that can be utilized to view the costs of water pollution can be expressed via the following equation.

$$\begin{array}{ccccccc} \text{Waste Disposal} & = & \text{Pollution Prevention} & + & \text{Pollution Avoidance} & + & \text{Pollution Damage} \\ \text{Costs} & & \text{Costs} & & \text{Costs} & & \text{Costs} \\ & & & & \underbrace{\hspace{10em}} & & \\ & & & & \text{Pollution Costs} & & \end{array}$$

The costs of dealing with pollutants affecting the water body is the sum of pollution prevention costs and pollution costs. Pollution prevention costs are those costs incurred either by firms or individuals in the private sector or by government to prevent either

entirely or partially the pollution that would result from some production or consumption activity.

Pollution costs can be broken into two categories. One, the private or public expenditures undertaken to avoid pollution damage once pollution has already occurred and two, the welfare damage of pollution. Once pollution has occurred because individuals or government have not been willing to accept the costs of pollution prevention, the community at large can either choose to avoid the damage by undertaking some defensive or remedial actions, or it can simply accept the consequences. In the first instance alternative lines of action may take the form of public expenditures on various kinds of clean up programs, filtration systems or on commuting to other areas to enjoy activities at unpolluted locations.

In the case of pollution that is not prevented or avoided the result is welfare damage. The most tangible pollution damage takes the form of observable deterioration of both living assets and living things, including human beings. In the case of Severn Sound, welfare costs result from the diminishing preferred fish stocks, fish contamination and health risks from algal growth and turbid waters.

## **6.2 Distribution of Costs and Benefits**

Who pays? Who benefits? These are critical questions and they define further dimensions that must be taken into account in the evaluation of remedial options. It is unlikely that the winners and losers associated with the different alternatives will be identical and therefore in evaluating them and formulating an overall strategy, it is important to determine the net gains and losses among the various groups in the community and then somehow balance the distributional effects and costs.

## **6.3 Methods of Financing Remedial Actions**

A variety of mechanism are available for financing remedial actions. Each has advantages and disadvantages and each bears a different distribution of costs and benefits. The following are some of the more commonly discussed mechanisms. It should be noted that the Ontario Ministry of the Environment has recently commissioned a study to look at the potential funding mechanisms for the implementation of remedial action plans.

### **6.3.1 Effluent Charges**

For the purposes of this discussion an effluent charge would be a fee levied on a polluter to allow them to discharge untreated water to sewage treatment plants. The charge would be calculated on the basis of a dollar amount for each unit of polluted water created and discharged.

The advantages of this funding mechanism given a proper calculation of the charge is that it provides a mechanism for making polluters pay for their degradation of an environmental resource. Unfortunately what looks good in concept is deceptively simple. First, there is a difficulty in establishing the proper effluent charge. To do this requires substantive knowledge of the external environmental costs created by the polluter as a result of its discharge of effluent. If the polluter is a sole source the calculation is easy, but in urban watersheds like those found at Midland and Penetanguishene where a polluter is but one of many contributors, the calculation becomes more difficult.

A second consideration when examining this mechanism is that the charge will likely be internalized by the polluter and passed on to the customer. Another danger with effluent charges particularly in fragile economic times like the present is that firms may simply find they make the cost of production too high and as a result they may shut their doors and move elsewhere. The repercussions of this event are both positive and negative. On one hand the aquatic environment and certain segments of society will benefit from improved water quality. On the other hand other segments of society will be negatively impacted through employment and tax losses.

Monitoring and enforcement are other considerations that must be taken into account by an authority that opts for this potential funding mechanism. Both activities are costly and both require government commitment to make the system work.

### **6.3.2 Discharge Controls**

The mechanism of discharge controls is beginning to see implementation. Requirements for MOE Certificates of Approval under the Water Resources Act, MNR work permits under the Public Lands Act, Environmental Protection Act provisions and MISA discharge regulations that are being implemented, can all be successful in controlling work and



discharges in or near water. An advantage of this system is that it recognizes enforceable property rights and sets limits and requirements on an entity's right to use the public domain. Once again however, it is a concept that is not as simple as it first appears. There are considerations of monitoring, enforceability, information, timing, existing detrimental operations and transaction costs. The implementation of MISA and the flexibility of existing legislation to adapt to particular situations can however, be effective in helping control works and discharges.

### **6.3.3 User Pay Schemes**

Typical water uses include water supply, sport fishing, recreational boating and other water based recreation and water oriented tourism. Various types of user fees and licenses can be implemented for these uses. Fees would be limited however, by the elasticity of demand, availability and cost of substitutes and administration costs. Current studies show that about one third of benefit results from water use and two thirds is non related use. Beneficiaries of non-use value are usually taken to be residents or visitors to the surrounding area. Mechanisms can include a variety of vehicles such as property taxes, income taxes, lotteries, special funds and user fees.

An advantage of a charge system is that it purports to draw funds from those who most desire improved water quality (ie. the users of the resource). A disadvantage of this type of system is that it is not a direct mechanism for holding polluters accountable. A charge for fishing in Severn Sound does not stop a development or industry from discharging wastes into the water body. In order for user fees to work they must be universally applied for the whole aquatic environment and the public must place a high value on the resource and be willing to pay fees with the knowledge that pollution is being abated. This "assurance of abatement" is in turn not without cost as it requires political will, monitoring, enforcement and public and private commitment to make it work.

## **6.4 Remedial Actions in Light of the Socio-economic Trends Surrounding Severn Sound**

The transition of the Severn Sound area from historic industrial uses towards a service and tourism economy has and will continue to place a higher value on a clean water body. Good water quality permits a variety of recreational activities and it is a key marketing tool for attracting and implementing recreational investment. The Severn Sound transition

makes it imperative to ensure that water quality is not a limiting factor in community endeavours to create a new economic base.

Achieving and maintaining clean water can be a two edged sword. On one hand clean water is an attribute which attracts people to Severn Sound. On the other hand the very fact that more people and more investment will be attracted to the area generates more waste water and puts more pressure on the area's waste treatment systems.

Turning from recreation and tourism development, it is also important to recognize that industry still plays a major role in the economic life of surrounding communities. To this end caution must be exercised in the imposition of water pollution controls and regulations on industry. Controls must not be so onerous that industry's only response is to shut down and move away. The phasing in of pollution prevention measures is one equitable method of providing long term gains without inflicting excessive short term pains. Such initiatives must be consistent with the MISA, "best available technology that is economically achievable", (BATEA) approach.

At this juncture the options for funding remedial actions can only be suggested. Substantial analysis will need to be done in order to prove their suitability and effectiveness. Given the significant tourism and seasonal resident populations in the area, the implementation of user pay schemes seem to hold forth some promise. Special waterfront improvement charges could be incorporated in lot levies to help the municipality build the necessary infrastructure and control systems. Along with regular taxes, a special waterfront tax could also be levied on these developments for waterway maintenance, as they benefit more directly from a clean harbour than other types of investment. This mechanism acts as a "premium tax" which makes owners/users pay extra for locations with additional amenities. A boater charge might also be levied on residents and transients who use public marina facilities.

Effluent charges are another mechanism that may also be appropriate for the area. This system could be applied to both industries and large scale residential/recreational developments. Metering systems could be put in place to monitor their use of water and the sewer systems. Charges could then be levied by the municipality in accordance with a predetermined rate structure. In effect, this charge system almost acts like a user pay scheme as it ensures that entities pay for their use of the municipality's infrastructure in proportion to the demands they place on it. In order for this form of "user pay" method to be effective in achieving RAP goals, mechanisms must be established to ensure that monies

derived from effluent charges go to the implementation of remedial actions and are not placed within general municipal or provincial coffers.

As the results of the on-going Ministry of Environment Study on funding remedial actions become known, the Severn Sound RAP Team will be better able to judge the mechanisms that are likely to work best in their situation. At this point all that can be concluded is that the Severn Sound area will need to employ a variety of coordinated remedial actions to achieve and maintain the desired water quality and at the same time they will need to employ a mixture of funding mechanisms that will generate the necessary monies for capital improvements and operational expenses. Both tasks will be challenging, but the Severn Sound communities have little choice except to meet these challenges if they are to grow and flourish as emerging recreation and tourist centres. An attractive, safe, usable water body is one of the main assets that communities surrounding Severn Sound will require in order to continue to attract recreational growth and a strengthened economic base.

## BIBLIOGRAPHY

- Amand, Dan. Planning Technician, Town of Midland. Personal Interview, February 1991.
- Baker, Carol. Economic Development Commissioner, Town of Midland. Personal Interview, March 1991.
- Baker, Douglas. General Manager, Midland Public Works. Personal Interview, March 1991.
- Campbell, Ian. Canadian Passenger Vessel Association. Telephone Interview, March 1991.
- Canadian Markets. 1990. Midland Census Area. Statistics.
- Cole, Reg. Bay Mills. Telephone Interview, March 1991.
- County of Simcoe Study Committee. 1990. What if, Public discussion report.
- Craig, Robin. Ministry of Natural Resources, Huronia District. Telephone interview, August, 1991.
- Crown, Wesley. Planning Director, Township of Tay. Personal Interview, February, 1991.
- Dejong, Case. Kindred Industries. Telephone Interview, March 1991.
- Dillon, M.M. 1990. Town of Collingwood Waterfront Planning Study, Phase 1 Background Notes. Prepared for the Town of Collingwood.
- Environment, Ministry of the. 1990. Overview Economic Assessment of Remedial Action Plans For the Great Lakes Areas of Concern, Appendices. Queen's Printer for Ontario
- Environment, Ministry of the. 1990. Overview Economic Assessment of Remedial Action Plans For the Great Lakes Areas of Concern. Queen's Printer for Ontario
- Evans, Peter, Ministry of Natural Resources. Telephone Interview, March 1991.
- Fox, Doug. Nebs Business Forms. Telephone Interview, March 1991.
- Free Press. March 28, 1990. Huronia'90, special supplement.
- Gagne, Y.A. Clerk, Penetanguishene. Personal Interview, March 1991.
- Georgian Bay, Township of. 1984. Secondary Plan.
- Georgian Bay, Township of. Marina Inventory.
- Gemmell, Greg. Georgian Bay Islands National Park. Telephone Interview, August 1991.
- Haarigan, Gail. Statistics Canada, Toronto. Telephone Data Collection, April 1991.
- Heritage Penetanguishene. Glimpses of our Past.
- Heymann, Les. Unimin Mines, Midland. Telephone Interview. March, 1991

Hodgins, Paul Town Planner, Penetanguishene. Personal Interview, March 1991.

Holmes, Glen. Pillsbury Canada. Telephone Interview, March 1991.

Hunter Bill, Ministry of Tourism and Recreation. Telephone Interview, March, 1991.

J. Ross Raymond and Associates Limited. 1990. Amendment No. 19 to the Official Plan of the Penetanguishene Planning Area. Marine Commercial Policies. Prepared for the Town of Penetanguishene.

Kibedi, Andrew, Ministry of Transportation. Telephone Interview, March 1991.

Likely, Joanne. Township of Tay Planning Department. Telephone Interview, August 1991.

LaFrance, Wayne. Fisheries Biologist, Ministry of Natural Resources, Midhurst. Personal Interview, March 1991.

Law, Robert A. District Planning Coordinator, Ministry of Natural Resources. Personal Interview, February 1991.

MacKell, Brian. Planning Consultant, Village of Victoria Harbour. Telephone Interview, March 1991.

Malone Given Parsons. 1988. Georgian Bay Recreational Resorts Study. Prepared for: Canada Ontario Tourism Development Agreement.

Ontario Marina Operators Association. 1991. Marinas, Ontario Canada. Kingston.

McCallister, Frank. Advanced Monobloc Inc. Telephone Interview, March 1991.

Midland Chamber of Commerce. 1989. List of Manufacturing Industries.

Midland Chamber of Commerce. 1990. List of Manufacturing Industries.

Midland Chamber of Commerce. 1990. Tour Sites, visitations.

Midland Chamber of Commerce. Gateway to the 30,000 Islands and Your Economic Opportunity, Information Brochure.

Midland Chamber of Commerce. Town Profile.

Midland Directory. 1990. In the beginning it was called Mundy's Bay, historic article.

Midland, Town of. 1980. The Official Plan of the Midland Planning Area.

Midland, Town of. 1990. Picture Midland's Future.

Moreau, Robert. Reeve, Village of Victoria Harbour. Personal Interview, March 1991.

Moss, J.R.. Weber Manufacturing. Telephone Interview, March 1991.

Murray, Ottilie. District of Muskoka. Telephone Interview, March 1991.

Muskoka, District of. 1989. Building Permit and Subdivision Approvals.

Muskoka, District of. 1989. The Official Plan of the Muskoka District Area.

Muskoka, District of. Permanent and Seasonal Population.

Muskoka, District of. Population Count.

Natural Resources, Ministry of. 1983, 1989. Ontario Provincial Parks Statistics. Queen's Printer for Ontario, Toronto.

Natural Resources, Ministry of. 1985. Survey of Sport Fishing in Canada - Highlights for the Province of Ontario. 1986.

Natural Resources, Ministry of. 1988. Ontario Provincial Parks Camper Survey.

Natural Resources, Ministry of. 1989. Huron District Fisheries Management Plan, 1989-2000.

Natural Resources, Ministry of. Summary of Severn Sound Creel Surveys, 1975-1988.

Oliver, George. Ogilvie Mills, Midland. Telephone Interview, March 1991.

Parks, David. Planner, Township of Georgian Bay. Personal Interview, March 1991.

Penetanguishene Building Department. 1990. Summary Sheet.

Penetanguishene, Town of, Building Department. 1991. Summary of 1990 Building Department Report.

Penetanguishene, Town of. 1990. Manufacturing Plants Within the Town of Penetanguishene.

Penetanguishene, Town of. 1990. Penetanguishene General Information.

Penetanguishene, Town of. Official Plan of the Penetanguishene Planning Area.

Penetanguishene, Town of. Town Brochure.

Port McNicoll, Village of. 1991. Official Plan of the Village of Port McNicoll.

Rivers, R and Kalinauskas, R. Water Demand Management: An Evaluation of a "Soft" Solution For The Hamilton Remedial Action Plan. Environment Canada.

Robillard, Steve. Penetang. 30,000 Island Cruises. Telephone Interview, August 1991.

Robity, Roger. Tiny Township Planning Department. Telephone Interview, August 1991.

Rowbotham, Sandra. Simcoe County, Community and Resource Development. Telephone Interview, March 1991.

Runyans, James. Techform Products Inc. Telephone Interview, March 1991.

Rusch, Erwin. Bruin Engineered Parts. Telephone Interview, March 1991.

Severn Sound RAP Team and Public Advisory Committee. 1990. Remedial Options Discussion Paper. Environment Ontario and Environment Canada.

Severn Sound RAP Team. 1988. Part I. Environmental Conditions and Problem Definitions. Environment Ontario and Environment Canada.

Simcoe County Study Committee. 1990. Consolidated Services Report.

Simcoe, County of. 1988. Directory of Manufacturers.

Simcoe, County of. Characteristic Statistics.

Simcoe, County of. Quick Profile.

Simcoe, County of. Statistical Information.

Smith, Jim. Mitsubishi. Telephone Interview, march 1991.

Stephen Chait Consultants Ltd.et al. 1991. Midland Community Planning Study. Final Discussion Draft. Prepared for the Town of Midland.

Tay, Township of. 1989. Municipal Housing Statement.

Tay, Township of. 1989. Official Plan of the Township of Tay.

Thompson Lightstone & Company Limited. 1987. The Ontario Tourism Attitude and Motivation Study. (Total Ontario). Volume I. Prepared for the Ministry of Tourism and Recreation.

Tiny, Township of. 1987. Official Plan of The Tiny Township.

Tiny, Township of. Population, Housing, Building and Subdivision Statistics.

Tourism and Recreation, Ministry of. 1985. Economic Impact of Tourism Expenditures.

Tourism and Recreation, Ministry of. 1989. Marinas, Ontario, Canada.

Tourism and Recreation, Ministry of. 1985. Ontario Travel Survey, 1982.

Tourism and Recreation, Ministry of. 1987. 1985 Ontario Exit Survey. Summary Report. Ontario. Volume I.

Tourism and Recreation, Ministry of. 1988. Ontario Occupancy Monitor. Summary Report.

Tourism and Recreation, Ministry of. 1990. Tourism and the Economy. Strategic Directions for Growth. Summary.

Walker, Edmund. Clerk, Village of Port McNicoll. Personal Interview, March 1991.

Wideman, Paul. Ministry of Natural Resources, Huronia District. Telephone Interview, March, 1991.

Wye Heritage Marina. 1991 Price List.

Zgudziak, Frank. Dominion Electroplating. Telephone Interview, March 1991.

Zuidema, Andy. Fabulous Formals. Telephone Interview, March 1991.