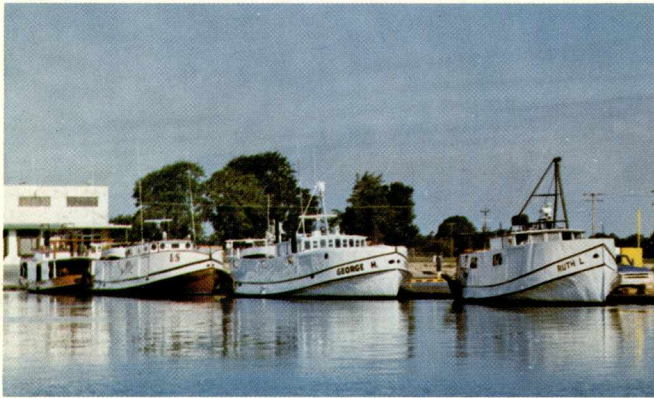


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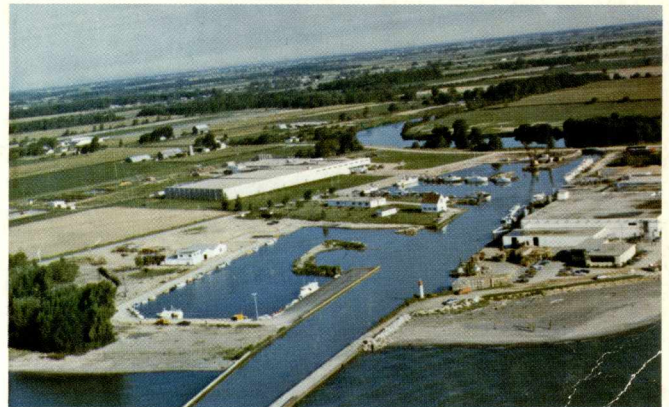


The Federal Small Craft Harbours Program On Lake Erie: The Socio-Economic Need For The Program And Its Potential For Success

By WILLIAM F. SINCLAIR

**SMALL CRAFT HARBOURS BRANCH
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DEPARTMENT OF FISHERIES AND
THE ENVIRONMENT.
ONTARIO REGION**

MAY, 1978



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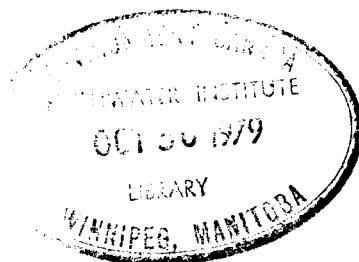


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THE FEDERAL SMALL CRAFT HARBOURS PROGRAM
ON LAKE ERIE: THE SOCIOECONOMIC NEED FOR
THE PROGRAM AND ITS POTENTIAL FOR SUCCESS

by

William F. Sinclair

Small Craft Harbours Branch
Fisheries and Marine Service
Department of Fisheries and the Environment
Ontario Region

May, 1978

FOREWORD

On January 1, 1974, the Small Craft Harbours regional office came into being. After its first full fiscal year of operation, it became apparent that the available data were insufficient to develop either a short or long term program that would adequately satisfy the commercial fishing and recreational boating needs in Ontario.

The importance of Lake Erie in relation to the total commercial fisheries of Ontario made it evident that the first major study should be on Lake Erie. This study will be the first of its kind in Ontario and should set a standard for other studies of a similar nature. It is intended that future studies will be carried out on all of the Great Lakes. Other studies on the Rideau-Trent Waterways also should be considered, along with an overview of all boating waterways in Ontario.

It is my belief that the recreational boating facilities in the Ontario Region could be developed on a total cost recovery basis. This would tend to make the Small Craft Harbours Program more meaningful, and at the same time give the people of Ontario and of Canada the opportunity to enjoy the vast water resources with which it has been blessed.

To the best of my knowledge, this is one of the few times that a federal agency charged with the responsibility of managing the commercial fisheries and recreational harbours has worked closely with other levels of government, the fishing industry and recreational boating associations to develop a direction for future development and the management of federally-owned harbour facilities. The results of

(ii)

this study are most encouraging, and it is hoped that others will benefit from the experience and information gained from this research.

M. H. Moffat
Director
Small Craft Harbours Program
Ontario Region

PREFACE

This study reports on the economic and social significance of only one, of many government programs, that will help determine whether or not Canada and Ontario will be able to successfully manage its resources in future. As noted in the report, the Small Craft Harbours Program has the potential to influence the number of individuals who will participate in boating in future, as well as, which segments of the population are likely to benefit most from the program. Small harbours development has proceeded fairly rapidly over the past five years, but not fast enough to meet the needs of all boaters in all parts of the province. It is sincerely hoped that this study will help those responsible for administering Ontario's Small Craft Harbours Branch successfully operate the program on Lake Erie. In other words, it is hoped that the program will meet the needs of both commercial fishermen and recreational boaters. It also is hoped that the program will continue to make a contribution to the economic and social welfare of all those living on the Canadian side of Lake Erie.

This report is meant to serve three different roles. It is meant to serve as a management guide, a technical report for social science researchers, and as a statistical reference. In trying to accomplish all of this, I may have fallen into the trap of serving too many masters. This may result in some reader dissatisfaction. A few who read the report may feel that there is far too much technical information provided, others may feel that there is not enough technical detail. Much of this will depend on the reader's own experience, and on whether or not, they believe or understand the statistical niceties that have been adopted. With the right amount of understanding, it is expected that most will find the contents of the report useful.

I would like to acknowledge the tremendous amount of assistance rendered to me in the preparation of this report. I am indebted to the Ontario Council of Commercial Fishermen for their cooperation

and assistance in helping me carry out the survey of Lake Erie commercial fishermen. Particularly, I owe a debt of thanks to Jack Corbett, Manager of the Ontario Council of Commercial Fishermen, and to the Executive Committee Council. I am also grateful for the cooperation of the Lake Erie commercial fish processors and the fishermen themselves. I hope that the findings contained in this report will help those involved in the Lake Erie commercial fishing industry.

I am also indebted to Lake Erie marina operators. The very substantial amount of cooperation which was received by both me and my staff helped to make this study a success.

Studies such as this could not have been undertaken without a great deal of help from public officials. I am indebted to Art Holder, Deputy Regional Director of the Ontario Ministry of Natural Resources in London. I also am indebted to Richard Loblaw and to other staff members of the Ontario Ministry of Natural Resources, London office, for their kind assistance and cooperation. I am equally indebted to the Provincial Parks staff. In particular, I would like to thank R. J. Vrancart, Director of Parks Planning Branch, and Paul Strausberger, District Parks Supervisor, Chatham. I would also like to thank Provincial Parks District Managers at Niagara, Chatham, Aylmer and Simcoe.

The pictures contained herein were provided by the Fisheries and Information Branches of the Ontario Ministry of Natural Resources. The Department of Industry and Tourism supplied us with some photographs. Erika Thimm of the Fisheries Branch, Toronto, coordinated collection of the photographs.

I received help from computer services staff at the Canada Centre for Inland Waters. In particular, I would like to thank John Rogalsky, Head of Data Management Section, for his help. Alice Liu provided data programming assistance, and Heather Coomba helped us complete the key punching.

But it is largely to the employees of the Small Craft Harbours Branch in Ontario to whom I owe a special thanks. My debt to this group of individuals extends beyond that normally associated with the preparation of a single report or publication. In addition to commissioning this study and providing the necessary financial support, the Small Craft Harbours Branch, over the nearly two years that I have been in Ontario, has provided me with office space, administrative assistance, and with a great deal of support for my program. In fact, Mort Moffatt, Byron Snead and other members of the Small Craft Harbours Branch have made some contribution to practically every successful accomplishment of Economic Services (although these accomplishments may be minor and few) during the past two years. I sincerely appreciate the many kind courtesies extended to me by the Small Craft Harbours staff.

I also would like to mention the great assistance rendered to me by those who were responsible for the mail and shoreline surveys and the preparation of the statistical data. Steve Kendall was responsible for supervising the surveys and the dissemination of the statistical data. His excellent handling of the data proved of considerable value to me. Gordon Henderson, Kevin Keane, and Richard Rozario proved to be valuable Research Assistants.

I am indebted to Ken Cox of Economic Services and to Dell Coleman of the Environmental Management Service for their critical review of this paper.

Debbie Cliffe was of enormous help to me in preparing this report. She helped edit, corrected grammatical errors and is responsible for the general appearance of this final edition. Miss Cliffe's patience, diligence, loyalty and tact is very much appreciated. Vicki Jayne and Hazel Verhaag are responsible for most of the typing.

While my debt to many is enormous, it would be misleading to suggest that the conclusions contained in the report enjoy the support

of all those who I have acknowledged. As always is the case in any study on publicly owned resources, it is expected that there will be some controversy over the results. This need not detract from the findings of this study. In fact, a critical review, in the proper atmosphere, might add greatly to the general understanding of the management needs on Lake Erie. I do, of course, assume all responsibility for any errors of analysis or judgement contained in this document.

William F. Sinclair
Manager, Economic Services
Burlington, Ontario
May, 1978

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INTRODUCTION

Prior to 1972, federal responsibility for small craft harbours was divided between the Department of Public Works and the Ministry of Transport. The main responsibility for construction and programming was in the Department of Public Works, while the Ministry of Transport assumed responsibility for management and planning. However, in addition to their small harbours' responsibilities, these two agencies also shared similar responsibilities for practically all of Canada's major shipping ports. Consequently, the amount of time and effort devoted to the management and development of small craft harbours' facilities was not sufficient to keep pace with the tremendous increase in recreational boating that took place during the 1960's and early 1970's.

In an effort to meet the needs of a rapidly increasing recreational boating population and improve the quality of harbour facilities available to Canada's commercial fishing fleet, the federal cabinet decided to transfer the planning and management responsibilities for small local harbours from the Ministry of Transport to the Department of the Environment. In July of 1973, program responsibility for small harbour development was formally transferred from the Department of Public Works to the Department of the Environment. At the same time, the already established Small Craft Harbours Branch, Fisheries and Marine Service, was given full responsibility for programming, planning and management of those small craft harbour facilities that are used primarily by commercial fishermen and recreational boaters. The Department of Public Works retained responsibility for the construction of small harbours facilities, but all such developments are carried out under the direction of the Small Craft Harbours Branch.

It was not until January, 1974, with the establishment of a regional office in Burlington, that the Small Craft Harbours Program was officially extended to Ontario. The immediate result of this was a rapid rise in the amount of public interest in Ontario's small harbour

facilities.¹ Commercial fishermen and recreational boaters busily set about informing the Ontario regional office about the large number of small harbours which required improvement. In addition, there was a perceived increase in the number of locations which required such facilities. With 50 percent of Canada's recreational boaters,² over 23 percent of Canada's fresh water³ and the largest fresh water commercial fishery in Canada, the Ontario regional office often has found it necessary to forego the needs in one location to accommodate needs in another. However, it is not always clear which of the various project proposals best serve the interests of Ontario's resident population. This was particularly true on Lake Erie where both commercial fishing and recreational boating interests are substantial. Lake Erie supports one of the largest fresh water commercial fisheries in the world, and together with the other Great Lakes, provides the largest fresh water recreational boating area in the world.

The purpose of this presentation is to: (1) determine the economic and social importance of the Lake Erie Small Craft Harbours Program to residents of Ontario, (2) provide direction for future development of small craft harbour facilities on Lake Erie, and (3) provide economic and social information against which the relative merit of future Small Craft Harbour proposals can be assessed. Even though the primary concern is to examine the importance of the Small Craft Harbours Program to residents of Ontario, attention is focused on examining the importance of Lake Erie boating activity to those

1 In May, 1975, the Minister of Natural Resources for Ontario, the Honorable Mr. Bernier, made a statement to the Ontario legislature (and later to the press) announcing the Great Lakes Access Program. This program was designed to provide financial assistance for municipalities to develop waterfront recreational facilities for fishing, boat launching, mooring, and other related services. It was indicated at that time, that the Access Program was meant to compliment the federal Small Craft Harbours Program.

2 Small Craft Harbours Systems Study: Central Region, Kilborn Engineering Limited, P. S. Ross and Partners, prepared for Small Craft Harbours Branch, July, 1974, (Table 13) p. 73.

3 Ibid. p. 14.

living in areas immediately adjacent to Lake Erie (see Map One). It also is intended that the reader will gain some appreciation of the overall success of the Small Craft Harbours Program since it was established in Ontario.

Chapter One is used to provide an assessment on the economic and social importance of Small Craft Harbour facilities to Lake Erie commercial fishermen. It provides a historical review on the economic development of the Lake Erie Commercial Fishery, assesses the economic viability of the fishing industry, and examines the importance of maintaining quality harbour facilities in those communities where commercial fishing is of importance to the resident population. It is expected that the reader will gain some appreciation about the adequacy of existing harbour facilities in serving the needs of commercial fishermen, as well as, provide direction for future development.

Chapter Two is used to examine the socioeconomic importance of the boating opportunities available on Lake Erie to the people of Ontario. A socioeconomic profile is presented on all recreational users of the Canadian side of the lake. Major recreational activities are identified and the overall impact of boating and other recreational activities on those areas immediately adjacent to the Canadian side of the lake are examined. The information and the assessment carried out in this chapter are meant to provide an overall prospective on the importance of boating compared to other recreational pursuits.

Turning to the more specific aspects of the study, Chapter Three is used to provide a more thorough examination of Lake Erie recreational boaters. To this end, participation patterns are presented and projections on the growth in boating requirements are examined. Information on existing facilities and the adequacy of existing harbour facilities are presented. It is intended that this chapter will help identify a direction for future development.

MAP ONE

LAKE ERIE RESIDENT AREA

LEGEND

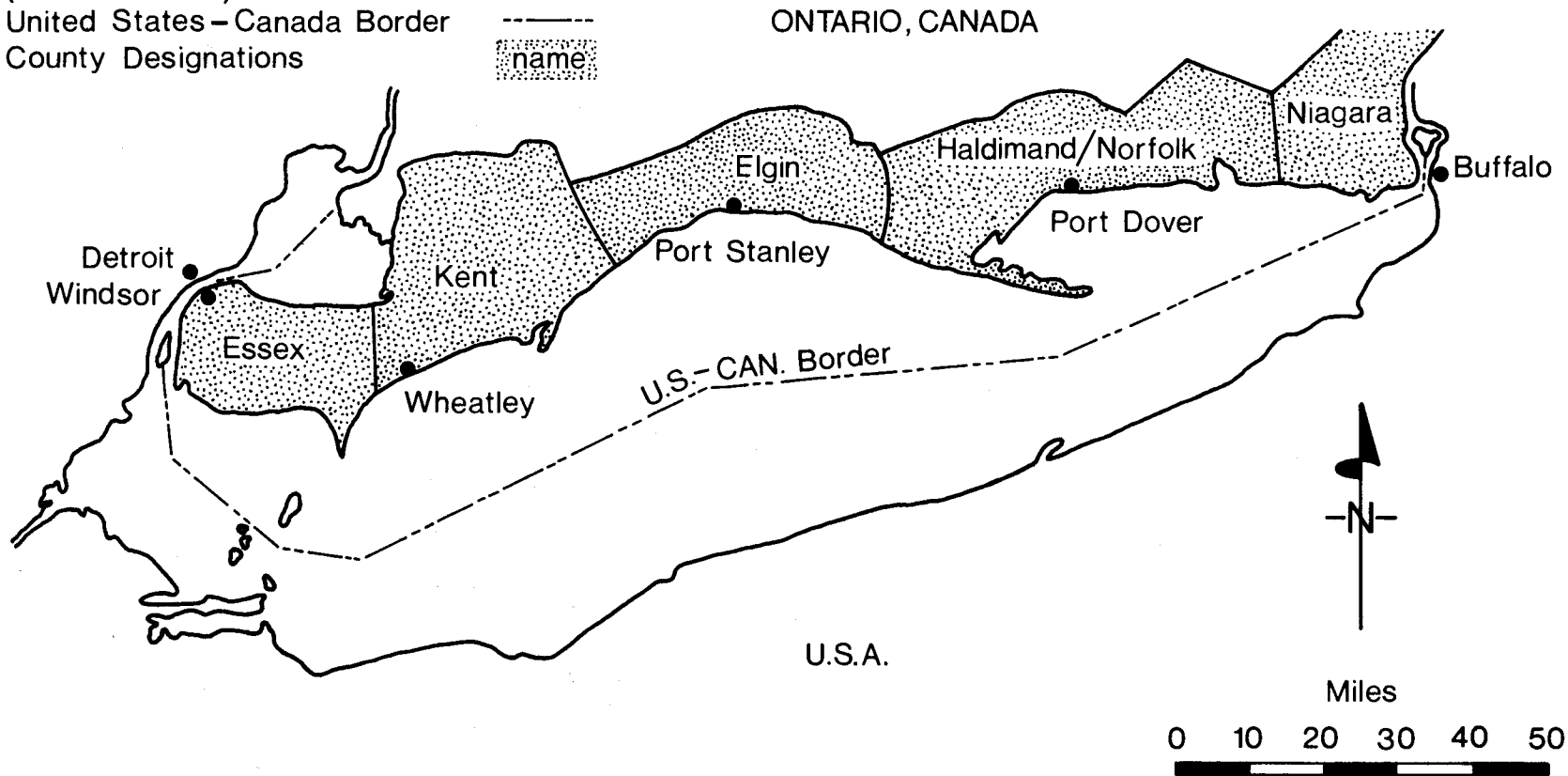
Areas Adjacent to Lake Erie
(Resident Area)



United States - Canada Border



County Designations



Chapter Four is used to outline the present mandate of the Small Craft Harbours Branch, discuss the role of government participation in this particular aspect of lake development and present a number of development alternatives. Emphasis is placed on the need to ensure that all segments of the population share in the benefits of the Small Craft Harbours Program. Cooperation between the Small Craft Harbours Branch and other government agencies also is important. Some operational recommendations are presented.

The regional focus of this study makes it necessary to establish certain definitions which will be used throughout the presentation. The first, and most important, is providing the reader with some understanding of what is meant by areas adjacent to Lake Erie. Areas adjacent to Lake Erie, or the Lake Erie area, are meant to include the counties of Essex, Kent, Elgin, Haldimand Norfolk and Niagara (see Map One). Very roughly, this resident area depicts that region of the province where residents are within a distance suitable for travelling to and from the lake for recreational enjoyment within one twenty-four hour period. The term resident is meant to include only those persons who reside within this designated area. A non-resident Canadian is a person who resides in Canada but is not included in the resident category. The term non-resident is a person who does not reside in Canada. A boater is a person who uses Lake Erie for some part of the year for recreational boating.⁴ In order to distinguish between boaters and other recreationists, those persons who do not boat but use the lake for recreational purposes are referred to as general recreationists.

The vast majority of the data presented in this paper was

4 For a better understanding of what is included in the definition recreation, see Marion Clawson and Jack L. Knetsch, Economics of Outdoor Recreation, Resources for the Future, John Hopkins Press, Baltimore, 1966, pp. 11-13.

gathered in surveys conducted during the spring and summer of 1977. A description of the surveys, the methodologies involved and the response are presented in Appendix One.

CHAPTER ONE

THE LAKE ERIE CANADIAN COMMERCIAL
FISHING INDUSTRY AND ITS HARBOUR REQUIREMENTS

An important objective of the Small Craft Harbours Branch is to develop a system of harbour facilities for commercial fishing vessels that will support the continuing development of a dynamic and viable commercial fishing industry. It follows, therefore, that the overall effectiveness of the Small Craft Harbours Program on Lake Erie depends on how well this Program contributes to the economic viability of the industry and serves the needs and wants of commercial fishermen. This chapter is used to present an economic description of Lake Erie's Canadian commercial fishing industry; it is used to provide economic and social information on commercial fishermen, and to determine whether the work that has been carried out on Lake Erie by the Small Craft Harbours Branch contributes to the economic well-being of the industry and the individual fisherman. The purpose is to provide background information against which the merit of future federally supported harbour developments on Lake Erie can be assessed.

In what follows, the need for federally supported harbour development is assessed from three different perspectives. The first part of the chapter is used to review the development pattern of the Lake Erie commercial fishery over time. It is expected that this type of historical overview will give some indication of how harbour development should proceed in future. The second portion of the chapter is used to present information on the commercial fishing industry and the fishermen themselves. It is intended that this information will help determine whether there is a potential for future growth in the commercial fishing industry and if harbour development might contribute to this growth. The third section is devoted to assessing the overall importance of commercial fishing to particular communities located along the north shore of Lake Erie. The fourth and final section is used to

examine the adequacy of existing harbour facilities.

Before proceeding, however, for the purposes of this chapter it is necessary to define those terms which may cause some confusion because of slight departure from normal interpretation. The term commercial fishery is meant to include both the fish stocks harvested by commercial fishermen and the act of catching fish for commercial purposes. The term owner/operator is used to refer to individuals who either own or are responsible for operating a commercial fishing tug on Lake Erie. The terms tug, fishing tug or vessel are meant to include all vessels which are used for the purpose of commercial fishing. Since the primary purpose here is to provide an accurate socioeconomic description of Lake Erie's Canadian commercial fishing industry, information on the owner and the principal operator will be used interchangeably to identify the person most closely involved in the day-to-day operation of the tug. However, it should be noted that information on both owners and the principal operators is presented together in an effort to avoid duplication and misleading the reader. The term fishing unit is used to refer to both the fishing tug and the owner or principal operator of the vessel. The term crew or deckhand will be used interchangeably to describe those fishermen who do not own or are not the principal operators of a tug but work on commercial fishing tugs as wage earners or share in the profits of a fishing unit. The term home port is used to refer to the port where the tug is located during the non-fishing season. The term permanent place of residence is used to refer to the location where the owner or operator permanently resides (usually the same as the home port). The main port of operation refers to the port where most of the catch is landed during the fishing season. All the information, the assessment, and the conclusions presented in this chapter pertain only to the Canadian portion of the Lake Erie commercial fishing industry.

Most of the information provided in this chapter was gathered in a commercial fishing mail survey conducted during the spring and

summer of 1977. A complete description of this survey and the results are presented in Appendix One.

Lake Erie's Commercial Fishery: A Historical Perspective

During the late part of the eighteenth century and the first half of the nineteenth century the fish stocks of Lake Erie were used by traders, settlers and Indians as a necessary staple food. The first commercial fishery on the lake started in Pennsylvania in 1795. This was a hook and line fishery which was confined mainly to the rivers, bays and the near shore areas. The importance of the commercial fishery grew with the need to provide both British and American soldiers with rations during the war of 1812. It was not until about 1850, with the introduction of the pound net, that the commercial fishery became firmly established. Gill net operations at the eastern end of the basin together with a general increase in the population gave further impetus to the growth and stability of the Lake Erie commercial fishery.

The growth and pattern of harvest has changed considerably over the years. It is noted, for instance, that at one time or another between 15 and 20 different species have been of major importance to the lake's commercial fishery.¹ Lake sturgeon, lake trout and blue pike were important commercial fisheries during the late 1800's. Lake herring was caught in most abundance during the early 1900's. Blue walleye were important during the period 1950 to about 1960 then became insignificant. Yellow walleye was caught in abundance in the western basin over many years, only to decline in the mid 1960's. Lake whitefish was a substantial and steady contributor to the fishery over most of the fishery's existence but became insignificant in the mid 1950's. Sauger was caught in great quantities in the early 1900's and gradually

¹ Harold C. Frick, Economic Aspects of the Great Lakes Fisheries of Ontario, Ottawa, The Fisheries Research Board of Canada (bulletin no. 149), Ottawa, 1965, p. 144.

decreased to commercially insignificant numbers by the 1950's. In recent years, the commercial catch has been divided among more than 15 different species, but the single most important species is yellow perch.

Despite changing species composition, the overall level of harvest has remained remarkably stable over time.² The willingness of Lake Erie commercial fishermen to introduce new gear has contributed substantially to this stability. The first commercial fishing operations were entirely dependent on hook and shoreline seining. Pound nets and gill nets were first used about 1850. This was followed by the introduction of the highly efficient trap net in Pennsylvania waters around 1885. Floating nets were introduced prior to 1900, but were not used regularly until after 1902. After 1906, "bull netting" was introduced.³ However, pound nets and gill nets remained the principal gear. Later, the otter trawl was introduced, thereby, helping to improve the efficiency of catching and handling smelt. The ability of commercial fishermen to adapt to changing fishing conditions has enabled the industry to maintain a good level of harvest over time.

The overall effectiveness of gear changes was increased substantially by accompanying technological improvements. For example, the introduction of power net lifters improved the ability of fishermen to handle gill nets and enabled him to use many more yards of net. The use of nylon filament netting after World War II decreased the time needed for drying nets. The stronger, less visible nylon netting, also improved the level of catch. Depth finding equipment improved the fisherman's ability to find his catch and it provided greater safety. The introduction of the modern diesel engine made it economically feasible for fishermen to build larger fishing tugs. Larger fishing tugs provided greater mobility, increased the speed with which commercial

2 J. H. Leach and S. J. Nepszy, "The Fish Community in Lake Erie". Journal of Research Board, vol. 33, no. 3 (March 1976), pp. 622-638.

3 Harold C. Frick, op. cit., p. 147.

fishermen could travel to and from the fishing grounds, and improved the fisherman's ability to protect the quality of his catch while on the fishing grounds.



Modern Commercial Fishing Tug and Gear
Port of Wheatley

Economic conditions within the industry have also changed dramatically over the years. During the early years, the potential of Lake Erie commercial fisheries was limited by the size of the market, difficulties in transportation, the type of storage facilities available, and the ability to maintain quality control. The flexibility of the industry and of the fishermen themselves has helped to eliminate most of these problems. Modern processing equipment and freezer facilities together with transportation and improved fishing techniques has broadened the potential of commercial fishing operations considerably. It has also changed the geographic distribution of the

industry and the requirements for production inputs. Greater mobility on the fishing grounds together with improved transportation facilities has permitted processors to improve the economic conditions within the industry. When it became feasible for a larger number of fishermen to deliver their catch to a single location, it also became desirable for processors to increase the minimum size of their plant, thereby, reducing the cost per unit of output (i.e. take advantage of economies of scale). In addition, it became feasible for processors to take advantage of those economies which flow directly from close inter-industry relationships. Joint use of harbours, fish reduction equipment and a trained labour pool helped to improve the profit potential of processing Lake Erie fish for the marketplace.

The number of alternative employment opportunities available within close proximity to Lake Erie had considerable effect on the industry. Rapid industrial development in southern Ontario substantially increased the number of alternative job opportunities available, to both fishermen and other workers in the industry. Thus, competition for labour during periods of economic growth forced up the cost of labour. This encouraged larger investments in capital equipment in order to displace high cost labour. This was particularly evident in the primary sector. The number of men employed in the primary sector decreased from 1,215 in 1946 to 918 in 1956 and 577 in 1969.⁴

In addition to the general decrease in fishing employment in the primary sector, there has been a decline in the overall importance of fishing in many port communities. At one time, practically every community along the north shore of Lake Erie was involved in some aspect of the industry.⁵ This is not true today. As is shown in Map Two, less

4 Ministry of Natural Resources, Annual Reports, Toronto, Province of Ontario. The reader should note that there may have been changes in the classification and tabulation of fish employment data over time.

5 Gary Greenland, "Historical Review of Lake Erie Commercial Fishery." Prepared for Ontario Ministry of Natural Resources, London, unpublished manuscript, 1973.

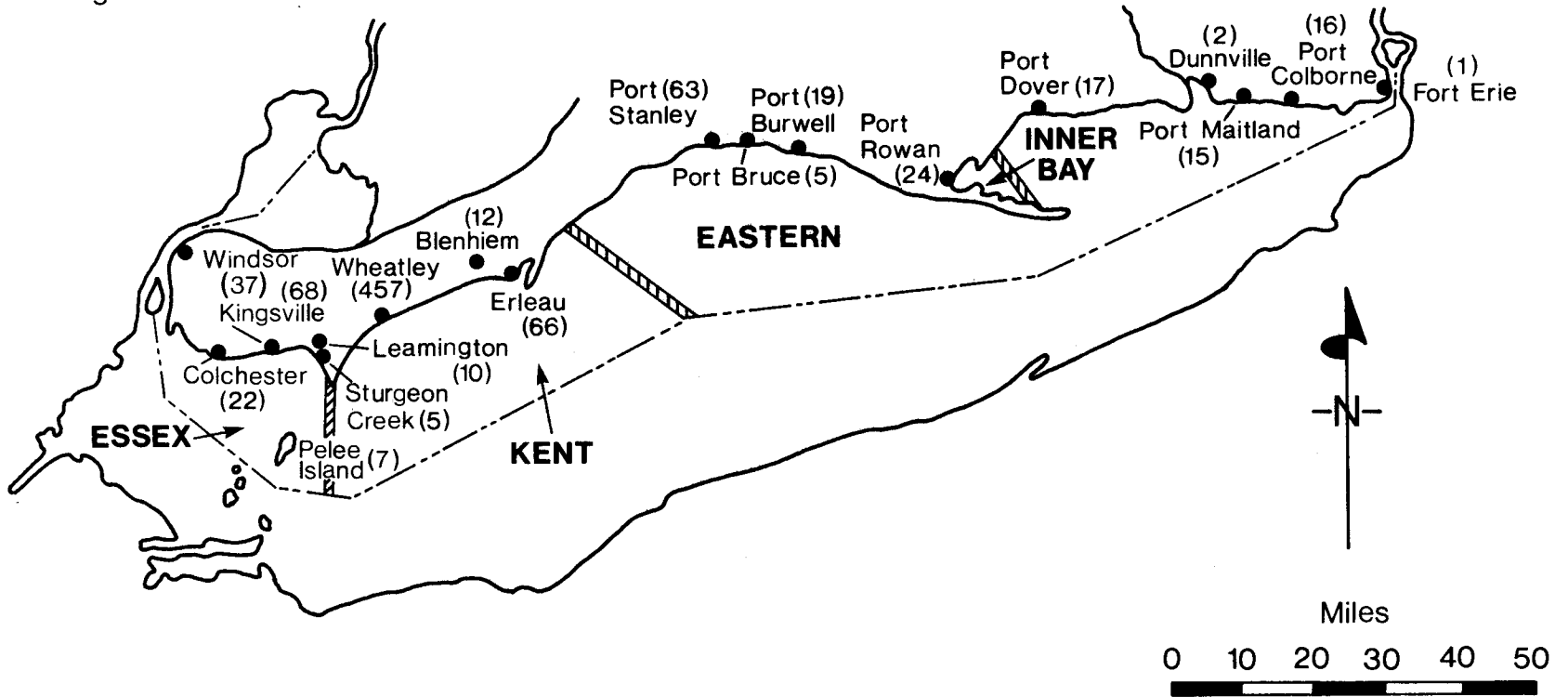
MAP TWO

PRIMARY FISHING EMPLOYMENT BY MAIN PORT OF OPERATION

LEGEND

Number of Persons Employed as Crewmen,
Owner/Operators, Processing ()

Fishing Zones



than 20 communities on the north shore of Lake Erie either serve as main ports of operation for fishing tugs or have a business which processes fish. According to Map Two, Wheatley, Port Dover, Kingsville, Erieau and Port Stanley account for 82.5 percent of total permanent (except for employment as deckhands, which is part-time) fishing employment. The remaining 17.5 percent is located in 13 different communities along the north side of the lake. In terms of overall impact on shoreline communities, the importance of commercial fishing has declined over time.

There are a number of important conclusions that follow from this brief historical overview that effect future Small Craft Harbour development requirements. First, the total number of persons employed in the Lake Erie commercial fishing industry is not likely to increase in future. Second, the total number of communities directly involved in the commercial fishing industry will not increase. Third, the total number of communities which require Small Craft Harbour facilities to accommodate commercial fishing operations is likely to remain the same or decline in future.⁶

The Economic Viability of the Industry and Economic and Social Characteristics of Fishermen

During 1976, the Lake Erie commercial fishing industry was comprised of 146 to 150 vessels that were operated by 159 individual owner/operators who hired 447 deckhands.⁷ This fleet and its manpower caught 25,711,071 pounds of fish at an estimated landed value of \$5,998,948.⁸ The average gross fishing revenue generated by a Lake Erie

6 These conclusions are supported by historical trends, the economic conditions which prevail within the industry, and the current fisheries management policy of limited entry.

7 Depending on the definition of a fishing vessel, the total number of vessels involved in the industry between one year and the next ranges between about 146 to 159 vessels.

8 Ministry of Natural Resources, Annual Statistical Report, Ontario Government, 1977.

fishing unit was \$41,449. The average deckhand was paid \$5,778 for 27 weeks of work during 1976. At least on surface, the overall economic conditions of the Lake Erie commercial fishery appears excellent. Nonetheless, this broad overview does not permit a detailed assessment on the relative merit of particular Small Craft Harbour proposals, nor does it permit an assessment of the relative merit of different project alternatives. In this section, a more detailed socioeconomic profile of the industry is presented.⁹

Table 1:1 is used to present information showing the age distribution of Lake Erie commercial fishermen during 1977 and the age distribution of the resident male population during 1976.¹⁰ According to this table, 79 percent of Lake Erie owner/operator commercial fishermen and 35.3 percent of the general resident male population are 40 years of age or older. Slightly more than 41 percent of the owner operator fishermen and 24.4 percent of the resident male population are 50 years of age or older. The general age distribution of owner operator commercial fishermen is substantially higher than the age distribution of the resident male population. It would appear that a large number of Lake Erie owner/operator fishermen will reach retirement age during the next 10 to 15 years.

An important consideration when assessing the relative economic welfare of commercial fishermen is the income that is earned by

9 Customarily, a detailed economic assessment of fishermen would require a return on investment or cash flow analysis. However, the information gathered during the course of this study does not permit these types of analyses. The information gathered during this study were vulnerable to a number of distortions. Many commercial fishermen included the value of their free fishing license (although annual fees are paid to exercise the right of the license) as part of their capital investment. Others included fixed capital investment as part of their annual operating expenses. An overview of the data does give the impression that there were excellent returns for investment among fishermen, but the information was not precise enough to permit these types of analyses.

10 The reader is reminded that the resident male population includes only male residents of Essex, Kent, Elgin, Haldimand/Norfolk and Niagara counties.

TABLE 1:1

COMPARISON OF AGE OF LAKE ERIE COMMERCIAL
FISHERMEN OWNER/OPERATORS (1977) WITH AGE DISTRIBUTION
OF RESIDENT MALE POPULATION (1976)

<u>Age Category</u>	<u>Owner/Operator</u> <u>Commercial Fishermen</u>		<u>Resident</u> <u>Male Population</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
0 - 19	0	--	172,995	36.6
20 - 29	4	2.9	76,365	16.1
30 - 39	25	18.1	56,410	11.9
40 - 49	52	37.7	51,550	10.9
50 - 59	36	26.1	47,450	10.0
60 - 65	13	9.4	19,095	4.0
66 +	8	5.8	49,170	10.4
TOTAL	138	100.0	473,035	100.0

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

Statistics Canada Census Survey 1976

other members of the general public with similar training or education. Table 2:1 provides information on the educational distribution of owner/operator commercial fishermen for 1977. According to this table, nearly 51 percent of all owner/operator fishermen have less than grade nine education and more than 91 percent have grade twelve or less. The educational attainment of the owner/operator fishermen is substantially less than that of the general population. According to Statistics Canada information, 38.7 percent of residents of the six counties bordering on the north shore of Lake Erie have grade nine or less education, and 54.1 percent have completed grade thirteen or less.¹¹



Commercial Fishing Tugs Docked at Port Stanley

Table 3:1 provides information on the number of years of

¹¹ Statistics Canada, Canada Census Survey, 1971. Population School Attendance and Schooling.

TABLE 2:1

EDUCATIONAL ATTAINMENT OF OWNER/OPERATOR
LAKE ERIE COMMERCIAL FISHERMEN - 1977

<u>Grade/Level</u>	<u>Number</u>	<u>Percentage</u>
1 - 6	7	5.1
7 - 9	63	45.7
10 - 12	56	40.6
13	6	4.4
2 Yrs. University	2	1.5
Bachelor's Degree	1	.7
No Response	3	2.2
TOTAL	<u>138</u>	<u>100.0</u>

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 3:1

OWNER/OPERATOR LAKE ERIE COMMERCIAL FISHERMEN

YEARS OF FISHING EXPERIENCE - 1977

<u>Year Category</u>	<u>Number of Fishermen</u>	<u>Percentage of Fishermen</u>
Under 5	13	9.4
5 - 10	15	10.9
11 - 15	17	12.3
16 - 20	15	10.9
21 - 25	15	10.9
26 - 30	20	14.5
31 - 35	14	10.1
36 - 40	10	7.3
41 - 45	10	7.3
46 - 50	5	3.6
51 - 55	2	1.5
No Response	2	1.5
TOTAL	138	100.0

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

fishing experience of Lake Erie owner/operator commercial fishermen. According to this information, only 9.4 percent of all Lake Erie owner/operator commercial fishermen have less than five years experience. More than 78 percent have greater than 10 years fishing experience and over 29 percent have more than 30 years of commercial fishing experience.

Table 4:1 is used to provide a comparison of the gross fishing revenue earned by individual Lake Erie owner/operator commercial fishing units during 1975 and earnings of these same fishing units during 1976. According to this table, 21.7 percent of owner/operators grossed less than \$10,000 revenue during 1976, 35.5 percent grossed between \$10,000 and \$40,000, and 37.8 percent grossed greater than \$40,000 during that same year. This table also reveals that a greater percentage of owner operators grossed less than \$10,000 during 1976 than they did during 1975. However, a higher percentage grossed more than \$140,000. A direct comparison between these two years reveals that there was an increase in the number of owner/operators who grossed both a low level of return and a high level of return, but there was a decrease in the number that grossed between \$30,000 and \$120,000.

When the gross revenue generated during 1976 is compared directly with the number of weeks of fishing activity information presented in Table 5:1, it becomes apparent that the overall level of gross returns are substantial. More than 21 percent of the owner/operators may have generated less than \$10,000 revenue, but according to the information presented in Table 5:1, more than 32 percent of the fishing units operated 20 weeks or less during 1976. More than 44 percent of the fishing units operated for a period of between 20 and 40 weeks. Only 11.2 percent operated more than 40 weeks during 1976.

Another important indication of economic viability is the direction of income changes over time. Table 6:1 shows the perceived change in Lake Erie net fishing income over the last five years.

TABLE 4:1

COMPARISON OF GROSS RETURNS GENERATED BY INDIVIDUAL
COMMERCIAL FISHING UNITS DURING 1975 AND THE GROSS
REVENUE RETURNS GENERATED BY FISHING UNITS DURING 1976

<u>Income Category</u>	<u>Gross Revenue Owner/Operator 1975</u>		<u>Gross Revenue Owner/Operator 1976</u>		<u>Total Percentage Fishing Units Decrease or Increase</u>
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>%</u>
Under \$10,000	23	16.7	30	21.7	+ 5.0
\$ 10,000 - \$ 20,000	23	16.6	16	11.6	- 5.0
\$ 20,001 - \$ 30,000	13	9.4	19	13.8	+ 4.4
\$ 30,001 - \$ 40,000	20	14.5	14	10.1	- 4.4
\$ 40,001 - \$ 60,000	18	13.0	18	13.0	-
\$ 60,001 - \$ 80,000	15	10.9	14	10.1	- .7
\$ 80,001 - \$100,000	8	5.8	6	4.5	- 1.5
\$100,001 - \$120,000	6	4.4	5	3.6	- .7
\$120,001 - \$140,000	3	2.2	3	2.2	-
\$140,001 - \$160,000	0	-	4	2.9	+ 2.9
\$160,001 - \$200,000	0	-	2	1.5	+ 1.5
Over \$200,000	0	-	0	-	-
No Response	9	6.5	7	5.1	
TOTAL	<u>138</u>	<u>100.0</u>	<u>138</u>	<u>100.0</u>	

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 5:1

NUMBER AND PERCENTAGE OF TUGS ACCORDING
TO WEEKS OF FISHING ACTIVITY - 1976

<u>Number of Weeks</u>	<u>Number of Tugs</u>	<u>Percentage</u>
1 - 5	7	4.9
6 - 10	12	8.5
11 - 15	6	4.2
16 - 20	21	14.8
21 - 25	5	3.5
26 - 30	15	10.6
31 - 35	25	17.6
36 - 40	18	12.7
41 - 45	9	6.3
46 - 50	2	1.4
51 - 52	5	3.5
No Response	17	12.0
	—	—
TOTAL	142	100.0
	—	—

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 6:1

CHANGE IN NET FISHING INCOME OF LAKE ERIE
OWNER/OPERATOR FISHERMEN OVER LAST
FIVE YEARS (1972 to 1976)

<u>Change in Net Income</u>	<u>Number</u>	<u>Percentage</u>
Increased Substantially	20	14.5
Increased Slightly	52	37.7
No Change	6	4.4
Decreased Substantially	15	10.9
Decreased Slightly	26	18.8
No Response	19	13.8
TOTAL	<u>138</u>	<u>100.0</u>

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

According to this table, more than 52 percent of all owner/operators felt their income increased over the five year period 1972 to 1976. Less than 30 percent felt that their income either decreased slightly or substantially during this same period. It should be remembered that 1972 and 1976 was a period of substantial inflation in Canada. The overall perception of the general population towards changes in their level of absolute earnings likely would be biased low. Therefore, on the basis of the information presented in this table, it would appear that most owner/operators experienced a reasonable increase in earnings over the five year period, 1972 to 1976.



Port Dover Harbour

Tables 7:1 and 8:1, respectively, show the number and percentage of owner/operators employed in other facets of the fishing industry or in other non-fishing employment during 1976. According to

TABLE 7:1

NUMBER AND PERCENTAGE OF OWNER/OPERATORS EMPLOYED
IN OTHER FACETS OF FISHING INDUSTRY - 1976

	<u>Number</u>	<u>Percentage</u>
Processing	32	28.8
Packing	31	27.9
Retail Fish Sales	21	18.9
Fishing Equipment Supply	12	10.8
Boat Building and Repairs	7	6.3
Leasing Vessels	6	5.4
Equipment Maintenance	0	-
Transportation	0	-
Other	2	1.8
	<u> </u>	<u> </u>
TOTAL	<u>111</u>	<u>100.0</u>

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 8:1

NUMBER AND PERCENTAGE OF OWNER/OPERATOR FISHERMEN
WORKING IN OTHER NON-FISHING EMPLOYMENT DURING 1976

	<u>Number</u>	<u>Percentage</u>
Service	13	26.0
Agriculture	10	20.0
Professional/Technical	5	10.0
Transport	5	10.0
Construction	4	8.0
Food Processing	1	2.0
Clerical/Sales	1	2.0
Automotive Industry	0	0.0
Other	1	2.0
No Response	10	20.0
TOTAL	<u>50</u>	<u>100.0</u>

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

this information, 111 owner/operators worked in other facets of the fishing industry and 50 owner/operators worked in other non-fishing employment during 1976. Of the total number that worked in other facets of the industry, 28.8 percent (32 owner/operators) worked in processing, 27.9 percent (31 owner/operators) worked in packing and 18.9 percent (21 owner/operators) worked in retail fish sales. Of the 50 owner/operators who worked in other non-fishing employment, 13 worked in the service sector, 10 worked in agriculture and five worked as professional-technical workers.

A good indication of the overall success of owner/operator fishermen is presented in Tables 9:1 and 10:1. Table 9:1 presents information on fishing income net of operating expenses and net income from all other sources for Lake Erie owner/operator commercial fishermen during 1976. According to this table, 24.6 percent of the owner/operator commercial fishermen earned a net income of less than \$10,000 during 1976. More than 50 percent earned between \$10,000 and \$30,000, 17.5 percent earned between \$30,000 and \$80,000. Only two owner/operators (1.5 percent) earned a net income of more than \$80,000 during 1976.

The information presented in Table 10:1 shows the future intentions of Lake Erie commercial owner/operator fishermen as of 1977. The information presented in the table reveals that more than 24 percent of the owner/operators who fish on Lake Erie either plan to continue fishing as a major occupation or to continue fishing as a supplementary occupation. Only 2.2 percent (three owner/operators) indicated that they intend to cease fishing.

Owner/operator commercial fishermen, although an important segment of the primary sector of the industry, represent only a portion of those dependent on fishing for personal income. During 1976, 71 percent of all workers at the primary level were employed as deckhands. Therefore, the earnings of deckhands is an important consideration when assessing the economic well-being of the industry. The relevant

TABLE 9:1

FISHING INCOME NET OF OPERATING EXPENSES AND
NET INCOME FROM ALL OTHER SOURCES OF LAKE ERIE
OWNER/OPERATOR COMMERCIAL FISHERMEN - 1976

<u>Income Category</u>	<u>Number</u>	<u>Percentage</u>
Under \$10,000	34	24.6
\$10,000 - \$ 20,000	44	31.9
\$20,001 - \$ 30,000	26	18.8
\$30,001 - \$ 40,000	12	8.7
\$40,001 - \$ 60,000	10	7.3
\$60,001 - \$ 80,000	2	1.5
\$80,001 - \$140,000	2	1.5
Over \$140,000	0	-
No Response ¹	8	5.8
TOTAL	138	100.0

1 Insufficient data available.

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 10:1

FUTURE INTENTIONS OF LAKE ERIE COMMERCIAL FISHERMEN
OWNER/OPERATORS - 1977

	<u>Number</u>	<u>Percentage</u>
Continue Fishing as a Major Occupation	109	79.0
Continue Fishing as a Supplementary Occupation	21	15.2
Cease Fishing	3	2.2
No Response	<u>5</u>	<u>3.6</u>
TOTAL	<u>138</u>	<u>100.0</u>

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

information is presented in Tables 11:1 and 12:1. The information presented in Table 11:1 shows the distribution of earnings of deckhands employed in commercial fishing on Lake Erie during 1976. Table 12:1 provides a breakdown of the number of weeks employed during that same period. A comparison of these two sets of information reveals that of the 335 crewmen included in the survey, 3.9 percent earned less than \$1,000 and 3.6 percent worked five weeks or less during 1976. Almost 73 percent earned more than \$5,000, while more than 34 percent worked less than 26 weeks. More than 60 percent of all the deckhands employed in fishing on Lake Erie during 1976 worked less than 36 weeks. At least on surface, it would appear that those employed as deckhands earned reasonable incomes given the amount of time employed during 1976.



Commercial Tugs - Wheatley Harbour

TABLE 11:1

INCOME EARNED BY
COMMERCIAL FISHING DECKHANDS
ON LAKE ERIE - 1976

<u>Income Category</u>	<u>Number</u>	<u>Percentage</u>
Under \$1,000	13	3.9
\$1,000 - \$ 2,000	16	4.8
\$2,001 - \$ 3,000	0	-
\$3,001 - \$ 4,000	3	.9
\$4,001 - \$ 5,000	60	17.9
\$5,001 - \$ 6,000	84	25.1
\$6,001 - \$ 7,000	125	37.3
\$7,001 - \$ 8,000	0	-
\$8,001 - \$ 9,000	8	2.4
\$9,001 - \$10,000	26	7.8
TOTAL	<u>335</u>	<u>100.0</u>

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 12:1

NUMBER AND PERCENTAGE OF DECKHANDS LISTED ACCORDING TO
NUMBER OF WEEKS OF FISHING EMPLOYMENT - 1976

<u>Number of Weeks</u>	<u>Number of Crew</u>	<u>Percentage</u>
1 - 5	12	3.6
6 - 10	19	5.7
11 - 15	13	3.9
16 - 20	47	14.0
21 - 25	23	6.9
26 - 30	23	6.9
31 - 35	64	19.1
36 - 40	56	16.7
41 - 45	40	11.9
46 - 50	2	.6
51 - 52	14	4.2
No Response	22	6.6
TOTAL	335	100.0

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

The information and discussion presented in this section has revealed a number of facts, which should be taken into account when future harbour investments are considered. The most important is that the Lake Erie commercial fishery provides a substantial economic return for those involved in the primary sector of the industry. This is supported by information that shows that more than 73 percent of all owner/operators generated gross returns of greater than \$10,000 during 1976. The distribution of net earnings and of weeks worked suggest that the overall level of income among commercial fishermen owner/operators ranges from adequate to substantial. Fishing also appears to be an important source of employment for residents living along the north shore of the lake. More than 1,000 individuals living in areas located along the north shore of Lake Erie were employed in fish processing or fish harvesting during 1976. The employment opportunities provided in the industry appear to compliment the labour requirements of the area. The overall level of earnings from all sources among owner/operators appears substantial. Therefore, on the basis of the foregoing, it would appear that any carefully considered investment in boating facilities has the potential to help provide many years of economically rewarding employment in Lake Erie's fishing industry.

Main Ports of Operation and Harbour Developments

In earlier sections, it was established that the total number of communities which require Small Craft Harbour facilities to accommodate commercial fishing operations is likely to remain the same or decline in future. It also was established that public investment in the Small Craft Harbours facilities has the potential to provide economically rewarding employment and contribute to the economic viability of the industry. However, it has not been established where public investment in Small Craft Harbour facilities might make the greatest contribution to the industry. Therefore, in this section, the overall effect of the fishing industry on particular communities is examined with the view to providing information which will indicate the relative

worth of establishing facilities in particular communities.

The overall importance of commercial fishing to any particular community depends on: (1) how well individual fishing units are functioning within the community, (2) the degree of resident dependence on commercial fishing for income, and (3) employment and the future plans of those fishermen who reside in the community.

Tables 13:1 and 14:1 are used to provide information on the number and percentage of owner/operator commercial fishermen by permanent place of residence, location of commercial fishing tugs in the off season, and the main port of operation. According to the information presented in these tables it would appear that owner/operators of commercial fishing tugs reside in more than 20 different locations along the north shore of the lake. Approximately 15 different locations either serve as the main port of operation for particular tugs or are the main port or location during the off season. This information clearly establishes three important facts. First, that the permanent place of residence of the owner/operators does coincide, fairly closely, with the location of tugs both during the season and the off season. Second, the main port of operation, for most tugs, appears to be the same port where the tug is located during the off season with but a few exceptions. Third, both in terms of permanent place of residence and location of tugs, Wheatley, Port Dover, Kingsville, Port Rowan, Erieau and Port Stanley are the six most important fishing ports on Lake Erie.

Table 15:1 is used to provide information on the number of commercial fishing licenses in each fishing license area according to home port during 1977.¹² The information presented in this table reveals that Wheatley and Kingsville are the two most important locations for those tugs licensed to fish in the Essex area; Wheatley and

¹² Lake Erie is divided into fishing license areas. These are shown in Map Two.

TABLE 13:1

NUMBER AND PERCENTAGE OF OWNER/OPERATOR
COMMERCIAL FISHERMEN BY PERMANENT
PLACE OF RESIDENCE - 1976

<u>Name of Location</u>	<u>Number of Owner/Operators by Place of Residence</u>	<u>Percentage of Owner/Operators by Place of Residence</u>
Port Dover	25	18.1
Wheatley	24	17.4
Kingsville	14	10.1
Port Rowan	10	7.3
Port Stanley	9	6.5
Leamington	8	5.8
Port Burwell	6	4.4
Blenheim	6	4.4
Erieau	5	3.6
Lowbanks	4	2.9
Dunnville	4	2.9
Pelee Island	3	2.2
Harrow	2	1.5
Port Colborne	2	1.5
Amherstburg	1	.7
Fort Erie	1	.7
Nanticoke	1	.7
Port Maitland	1	.7
Port Ryerse	1	.7
St. Williams	1	.7
Outside Lake Erie	7	5.1
No Response	3	2.2
TOTAL	<u>138</u>	<u>100.0</u>

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 14:1

NUMBER OF COMMERCIAL FISHING TUGS
ACCORDING TO MAIN PORT OF OPERATION AND
PORT LOCATION IN OFF SEASON

<u>Location</u>	<u>Port in Off Season</u>	<u>Main Port of Operation</u>
Wheatley	31	31
Port Dover	30	30
Kingsville	14	15
Port Rowan	13	13
Erieau	10	10
Port Stanley	10	10
Port Maitland	8	4
Port Burwell	5	6
Pelee Island	4	4
Colchester	2	3
Port Bruce	2	2
Sturgeon Creek	1	1
Fort Erie	1	1
Nanticoke	1	0
Port Colborne	0	4
Outside Lake Erie	2	0
No Response	8	8
	<hr/>	<hr/>
TOTAL	142	142
	<hr/> <hr/>	<hr/> <hr/>

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 15:1

NUMBER OF COMMERCIAL FISHING LICENSES
IN EACH FISHING LICENSE AREA ACCORDING TO
HOME PORT - 1977

<u>Location</u>	<u>Essex</u>	<u>Kent</u>	<u>Eastern</u>	<u>Inner Bay</u>	<u>No Response</u>
Wheatley	14	19	3		1
Port Dover	1	1	26	1	1
Kingsville	13	2			1
Port Rowan				10	
Port Stanley		1	8		1
Leamington	4	3			2
Blenheim	3	5	1		
Port Burwell			6		
Erieau		5			
Lowbanks			4		
Dunnville			4		
Pelee Island	3				
Port Colborne			2		
Harrow	2				
Nanticoke			1		
Amherstburg	1				
Port Maitland			1		
Port Ryerse			1		
Fort Erie			1		
St. Williams					1
Outside Lake Erie	3	1	3	1	
TOTAL	44	37	61	12	7
	==	==	==	==	==

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

Erieau are the two most important ports for those tugs who are licensed to fish in the Kent area, and Port Dover, Port Stanley and Port Burwell are the three most important ports for those tugs licensed to fish in the Eastern area. Port Rowan is the single most important location for those licensed to fish in the Inner Bay area.

Information on how well fishermen from particular communities are functioning in the industry is presented in Tables 16:1 and 17:1. More specifically, Table 16:1 is used to provide information on the number of persons employed in the primary sector of Lake Erie commercial fishing industry according to location. The information presented in this table reveals that almost 63 percent of all Lake Erie primary commercial fishing employment is located in Wheatley and Port Dover. More than 82 percent of all primary fishing employment is located in Wheatley, Port Dover, Kingsville, Erieau and Port Stanley. In terms of primary fishing employment, Wheatley is the single most important harbour on the lake.

Together with the information presented in Table 16:1, the information presented in Table 17:1 indicates the relative importance of those employed in the industry. For example, a comparison of the two sets of information reveals that fishermen operating out of Wheatley generate 45.7 percent of fishing employment and 50.7 percent of total primary fishing earnings. Similarly, Port Dover accounts for 17.1 percent of the employment, and 15.7 percent of income. Kingsville, on the other hand, provides 6.8 percent of the employment and 5.7 percent of the income. When this type of comparison is extended over each of the major fishing communities listed in these tables, it becomes clear that total fishing related employment provides a reasonable indication of the total fishing earnings generated within each community.

The next six tables are used to present information that partially reveals the dependence of communities located along the north shore of Lake Erie on commercial fishing. For instance, Tables 18:1,

TABLE 16:1

TOTAL NUMBER OF INDIVIDUALS EMPLOYED¹ IN THE LAKE ERIE
FISHING INDUSTRY BY MAIN PORT OF OPERATION
OR LOCATION OF PROCESSOR

	<u>Owner Operators</u>	<u>Processing³ Employees</u>	<u>Deckhands</u>	<u>Total</u>	<u>Percentage</u>
Wheatley	35	297	125	457	45.7
Port Dover	29	82	60	171	17.1
Kingsville	13	16	39	68	6.8
Erieau	11	29	26	66	6.6
Port Stanley	10	29	24	63	6.3
Windsor	0	37	0	37	3.7
Port Rowan	11	0	13	24	2.4
Colchester	3	13	6	22	2.2
Port Burwell	6	0	13	19	1.9
Port Colborne	4	4	8	16	1.6
Port Maitland	5	0	10	15	1.5
Blenheim	0	12	0	12	1.2
Leamington	0	10	0	10	1.0
Pelee Island	3	0	4	7	.7
Sturgeon Creek	1	0	4	5	.5
Port Bruce	2	0	3	5	.5
Dunnville	0	2	0	2	.2
Fort Erie	1	0	0	1	.1
TOTAL	<u>134²</u>	<u>531</u>	<u>335</u>	<u>1,000</u>	<u>100.0</u>

1 It should be noted that processing employment is calculated on a man-year basis while deckhand and owner/operator employment is calculated on a seasonal basis.

2 Four of the 138 did not identify a main port of operation.

3 The number of processing employees is calculated on the basis of processing employment during 1977. Deckhand and owner/operator employment information is for 1976.

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 17:1

GROSS TOTAL INCOMES (INCLUDES OWNER/OPERATOR,¹
PROCESSING EMPLOYEES,² AND DECKHANDS¹) BY MAIN PORT
OF OPERATION OR LOCATION OF PROCESSOR

<u>Location</u>	<u>Gross Total Income³</u>	<u>Percentage</u>
Wheatley	\$ 6,593,500	50.7
Port Dover	2,035,500	15.7
Erieau	1,104,500	8.5
Port Stanley	862,500	6.6
Kingsville	742,500	5.7
Port Burwell	356,500	2.7
Windsor	235,000	1.8
Port Colborne	229,500	1.8
Pelee Island	188,500	1.5
Colchester	137,500	1.1
Other	516,500	4.0
TOTAL	\$13,002,000	100.0

1 Owner/Operators', and deckhands' incomes 1976 data.

2 Processing employees' incomes 1977 data.

3 Rounded to the nearest \$500.

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 18:1

OWNER/OPERATORS LAKE ERIE COMMERCIAL
FISHERMEN YEARS OF FISHING EXPERIENCE
BY MAIN PORT OF OPERATION - 1977

Years Location	Under 5	5-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	No Response
Wheatley	6	7	3	6	4	3	3		1	1		1
Port Dover	3	4	3	2	5	3	2	3	1	1	1	1
Kingsville	1	1	2		1	6			1	1		
Erieau			2	2	1	2	1	1	2			
Port Rowan	2	1	2	1		1	1		1	1	1	
Port Stanley		2	1		2	1	3			1		
Port Burwell			2	2			1	1				
Port Maitland						1		2	2			
Port Colborne			1	1	1		1					
Colchester			1		1			1				
Other						3	2		2			
No Response	1			1				2				
TOTAL	13	15	17	15	15	20	14	10	10	5	2	2

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

19:1 and 20:1, respectively, present information on the number of years of fishing experience, number of weeks of fishing activity and the number of individuals dependent on primary fishing activity for at least some portion of their income.¹³ The information presented in Table 18:1 shows that fishing experience is fairly evenly distributed over the most important ports of operation on the lake. Table 19:1 shows, that with the exception of Port Stanley, most fishing communities have some fishing activity over a substantial portion of the year. Table 20:1 shows that Wheatley, Port Dover, Kingsville and Port Rowan are the permanent places of residence for over 55 percent of those dependent on commercial fishing activity for some portion of their household income. With the exception of those communities listed in Table 20:1, virtually all communities contain less than 4.1 percent of the total population who are dependent on primary fishing activity (not including fish processing) for all or some portion of their family income.

Table 21:1 is used to provide information on the total investment (or market value) of fishing vessels in each of the main ports of operation during 1977. Table 22:1 is used to present information on the gross fishing income of owner/operator commercial fishermen according to main port of operation during 1976. Table 23:1 shows the number and percentage of crewmen and the crewmen payroll accruing to each of the main fishing harbours during 1976. According to the information presented in these tables, the greatest amount of dependence on commercial fishing activity occurs in Wheatley, Port Dover, Kingsville, Erieau and Port Stanley.

The overwhelming dependence on these harbours is further revealed by the information presented in Tables 24:1 and 25:1. According to the information presented, these five main commercial fishing

13 Statistical disclosure restrictions established by Statistics Canada prevents presenting information which could be traced to any single firm or individual. Therefore, detailed information on fishermen located in particular communities cannot be provided in every case.

TABLE 19:1

NUMBER OF WEEKS OF FISHING
ACTIVITY OF TUGS BY MAIN PORT
OF OPERATION - 1976

Weeks Location	Under 6	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-52	No Response
Wheatley	2		2	2	2	1	4	8	6		1	3
Port Dover	1	3		3	1	2	7	3	1	2	4	3
Kingsville	2	3		5		4						1
Port Stanley	1	5	2	4								1
Port Rowan				4	1	2	2	1				
Erieau						1	7	1	1			
Port Burwell						1	2	2	1			
Port Maitland		1		1			1	1				
Port Colborne						1		2				1
Pelee Island				1		3						
Other	1		2	1	1		2					
No Response												8
TOTAL	7	12	6	21	5	15	25	18	9	2	5	17

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 20:1

ESTIMATED NUMBER AND PERCENTAGE OF INDIVIDUALS
DEPENDENT ON PRIMARY FISHING ACTIVITY
BY MAJOR HOME PORT - 1977

<u>Location</u>	<u>Individuals</u>	<u>Percentage</u>
Wheatley	102	21.0
Port Dover	77	15.9
Kingsville	52	10.7
Port Rowan	37	7.6
Leamington	30	6.2
Port Burwell	23	4.7
Port Stanley	20	4.1
Blenheim	19	3.9
Other	89	18.3
Outside Lake Erie	21	4.3
No Response	15	3.1
TOTAL	<u>485</u>	<u>100.0</u>

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 21:1

TOTAL INVESTMENT OR MARKET VALUE
OF FISHING VESSELS BY
MAIN PORT OF OPERATION - 1977

(Rounded to nearest \$1000)

<u>Location</u>	<u>Total Market Value</u> ¹	<u>Percentage</u>
Wheatley	\$3,319,000	47.8
Port Dover	1,251,000	18.0
Kingsville	665,000	9.6
Erieau	475,000	6.9
Port Stanley	457,000	6.6
Port Colborne	220,000	3.2
Port Burwell	187,000	2.7
Port Maitland	115,000	1.7
Port Rowan	46,000	.7
Other	202,000	2.9
TOTAL	<u><u>\$6,937,000</u></u>	<u><u>100.0</u></u>

1 Values for 133 vessels were given.

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 22:1

GROSS FISHING INCOME OF OWNER/OPERATOR
LAKE ERIE COMMERCIAL FISHERMEN BY
MAIN PORT OF OPERATION - 1976

<u>Location</u>	<u>Under</u> <u>\$10,000</u>	<u>\$10,000-</u> <u>\$30,000</u>	<u>\$30,001-</u> <u>\$60,000</u>	<u>\$60,001-</u> <u>\$100,000</u>	<u>\$100,001-</u> <u>\$120,000</u>	<u>\$120,001-</u> <u>\$140,000</u>	<u>\$140,001-</u> <u>\$160,000</u>	<u>\$160,001-</u> <u>\$200,000</u>	<u>Over</u> <u>\$200,000</u>	<u>No</u> <u>Response</u>
Wheatley	3	5	6	8	3	3	4	1		3
Port Dover	6	9	6	6						2
Kingsville	2	3	8							
Erieau		5	1	2	2					1
Port Rowan	8	2								1
Port Stanley	1	4	3	1				1		
Port Burwell		1	4	1						
Port Maitland	1	4								
Other	9	2	4	3						
TOTAL	30	35	32	21	5	3	4	2	0	7
	==	==	==	==	==	==	==	==	==	==

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 23:1

NUMBER AND PERCENTAGE OF FISHING
TUG CREW AND CREW PAYROLL BY
MAIN PORT OF OPERATION - 1976

<u>Location</u>	<u>Number of Crew</u>	<u>Percentage of Crew by Port of Operation</u>	<u>Payroll¹ of Crew</u>	<u>Percentage of Crew Payroll by Port of Operation</u>
Wheatley	125	37.3	\$ 797,000	41.2
Port Dover	60	17.9	298,000	15.4
Kingsville	39	11.6	228,500	11.8
Erieau	26	7.8	249,000	12.9
Port Stanley	24	7.2	140,500	7.3
Port Rowan	13	3.9	7,000	.4
Port Burwell	13	3.9	69,000	3.6
Port Maitland	10	3.0	13,500	.7
Other	25	7.5	133,000	6.9
TOTAL	335	100.0	\$1,935,500	100.0

1 Rounded to the nearest \$500.

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 24:1

AGE DISTRIBUTION OF LAKE ERIE
OWNER/OPERATOR FISHERMEN BY
MAIN PORT OF OPERATION - 1977

<u>Location</u>	<u>20-29</u>	<u>30-39</u>	<u>40-49</u>	<u>50-59</u>	<u>60-65</u>	<u>66 +</u>	<u>Total</u>
Wheatley	2	6	16	8	1	2	35
Port Dover	1	5	12	7	2	2	29
Kingsville		1	6	3	3		13
Erieau		2	6	1	2		11
Port Rowan		3	1	5		2	11
Port Stanley	1	2	3	3	1		10
Port Burwell		4	1	1			6
Port Maitland				3	1	1	5
Other		2	6	3	2	1	14
No Response			1	2	1		4
TOTAL	<u>4</u>	<u>25</u>	<u>52</u>	<u>36</u>	<u>13</u>	<u>8</u>	<u>138</u>

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

TABLE 25:1

FUTURE INTENTIONS OF
OWNER/OPERATOR COMMERCIAL FISHERMEN
BY MAIN PORT OF OPERATION - 1977

<u>Location</u>	<u>Continue Fishing as a Major Occupation</u>	<u>Continue Fishing as a Supplementary Occupation</u>	<u>Cease Fishing</u>	<u>No Response</u>	<u>Total</u>
Wheatley	29	3	2	1	35
Port Dover	25	2		2	29
Kingsville	11	2			13
Erieau	10	1			11
Port Rowan	2	9			11
Port Stanley	9			1	10
Port Burwell	6				6
Port Maitland	4			1	5
Other	12	2			14
Outside Lake Erie	1	1			2
No Response		1	1		2
TOTAL	109	21	3	5	138

Source: Survey of Commercial Fishermen North Shore Lake Erie Study

locations will continue to be important fishing locations for many years. According to the information presented in Table 24:1, all owner/operator fishermen located in Port Maitland can be expected to retire within the next 15 to 20 years. The information presented in Table 25:1 indicates that fishermen from every major fishing community either plan to continue fishing as a major occupation or as a supplementary occupation within the foreseeable future.



Port Dover: Nets on Dock in Foreground

In this section, it has been shown that any of about 15 different communities are important to Canada's Lake Erie commercial fishing industry. However, the main commercial fishing ports are Wheatley, Port Dover, Kingsville, Erieau, Port Rowan and Port Stanley. Investment in harbour facilities in any of these six communities will make some contribution to the economic viability of the commercial

fishing industry, providing that all such investments are made in response to the boating needs of the individual community.¹⁴

Existing Harbour Facilities in Use by Commercial Fishermen

It is always difficult to measure existing and future harbour requirements, but it is particularly difficult in the fishing industry where the overall level of boating activities depends on the vagrancies of the resource as well as the whims of the market. The level of commercial fishing boating activity varies considerably between one year and the next, and the requirements often are unique to the fishing industry. There are the safety and convenience needs which pertain to all operations carried out on water. However, in the fishing industry there is an even greater need for safety and convenience than normally encountered among small boaters. In addition to being small craft operators, commercial fishermen are part of an industry process which often requires them to be out on the water during inclement weather when other small craft are safe in harbour. Also, in the commercial fishing industry, the location of a harbour affects the profits of the fishing unit. It affects the speed, and consequently, the costs of fishermen going to and from the fishing grounds. It also influences the quality of fish landings, and therefore, the prices received for catch.

Even a very cursory review of existing records reveals that Lake Erie almost always has had a sufficient number of harbour facilities to accommodate the commercial fishing fleet safely and conveniently.¹⁵ In other words, it would appear that Lake Erie has always had

14 This should not be interpreted to mean that legitimate public investment in commercial fishing facilities cannot be made in other communities, but rather, that the six communities identified here should be considered the main focus of attention for commercial fishing related harbour investments on Lake Erie in future.

15 It should be recognized that the acceptable standard of safety and convenience undoubtedly would change over time.

a sufficient number of harbours, located within a reasonable distance of one and another, to ensure minimal safety and convenience for the fishing fleet. In this regard it is important to note that there is a Small Craft Harbour facility, or some other type of boat refuge, at roughly seven mile intervals along the north shore of the lake.¹⁶

What is less clear however, is the adequacy of these facilities for the somewhat unique requirements of the fishing industry. Fish catch is frequently sorted by species, iced and temporarily stored at dock-side. Net storage, net mending and even some net drying is undertaken by commercial fishermen on wharfage facilities. As a consequence, it is desirable, even necessary in some cases, to provide commercial fishermen with clean spacious harbour facilities. Clean spacious harbour facilities help ensure that the Canadian commercial fishing industry is able to supply the consumer with reasonably good quality fish products.

Since locating in Ontario, the Small Craft Harbours Branch has spent over \$2,547,000 on harbour facilities on Lake Erie. More than 84 percent, or \$2,157,000, was spent on harbour facilities which are mainly used by commercial fishing vessels. Moreover, the vast majority of these expenditures were directed at improving existing facilities. The amount and the percentage distribution of Small Craft Harbours Branch commercial fishing harbour investments according to location is provided in Table 26:1. According to this table, 67.7 percent of all commercial fishing harbour expenditures by Small Craft Harbours on Lake Erie were made in Wheatley. Rondeau (Erieau) and Port Dover accounted for more than 25 percent of the total expenditures.

Table 27:1 is used to provide information on the harbour

16 The average distance between harbour or refuge facilities on the U.S. side of Lake Erie, is somewhat more than 15 miles. See: The Great Lakes Basin Framework Study, Recreational Boating, Appendix R9, prepared by the Recreational Boating Task Group of the Navigation Work Group of the Great Lakes Basin Commission sponsored by the U.S. Department of Army Corp of Engineers in the State of Michigan, Ann Arbor, Michigan, 1975, pp. 97, 101, 107.

TABLE 26:1

THE AMOUNT AND PERCENTAGE DISTRIBUTION
OF SMALL CRAFT HARBOUR'S BRANCH INVESTMENT
ON COMMERCIAL FISHING SMALL CRAFT HARBOURS
FACILITIES SINCE 1974

<u>Location</u>	<u>Amount</u> ¹	<u>Percentage</u>
Wheatley	\$1,461,000	67.7
Rondeau (Erieau)	291,000	13.5
Port Dover	252,500	11.7
Colchester	140,000	6.5
Port Bruce	<u>13,500</u>	<u>.6</u>
TOTAL	<u><u>\$2,158,000</u></u>	<u><u>100.0</u></u>

1 Rounded to the nearest \$500.

Source: Small Craft Harbour - Ontario Region Annual Project Narratives - 1974 - 1977

TABLE 27:1

HARBOUR FACILITIES, ESTIMATED NUMBER OF BERTHS AND LOCATION
OF COMMERCIAL FISHING TUGS ACCORDING TO LOCATION ON LAKE ERIE - 1977

<u>Location</u>	<u>Small Craft Harbours</u>	<u>Other Government Facilities</u>	<u>Commercial Marinas</u>	<u>Estimated Number of Berths</u>	<u>Tugs in Port During Off Season</u>	<u>Tugs by Main Port of Operation</u>
Wheatley	150			150	31	31
Port Dover	60		72	132	30	30
Kingsville		32		32	14	15
Port Rowan	50		200	250	13	13
Erieau	100		190	290	10	10
Port Stanley			217	217	10	10
Port Maitland	(Private Docking Facilities) ¹				8	4
Port Burwell	125 ²			125	5	6
Pelee Island		90	45	135	4	4
Colchester	10			10	2	3
Port Bruce	30 ²		126	156	2	2
Sturgeon Creek	30			30	1	1
Fort Erie		135		135	1	1
Port Colborne			180	180	0	4
No Response					8	8
TOTAL	<u>555</u>	<u>257</u>	<u>1,030</u>	<u>1,842³</u>	<u>139</u>	<u>142</u>

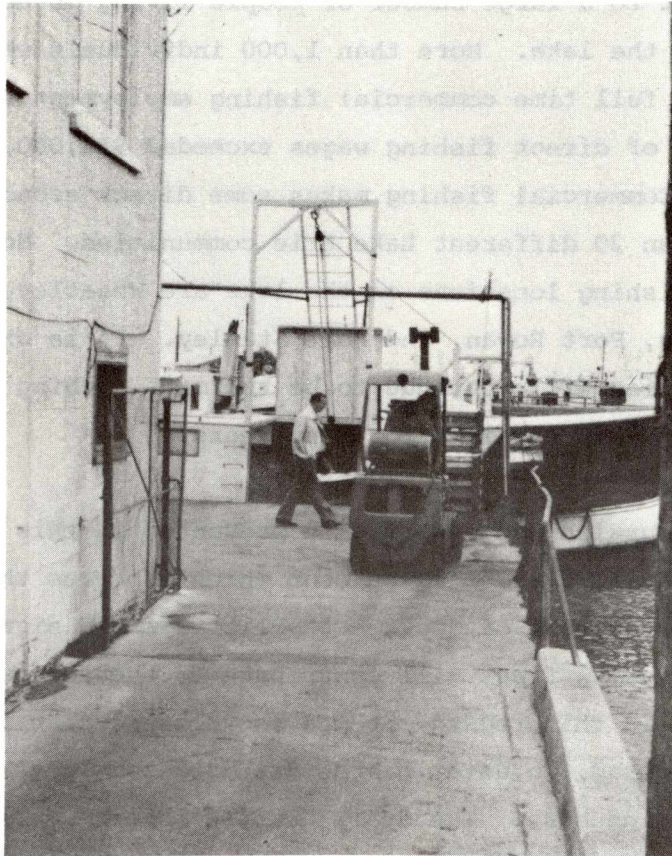
1 The presence of private facilities are sufficient to accommodate commercial fishing requirements.

2 These estimates are based on maximum number of berths under fair weather conditions and may be significantly reduced during inclement weather.

3 Estimates on the number of berths provided in each location are not exact. This information is meant to give the reader a rough indication of the adequacy of existing facilities.

Source: Survey of Commercial Fishermen North Shore Lake Erie Study & Marina Operators North Shore Lake Erie Study

facilities, estimated number of berths, and location of commercial fishing tugs according to location on Lake Erie during 1977. The information presented in this table indicates that the total berthage available is adequate to meet the requirements of the commercial fishing fleet. Government facilities, including Small Craft Harbour facilities, provides an estimated 812 berths. This would seem more than adequate to serve the commercial fishing requirements of approximately 140 tugs.



Port Dover Activity on Docks

A comparison of the information presented in this section with the information presented in the previous section reveals that the Lake Erie commercial fishing fleet has an adequate amount of good harbour facilities. The quantity and quality of the facilities appears to have been improved with the introduction of the Small Craft Harbours Program in Ontario. The direction of the Small Craft Harbours Program,

to date, appears satisfactory. This is confirmed by the fact, that those locations where commercial fishing is of greatest importance are also those locations where Small Craft Harbours Branch has directed most of its effort.

Conclusion

The Lake Erie commercial fishery is both economically and socially important to a large number of people living in areas immediately adjacent to the lake. More than 1,000 individuals were involved in either part or full time commercial fishing employment during 1977. The overall level of direct fishing wages exceeded \$13,000,000 during that same year. Commercial fishing makes some direct economic contribution to more than 20 different Lake Erie communities. However, the main commercial fishing locations on the lake are Wheatley, Port Dover, Kingsville, Erieau, Port Rowan, and Port Stanley. It is expected that these six communities will continue to be the main fishing locations on the Canadian side of the lake for many years.

The discussion and information presented in this chapter reveals that any small harbour investment which improves the safety, convenience or cleanliness of dockage facilities for a significant portion of the existing fleet will contribute to the economic viability of the industry. In this regard, it was established that the Small Craft Harbours Program, to date, has contributed considerably to the well-being of the industry. The Small Craft Harbours regional office has directed most of its efforts to improving harbour facilities in those locations where commercial fishing is of greatest importance. As a result, the Small Craft Harbours Program has greatly improved the quality of harbour facilities for Lake Erie's commercial fishing fleet.

The presence of good quality harbour facilities should not be interpreted to mean that the Small Craft Harbours Program cannot continue to make a very major contribution to the economic viability of

the Lake Erie commercial fishing industry. There are still many situations on the lake where an improvement of existing facilities can and should be considered. However, all such improvements should be assessed in terms of the opportunities foregone in other areas.

CHAPTER TWO

LAKE ERIE RECREATIONAL OPPORTUNITIES: PRIMARY USERS AND SOCIOECONOMIC IMPORTANCE

The purpose of this chapter is to identify the socioeconomic importance of the boating opportunities available on Lake Erie to the people of Ontario. This will be accomplished in the following manner. In the first section, a socioeconomic profile of all Lake Erie recreationists is presented. In presenting this profile, distinction is made between the general recreationists and the recreational boater. The second section is used to look at the major activities of the boaters, as well as all other recreationists. The final section is used to examine the overall economic impact of boating and other recreational activities on the regions bordering on the north shore of Lake Erie. In this section recreational party expenditures and employment information on businesses directly catering to the lake's recreationists are presented. The economic region examined here is the resident area as defined in the Introduction.

Recreational Activities on Lake Erie

One of the most pleasing features of the Great Lakes is its tremendous potential for providing outdoor recreational opportunities. Located in one of the most heavily populated areas of North America, the Great Lakes are both easily accessible and sufficiently diverse to satisfy, at least partially, the outdoor recreational aspirations of a large segment of North America's population. Lake Erie, with a number of large metropolitan areas within easy access of its shores, supports a substantial amount of this activity. This is shown in Table 1:2 which indicates the estimated number and percentage of individuals who visited Lake Erie for recreational purposes during 1977. With a total resident

TABLE 1:2

ESTIMATED NUMBER AND PERCENTAGE
OF INDIVIDUALS VISITING
LAKE ERIE
FOR RECREATIONAL PURPOSES DURING 1977
(Rounded to nearest 500)

	<u>Number of</u> <u>Individuals</u>	<u>Percentage of</u> <u>Individuals</u>
Total Visitors	860,500	100.0
General Recreationist Directly Using Lake	592,500	68.9
Boaters Using Lake	123,500	14.4

Source: Ontario Ministry of Natural Resources: Parks Branch
Marina Clientele and General Recreational Surveys - 1977

population of approximately 949,970,¹ the information indicates that an estimated 860,500 individuals visited the Canadian side of Lake Erie for recreational purposes during 1977. It is estimated that 592,500 persons directly used the lake for some form of outdoor recreational activity during 1977. Another 123,500 individuals went recreational boating on Lake Erie during that same year. Almost 69 percent of those who visited the Lake Erie area for recreational purposes, made some direct use of the lake.² More than 14 percent of all those who visited the area participated in some type of recreational boating activity.

Table 2:2 shows the number and percentage of resident, non-resident Canadian and non-resident party visits to Lake Erie during 1977. The information presented in this table reveals that 177,100 parties (very roughly, containing an average of three individuals) visited Lake Erie for recreational purposes during 1977.³ Similarly, it shows that 42,050 visited the lake for recreational boating during that same year. Nearly 68 percent of all general recreationists were residents of the Lake Erie area, while more than 59 percent of the boaters were residents of the area. According to the information presented in this table, a higher percentage of boaters are either non-resident Canadians, or non-residents of Canada than is true of

1 Statistics Canada: The 1976 population, Essex, Elgin, Kent, Haldimand/Norfolk and Niagara counties.

2 It is important to distinguish between those persons who visit the Lake Erie area for camping, picnicking, or some other activity which does not involve direct contact with the lake's water and those persons who visit the Lake Erie area for recreational purposes and consider the presence of the lake itself a major reason for visiting the area. The latter group includes within it those persons who may not come into direct contact with the lake's water but who consider the water itself part of the scenic attraction of the area, and therefore, a major reason for visiting.

3 Approximately 10,000 recreational boating parties entered Canada by boat from the U.S. during 1977. These individuals are not included in the totals presented here. It is not felt that failure to include this group would in any way distort the analysis or findings.

TABLE 2:2

NUMBER AND PERCENTAGE OF TOTAL ANNUAL PARTY VISITS

USING LAKE ERIE

ACCORDING TO RESIDENT CATEGORY - 1977

(Rounded to nearest 25)

	<u>Boaters</u>		<u>General Recreationists</u>	
	<u>Number</u>	<u>Percentage</u>	<u>Number</u>	<u>Percentage</u>
Resident	24,925	59.2	119,675	67.6
Non-Resident Canadian	12,625	30.0	44,300	25.0
Non-Resident	<u>4,500</u>	<u>10.7</u>	<u>13,125</u>	<u>7.4</u>
TOTAL	<u>42,050</u>	<u>100.0</u>	<u>177,100</u>	<u>100.0</u>

Source: Marina Clientele and General Recreational Surveys - 1977

the general recreationist.



Water Surfing - Lake Erie

Table 3:2 is used to show the estimated number and percentage of individuals using Lake Erie for recreational purposes according to resident category during 1977. Although corresponding very roughly to the information presented in the previous tables, the information presented here provides the reader with the number of persons in each resident category directly involved in Lake Erie recreational activities during 1977. More than 66 percent of all general recreationists were residents of the Lake Erie area, 25.6 percent were non-resident Canadians, and 8.3 percent non-residents. Greater than 59.5 percent of boaters were residents, 30 percent non-resident Canadian, and 10.5 percent non-residents. Boating appears somewhat more popular among those who visit from other areas than among residents. Residents appear to take greater advantage of the non-boating activities than do non-residents.

TABLE 3:2

ESTIMATED NUMBER AND PERCENTAGE OF INDIVIDUALS

USING LAKE ERIE FOR RECREATIONAL PURPOSES

ACCORDING TO RESIDENT CATEGORY DURING 1977

(Rounded to nearest 500)

	<u>Boaters</u>		<u>General Recreationists</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Resident	73,500	59.5	392,000	66.1
Non-Resident Canadian	37,000	30.0	151,500	25.6
Non-Resident	<u>13,000</u>	<u>10.5</u>	<u>49,000</u>	<u>8.3</u>
TOTAL	<u>123,500</u>	<u>100.0</u>	<u>592,500</u>	<u>100.0</u>

Source: Ontario Ministry of Natural Resources

Marina Clientele and General Recreational Surveys - 1977

Table 4:2 is used to provide information on the average number of visits by boaters and general recreationists to Lake Erie for direct use of the lake according to resident categories during 1977. According to this table, resident general recreationists visit Lake Erie for recreational purposes an average of 16.5 times per year. Resident boaters visit the lake for recreational purposes an average of 9.8 times per year. The information presented in this table shows that general recreationists visited the lake more frequently than boaters during 1977. It also shows that residents of the area visit the lake more frequently than do non-resident Canadians or non-residents.

Information on the average length of stay according to resident category, boaters and general recreationists, is presented in Table 5:2. The information presented in this table shows resident general recreationists, on average, stayed nearly six days during 1977. It shows that resident boaters stayed an average of slightly over four days. Non-resident Canadian general recreationists stayed approximately seven days while non-resident Canadian boaters stayed an average of four days. Non-resident general recreationists stayed an average of 4.2 days and non-resident boaters stayed an average of 6.2. The information presented in this table seems to suggest that non-resident boaters tend to visit the north side of Lake Erie mainly for the opportunity to participate in recreational boating. It also appears that non-resident general recreationists use the area as a stop-over or visit only on extended weekends.

Given the number of individuals who visit the lake each year, and the number of times that individuals visit the lake each year, it is possible to calculate the total number of recreational days that took place on the north shore of Lake Erie during 1977. Information on the number of days and hours spent in each recreational activity directly involving the lake during 1977 is presented in Tables 6:2 and 7:2. According to Table 6:2, general recreationists spent 45,132,000

TABLE 4:2

AVERAGE NUMBER OF ANNUAL VISITS TO LAKE ERIE
FOR DIRECT USE OF THE LAKE
ACCORDING TO RESIDENT CATEGORY - 1977

	<u>Boaters</u>	<u>General Recreationist</u>
Resident	9.8	16.5
Non-Resident Canadian	5.0	7.0
Non-Resident	3.0	2.0

Source: Marina Clientele and General Recreational Surveys
- 1977

TABLE 5:2

AVERAGE LENGTH OF STAY IN DAYS¹
OF DIRECT USERS OF LAKE
ACCORDING TO RESIDENT CATEGORY - 1977

	<u>Boaters</u>	<u>General Recreationists</u>
Resident	4.1	5.8
Non-Resident Canadian	4.0	7.1
Non-Resident	6.2	4.2

1 These data include a large number of recreational parties which rent cottages and stay in the area throughout the summer period.

Source: Marina Clientele and General Recreational Surveys - 1977

TABLE 6:2

TOTAL NUMBER AND PERCENTAGE OF ACTIVITY DAYS
DIRECTLY USING LAKE ERIE FOR RECREATIONAL PURPOSES
ACCORDING TO RESIDENT CATEGORY DURING 1977

(Rounded to nearest 500)

	<u>Boaters¹</u>		<u>General Recreationists</u>	
	#	%	#	%
Resident	2,953,000	75.0	37,191,000	82.4
Non-Resident Canadian	740,000	18.8	7,529,500	16.7
Non-Resident	<u>242,000</u>	<u>6.2</u>	<u>411,500</u>	<u>.9</u>
TOTAL	<u><u>3,935,000</u></u>	<u><u>100.0</u></u>	<u><u>45,132,000</u></u>	<u><u>100.0</u></u>

1 Boater activity days involve all the recreational activities participated by those identified as "Boaters" including recreational boating.

Source: Marina Clientele and General Recreational Surveys - 1977

TABLE 7:2

NUMBER AND PERCENTAGE OF HOURS
SPENT ON LAKE ERIE FOR RECREATIONAL PURPOSES
OTHER THAN BOATING
ACCORDING TO RESIDENT CATEGORY DURING 1977

(Rounded to nearest 500)

	<u>Boaters</u>		<u>General Recreationists</u>	
	<u>Number of Hours</u>	<u>Percentage</u>	<u>Number of Hours</u>	<u>Percentage</u>
Resident	10,344,500	71.8	47,233,000	79.3
Non-Resident Canadian	2,908,000	20.2	11,295,000	19.0
Non-Resident	<u>1,155,000</u>	<u>8.0</u>	<u>1,046,000</u>	<u>1.7</u>
TOTAL	<u><u>14,407,500</u></u>	<u><u>100.0</u></u>	<u><u>59,574,000</u></u>	<u><u>100.0</u></u>

Source: Marina Clientele and General Recreational Surveys - 1977

days participating in recreational activities associated with the lake during 1977. Resident, non-resident Canadian and non-resident boaters spent 3,935,000 days participating in recreational activities during the same year. General recreationists and boaters, together, participated in an estimated 49,067,000 Lake Erie recreational days during 1977.



Golfers Taking Time Out for Boating
Turkey Point - Lake Erie

According to the information presented in Table 7:2, general recreationists expended 59,574,000 hours on recreational activities directly associated with Lake Erie during 1977. Most of this activity was undertaken by residents (somewhat over 79 percent), while non-resident Canadian and other non-residents, respectively, accounted for 19 and 1.7 percent. Boaters expended 14,407,500 hours on Lake Erie during 1977. Residents of Canada accounted for 71.8 percent of this activity;

non-residents accounted for 20.2 percent and non-residents eight percent.



Beach Activity
Rondeau Park - Lake Erie

The information presented in this section has revealed a number of interesting facts. Most individuals that visited the Lake Erie area during 1977 did so to participate directly in some recreational activities involving the lake. A higher percentage of non-residents visit the lake for boating purposes than for general recreational pursuits. This is revealed by the information which showed that non-resident boaters tend to visit more often and stay longer than non-resident general recreationists. Except for non-residents, general recreationists tend to visit more often and stay longer than boaters. Boaters account for approximately 19.5 percent of all Lake Erie recreational activity (boating and other leisure time pursuits).

The boating opportunities available on Lake Erie appear to be more popular among non-residents than they are among the resident population. Nonetheless, the information presented in this section has clearly established that the north side of Lake Erie is primarily a resident recreational area, and the lake itself is of substantial importance to the overwhelming majority of these individuals.

Socioeconomic Profile of Boaters and Other Recreationists

The previous section was used to provide an indication of the importance of Lake Erie outdoor recreational activity to residents of the Lake Erie area. This was partially accomplished by providing data on the total number of residents who actually participated in Lake Erie related outdoor recreational activities during 1977. A further indication of the lake's overall importance was revealed by providing information on the total number of visitors to the area and the actual percentage of those visitors who visit the area for the purpose of participating in Lake Erie oriented outdoor recreational activities. Since over 65 percent of the total resident population participate in Lake Erie recreational pursuits, the importance of Lake Erie recreational activities can also be revealed by examining the socioeconomic background of those who actually use the lake for recreational purposes.⁴ In this section, information on the age, occupation and income of boaters and other outdoor recreationists is used to show the overall importance of this outdoor activity.

Table 8:2 presents information on the age distribution of resident and non-resident boaters and general recreationists. The information presented in this table, shows that individuals from every age group (from less than nine to over 60 years of age) participate in Lake Erie outdoor recreational activities. Further, it shows that residents and non-residents, alike, participate in these activities.

⁴ Approximately 592,488 of the total resident population of 949,970 participated directly in Lake Erie recreational activity during 1977.

TABLE 8:2

AGE DISTRIBUTION OF RESIDENT AND NON-RESIDENT
LAKE ERIE BOATERS AND GENERAL RECREATIONISTS - 1977

(Rounded to nearest 500)

Age Category	RESIDENT					NON-RESIDENT CANADIAN NON-RESIDENT				
	Boaters		General Recreationists		Total	Boaters		General Recreationists		Total
	#	%	#	%		#	%	#	%	
0 - 9	9,000	12.2	63,500	16.2	72,500	4,000	8.1	42,500	21.2	46,500
10 - 19	20,500	27.9	104,500	26.6	125,000	8,000	15.6	37,500	18.7	45,500
20 - 29	16,500	22.4	75,500	19.2	92,000	6,000	11.9	41,000	20.4	47,000
30 - 39	11,500	15.7	48,500	12.4	60,000	5,000	10.0	28,500	14.2	33,500
40 - 49	8,500	11.6	36,500	9.3	45,000	23,000	45.6	19,500	9.7	42,500
50 - 59	5,000	6.8	31,000	7.9	36,000	3,000	6.3	18,500	9.2	21,500
60 +	2,500	3.4	33,000	8.4	35,500	1,000	2.5	13,000	6.6	14,000
TOTAL	73,500	100.0	392,500	100.0	466,000	50,000	100.0	200,500	100.0	250,500

Source: Marina Clientele and General Recreational Surveys - 1977

Boating appears to be particularly popular among non-residents in the 40 to 49 years of age category. Boating appears relatively less popular among those over 60.



Young Fisherman on Beach

Table 9:2 shows the number and percentage of resident, non-resident head-of-household boaters and general recreational parties according to occupational categories. Once again, similar to the information presented in the previous table, the information presented in this table shows that Lake Erie outdoor recreational activities are popular among all occupational categories.

Table 10:2 shows the income distribution of resident and non-resident head-of-household boaters and general recreational parties for 1977. These data indicate that Lake Erie non-boating outdoor

TABLE 9:2

NUMBER AND PERCENTAGE OF RESIDENT, NON-RESIDENT
HEAD OF HOUSEHOLD BOATERS AND GENERAL RECREATIONAL PARTIES
ACCORDING TO OCCUPATIONAL CATEGORIES - 1977

(Rounded to nearest 25)

Occupation Category	RESIDENT						NON-RESIDENT CANADIAN NON-RESIDENT					
	Boaters		General Recreationists		Total		Boaters		General Recreationists		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Managerial and Administrative	3,025	12.2	7,050	5.9	10,075	7.0	2,625	15.2	3,700	6.6	6,325	8.6
Sales	1,500	6.0	4,300	3.6	5,800	4.0	1,675	9.7	1,125	2.0	2,800	3.8
Natural Sciences	1,250	5.0	3,825	3.2	5,075	3.5	1,225	7.1	3,125	5.6	4,350	6.0
Social Sciences	300	1.2	2,750	2.3	3,050	2.1	1,150	6.7	4,800	8.6	5,950	8.1
Teaching	850	3.4	4,900	4.1	5,750	4.0	225	1.3	400	.7	625	.9
Medicine and Health	850	3.4	6,700	5.6	7,550	5.2	825	4.7	2,250	5.0	3,075	4.2
Clerical	950	3.8	11,725	9.8	12,675	8.8	525	3.0	3,525	6.3	4,050	5.5
Other Services	1,100	4.4	6,350	5.3	7,450	5.2	900	5.1	4,650	8.3	5,550	7.6
Farming	1,250	5.0	3,825	3.2	5,075	3.5	300	1.7	550	1.0	850	1.2
Food Processing	500	2.0	1,075	.9	1,575	1.1	125	.8	900	1.6	1,025	1.4
Other Primary Occ.	325	1.3	1,800	1.5	2,125	1.5	475	2.8	550	1.0	1,025	1.4
Construction and Trans- port Equipment Oper.	3,775	15.2	6,475	5.4	10,250	7.1	2,775	16.1	10,000	17.9	12,775	17.4
Machining Fabrication & Assembly Repairs	5,225	21.0	16,375	13.7	21,600	15.0	2,350	13.6	5,150	9.2	7,500	10.2
Artistic, Literary and Recreational	400	1.6	1,800	1.5	2,200	1.5	750	4.4	0	-	750	1.1
Housewives	425	1.7	8,125	6.8	8,550	5.9	250	1.5	1,675	3.0	1,925	2.7
Students	1,050	4.2	14,475	12.1	15,525	10.7	250	1.4	5,200	9.3	5,450	7.4
Retired	850	3.4	0	-	850	.6	300	1.7	2,625	4.7	2,925	4.0
Unemployed	150	.6	0	-	150	.1	375	2.2	5,525	9.9	5,900	8.1
Others	1,100	4.4	17,350	14.5	18,450	12.8	100	.6	0	-	100	.1
No Response	0	-	700	.6	700	.5	75	.4	175	.3	250	.3
TOTAL	24,875	100.0	119,600	100.0	144,475	100.0	17,275	100.0	55,925	100.0	73,200	100.0

Source: Marina Clientele and General Recreational Surveys - 1977
 Statistics Canada, Census Surveys.

TABLE 10:2

INCOME DISTRIBUTION OF RESIDENT AND NON-RESIDENT
HEAD OF HOUSEHOLD, BOATERS AND
GENERAL RECREATIONAL PARTIES - 1977

(Rounded to nearest 25)

Income Category	RESIDENT						NON-RESIDENT CANADIAN NON-RESIDENT					
	Boaters		General Recreationists		Total		Boaters		General Recreationists		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Under \$10,000	2,425	9.8	25,375	21.2	27,800	19.2	1,350	7.8	10,275	18.4	11,625	15.9
\$10,000-\$20,000	14,300	57.5	62,450	52.2	76,750	53.1	9,350	54.2	31,600	56.5	40,950	55.9
\$20,001-\$30,000	4,975	20.0	23,925	20.0	28,900	20.0	4,300	24.9	8,925	16.0	13,225	18.1
\$30,001-\$40,000	1,950	7.8	3,950	3.3	5,900	4.1	1,250	7.2	3,475	6.2	4,725	6.5
\$40,001-\$50,000	125	.5	1,425	1.2	1,550	1.1	350	2.0	725	1.3	1,075	1.5
Over \$50,001	1,100	4.4	2,475	2.1	3,575	2.5	675	3.9	925	1.6	1,600	2.1
TOTAL	24,875	100.0	119,600	100.0	144,475	100.0	17,275	100.0	55,925	100.0	73,200	100.0

Source: Marina Clientele and General Recreational Surveys - 1977

Statistics Canada, Census Survey

recreational activities are popular among those in lower income groups. Boating seems somewhat more popular in the higher income groups, but is not ignored by those persons earning under \$10,000. According to the information presented here, boating and general recreational activities, alike, appear to serve the outdoor aspirations of some persons from all income groups.



Boating is Popular Among
Younger Age Groups

The information presented in this section reveals that Lake Erie outdoor recreational activities are popular among all age groups, all occupational categories and all income groups. This is true of both resident and non-resident visitors to the lake. Furthermore, participants from all age categories, all occupational groups and all income segments participate in the boating opportunities available on Lake Erie.

Reasons for Visiting Lake Erie and Type of Participation

There are numerous reasons why outdoor recreational enthusiasts would wish to visit the Lake Erie area. Water, beaches, and seclusion greatly contribute to the attractiveness of the area. However, it is not clear why residents or non-residents would choose the Lake Erie area over other areas, where similar types of attributes are available. In an attempt to distinguish between the features available at Lake Erie and those of other areas, outdoor recreationists were asked why they visited Lake Erie during the summer of 1977. The results are presented in Table 11:2 which shows the indicated reasons why residents and non-residents visited Lake Erie for leisure activities during that summer.

The information presented in Table 11:2 shows that close to home and convenience were the most important reasons among both residents and non-residents for visiting Lake Erie. However, close to home and convenience were more important among residents than among non-residents. Consistent with this, it can be seen that good camping facilities was an important reason for visiting Lake Erie among all visitors, but somewhat more important among non-residents. Fishing was an important reason for visiting among both resident and non-resident boaters, but only of small importance among the general recreationists. A quiet clean atmosphere was more important among non-residents than it was among residents. The five most important reasons for visiting Lake Erie during the summer of 1977 were close to home and convenience, beach/sun, good camping facilities, quiet clean atmosphere and swimming.

The perceived behaviour of individuals often gives important clues on the reasons for particular group behavioural patterns. In this regard, Table 12:2 is used to present information on the number and percentage of recreational activity hours for each recreational activity on Lake Erie during 1977. According to the information presented in this table, swimming is the most popular pastime and

TABLE 11:2

NUMBER¹ AND PERCENTAGE OF INDICATED REASONS GIVEN
FOR RESIDENT AND NON-RESIDENTS VISITING LAKE ERIE
FOR LEISURE TIME ACTIVITIES - 1977

(Rounded to nearest 25)

Reasons Category	RESIDENT						NON-RESIDENT CANADIAN NON-RESIDENT					
	Boaters		General Recreationists		Total		Boaters		General Recreationists		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Close to Home												
Convenient	5,725	24.0	118,875	30.3	124,600	29.9	2,775	16.0	37,025	18.5	39,800	18.3
Beach/Sun	2,525	10.6	40,800	10.4	43,325	10.4	2,250	13.0	22,625	11.3	24,875	11.4
Good Camping												
Facilities	2,300	9.6	36,100	9.2	38,400	9.2	2,300	13.2	22,625	11.3	24,925	11.5
Relatives/Friends	1,550	6.5	26,275	6.7	27,825	6.7	1,375	7.9	21,425	10.7	22,800	10.5
Quiet Clean												
Atmosphere	1,475	6.2	49,425	12.6	50,900	12.2	1,550	8.9	31,425	15.7	32,975	15.2
Swimming	2,900	12.2	38,050	9.7	40,950	9.8	1,725	9.9	18,825	9.4	20,550	9.4
Being Near the Water	750	3.1	13,350	3.4	14,100	3.4	500	2.8	3,200	1.6	3,700	1.7
Fishing	2,325	9.8	12,150	3.1	14,475	3.5	1,625	9.4	6,400	3.2	8,025	3.7
Scenery	450	1.9	8,250	2.1	8,700	2.1	375	2.1	7,600	3.8	7,975	3.7
Children's Play	175	.7	3,525	.9	3,700	.9	175	1.0	2,800	1.4	2,975	1.4
Other	3,675	15.4	45,500	11.6	49,175	11.8	2,750	15.8	26,225	13.1	28,975	13.3
TOTAL	23,850	100.0	392,300	100.00	416,150	100.0	17,400	100.0	200,175	100.0	217,575	100.0

1 The number of answers given does not necessarily total the number of persons or parties who gave indicated preferences because some persons gave more than one reason. Note adjustments are made to indicate preferences of total recreational population visiting Lake Erie during 1977.

Source: General Recreational Survey - 1977

TABLE 12:2

NUMBER AND PERCENTAGE HOURS
OF RECREATIONAL ACTIVITY ON LAKE ERIE DURING 1977
ACCORDING TO RECREATIONAL ACTIVITY
(Rounded to nearest 500)

<u>Activities</u> <u>Category</u>	<u>Total</u>	<u>Percentage</u>
Recreational Boating	13,333,500	15.3
Swimming	15,649,500	17.9
Sunbathing	3,327,000	3.8
Picnicking (day use only) ¹	5,060,000	5.8
Pier Fishing	10,701,000	12.3
Photography	70,000	.1
Walking for Pleasure	8,676,000	9.9
Hiking - Trails	675,000	.8
Sight-Seeing	3,421,000	3.9
Outdoor Games	11,005,000	12.6
Social Campfire Gatherings	9,374,000	10.7
Bicycling	739,000	.9
Nature Study	471,000	.5
Other	4,811,000	5.5
TOTAL	<u>87,313,000</u>	<u>100.0</u>

1 Because it is difficult to assess whether preparation of food and eating are enjoyable pastimes or housekeeping chores for campers, only day use visitors are identified as picnickers.

accounted for almost 18 percent of all recreational activity hours during 1977. Recreational boating was the second most popular pastime and accounted for 15.3 percent of all recreational hours. Outdoor games and pier fishing were the third and fourth most popular recreational activities.



Beach Scene
Port Dover - Lake Erie

Table 13:2 is used to present information similar to that presented in Table 12:2. However in this case, boating is not included as an activity, and a distinction is made between boaters and general recreationists, between residents and non-residents. According to the information presented in this table, resident general recreationists spent 47,233,000 hours on Lake Erie recreational activities. Resident boaters spent 10,344,000 hours on activities other than boating. Similarly, non-resident Canadian and other

TABLE 13:2

TOTAL ESTIMATED HOURS OF LAKE ERIE RECREATIONAL ACTIVITIES
OTHER THAN BOATING AMONG BOATERS AND GENERAL RECREATIONISTS
ACCORDING TO TYPE OF ACTIVITY - 1977

(Rounded to nearest 1000)

Activities Category	RESIDENT						NON-RESIDENT CANADIAN NON-RESIDENT					
	Boaters		General Recreationists		Total		Boaters		General Recreationists		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Swimming	2,482,000	24.0	8,360,000	17.7	10,842,000	18.8	1,142,000	28.1	3,665,000	29.7	4,807,000	29.3
Sunbathing	652,000	6.3	2,031,000	4.3	2,683,000	4.7	102,000	2.5	543,000	4.4	645,000	3.9
Picnicking (day use only)	1,200,000	11.6	1,842,000	3.9	3,042,000	5.3	463,000	11.4	1,555,000	12.6	2,018,000	12.3
Pier Fishing	1,045,000	10.1	7,888,000	16.7	8,933,000	15.5	719,000	17.7	1,049,000	8.5	1,768,000	10.8
Photography	10,000	.1	47,000	.1	57,000	.1	0	-	12,000	.1	12,000	.1
Walking for Pleasure	1,551,000	15.0	5,526,000	11.7	7,077,000	12.3	500,000	12.3	1,098,000	8.9	1,598,000	9.7
Hiking-Trails	207,000	2.0	189,000	.4	396,000	.7	45,000	1.1	235,000	1.9	280,000	1.7
Sight-Seeing	155,000	1.5	1,889,000	4.0	2,044,000	3.5	130,000	3.2	1,246,000	10.1	1,376,000	8.4
Outdoor Games	745,000	7.2	8,502,000	18.0	9,247,000	16.1	475,000	11.7	1,283,000	10.4	1,758,000	10.7
Social Campfire Gatherings	1,738,000	16.8	6,282,000	13.3	8,020,000	13.9	280,000	6.9	1,074,000	8.7	1,354,000	8.3
Bicycling	21,000	.2	473,000	1.0	494,000	.9	36,000	.9	210,000	1.7	246,000	1.5
Nature Study	93,000	.9	378,000	.8	471,000	.8	0	-	0	-	0	-
Other	445,000	4.3	3,826,000	8.1	4,271,000	7.4	171,000	4.2	370,000	3.0	541,000	3.3
TOTAL	10,344,000	100.0	47,233,000	100.0	57,577,000	100.0	4,063,000	100.0	12,340,000	100.0	16,403,000	100.0

Source: Marina Clientele and General Recreational Surveys - 1977

non-resident general recreationists spent 12,340,000 hours on activities associated with Lake Erie. Non-resident Canadian and other non-resident boaters spent 4,063,000 hours on activities other than boating. Swimming was the most popular leisure time pursuit among all resident categories.



Boys Fishing From Pier

Table 14:2 is used to present information on the number and percentage of day and overnight visitors who used Lake Erie for recreational purposes according to resident category during 1977. The information presented in this table shows that overnight visits were more popular than day visits among all categories. Further, it shows that boaters were more likely to stay overnight than were general recreationists during the summer of 1977. Day visits were most popular among resident general recreationists.

TABLE 14:2

NUMBER AND PERCENTAGE DAY AND OVERNIGHT DIRECT
USERS¹ OF LAKE ERIE FOR RECREATIONAL PURPOSES
ACCORDING TO RESIDENT CATEGORY

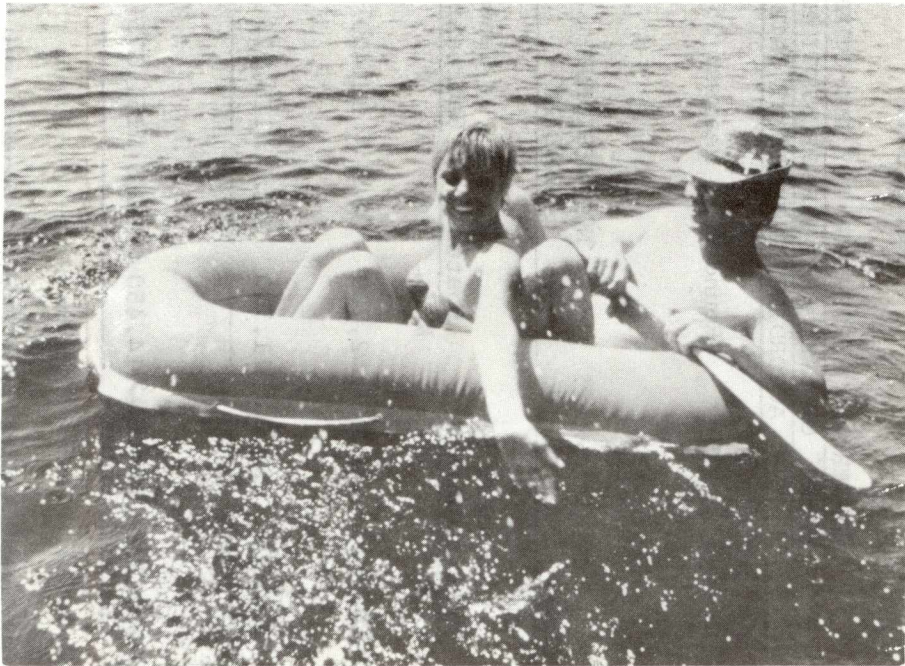
(Rounded to nearest 25)

	<u>RESIDENT</u>				<u>NON-RESIDENT CANADIAN</u>				<u>NON-RESIDENT</u>			
	<u>Boaters</u>		<u>General Recreationists</u>		<u>Boaters</u>		<u>General Recreationists</u>		<u>Boaters</u>		<u>General Recreationists</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Day	7,650	32.1	183,600	46.8	2,700	18.7	32,400	21.4	500	17.1	14,650	30.0
Overnight	<u>16,175</u>	<u>67.9</u>	<u>208,700</u>	<u>53.2</u>	<u>11,750</u>	<u>81.3</u>	<u>118,975</u>	<u>78.6</u>	<u>2,425</u>	<u>82.9</u>	<u>34,175</u>	<u>70.0</u>
TOTAL	<u>23,825</u>	<u>100.0</u>	<u>392,300</u>	<u>100.0</u>	<u>14,450</u>	<u>100.0</u>	<u>151,375</u>	<u>100.0</u>	<u>2,925</u>	<u>100.0</u>	<u>48,825</u>	<u>100.0</u>

1 Users information does include boaters from Marina Survey, and therefore, would not include overnight visitors who spent the night on their boats.

Source: General Recreational Survey - 1977

It is clear from the information presented in this section that convenience and being close to home are the main reasons why most recreationists visited Lake Erie during 1977. Fishing was noted an important reason for boaters to visit Lake Erie. Boaters, like general recreationists, participated in all forms of recreational activity during 1977. Boating was second only to swimming in terms of total activity days. Most recreationists who visited the area during 1977 stayed overnight. However, a larger percentage of boaters stayed overnight than did general recreationists.



On Water Recreational Activity

Economic Impact of Recreational Activities on Area
Adjacent to Lake Erie

There are a number of different methods which can be used to show the economic impact of outdoor recreation on the Lake Erie area.

All of these methods involve estimating the total amount of expenditure which is directly attributable to Lake Erie recreationists, determining what percentage of these total expenditures would not be made if recreational opportunities were not available, and applying the appropriate multiplier.⁵ However, the development of such calculations is difficult when large numbers of residents are involved and useable multipliers are not available.⁶ Therefore, given the limited amount of data that are available, it would seem appropriate to provide descriptive information which shows the relative magnitude of expenditures without a detailed assessment of the economic value. The relative descriptive information is presented in this section.

Numerous different business enterprises depend directly on the expenditures of recreationists visiting the area to participate in the recreational opportunities available on the lake. However, it is not always possible to identify precisely those businesses, (or the percentage of these businesses) which are directly dependent on this activity. Some businesses which are dependent on the lake's recreational activity would be located on thoroughfares, others near border crossings, and some in the larger metropolitan locations just outside the resident area. Nonetheless, a large number of Lake Erie area businesses were identified as being at least partially dependent on Lake Erie recreational activity during 1977.

Table 15:2 provides a breakdown on the private businesses

5 The size of a multiplier varies according to the "leakages" in the system. These "leakages" result from the amount of money which is saved or spent outside the area as a result of successive rounds of expenditure. See: Steven J. Weiss and Edwin C. Gooding, "Estimation of Differential Employment Multipliers in a Small Regional Economy" Regional Economics, ed. H. W. Richardson, McMillan St. Martin's Press, 1969, pp. 55-68.

6 For an explanation of the difficulties involved see: William F. Sinclair, The Socio-Economic Importance of Maintaining the Quality of Recreational Resources in Northern British Columbia: The Case of Lakelse Lake, Fisheries and Marine Service, PAC/T-74-10, Northern Operations Branch, Pacific Region, 1974, pp. 49-54.

identified as dependent on the recreational activities, that were associated with Lake Erie during 1977 by type of services provided. According to the information presented in this table, almost 24 percent of these businesses were either marinas or boat clubs, 15.7 percent of these businesses were restaurants, and nearly 10 percent were commercial campgrounds. More than 300 of the Lake Erie area's business enterprises are dependent on Lake Erie recreationists for either all or a substantial portion of their business revenue.

Information on average expenditures per day of resident, non-resident Canadian, non-resident boaters and general recreationists is presented in Table 16:2. During 1977, resident boating parties, on average, spent \$12.41 per day and resident general recreational parties spent \$3.53 per day. Non-resident Canadian boating parties spent \$22.55 per recreational day and non-resident Canadian general recreationists spent \$3.72 per day. Non-resident boaters spent \$8.40 per day and non-resident general recreationists spent \$11.17 per day. Both resident and non-resident Canadian boaters spent substantially more per day than did resident and non-resident Canadian general recreationists. However, non-resident boaters spent almost 25 percent less per day than did non-resident general recreationists.

Table 17:2 is used to provide the estimated total yearly spending according to the expenditure categories for those visiting Lake Erie for recreational purposes during 1977. By far the greatest single total expenditure by any group was by resident general recreationists. Resident general recreationists spent \$40,026,000 visiting Lake Erie during 1977. Almost 57 percent of these expenditures were on food and beverage. Resident boaters spent \$12,423,000 on Lake Erie recreational activities during 1977. Nearly 50 percent of these expenditures were on food and beverage. Surprisingly, expenditures on transportation and gas represented

TABLE 15:2

PRIVATE BUSINESSES IDENTIFIED AS DEPENDENT
ON LAKE ERIE RECREATIONAL ACTIVITY
ACCORDING TO TYPE OF SERVICES¹ - 1977

<u>Type of Service</u>	<u>Number</u>	<u>Percentage</u>
Marina and Boat Clubs	79	23.8
Other Marina Service Outlets	4	1.2
Restaurant	52	15.7
Commercial Campgrounds	33	9.9
Motel/Cottage Accommodations	27	8.1
Variety & Souvenir Stores	27	8.1
Fishing Supplies & Services	25	7.5
Grocery Stores	25	7.5
Sporting Goods & License Sales	20	6.0
Camping Equipment Sales & Rental	9	2.7
Gas Stations	8	2.4
Amusement Parks	5	1.5
Laundry	1	.3
Other	17	5.1
TOTAL	332	100.0

1 Many of the business enterprises provide more than one type of service.

TABLE 16:2

AVERAGE EXPENDITURES OF RECREATIONAL
PARTIES VISITING LAKE ERIE PER DAY
ACCORDING TO RESIDENT CATEGORY - 1977

	<u>Boaters</u>	<u>General</u> <u>Recreationists</u>
	\$	\$
Resident	\$12.41	\$ 3.53
Non-Resident Canadian	22.55	3.72
Non-Resident	8.40	11.17

Source: General Recreational and Marina Operator Surveys - 1977

TABLE 17:2

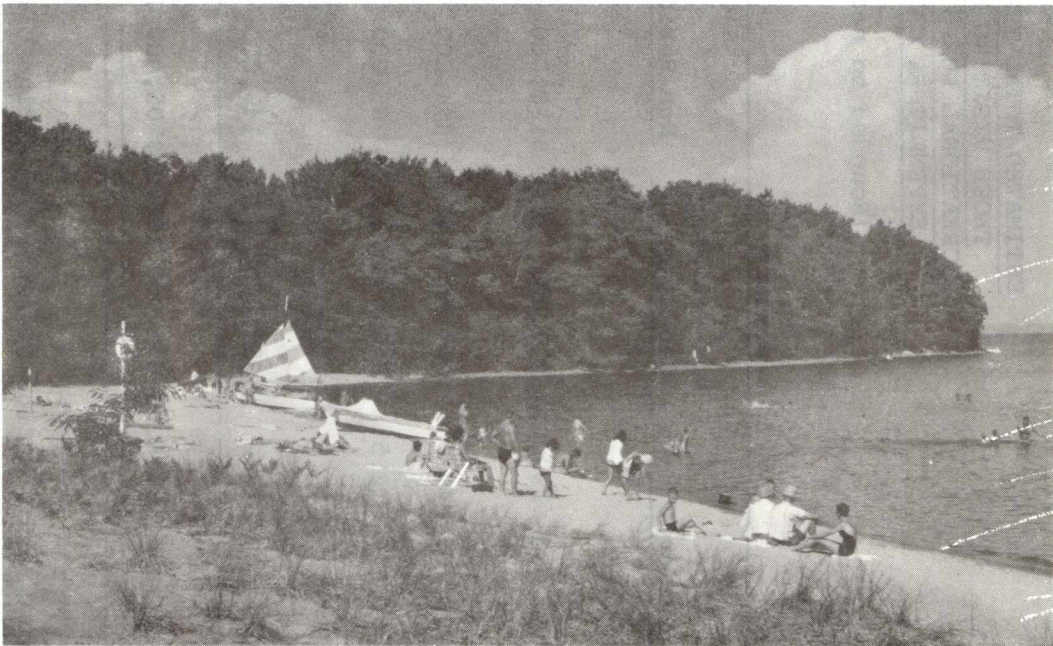
ESTIMATED TOTAL YEARLY SPENDING OF
THOSE VISITING LAKE ERIE FOR
RECREATIONAL PURPOSES ACCORDING TO
EXPENDITURE CATEGORY - 1977

(Rounded to nearest \$1,000)

	<u>Boaters</u>						<u>General Recreationists</u>					
	<u>Resident</u>		<u>Non-Resident</u>		<u>Non-Resident</u>		<u>Resident</u>		<u>Non-Resident</u>		<u>Non-Resident</u>	
	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>
Transportation and Gas	\$ 2,410,000	19.4	\$1,213,000	21.3	\$128,000	18.2	\$ 8,806,000	22.0	\$2,031,000	24.8	\$ 281,000	22.8
Food and Beverage	6,199,000	49.9	2,569,000	45.1	344,000	48.8	22,735,000	56.8	4,308,000	52.6	635,000	51.5
Accommodation	1,553,000	12.5	854,000	15.0	86,000	12.2	7,004,000	17.5	1,482,000	18.1	196,000	15.9
Incidentals Boat Repairs and Storage	2,261,000	18.2	1,059,000	18.6	147,000	20.9	1,481,000	3.7	369,000	4.5	121,000	9.8
TOTAL	\$12,423,000	100.0	\$5,695,000	100.0	\$705,000	100.0	\$40,026,000	100.0	\$8,190,000	100.0	\$1,233,000	100.0

Source: General Recreational, Marina Operator and Marina Clientele Surveys - 1977

somewhat less of total non-resident expenditures than of total non-resident Canadian expenditures. Non-resident boaters devoted less of their total expenditures to transportation and gas than did resident boaters. Also apparent in this table is the substantial difference in expenditures on incidentals between boaters and general recreationists. Expenditures on incidentals, boat repairs and storage represented only 3.7 percent, 4.5 percent and 9.8 percent, respectively, of resident, non-resident Canadian and other non-resident general recreationists' total spending. Incidentals, boat repairs and storage represented 18.2, 18.6 and 20.9 percent of total expenditures, respectively, for resident, non-resident Canadian and other non-resident boaters. Boat repairs and boat storage was a major expenditure item among Lake Erie recreational boaters during 1977.



Beach Scene - Lake Erie

Table 18:2 provides estimated wages, salaries and employment directly attributable to recreational activities in the Lake Erie area during 1977. According to the information presented in this table, the expenditures made in the Lake Erie area as a result of Lake Erie recreational activities directly generate \$13,655,000 in wages and salaries and 853 man-years of employment. Approximately \$3,769,000 of the wages and salaries and 235 man-years of employment (27.6 percent) is attributable to recreational boaters.

The information presented in this section has shown that Lake Erie recreational activities generated a large amount of expenditure in the Lake Erie area during 1977. These expenditures created a substantial number of jobs and at the same time provided many hours of recreational enjoyment for residents of the area. It should be cautioned, however, that the estimates presented here are as a result of direct expenditures and have not been adjusted by a multiplier (which would increase the total economic injection into the area) or by percentages which identify precisely that amount which would have not been spent in the area if no recreational opportunities were available (which would decrease the economic injection into the area). The estimates do not represent the economic value of recreational activities to the area, but do provide a good indication of the economic importance of Lake Erie recreational opportunities to residents of the Lake Erie area and to others living in Ontario.

Conclusion

The primary purpose of this chapter was to identify the socioeconomic importance of the boating opportunities available on Lake Erie to the people of Ontario. In accomplishing this, it has been determined that an estimated 860,500 individuals visited areas immediately adjacent to Lake Erie for recreational purposes during 1977. Almost 69 percent of this total, or approximately 592,500 individuals, directly used the lake for 45,132,000 days of recreational activity.

TABLE 18:2

ESTIMATED WAGES, SALARIES AND EMPLOYMENT

DIRECTLY ATTRIBUTABLE TO LAKE ERIE RECREATIONAL

ACTIVITIES IN THE LAKE ERIE AREA

ACCORDING TO BOATERS AND GENERAL RECREATIONISTS DURING 1977

(Rounded to nearest \$1,000)

	<u>Employment</u> ¹		<u>Wages and Salaries</u>	
	<u>#</u>	<u>%</u>	<u>\$</u>	<u>%</u>
Boaters	235	27.6	\$ 3,769,000	27.6
General Recreationists	<u>618</u>	<u>72.4</u>	<u>9,886,000</u>	<u>72.4</u>
TOTAL	<u>853</u>	<u>100.0</u>	<u>\$13,655,000</u>	<u>100.0</u>

1 All employment is given on a man-year basis and included all seasonal employment (i.e. three persons working for four months each year is one man-year of employment).

Source: Marina Operator and Associated Businesses Surveys - 1977

Over 14 percent, or 123,500 individual boaters, participated in 3,935,000 days of Lake Erie recreational activities. Boating itself accounted for 15.3 percent, or 13,333,500 hours, of the total 87,313,000 hours of the Lake Erie related recreational activity that took place during 1977.

Residents of the Lake Erie area generated 75 percent of all the Lake Erie related recreational activity carried out by boaters. Non-resident Canadians accounted for 18.8 percent, and non-residents 6.2 percent, of the total recreational activities participated in by those identified as boaters. More than 28 percent of all boater activity is either by non-resident Canadians or other non-residents. Slightly under 21 percent of all general recreational activity is attributable to non-resident Canadians or non-residents. The recreational opportunities available on Lake Erie are more popular among those identified as boaters than among general recreationists.

The recreational opportunities available on Lake Erie are participated in by all age groups, all occupational categories and every income strata. However, a higher percentage of boaters than of general recreationists were in the 40 to 49 years of age category. This was true of both residents and non-residents alike. A higher percentage of boaters than of general recreationists were employed in the managerial and administrative sales category, and more boaters earned \$50,000 per year than did general recreationists.

There appears no distinct difference between residents and non-residents in their reasons for visiting Lake Erie. Both residents and non-residents identified close to home and convenience as a main reason for visiting Lake Erie. The most important single leisure pastime was swimming (which was also an important reason for visiting the area) among both residents and non-residents. Almost 10 percent of resident boaters and over nine percent of non-resident boaters

identified fishing as a major reason for visiting the lake. Generally, non-residents preferred to swim and were more appreciative of the "quiet, clean atmosphere" than residents. It was also noted, that boaters were more likely to stay overnight than were general recreationists.

The information that was presented on non-resident Canadian and non-resident expenditures revealed that both non-resident Canadian boaters and general recreationists devoted a higher percentage of their total expenditures to gas and transportation than did non-residents. This probably indicates that a great many non-resident visitors live in close proximity to the north side of Lake Erie.

The economic information presented in this chapter does not identify the economic value of outdoor recreation or boating to the people of Ontario. However, it does provide a good indication of the economic importance of Lake Erie recreational opportunities, including boating opportunities, to residents of the Lake Erie area and to others living in Ontario. In this regard, it was estimated that more than 300 businesses were dependent on Lake Erie recreation for all or a substantial portion of their business revenue. The wages and salaries directly attributable to the recreational activities associated with Lake Erie amounted to \$13,655,000 during 1977. It is estimated that 853 man-years of employment were provided by these recreational opportunities. Approximately \$3,769,000 in wages and salaries and 235 man-years of employment were generated by boaters' expenditures in the Lake Erie area during 1977.

CHAPTER THREE

RECREATIONAL BOATING REQUIREMENTS AND
ADEQUACY OF EXISTING FACILITIES ON LAKE ERIE

The discussion and the analysis presented in Chapter Two identifies the overall level of outdoor recreational activity, the primary reasons for visiting the Lake Erie area and the socioeconomic importance of recreational boating. In this chapter the pattern of participation of boaters is more thoroughly examined. Information is presented on boater facilities, the services available, the adequacy of existing facilities and future boating requirements. It is intended that this chapter will provide the information necessary to identify a direction for future federal Small Craft Harbour developments.

Existing Boating Requirements

In addition to the general area classification presented in the introduction, there is a need to divide the north shore of the lake into three subareas. It is intended that these three subareas will provide the reader with a good appreciation of the distribution of recreational activity on the Canadian side of the lake. The three subareas on the north side of Lake Erie are shown on Map Three. Subarea I includes the counties of Essex and Kent and is located on the western extreme of the lake. Subarea II is the county of Elgin located in the central area. Subarea III is located on the most easternly part of the lake and includes the counties of Haldimand/Norfolk and Niagara.

Table 1:3 is used to present information on the distribution of the Lake Erie recreational activity of residents, non-resident Canadians and other non-residents according to subarea for 1977.¹ A

¹ Since all recreationists included in the survey were engaged in some type of recreational pastime, it is expected that the distribution of individual recreationists would accurately reflect the amount of recreational activity which took place in particular locations.

MAP THREE

DISTRIBUTION OF BOATERS ALONG NORTH SHORE OF LAKE ERIE

Summer of 1977

LEGEND

Subarea Boundaries	—————
Resident Boaters	()
Non-Resident Canadian Boaters	—————
Non-Resident Boaters	" "

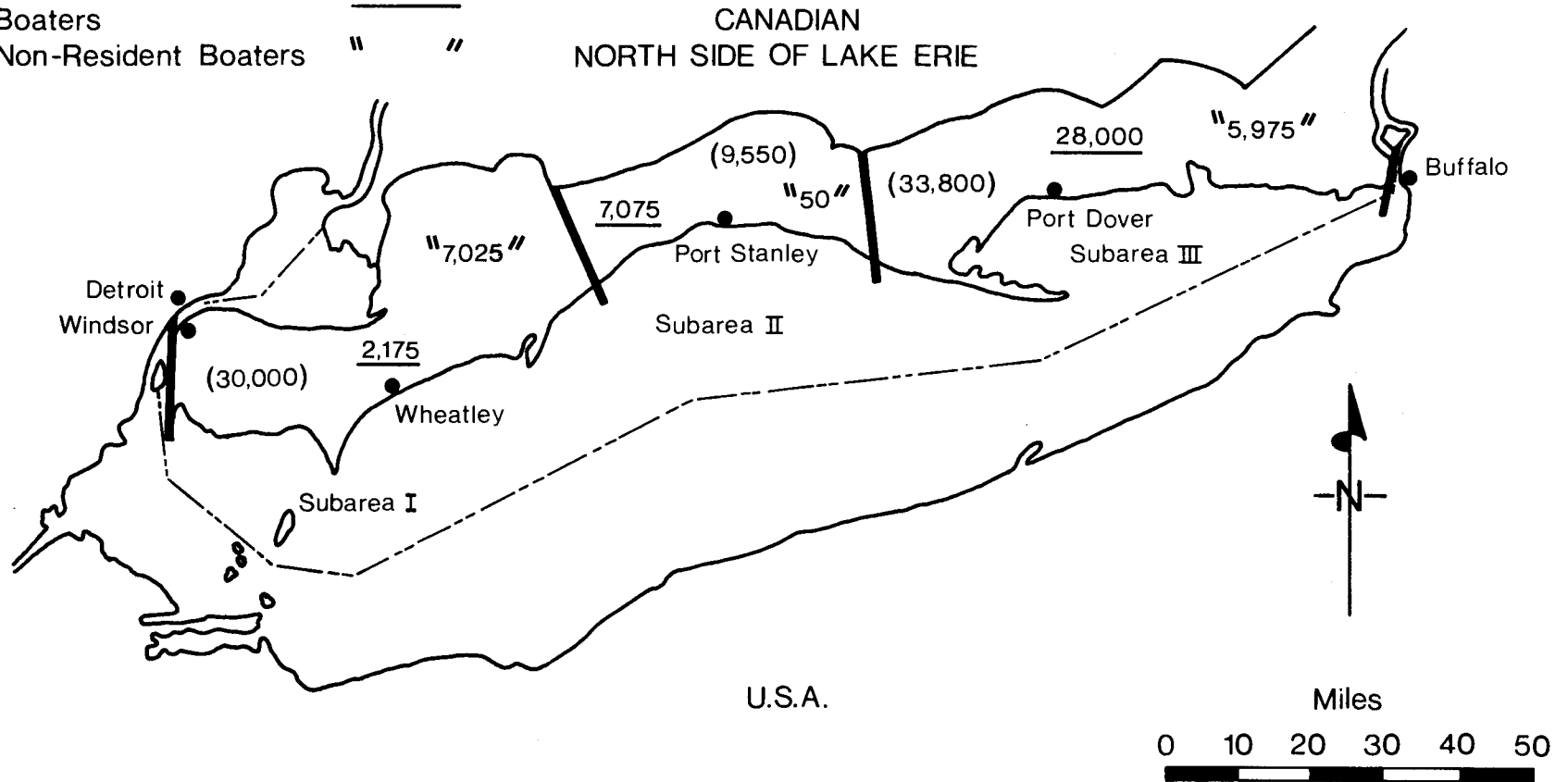


TABLE 1:3

LAKE ERIE RECREATIONAL ACTIVITY OF RESIDENTS,
NON-RESIDENT CANADIANS AND NON-RESIDENTS
ACCORDING TO SUBAREA - 1977

(Rounded to nearest 25)

	BOATERS						GENERAL RECREATIONISTS						Resident Population of Lake Erie Area	
	Resident		Non-Resident Canadian		Non-Resident		Resident		Non-Resident Canadian		Non-Resident			
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Subarea I (Essex & Kent)	30,000	40.9	2,175	5.8	7,025	53.8	161,225	41.1	13,475	8.9	24,075	49.3	416,500	43.9
Subarea II (Elgin)	9,550	13.0	7,075	19.0	50	.4	114,950	29.3	52,525	34.7	4,350	8.9	69,075	7.3
Subarea III (Haldimand/Norfolk & Niagara)	33,800	46.1	28,000	75.2	5,975	45.8	116,125	29.6	85,375	56.4	20,400	41.8	462,400	48.8
TOTAL	73,350	100.0	37,250	100.0	13,050	100.0	392,300	100.0	151,375	100.0	48,825	100.0	947,975	100.0

Source: Marina Clientele and General Recreational Surveys - 1977

Statistics Canada, Census Division, 1976

comparison between the information presented in Table 1:3 and the subareas shown in Map Three reveals that the majority of Lake Erie recreational activity is located on the two ends of the lake. This is particularly true of boaters. For example, 70.7 percent of all resident general recreational activity that took place during 1977 was located in subareas I and III. Approximately 87 percent of all resident boater activity took place in subareas I and III. Furthermore, the information presented in this table reveals that subarea II is used primarily by either residents or non-resident Canadians. Only 7.3 percent of the resident population lives in subarea II. In contrast, 29.3 percent of all resident general recreational activity and 34.7 percent of all non-resident Canadian general recreational activity took place in subarea II. On the basis of the information presented here, it would appear safe to conclude that subareas I and III support the overwhelming majority of all recreational activity, particularly boating activity, that takes place on the north side of the lake. However, it also appears true that subarea II is relatively more popular among both resident and non-resident Canadian recreationists than it is among non-residents.

Table 2:3 is used to estimate the number and percentage of boats that are privately owned by residents of the Lake Erie area according to type of boat during 1977. The information presented in this table shows that 89,850 boats were owned by residents of the Lake Erie area during 1977. An estimated 41,300 (46 percent) of these boats were outboard. Another 23,350, or 26 percent, were canoes; 8,400, or 9.4 percent, were rowboats. Inboard/outboards, inboards, sailboats and houseboats accounted for 13.2 percent of the total number of boats owned by residents of the Lake Erie area.

Table 3:3 is used to present the number and percentage of different kinds of boats owned by marina clientele on Lake Erie according to resident category during 1977. The information presented in this table shows that 26,700 boats were owned by persons who utilized

TABLE 2:3

ESTIMATED NUMBER AND PERCENTAGE OF
PRIVATELY OWNED BOATS BY RESIDENTS
OF LAKE ERIE AREA
ACCORDING TO TYPE OF BOAT - 1977
(Rounded to nearest 50)

<u>Type</u>	<u>Number of Privately Owned Boats</u>	<u>Percentage of Privately Owned Boats</u>
Inboard/Outboard	2,800	3.1
Outboard	41,300	46.0
Inboard	1,650	1.8
Sailboat	7,450	8.3
Houseboat	250	.3
Canoe	23,350	26.0
Rowboat	8,400	9.4
Other	<u>4,650</u>	<u>5.2</u>
TOTAL	<u><u>89,850</u></u>	<u><u>100.0</u></u>

Source: Calculated from information gathered in surveys conducted during the summer of 1977.

TABLE 3:3

NUMBER AND PERCENTAGE OF BOAT TYPES OWNED
BY MARINA CLIENTELE ON LAKE ERIE
ACCORDING TO RESIDENT CATEGORY - 1977

(Rounded to nearest 25)

	<u>Resident</u>		<u>Non-Resident</u>				<u>Total</u>	
	<u>#</u>	<u>%</u>	<u>Canadian</u>		<u>Non-Resident</u>		<u>#</u>	<u>%</u>
			<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>		
Sail (fixed keel)	1,375	10.0	1,025	12.2	1,150	25.3	3,550	13.3
Sail (retractable)	525	3.9	625	7.5	400	8.8	1,550	5.8
Sail	25	.2	25	.3	0	-	50	.2
Outboard	6,800	49.5	4,325	51.4	1,300	28.6	12,425	46.5
Inboard	1,950	14.1	1,375	16.3	900	19.8	4,225	15.8
Inboard/Outboard	3,000	21.8	950	11.4	775	17.0	4,725	17.7
Others	75	.5	75	.9	25	.5	175	.7
TOTAL	<u>13,750</u>	<u>100.0</u>	<u>8,400</u>	<u>100.0</u>	<u>4,550</u>	<u>100.0</u>	<u>26,700</u>	<u>100.0</u>

Source: Marina Clientele Survey - 1977

Lake Erie marinas during 1977. More than half of these boats, or 13,750, were owned by residents of the Lake Erie area. Another 8,400, or 31.5 percent, were owned by non-resident Canadians. Non-residents accounted for 4,550, or 17 percent, of the total boats utilized by marina clientele in the Lake Erie area during 1977.



Private Boat Accommodation - Lake Erie

This same table, also reveals a number of interesting facts about resident utilization of the marina facilities. More than 25 percent of all non-residents who use the marinas located on the north side of Lake Erie own fixed keel sailboats. In comparison, only 10 percent of all residents who use marinas, own fixed keel sailboats. Similarly, a higher percentage of non-residents appear to utilize inboards; a smaller percentage of non-residents own outboards. When the information presented in Table 3:3 is compared with the information presented

previously in Table 2:3, it is revealed that only 13,750 of the 89,850, or 15.3 percent, of resident owned boats are utilized by individuals who use local marinas or small boat harbour facilities. On the basis of this, it would seem reasonable to conclude that most non-resident marina clientele own boats which require marina facilities and services. Resident and non-resident Canadian marina clientele, although dependent on the existence of marina boating facilities, do not appear to be as critically dependent on the existence of these facilities as non-residents.

Existing Facilities

During the summer of 1977, four different types of marina or small harbour facilities were identified on the north side of Lake Erie. These were: commercial public marinas, private membership marinas, Small Craft Harbours facilities and other government harbour docking facilities. All marinas which are either under private or multiple proprietorship and open to the general public are identified as commercial public marinas. Marinas which are either multiple or single proprietorship and are not open to the general public are identified as private membership marinas. Small Craft Harbours facilities are those facilities owned by the Crown Federal and managed by the Small Craft Harbours Branch of Fisheries and Marine Service. Other government facilities include all provincial and federal docking facilities which are not the responsibility of the Small Craft Harbours Branch.

Map Four shows the distribution of marinas and Small Craft Harbour facilities, according to type of facilities, on the north side of Lake Erie during 1977. A comparison between the information shown on Map Four and the information presented in Table 4:3 reveals a number of interesting facts. First, the distribution of marina facilities roughly coincides with the distribution of boating activity on the north side of the lake. Second, private membership marinas are located

MAP FOUR

DISTRIBUTION OF MARINAS AND SMALL CRAFT HARBOURS FACILITIES NORTH SIDE OF

LAKE ERIE
Summer of 1977

LEGEND

- Commercial Public ▲
- Private Membership ■
- Small Craft Harbours □
- Other Government Facilities ▽

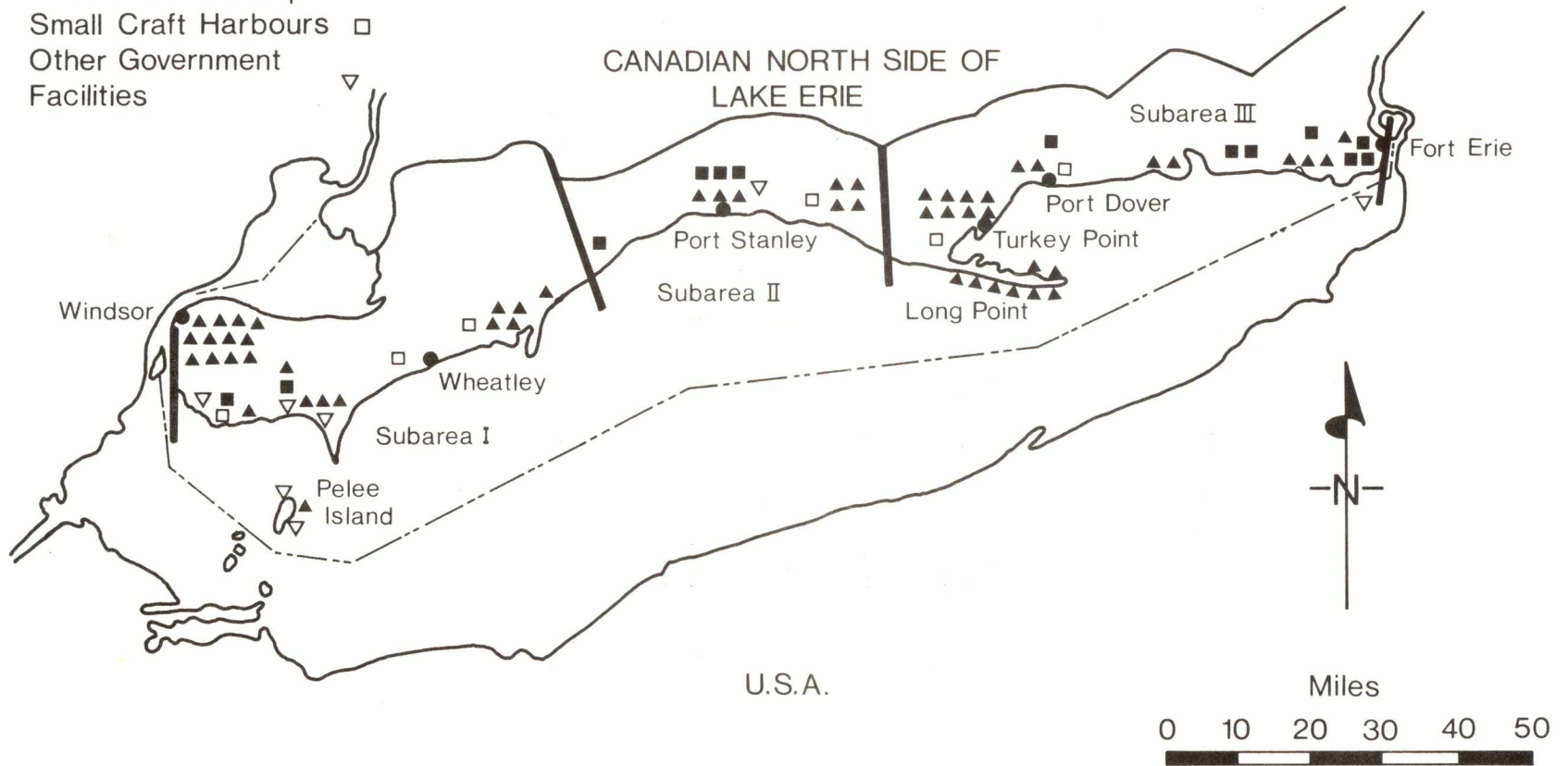


TABLE 4:3

NUMBER AND PERCENTAGE OF LAKE ERIE MARINAS

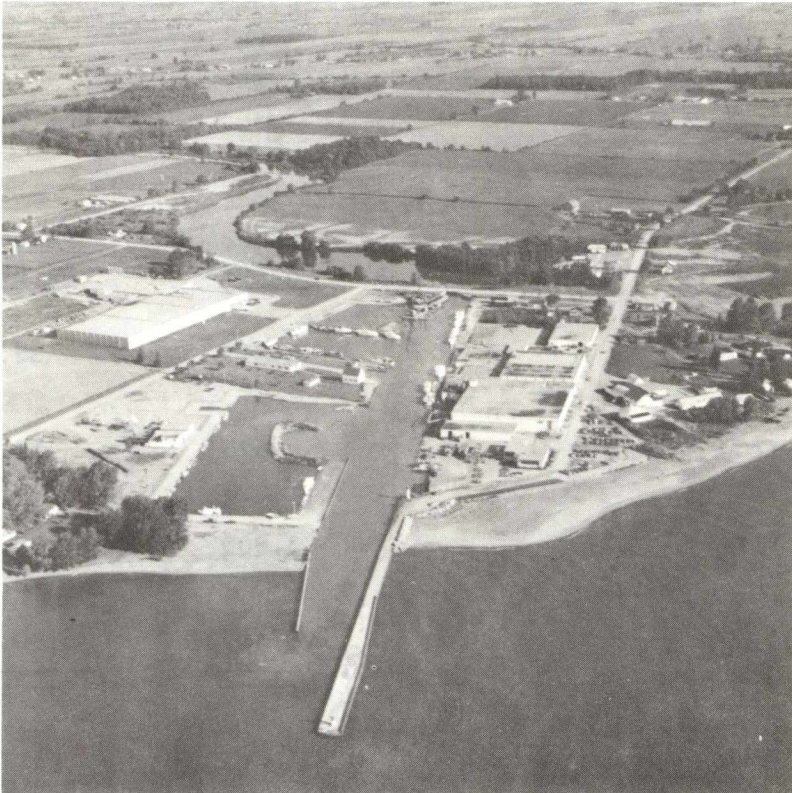
ACCORDING TO TYPE OF FACILITY

AND SUBAREA - 1977

Type of Marina Facility Subarea	Commercial Public		Private Membership		Small Craft Harbour		Other Government Facilities	
	#	%	#	%	#	%	#	%
	I	23	42.6	2	15.4	3	50.0	5
II	7	13.0	4	30.8	1	16.7	1	14.3
III	24	44.4	7	53.8	2	33.3	1	14.3
TOTAL	54	100.0	13	100.0	6	100.0	7	100.0

Source: Marina Operators Survey - 1977

in all three subareas, but most are located in subarea III where non-resident Canadian boating activity is most prevalent. Third, commercial public marinas account for more than 67.5 percent of the total number of harbour facilities available to small craft. Finally, there are as many private membership marina facilities as there are government facilities on the Canadian side of the lake.



Small Craft Harbour Facilities - Wheatley

The estimated number and percentage of on water berths that were available on the north side of Lake Erie during 1977 are presented in Table 5:3. According to the information presented in this table, nearly 33 percent of the on water berths available on the north side of Lake Erie were located in subarea I; 11.6 percent were located in subarea II and 55.6 percent were located in subarea III. Once again, it would appear that the distribution of on water berths roughly coincides

TABLE 5:3

NUMBER AND PERCENTAGE OF ESTIMATED
TOTAL ON WATER BERTHING CAPACITY ON LAKE ERIE
ACCORDING TO SUBAREA - 1977

(Rounded to nearest 25)

	<u>Number of</u> <u>Berths</u>	<u>Percentage</u> <u>of Berths</u>
Subarea I	1,775	32.9
Subarea II	625	11.6
Subarea III	<u>3,000</u>	<u>55.6</u>
TOTAL	<u>5,400</u>	<u>100.0</u>

Source: Marina Operators Survey - 1977

with the distribution of boating activity. However, it is also worth noting that the total estimated berthage of 5,400 is roughly 20 percent of the total number of boats that were owned by marina clientele (26,700) during the summer of 1977.



Protected On Water Berthage - Port Rowan

Table 6:3 is used to present the number and percentage of marinas possessing particular boating services according to subarea during 1977. The information presented in this table reveals that only 26 of the 80 marinas, or small harbour facilities, provided electrical service at dockside. Twenty-four provided water, 11 launching facilities, three pump-out services and eight on water storage. Nine possessed club house facilities, nine provided toilet facilities and 39 provided gas bar services. Only four provided off water storage. It is also revealed in this table that every subarea possesses at least

TABLE 6:3

NUMBER AND PERCENTAGE OF MARINAS
POSSESSING PARTICULAR BOATING CLIENTELE SERVICES
ACCORDING TO SUBAREAS - 1977

	<i>Electrical Outlets</i>		<i>Water</i>		<i>Launching Facilities</i>		<i>Pump Out</i>		<i>Storage</i>		<i>Clubhouse Facilities</i>		<i>Toilet Facilities</i>		<i>Gas Bar</i>		<i>Temporary Off Water Storage</i>	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Subarea I	8	30.8	8	33.3	3	27.3	1	33.3	1	12.5	1	11.1	2	22.2	14	35.9	1	25.0
Subarea II	5	19.2	5	20.9	1	9.1	1	33.3	2	25.0	2	22.2	2	22.2	6	15.4	1	25.0
Subarea III	13	50.0	11	45.8	7	63.6	1	33.3	5	62.5	6	66.7	5	55.6	19	48.7	2	50.0
TOTAL	26	100.0	24	100.0	11	100.0	3	100.0	8	100.0	9	100.0	9	100.0	39	100.0	4	100.0

Source: Marina Operators Survey - 1977

one marina which provides one type of service. Nonetheless, there appears to be a tremendous shortage of some services. For example, only one marina in each of the subareas possess a pump-out service. Only two marinas in each of the two subareas I and II possess toilet facilities. The information presented in this table suggests an overall shortage of marina clientele services.

The number and percentage of marinas offering boat repairs, launching and rental services during 1977 are presented in Table 7:3. According to the information presented in this table, 45 of the total 80 marinas located on the north side of Lake Erie provided launching ramps, another 12 provided small craft crane and travel lifts and 14 provided large craft crane and travel lifts. Twenty marinas provided hull and engine maintenance service, while three provided only engine maintenance. Seventeen different marinas provided boat rental services. In terms of overall service, the facilities appear inadequate. For the most part, the distribution of boating services over the three subareas appears to favourably coincide with the level of recreational boating activity that takes place in each of the subareas.

Table 8:3 is used to show the number and percentage of different marina fee structures on Lake Erie during 1977. This table shows that during the summer of 1977 at least 12 different systems of charging boaters for services were used on the north side of Lake Erie. The two most popular methods were to charge the boater either a flat rate according to some pre-established length category or a differential fee according to the per foot length of the boat. However, even these two fee structures were not applied consistently. For example, some marina operators had established different length categories, while others had established a minimal hourly or daily rate. Moreover, the fees or rates charged varied with practically every marina. In at least two cases, as shown in the table, the owner or marina operator had no established fee structure and was free to charge a different fee for each different customer. A number of different operators charged according to the

TABLE 7:3

NUMBER AND PERCENTAGE OF MARINAS OFFERING
BOAT REPAIR, LAUNCHING AND RENTAL SERVICES
DURING 1977 ACCORDING TO SUBAREAS

	Launching Ramps		Small Craft Crane ¹ & Travel Lifts		Large Craft Crane & Travel Lifts		Engine Maintenance		Hull & Engine Maintenance		Boat Rentals	
	#	%	#	%	#	%	#	%	#	%	#	%
Subarea I	17	37.8	5	41.7	4	28.6	0	-	6	30.0	7	41.2
Subarea II	7	15.5	2	16.6	6	42.8	0	-	3	15.0	2	11.8
Subarea III	21	46.7	5	41.7	4	28.6	3	100.0	11	55.0	8	47.0
TOTAL	45	100.0	12	100.0	14	100.0	3	100.0	20	100.0	17	100.0

1 Large craft are defined as vessels 18 feet and over, small craft are vessels under 18 feet.

Source: Marina Operators Survey - 1977

TABLE 8:3

NUMBER AND PERCENTAGE OF DIFFERENT
MARINA BERTHING FEE STRUCTURES
ON LAKE ERIE - 1977

	<u>Number of Marinas</u>	<u>Percentage of Marinas</u>
Flat Rate length category	22	27.8
Length of Boat (Per Foot)	22	27.8
Commercial or Recreational	6	7.6
Length of Boat, Different Size Categories	4	5.1
Flat Rate or Per Foot, Depending on Width	3	3.8
Slip or Boat House	3	3.8
Frontage or Feet Per Season	2	2.5
Owner's Discretion, No Set Rate	2	2.5
Member or Non-Member	2	2.5
Flat Rate (Type of Boat)	1	1.3
Flat Rate (Depending on Beam)	1	1.3
Minimum, + Per Foot Rate Thereafter	1	1.3
No Response	11	12.7
TOTAL	<u>80</u>	<u>100.0</u>

1 Not all government harbours charge regular fees for use of berthing facilities.

Source: Marina Operators Survey - 1977

main use of the boat. This is revealed in the table which shows that six different marinas established their rates on the basis of whether the boat was used for the commercial or recreational purposes.

Adequacy of Existing Facilities

In the previous two sections it was established that the marinas and small boat harbour facilities located on the north side of Lake Erie have an estimated 5,400 water berths. These same marinas or boating outlets serve 123,650 boating customers who owned approximately 26,700 boats during 1977. This information indicates that there were approximately five boats in the area for every berth available on the Canadian side of the lake during the summer of 1977. However, this information does not reveal whether existing facilities adequately serve the needs of boaters, nor does it give any indication of the boating requirements of the resident population.

Table 9:3 is used to present information on the amount of public berthage on the lake and the average level of utilization. The information presented in this table shows that in subarea I, 1,250 on water commercial public berths were available, and that 825 of these were permanently utilized, for a 66 percent level of utilization. Subarea II had an estimated 350 water berths, of which 225 were permanently used, for a percentage utilization of 64.3 percent. Similarly, 2,250 water berths were available in subarea III; 1,975 of these were permanently used, which revealed an 87.8 percent level of utilization. The information presented in this table shows a modest level of utilization in both subareas I and II, but a very high level of utilization in subarea III. At very least, this would tend to suggest that there is a shortage of berthage facilities in subarea III. However this information alone, does not prove that there is adequate water berthage in subareas I and II. There is always a need to maintain a certain amount of berthage over and above that used for permanent accommodation to serve transient or mobile boaters. There also are the seasonal

TABLE 9:3

ON WATER PUBLICLY ACCESSIBLE BERTHAGE
AND LEVEL OF UTILIZATION ON LAKE ERIE

(Rounded to nearest 25)

	<u>Number on Water Berths Available</u>	<u>Number¹ on Water Berths Utilized</u>	<u>Average Percentage Utilization</u>
Subarea I	1,250	825	66.0
Subarea II	350	225	64.3
Subarea III	2,250	1,975	87.8

1 Does not include government dockside facilities nor private membership marinas.

Source: Marina Operators Survey - 1977

fluctuations which must be considered. Most marinas could use more water berthage during the height of the boating season than in the early spring or late fall. Since the information presented in Table 9:3 shows only the average level of utilization during the entire boating season, it can be assumed that there probably is a shortage of water berthage in subareas I and II during the main part of the boating season.

The number of winter storage boat accommodations available and the average percentage of utilization is presented in Table 10:3. The information presented in this table shows that the level of winter storage utilization in subarea I is 21.1 percent, the level of winter storage utilization in subarea II is 62.5 percent and in subarea III 57.1 percent. A comparison between the information presented in Table 9:3 and Table 10:3 shows that the level of berthage utilization in subarea II is 64.3 percent and the level of winter storage boat accommodation utilization in subarea II is 62.5 percent. These data are consistent with the information presented earlier which shows that subarea II is primarily used by residents and non-resident Canadians. It would seem reasonable to expect that in an area where residents and non-resident Canadians dominate, that the level of utilization of winter facilities would approximate the level of utilization during the summer.

Despite the evidence presented in Tables 9:3 and 10:3, it is difficult to draw firm conclusions about the adequacy of existing boating facilities on the north side of Lake Erie. Quantity does not necessarily reflect quality, nor does it necessarily reflect the special or unique needs of those who might prefer to take advantage of the recreational opportunities available on Lake Erie. It may be that a substantial portion of the resident population prefer other lakes where the service facilities are more abundant or of better quality. There is also the possibility that many non-resident boaters, who might otherwise choose to visit Lake Erie, visit other areas where good services are more readily available. The prevalence of this attitude is

TABLE 10:3

NUMBER OF WINTER STORAGE BOAT
ACCOMMODATIONS AVAILABLE AND THE
AVERAGE PERCENTAGE OF UTILIZATION

(Rounded to nearest 25)

	<u>Number Winter Storage Available</u>	<u>Number Winter Storage Utilized</u>	<u>Percentage Utilization</u>
Subarea I	1,775	375	21.1
Subarea II	200	125	62.5
Subarea III	875	500	57.1

Source: Marina Operators Survey - 1977

partially revealed by the information presented in Tables 11:3 and 12:3.

The information presented in Table 11:3 shows the number and percentage of times each of a number of different attributes were selected as a main reason why marina clientele chose to use boating facilities on the Canadian side of Lake Erie during 1977. It is interesting to note, that 37.5 percent of all resident boaters indicated that close to place of residence was the main reason why they chose to use the facilities on Lake Erie. More revealing, however, 16.3 percent of residents indicated that availability of the right boating services was the main reason why they used Lake Erie's facilities. Moreover, a greater percentage of both non-resident Canadians and non-resident boaters indicated that the availability of the right boating services was the main reason why they chose to use boating facilities on the Canadian side of the lake. Close to place of residence, availability of the right boating services and good fishing were noted most often as main reasons why marina clientele chose to use the boating facilities on the Canadian side of Lake Erie.



Fishing Off Turkey Point - Lake Erie

TABLE 11:3

NUMBER AND PERCENTAGE OF TIMES
EACH OF A NUMBER OF DIFFERENT ATTRIBUTES WERE SELECTED
BY MARINA CLIENTELE AS THE MAIN REASON FOR USING
BOATING FACILITIES ON THE CANADIAN SIDE
OF LAKE ERIE - 1977
(Rounded to nearest 25)

	<u>Resident</u>		<u>Non-Resident</u>		<u>Non-Resident</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Close to Place of Residence	6,300	37.5	2,000	19.5	375	6.8
Availability of the Right Boating Services	2,750	16.3	2,400	23.5	1,750	31.5
Good Fishing Nearby	1,875	11.2	1,250	12.2	550	9.9
No Alternative Facilities	1,650	9.8	300	2.9	225	4.1
Social Activity, Entertainment	975	5.8	1,200	11.7	500	9.0
Inexpensive	775	4.6	600	5.8	0	-
Close to Summer Residence	650	3.9	1,075	10.4	500	9.0
Good Boating Conditions	575	3.4	325	3.2	150	2.7
Well Protected Harbour	475	2.8	425	4.2	350	6.3
Stop Over on Cruise	275	1.6	150	1.5	625	11.2
Scenery	200	1.2	150	1.5	150	2.7
Depth of Harbour	150	.9	50	.5	25	.5
Vacation in the Area	25	.2	175	1.7	150	2.7
Clear Water	25	.2	0	-	100	1.8
Variety	25	.2	125	1.2	100	1.8
Waterfowl Hunting	25	.2	25	.2	0	-
Dry Sailing	25	.2	0	-	0	-
TOTAL	16,775	100.0	10,250	100.0	5,550	100.0

Source: Marina Clientele Survey - 1977

TABLE 12:3

PERCENTAGE OF TIMES EACH ATTRIBUTE WERE SELECTED
BY MARINA CLIENTELE AS A REASON FOR USING BOATING FACILITIES
ON THE CANADIAN SIDE OF THE LAKE - 1977

	<u>Resident</u>	<u>Non-Resident</u>	
	%	<u>Canadian</u>	<u>Non-Resident</u>
	%	%	%
Close to Place of Residence	29.5	15.8	7.2
Availability of the Right Boating Services	21.8	25.1	31.1
Good Fishing Nearby	10.2	11.7	8.0
Social Activity, Entertainment	7.0	12.2	9.2
No Alternative Facilities	9.0	2.7	5.2
Inexpensive	6.1	5.8	.8
Good Boating Conditions	3.8	2.9	3.2
Well Protected Harbour	3.7	6.2	5.6
Close to Summer Residence	3.3	8.3	9.2
Stop Over on Cruise	1.5	1.2	9.5
Scenery	1.1	2.9	3.6
Depth of Harbour	1.0	1.2	1.2
Variety	.9	1.4	1.6
Vacation in the Area	.5	1.2	2.0
Waterfowl Hunting	.2	.5	-
Clear Water	.2	.9	2.8
Use of Pump Out	.1	-	-
Dry Sailing	.1	-	-

Source: Marina Clientele Survey - 1977

The importance of the availability of the right boating services is further revealed by the information presented in Table 12:3, that shows the percentage of times each of these attributes were mentioned by marina clientele as reasons for using the marina facilities on the lake. According to the information presented in this table, the availability of the right boating services is of even greater importance among resident and non-resident Canadians than previously indicated. Almost 22 percent of residents and more than 25 percent of non-resident Canadian boaters mentioned the availability of the right boating services as a reason why they used facilities located on Lake Erie. Once more this table shows, as did the previous table, that no alternative facilities was an important reason for using Lake Erie facilities to over nine percent of resident boaters. On the basis of the information presented in Table 12:3, close to place of residence, availability of right boating services, good fishing, social activity, the lack of alternative facilities and costs were the most frequently mentioned reasons why persons chose to use boating facilities located on Lake Erie.

The information gathered during the summer of 1977 indicated that well over half of the approximately 32,500 boating parties who used marinas located on the north side of Lake Erie during the summer of 1977 visited other areas on the lake or other lakes and waterways. It was found that about 54 percent of residents, 52 percent of non-resident Canadians and 65 percent of non-residents visited other locations on the lake or other lakes and waterways. Slightly over 32 percent, or 5,800, left Lake Erie to seek recreational boating opportunities on other waterways. This in itself is not very revealing. What is revealing, and of considerable significance to this analysis, are the main reasons why boaters chose to visit other lakes or waterways. This information is presented in Table 13:3. According to the information presented in this table, more than 16 percent of all resident boaters indicated that the availability of the right boating services was the main reason why they chose to leave Lake Erie to seek boating opportunities in other locations. Approximately 18 percent of non-resident

TABLE 13:3

PERCENTAGE OF TIMES THAT PARTICULAR ATTRIBUTES ARE MENTIONED
AS MAIN REASONS WHY MARINA CLIENTELE USE BOATING FACILITIES
OTHER THAN THOSE LOCATED ON LAKE ERIE - 1977

	Non-Resident		
	<u>Resident</u>	<u>Canadian</u>	<u>Non-Resident</u>
	%	%	%
Availability of the Right Boating Services	16.5	18.3	19.7
Close to Place of Residence	14.8	10.5	26.2
Good Fishing Nearby	12.5	11.7	12.3
Stop Over on Cruise	12.2	7.8	20.5
Vacation in the Area	12.2	11.1	7.4
Social Activity, Entertainment	6.9	11.1	2.5
Home Port	6.3	11.7	3.3
Good Boating Conditions	4.9	2.8	1.6
Variety	4.3	5.5	.8
Close to Summer Residence	3.6	4.4	-
Well Protected Harbour	2.6	2.2	2.5
Inexpensive	1.6	-	-
No Alternative Facilities	1.0	.6	1.6
Clear Water	.3	.6	-
Depth of Harbour	.3	.6	-
Use of Pump Out	-	-	.8
Scenery	-	1.1	.8

Source: Marina Clientele Survey - 1977

Canadians chose the availability of the right boating services while almost 20 percent of non-residents gave this same reason. Since it is only reasonable to expect that most non-residents would consider close to place of residence as a main reason for visiting other waterways, it would seem that the availability of the right boating services is of overwhelming importance for attracting recreational boaters to use the boating facilities on the north side of Lake Erie. The information presented in this table, together with the information presented in Tables 11:3 and 12:3, seems to indicate that most boaters feel that the boating facilities on Lake Erie are less than totally adequate.

Even though it appears clear that most marina clientele feel that there is a lack of boating services on Lake Erie, it is not at all evident what services are required. Some idea of what boaters feel is required can be obtained from the information presented in Tables 14:3 and 15:3, which shows the reasons why marina clientele go recreational boating. The information presented in Table 14:3 shows that the overwhelming majority of marina clientele feel that cruising is the main reason why they go recreational boating. It also is shown that many marina clientele felt that fishing was the main reason for recreational boating. Water-skiing was important to some individuals and so was racing. However, all other activities were of only minor significance.

Table 15:3 presents information on the percentage of times particular activities were mentioned by marina clientele as reasons for recreational boating. Once again, cruising was chosen as the main reason why marina clientele choose to go boating. However from this table, it should be noted that fishing was of even greater importance. Water-skiing also has become more significant. According to the information presented in this table, more than one third of both residents and non-resident Canadian marina clientele indicated that fishing was an important reason for recreational boating. Similarly, 17.6 percent of residents, 12.9 percent of non-resident Canadians and 13.8 percent of

TABLE 14:3

INDICATED MAIN REASONS WHY MARINA CLIENTELE

PARTICIPATE IN BOATING ACTIVITIES

ON LAKE ERIE - 1977

(Rounded to nearest 25)

	<u>Resident</u>		<u>Non-Resident</u>				<u>Total</u>	
	<u>#</u>	<u>%</u>	<u>Canadian</u>	<u>Non-Resident</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Cruising	11,100	66.2	6,250	61.0	4,525	81.5	21,875	67.2
Fishing	4,650	27.8	3,150	30.7	775	14.0	8,575	26.3
Water Skiing	775	4.6	575	5.6	175	3.2	1,525	4.7
Diving	0	-	25	.2	0	-	25	.1
Racing	125	.7	25	.2	50	.9	200	.6
Over Water Transportation	50	.3	150	1.5	0	-	200	.6
On Board Accommodation, Entertainment	50	.3	0	-	0	-	50	.2
Other	0	-	75	.7	25	.5	100	.3
No Response	25	.1	0	-	0	-	25	.1
TOTAL	16,775	100.0	10,250	100.0	5,550	100.0	32,575	100.0

Source: Marina Clientele Survey - 1977

TABLE 15:3

PERCENTAGE OF TIMES THAT A PARTICULAR ACTIVITY

WAS MENTIONED BY MARINA CLIENTELE

AS REASON FOR RECREATIONAL BOATING - LAKE ERIE 1977

	<u>Resident</u>	<u>Non-Resident</u> <u>Canadian</u>	<u>Non-Resident</u>
	%	%	%
Cruising	40.4	39.3	51.2
Fishing	34.0	35.0	23.2
Water Skiing	17.6	12.9	13.8
Diving	.5	.9	1.9
Racing	2.9	2.3	7.7
Over Water Transportation	2.8	7.3	.6
On Board Accommodation/ Entertainment	1.4	1.3	1.0
Other	.5	1.0	.6
	<u> </u>	<u> </u>	<u> </u>
TOTAL	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

Source: Marina Clientele Survey - 1977

non-residents indicated water-skiing was an important reason for recreational boating.

Careful interpretation of the information presented in Tables 14:3 and 15:3 would suggest that fishing is an important reason for recreational boating. Cruising is important. However, cruising is in fact part and parcel of boating. It is impossible to cross water by boat and not recognize that this, in some sense of the word, involves cruising. It would seem, therefore, that the availability of fishing opportunities would have substantial influence on the amount of boating that takes place on Lake Erie. It would also seem important for marina operators to recognize, that in addition to all other boating services, they should be concerned with providing their customers with services which would complement boater fishing needs.



Sailing on Lake Erie

To this point, we have considered only the adequacy of existing facilities as they pertain to marina clientele. Another important consideration when assessing the importance of boating facilities is determining the accessibility of those who only participate in recreational boating as part of a larger more diversified outdoor recreational experience. Those who use marina facilities on a regular basis usually can be considered ardent boaters. This is supported by the information presented in Table 16:3 which shows the number and percentage of marina clientele parties who owned, rented or borrowed boats during the summer of 1977. According to the information presented in this table, 27,000 of the 27,725 parties, who used marina clientele facilities, owned their boat. In other words, 97.4 percent of all marina clientele owned the boat they were using, 1.4 percent rented the boat they were using, and 1.1 percent borrowed the boat they were using. It can be safely concluded that the vast majority of marina clientele own their boat and only a very few depend on rentals for access to the lake.

Table 17:3 is used to show the estimated number and percentage of party boat rentals on Lake Erie during the summer of 1977 according to subarea. The information presented in this table shows that there were over 5,525 rentals on Lake Erie during the summer of 1977. Well over 55 percent of these rentals took place in subarea I, 10 percent took place in subarea II, and more than 34 percent were in subarea III.

The number and percentage of resident, non-resident Canadian and non-resident party boat rentals among marina clientele and general recreationists is presented in Table 18:3. According to the information presented in this table, the vast majority of boat rentals were to general recreationists. More than 37 percent of the general recreationists who rented boats were residents, 26.2 percent were non-resident Canadian, and 36.4 percent were non-residents.

The information presented in Tables 16:3, 17:3 and 18:3 indicates that boat rentals are of importance to those people who visit

TABLE 16:3

MARINA CLIENTELE PARTIES AND WHETHER THEY OWNED,
RENTED OR BORROWED THE BOAT
THEY USED ON LAKE ERIE DURING SUMMER 1977

(Rounded to nearest 25)

	<u>Number</u>	<u>Percentage</u>
Own	27,000	97.4
Rent	375	1.4
Borrow	300	1.1
No Response	<u>50</u>	<u>.2</u>
TOTAL	<u>27,725</u>	<u>100.0</u>

Source: Marina Clientele Survey - 1977

TABLE 17:3

ESTIMATED NUMBER AND PERCENTAGE OF PARTY BOAT RENTALS

ON LAKE ERIE DURING 1977

ACCORDING TO SUBAREAS

(Rounded to nearest 25)

	<u>Number</u>	<u>Percentage</u>
Subarea I	3,075	55.6
Subarea II	550	10.0
Subarea III	<u>1,900</u>	<u>34.4</u>
TOTAL	<u>5,525</u>	<u>100.0</u>

Source: Marina Operators Survey - 1977

TABLE 18:3

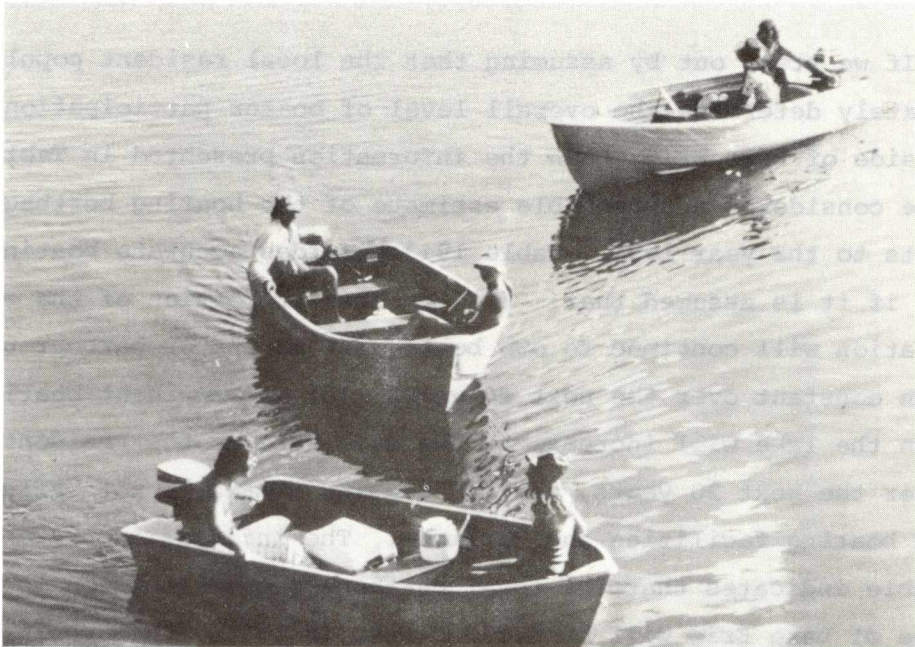
NUMBER AND PERCENTAGE OF RESIDENT, NON-RESIDENT CANADIAN
AND NON-RESIDENT PARTY BOAT RENTALS
ACCORDING TO WHETHER IDENTIFIED AS
MARINA CLIENTELE OR GENERAL RECREATIONISTS - 1977

(Rounded to nearest 25)

	<u>Marina Clientele</u>		<u>General Recreational</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Resident	125	33.3	1,925	37.4
Non-Resident Canadian	225	60.0	1,350	26.2
Non-Resident	<u>25</u>	<u>6.7</u>	<u>1,875</u>	<u>36.4</u>
TOTAL	<u>375</u>	<u>100.0</u>	<u>5,150</u>	<u>100.0</u>

Source: Marina Clientele and General Recreationist Surveys - 1977

the lake for general recreational purposes. Provision of boat rentals would appear to be an important mechanism for providing access to resident, non-resident Canadian and non-resident general recreationists. Although the information presented in these three tables does not reveal if there are a sufficient number of rental outlets to accommodate existing demand, it would seem that the provision of boat rentals might be important among lower income groups or those not considered ardent boaters.



Boat Rentals

Future Boating Requirements

The requirements for Lake Erie boating opportunities - like the demand for all other outdoor recreational activities - is extremely difficult to assess. As already implied above, the quality of fishing opportunities, the innate physical quality of the lake's water and the

amount of services available will help to affect future boating requirements on Lake Erie. There also are a large number of socioeconomic factors which will influence future boating requirements. Among the most important of these is the age distribution of the population, the absolute size of the population, the level of education, the level of disposable income and its distribution, the level of employment, health, the amount of discretionary leisure time available and overall mobility. However, the complexity of assessing boating requirements becomes substantially more difficult when the assessments involve a body of water, such as Lake Erie, which has tremendous potential for future growth in recreational boating.

If we start out by assuming that the local resident population will ultimately determine the overall level of boater participation on the north side of Lake Erie, then the information presented in Table 19:3 can be considered a reasonable estimate of the boating berthage requirements to the year 1996. Table 19:3 provides accurate boating estimates, if it is assumed that: (1) the same proportion of the resident population will continue to own boats, (2) marina or harbour usage will remain constant over the next 20 years, (3) non-resident boating activity on the lake will increase at the same rate as the resident population over the next 20 years, and (4) boating demand is not influenced by lack of boating facilities and services. The information presented in this table indicates that the total berthage requirements on the north shore of Lake Erie will be 6,873 berths in 1996. This would represent an increase of 1,473 on water berths (or 27.3 percent) over the 20 year period.

Even though a substantial number of demand projections are developed in this simple manner, there is a substantial amount of evidence to suggest that such an approach is not very realistic. First, there is a considerable amount of information which shows that the overall level of boating activity is increasing more rapidly than the general population. Second, there is wide variations in the overall

TABLE 19:3

ESTIMATED¹ NUMBER OF BOATS OWNED
BY RESIDENTS OF LAKE ERIE
AND ESTIMATED BERTHAGE REQUIREMENTS TO THE YEAR 1996

	<u>Number of People</u>	<u>Number of Boats</u>	<u>Number of Berths</u>
1976	948,000	26,750	5,400
1981	1,009,430	28,466	5,693
1986	1,074,842	30,311	6,062
1991	1,144,492	32,275	6,455
1996	1,218,655	34,366	6,873

1 Estimates are made assuming that:

- (a) Resident population of Lake Erie will increase at the same constant rate over the next 20 years as over the last 20 years.
- (b) Same proportion of the resident population will continue to own boats.
- (c) Marina or harbour usage will remain the same over next 20 years.
- (d) Non-resident boating activity on the lake will increase at the same rate as the resident population.
- (e) Boating demand is not influenced by lack of boating facilities or services.

Source: Statistics Canada population Census data was used to develop estimates.

level of population increase. Third, the boating conditions on Lake Erie are less than totally ideal, relative to the boating conditions that prevail in other areas where alternatives are available. Fourth, changing relative economic conditions between Canada and the United States could have a substantial effect on the overall number of individuals that choose to visit Canada for recreational purposes in the future. Fifth, changing tastes among potential boaters for certain types of craft, together with the rapid increase in the cost of purchasing gas, might cause a dramatic shift in the kind of boats that the population demands in future. Each of these conditions is discussed in greater detail in what follows.

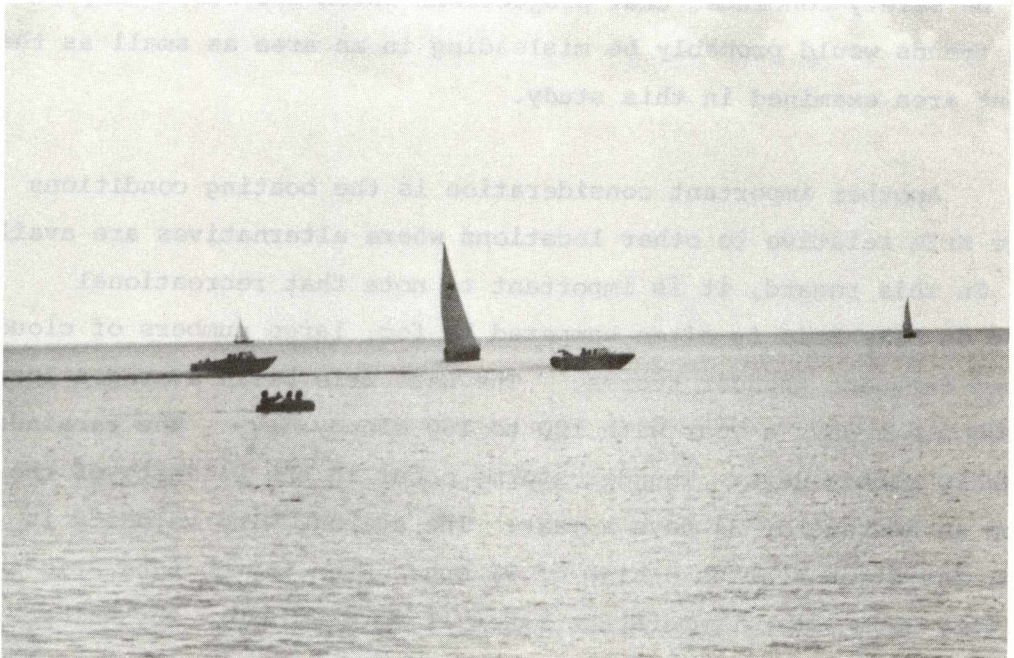
Although information on boater participation in Canada is incomplete, there is a large volume of information on population growth. The most recent information published by the Ontario government on population change reveals that the annual increase in Ontario's resident population between 1941 and 1971 was about 2.4 percent per annum.² The population increase over the period 1951 to 1976 for the Lake Erie area, as defined in this presentation, was slightly under two percent.³ Therefore, even a very optimistic estimate of the population increase of Ontario would be less than three percent per annum. Information gathered by the Outdoor Recreation Research Section of Parks Canada during 1972 revealed that participation in power boating increased at an average of seven percent per annum over the period 1969 to 1972.⁴ This same survey determined that participation in sailing in Canada increased at an average of 11 percent per annum over that same period. A more recent study by Kilborn Engineering Limited estimated that the boat population

2 Ontario's Changing Population Directions and Impact of Future Change, 1971-2001, Ministry of Treasury, Economics and Intergovernmental Affairs, Regional Planning Branch, vol. 2, March 1976, pp. 27-29.

3 Statistics Canada, 1976, Population Census Data, Compiled in December 1977.

4 Trends in Participation in Outdoor Recreation Activity, Outdoor Recreation Research Section, National and Historic Parks Branch, Parks Canada, Cord Technical Note No. 22, draft report, August 1973, p. 13.

in Ontario will increase at an average rate of between nine and 15 percent over the period 1972 to 1980.⁵ All of this information is consistent with data gathered elsewhere in North America which shows that boating sales, participation in boating and overall interest in outdoor recreational activity has been increasing at a rate in excess of growth in the domestic population. It follows, therefore, that any projections on recreational boating, which are based on growth in population, could be expected to substantially underestimate increases in boating.



Boating Activity - Turkey Point on Lake Erie

A more serious problem, when using population projections

5 Kilborn Engineering Ltd., P. S. Ross and Partners, Small Craft Harbours Systems Study: Central Region, prepared for the Small Craft Harbours Branch, Environment Canada, Appendix vol. II, July 1974, pp. 224-235.

to estimate future boating requirements, is the wide variations in population growth between one area and the next. These variations have been substantial throughout the country and even within the Lake Erie area. For example, the information presented in Table 20:3 shows that there has been wide fluctuations in the rate of population increase in all three subareas. The information presented in Table 20:3 shows that population increases ranged from 16.2 percent over one five-year period in subarea III to minus 1.6 percent over another five year period in subarea II. The population of subarea III has increased much faster than in the other two subareas for most of the 25 years shown. Moreover, subareas I and II have experienced greater fluctuations in the rate of growth than has subarea III. Therefore, it can be safely concluded that projections which are based on population trends would probably be misleading in an area as small as the resident area examined in this study.

Another important consideration is the boating conditions on Lake Erie relative to other locations where alternatives are available. In this regard, it is important to note that recreational boating on Lake Erie is often hampered by fog, large numbers of cloudy days and frequent thunder storms.⁶ The Lake Erie basin averages less than 100 clear days a year with 120 to 160 cloudy days. The remainder are partly cloudy days. Thunder storms occur in the vicinity of the lake on an average of 34 days a year. The average wind velocity is 10 mph, and often reaches a high of 91 mph. Even though Lake Erie's relatively warm water temperature makes it more suitable for water-skiing than the other great lakes, seasonal fluctuations of water levels on Lake Erie are quite severe and effect recreational boating. Despite these shortcomings, it is difficult to conclude from this that Lake Erie will not continue to be a popular boating area among both residents

⁶ Great Lakes Basin Framework Study, Appendix R9, Recreational Boating Great Lakes Basin Commission, prepared by the Recreational Boating Task Group of the Navigation Work Group, sponsored by the U.S. Department of the Army Corp. of the Engineers and the State of Michigan, Ann Arbor GLBC, 1975, pp. 14-15.

TABLE 20:3

POPULATION TRENDS IN SUBAREAS I, II AND III
OF LAKE ERIE AREA OVER 25 YEAR PERIOD 1951-1976

	<u>SUBAREA I</u>		<u>SUBAREA II</u>		<u>SUBAREA III</u>	
	<u>Population</u>	<u>% Increase Over Past 5 Years</u>	<u>Population</u>	<u>% Increase Over Past 5 Years</u>	<u>Population</u>	<u>% Increase Over Past 5 Years</u>
1951	296,275	n/a	55,525	n/a	279,450	n/a
1956	332,275	10.8	59,125	6.1	333,525	16.2
1961	347,650	4.4	62,875	6.0	370,075	9.9
1966	377,325	7.9	61,900	-1.6	405,525	8.7
1971	407,525	7.4	66,600	7.1	434,100	6.6
1976	416,500	2.2	69,075	3.6	462,400	6.1

Source: Statistics Canada, Census Division

of Canada and visitors from the United States. Strategically located among a fairly heavily populated area in Canada and close to the United States border, Lake Erie can be expected to attract boaters seeking locations with relatively little boating congestion. Therefore, non-resident boating activity is likely to increase even if the relative economic conditions in Canada with respect to the United States deteriorates. A declining Canadian dollar will decrease the cost of non-residents visiting Canada and can be expected to contribute further to an influx of United States boaters.

Over the years, there has been a trend among boaters to switch from power boating to sailing, from small boats to large boats. Evidence gathered during the surveys conducted during the summer of 1977 reveals that a substantial number of individuals expect to purchase larger boats in the future. Further, a substantial number of these individuals expect to keep their power boats. Information on this is presented in Tables 21:3 and 22:3 which shows the future plans of marina clientele and the type of boats they intend to purchase.

Table 21:3 is used to show the future intentions of marina clientele according to resident category. The information presented in this table shows that more than 60 percent of marina clientele expect to keep the same boat in future. However, it also shows that almost 31 percent expect to purchase a larger boat in future, only 2.2 percent expect to purchase a smaller boat, and 2.5 percent expect to purchase another type of boat. Consistent with trends that have been witnessed elsewhere, it would seem that many Lake Erie boaters expect to switch to larger boats in future.

Information on the type of boats that marina clientele intend to purchase is presented in Table 22:3. According to this information, 875 (35 percent) intend to purchase outboard motors of greater than 20 h.p. Many (17 percent) intend to purchase inboard/outboard power boats and an equal number were not certain. Once again, the data are

TABLE 21:3

FUTURE BOAT OWNERSHIP PLANS OF
MARINA CLIENTELE ON LAKE ERIE - 1977

(Rounded to nearest 25)

	<u>Resident</u>		<u>Non-Resident Canadian</u>		<u>Non-Resident</u>		<u>Total</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Keep Same Boat	9,525	56.8	6,525	63.7	3,625	65.4	19,674	60.4
Sell Boat Outright	300	1.8	300	2.9	50	1.1	650	2.0
Purchase Larger Boat	6,000	35.8	2,425	23.6	1,600	28.6	10,025	30.7
Purchase Smaller Boat	400	2.3	275	2.6	50	1.1	725	2.2
Purchase Another Type of Boat	350	2.1	325	3.2	100	1.6	775	2.5
No Response	200	1.2	400	4.0	125	2.2	725	2.2
TOTAL	<u>16,775</u>	<u>100.0</u>	<u>10,250</u>	<u>100.0</u>	<u>5,550</u>	<u>100.0</u>	<u>32,575</u>	<u>100.0</u>

Source: Marina Clientele Survey - 1977

TABLE 22:3

TYPE OF BOAT MARINA CLIENTELE
ON LAKE ERIE INTEND TO PURCHASE

IN FUTURE - 1977

(Rounded to nearest 25)

	<u>Number</u>	<u>Percentage</u>
Sail	25	1.0
Sail (fixed keel)	350	14.0
Sail (retractable keel)	125	5.0
Canoe ¹	0	-
Outboard (10 - 20 h.p.)	50	2.0
Outboard (over 20 h.p.)	875	35.0
Power Boat (inboard)	225	9.0
Power Boat (inboard/outboard)	425	17.0
Did Not Specify	425	17.0
	<hr/>	<hr/>
TOTAL	2,500	100.0
	<hr/> <hr/>	<hr/> <hr/>

1 Less than .3 percent intend to buy a canoe in future.

Source: Marina Clientele Survey - 1977

consistent with information which indicates a trend to larger boats, but there does not appear to be any inclination among marina clientele to change from power boats to sail boats. Rising gasoline prices appear to have little influence on the boating preference of marina clientele.

It would seem reasonable to expect that on water berthage requirements will increase more rapidly than will the resident population. Further, it would seem reasonable to expect that there will be greater interest shown on the north shore of Lake Erie in future, when other waterways become more congested. Therefore, on the basis of this information and the foregoing discussion, estimates have been developed on the number of boats and berthage requirements on the north side of the lake. These estimates are presented in Table 23:3. This table shows the estimated number of boats and berthage requirements on the north side of Lake Erie according to type of boat. The information indicates that by 1986 the north shore of Lake Erie will require 14,400 on water berths. It shows that 25,900 berths will be required in 1991 and that 47,600 will be needed in 1996. Given existing conditions and available information, these are considered the single best estimates.

Potential for Growth in Services

The estimates presented in the previous section, like all other predictions about the future, have substantial potential for error. Nonetheless, even the most pessimistic outlook would suggest that the demand for boating facilities on the Canadian side of Lake Erie will grow substantially in future. There is some question about the ability of both the private sector and the government agencies to respond adequately to these needs. On the basis of the information presented previously, it would seem that the potential to meet boating needs is not good. Aside from the fact that there appears to be a shortage of boating services, it would appear that the boating industry

TABLE 23:3

ESTIMATED¹ NUMBER OF BOATS AND BERTHAGE
REQUIREMENTS ON NORTH SIDE OF LAKE ERIE
TO YEAR 1996 BY TYPE OF VESSEL

	<u>Sail (Fixed Keel)</u>	<u>Sail (Retractable Keel)</u>	<u>Outboard</u>	<u>Inboard</u>	<u>Inboard Outboard</u>	<u>Other</u>	<u>Number² of Berths Required</u>
1978	4,189	1,736	13,543	4,732	5,292	191	5,900
1981	6,883	2,438	17,539	6,648	7,435	247	8,200
1986	15,747	4,297	26,987	11,582	13,102	379	14,400
1991	36,025	7,575	41,522	20,788	23,090	583	25,900
1996	82,417	13,349	63,886	36,636	40,693	896	47,600

1 Estimates are made assuming variations in the preferences for type of boats. It is assumed that sail (fixed keel) will increase at 18 percent, sail (retractable keel) at 12 percent, outboard at 9 percent, inboard 12 percent, inboard/outboard 12 percent and others at 9 percent. It is assumed that Lake Erie boating activity is not influenced by a lack of appropriate boating facilities and services in area.

2 Rounded to the nearest 100.

on the Canadian side of the lake is not fully adaptable. This is revealed by the fact that less than 10 percent of the existing commercial public marinas on Lake Erie were built in the last 10 years. In fact, fewer than four percent were built in the past five years. The inertia that this implies is further revealed by the information provided in the previous section which indicates that a tremendous increase in boating activity had taken place during the last 10 years and by the information presented in Table 24:3. The data presented in Table 24:3 shows that well over half of existing public marina operators purchased their business during the last five years in subareas I and III. Only one of seven owners of commercial public marinas located in subarea II had purchased their business during the last five years. It would seem reasonable to expect that a responsive or dynamic industry would have generated more additional investment as a result of increased boating activity. In subarea I and III, where there has been substantial changes in marina ownership, it would seem reasonable to expect that new owners would have shown greater willingness to make some addition to their newly acquired businesses. It must be concluded, therefore, that it would be excessively optimistic to expect the private sector to provide sufficient facilities to accommodate all who will choose to boat on Lake Erie in future.

The situation has not been appreciably better on the government side. As noted earlier, in Chapter One, the vast majority of Small Craft Harbour investment on Lake Erie has been directed at improving harbour facilities used primarily by commercial fishing tugs. Since coming into existence in 1974, the Small Craft Harbours Branch in Ontario has spent approximately \$382,558 on recreational boating facilities on Lake Erie. This represents only 17.7 percent of the total money that Small Craft Harbours spent improving or adding to harbour facilities on Lake Erie during the four years of their existence. At least, on the basis of performance to date, it would not appear as if Small Craft Harbours will satisfy the needs of recreational boaters on Lake Erie during the next 10 to 20 years.

TABLE 24:3

<u>NUMBER OF YEARS OF BUSINESS OWNERSHIP</u> <u>AMONG COMMERCIAL PUBLIC MARINAS OPERATORS</u> <u>LOCATED NORTH SIDE OF LAKE ERIE</u> <u>ACCORDING TO SUBAREA - 1977</u>						
	<u>Subarea I</u>		<u>Subarea II</u>		<u>Subarea III</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
5 Years and Under	13	56.5	1	14.3	13	54.2
6 - 10	4	17.4	2	28.6	2	8.3
11 - 15	0	-	2	28.6	2	8.3
16 - 20	1	4.4	1	14.3	3	12.5
21 - 25	0	-	1	14.3	1	4.2
26 - 30	1	4.4	0	-	1	4.2
31 +	3	13.0	0	-	2	8.3
No Response	1	4.4	0	-	0	-
TOTAL	<u>23</u>	<u>100.0</u>	<u>7</u>	<u>100.0</u>	<u>24</u>	<u>100.0</u>

Source: Marina Operators Survey - 1977

The foregoing discussion clearly reveals that the potential for growth in the amount of boating services available on Lake Erie is not good. The private sector does not appear to be responsive to the changing boating demands. The Small Craft Harbours Branch has found it necessary, during the past four years, to devote most of its efforts to the commercial fishing industry.⁷ Unless a great deal more effort is made to improve and add to existing boating facilities on Lake Erie, the demand for boating facilities will greatly surpass future and existing requirements. A failure to meet boating needs will detract from the benefits which accrue to resident boaters (including non-resident Canadian boaters), and at the same time, discourage non-resident boaters (with their tourist dollars) from visiting Canada. Clearly, this works to the disadvantage of both residents of Ontario and all Canadians.

Conclusion

The discussion and analysis presented in this chapter has revealed that residents of the Lake Erie area owned 89,850 boats during 1977. Approximately 13,750 of these boats were owned by individuals who make regular use of Lake Erie marinas. Those non-resident Canadians

⁷ These comments should not be construed as criticism of either the marina industry or the Small Craft Harbours Branch. Private marina operators cannot be expected to invest funds in risky ventures where there is inadequate information, a great deal of uncertainty and a generally poor business climate. All of these conditions have prevailed to some degree in recent years. Marina operators have a very short season in which to recover costs and to make a profit. Their efforts are complicated by, what some consider, excessive government regulations, and uncertainty with respect to the application and administration of these regulations (i.e. zoning bylaws, property tax changes, changes in license programs and the fluctuating value of the Canadian dollar). All of this significantly adds to business risk and discourages private investment. It also should be remembered that the Small Craft Harbours Branch has a responsibility to commercial fishermen, as well as to recreational boaters. These responsibilities extend to other lakes and to other areas even though only limited funds are available. The Branch has to make investment decisions on the basis of what is good for all Canadians and not just Lake Erie recreational boaters.

who used Lake Erie marinas owned 8,400 boats; residents owned 4,550 boats. In all, 26,700 boats were owned by those who used marina facilities located on the north shore of Lake Erie during 1977.

The overall dependence of boating facilities varied with resident category and location on the lake. As a group, non-residents were more dependent on the existence of marinas or harbour facilities than were residents. Non-residents were more inclined to use facilities located at the two ends of the lake (nearest to border crossings), while residents preferred the centre area referred to as subarea II. The majority of members in all three resident categories considered the availability of the right services and close to place of residence as the two main reasons for visiting Lake Erie. All three groups indicated that cruising and sport fishing were the main reasons they participated in recreational boating.

It also was revealed that existing facilities on Lake Erie are less than totally adequate. Not only does there appear to be a shortage of particular services, but the availability of those services that are provided is sporadic and inconsistent. This is more than merely a matter of providing variety (which is considered desirable), but rather dependability. Lake Erie boaters cannot depend on receiving particular services on the Canadian side of the lake, nor can they depend on being charged consistent fees. Most evidence seems to suggest that better quality services are required if Canadians are to fully exploit and enjoy the boating potential available on Lake Erie.

Even though there is not conclusive evidence to indicate what additional services are most needed, the information presented in this chapter does provide some evidence as to what might add to the attractiveness of Lake Erie among boaters. For example, the indicated importance of having alternative facilities reveals a concern for overall quality of service. Boater preference for fishing suggests that fishing equipment outlets, fishing licensing sales, and the provision

of bait is important. The apparent shortage of toilets and pump-out facilities suggests that more of these facilities should be made available to the boating public. Finally, there is reason to believe, that if all segments of the population are to share in the benefits of boating on Lake Erie, a substantial number of public boat launching ramps and boat rental outlets should be located along the north shore of the lake.

Despite these shortcomings, it was determined that there is potential for a substantial increase in boating activity on Lake Erie over the next 10 to 20 years, and that a great deal of this potential is due to non-resident interest. It is estimated that the requirements for on water berthage will grow from 5,400 (which appears to be barely adequate at present) to 14,400 in 1986 and to 47,600 in 1996. On the basis of existing performance, it is unlikely that private marinas will satisfy these requirements and a great deal more effort will have to be directed at providing harbour facilities for recreational boaters, if the federal Small Craft Harbours Program is to help meet these needs.

It should be understood that this predicted increase in boating activity could be much more beneficial if (as noted important in the text) the water quality of the lake is maintained, or improved, the quiet seclusion of the area is protected, proper boating facilities are provided and all of this is supported by government activities which encourage business confidence. This is more than just a matter of generating tourist expenditures in Canada (thereby improving our balance of payments), providing jobs, or increasing income. Improved recreational boating facilities will help insure that all Canadians share in all the potential benefits that can be derived from the Canadian portion of Lake Erie.

CHAPTER FOUR

THE OPERATIONAL REQUIREMENTS OF THE LAKE ERIE

SMALL CRAFT HARBOURS PROGRAM

At least on surface, the program responsibilities of the Small Craft Harbours Branch on Lake Erie appear straight forward. The Branch merely has to build harbour facilities on Lake Erie that will contribute to the economic viability of the commercial fishery and satisfy the harbour or dockage needs of recreational boaters. However, within this mandate there is a potential for a substantial amount of conflict, inconsistency and even error. This can work to the severe disadvantage of both the Canadian public and Lake Erie boaters. This chapter is used to examine the potential for conflicts and develop a number of different program alternatives which should help minimize conflicts, and at the same time, maximize the benefit potential of the Lake Erie Small Craft Harbours Program. This is accomplished by outlining the potential for conflict, examining the possibility for minimizing conflict, reviewing the performance of the Ontario Small Craft Harbours Program to date, and making recommendation on future operations.

Basic Program Requirements

Any public program conducted by a government agency whose mandate encompasses a range of responsibilities has considerable potential for conflict. This is true of the Fisheries and Marine Service Program in general, as it is true of the Ontario Small Craft Harbours Program. In order to be effective and at least partially avoid conflict and inconsistency, government programs should be managed so that they adhere to certain fundamental principles. Some of these principles would be unique to specific programs while others would be universal to all government programs. The basic principles that readily apply to the Ontario Small Craft Harbours Program are as follows:

(1) Both in manner and in substance the operation of a public program by a government agency should contribute to the goals of the organization and the government. (2) The program should not detract from the legal or worthwhile efforts of other government agencies or organizations in the private sector. (3) The program should meet or contribute to the unique or special requirements of the area or region in which it operates. (4) The program should be conducted in a manner which ensures that all segments of the Canadian public benefit from those actions undertaken within the program mandate. Each of these basic criteria will be implicitly or explicitly discussed in what follows.

Potential for Conflict

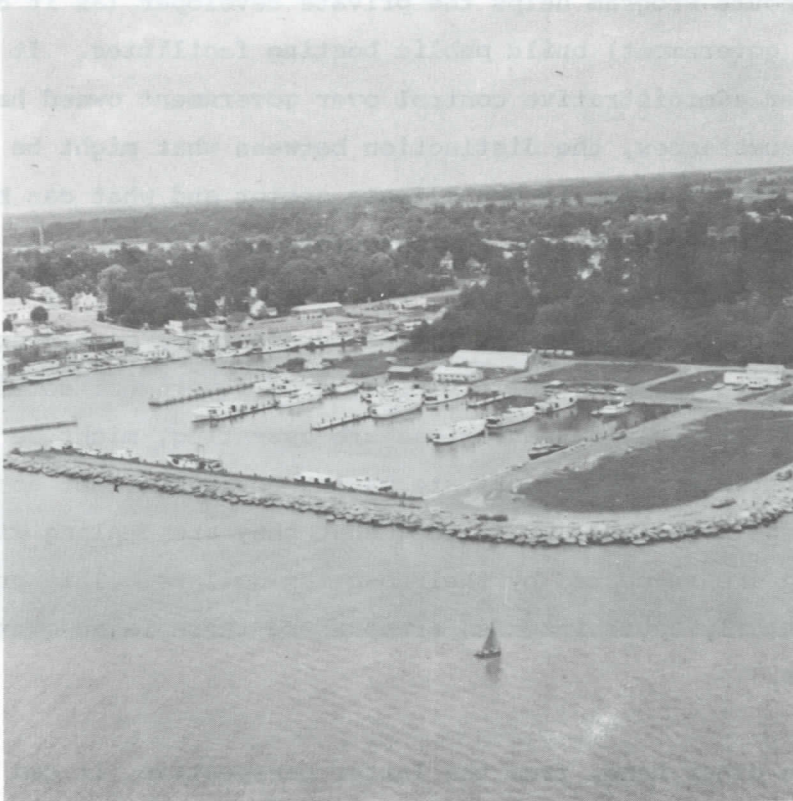
The first and most obvious responsibility of a government agency is to contribute to the welfare of the general public within the mandate or responsibilities established by elected representatives. Within the mandate and the responsibilities of the Fisheries and Marine Service, the Small Craft Harbours Branch is to provide a system of harbour facilities for commercial fishing vessels and ensure the provision of harbour facilities for sport fishing and other recreational craft. The provision of harbour facilities has implications on other responsibility areas which may or may not fall within federal jurisdiction. For example in Ontario, the management of commercial and recreational fisheries is the responsibility of the provincial government. Yet it is obvious that the location of harbour facilities, or the type of facilities provided, can have considerable effect on fishing activities. The construction of new harbour or marina facilities in a particular location will attract fishing enthusiasts into the area and probably will increase the amount of fishing effort on resident fish stocks. Conversely, changes in fishing regulations can influence the need for harbour facilities. If the Ontario Ministry of Natural Resources establishes a resident sport fish license, or decides to rationalize the commercial fishing fleet, it will decrease the amount of sport fishing activity which takes place in a particular area and almost certainly

alter the harbour or marina requirements throughout the province. It is absolutely necessary, therefore, in order to avoid conflict and working at cross purposes, that the Small Craft Harbours Branch of the Fisheries and Marine Service should coordinate their efforts with provincial fisheries management authorities. It also is important that those responsible for provincial fisheries management coordinate their efforts or activities with the Small Craft Harbours Branch. Cooperation between federal fisheries authorities and Ontario fisheries management is particularly important for the Fisheries and Marine Service, which has strong federal responsibility for the management of Canada's fisheries resources.

There are at least two other areas of responsibility where the coordination of the Small Craft Harbours Program and provincial authorities is extremely important. This is in the areas of tourism and parks administration or conservation area management. As already noted above, non-resident tourist activity on the north shore of Lake Erie is substantial. The vast majority of tourists who visit the area stay in provincial parks. Since the Lake Erie Small Craft Harbours Program has a strong influence on the recreational attractiveness of the Lake Erie area, it follows that the Small Craft Harbours Program will influence the amount of tourist activity that takes place in the area, and consequently, the level of parks utilization. It is absolutely essential that the Small Craft Harbours Program on Lake Erie be operated in cooperation with the provincial tourism and parks authorities to avoid waste and to ensure that one government's program does not detract from the effectiveness of another.

The potential for conflict between the Small Craft Harbours Program and other programs is not limited solely to the provincial government. There is also tremendous potential for conflict between the Small Craft Harbours Branch and other federal programs. For example, the federal Department of Fisheries and the Environment is responsible for maintaining water quality and protection of the

environment. The Small Craft Harbours Program has the potential to influence both the amount and distribution of recreational activity which takes place on particular waterways. It also has the potential to influence the amount of sewage or waste which is dumped directly into the water (through the provision of toilets or pump-out facilities). In other words, the Small Craft Harbours Program has the ability to influence the quality of water at particular locations. It would seem reasonable, therefore, to expect that the Small Craft Harbours Program would be coordinated with other federal environmental agencies to help protect water quality, and thereby, influence the amount of benefits which Canadians and Ontario residents receive from their water resources.



Small Craft Harbour Facilities - Port Dover

All of the aforementioned areas of potential conflict are

important. However, none are more important or more serious than the possible conflict between the Small Craft Harbours Program and the private sector. Even though the federal government has been responsible for the management and provision of port facilities in Canada for many years, most federal government harbours programs were aimed at facilitating the free transport of goods produced in the private sector. Many, if not most, federal harbours were located in areas where private marinas or public dockage were scarce. In those areas where government harbours were located next to private accommodations, the private operators often used the loosely managed government facilities in conjunction with their own businesses. The Small Craft Harbours Branch has changed this pattern by providing facilities whenever and wherever there is an established need to accommodate recreational or commercial boating. The Small Craft Harbours Program helps the private developer (as it does other levels of government) build public boating facilities. It also exercises greater administrative control over government owned harbours. Under these circumstances, the distinction between what might be considered government intervention in the private sector and what can be considered government responsibility is less clear.

On the one hand, from the former perspective, government support of a privately owned public marina, or a government development in an area where privately owned marinas are operating, might be considered unfair competition. Those private marina operators that do not receive government assistance might feel that they are dealing with competitors, who are supported by their own tax dollars. This problem would be particularly acute in those areas where there is an overabundance of marinas.

On the other hand, from the latter perspective, it can be readily seen that the provision of Small Craft Harbour facilities has implications on a number of activities which are considered within the government domain. Included in this are navigation and boater safety, management of public lands and the protection of the aquatic

environment. Furthermore, it has been found that the private sector is not always able to provide sufficient harbour facilities to accommodate boating activities in a manner which would help to ensure boater safety and support increased tourist activity.¹ Given this set of circumstances, it would seem appropriate for the Small Craft Harbours Branch to adopt a strategy which encourages stability and growth among private marinas, and at the same time, ensures that there is sufficient boating facilities available to meet those boating needs that cannot be readily accommodated in the private sector.



Breakwater and Lighthouse

¹ As indicated in Chapter Three, it would appear that the development of marinas in the private sector will not proceed fast enough to accommodate the increase in demand for boating facilities on Lake Erie in future.

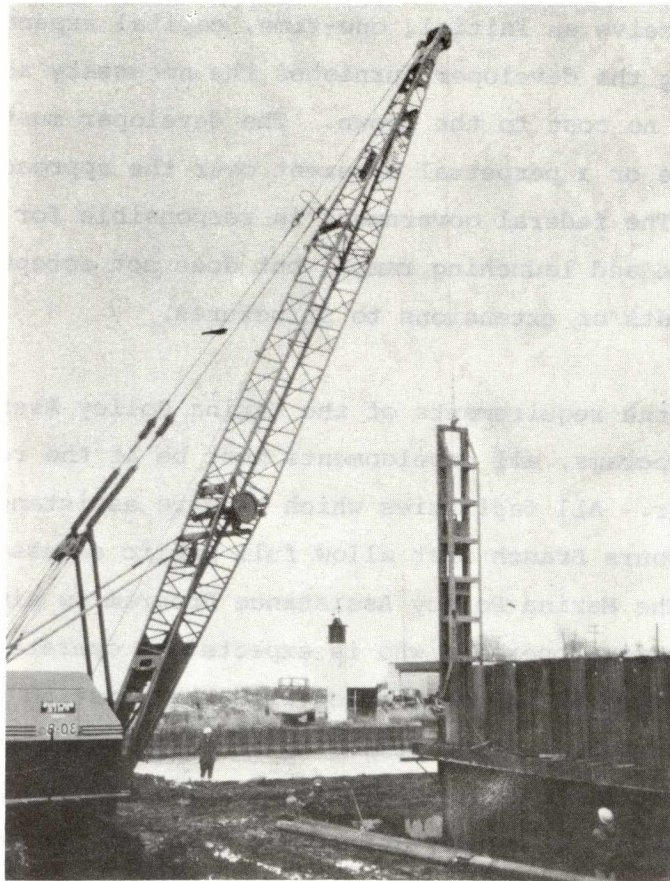
The Program as Presently Administered in Ontario

The Small Craft Harbours Branch in Ontario is responsible for the administration and management of more than 400 public harbours. The majority of these harbours are used mainly by recreational boaters, although many are used by commercial fishermen. The priorities and strategies adopted in Ontario are usually established at the national level in Ottawa. The initial thrust of the national Small Craft Harbours Program was to increase and improve the harbour facilities available to Canada's commercial fishing fleet. Consistent with this national effort, most of the regional work to date has been directed at improving those harbour facilities used mainly by the commercial fishing fleet. This is clearly demonstrated on Lake Erie, where (as noted in Chapter One) almost 85 percent of all Small Craft Harbour expenditures on Lake Erie since 1972 have been on harbour facilities primarily used by the commercial fishing fleet.

Nationally, as well as within the region itself, the Small Craft Harbours Program has proved of considerable benefit to commercial fishermen. In Ontario, breakwaters have been built, dredging has been undertaken, berthage has been updated, and cleaner more spacious wharfage has been provided. Much of this activity has been undertaken on an emergency, or as required, basis. Virtually all of this development was initiated as a result of requests from private industry. The most notable commercial developments on Lake Erie were at Wheatley, Rondeau and Port Dover. There was a large addition to berthage at Wheatley, an improvement in harbour protection and wharfage facilities at Rondeau, and a substantial upgrading of services at Port Dover. The work at Port Dover included construction of a pump-out station, the provision of a water main and improvement in the lighting system. All of this work has been provided at minimal cost to commercial fishermen.

The Small Craft Harbours Program in Ontario also has proved of considerable benefit to recreational boaters. A substantial portion

of Ontario's total program expenditures has been directed at harbour facilities administered by the Branch and used primarily by recreational boaters. There are several examples of this on Lake Erie. Perhaps the largest and most notable contribution to recreational boaters was in Wheatley Harbour where recreationists indirectly benefited (less competition for space) from additions to the commercial fishing facilities, but also as a result of additional berthage being provided specially for them. Navigational aids were provided at St. Williams, breakwater and wood pilings replaced at Cedar Beach, and improvements to wharfage at Port Rowan. Once again, all this was provided at minimal cost to the recreational boaters.



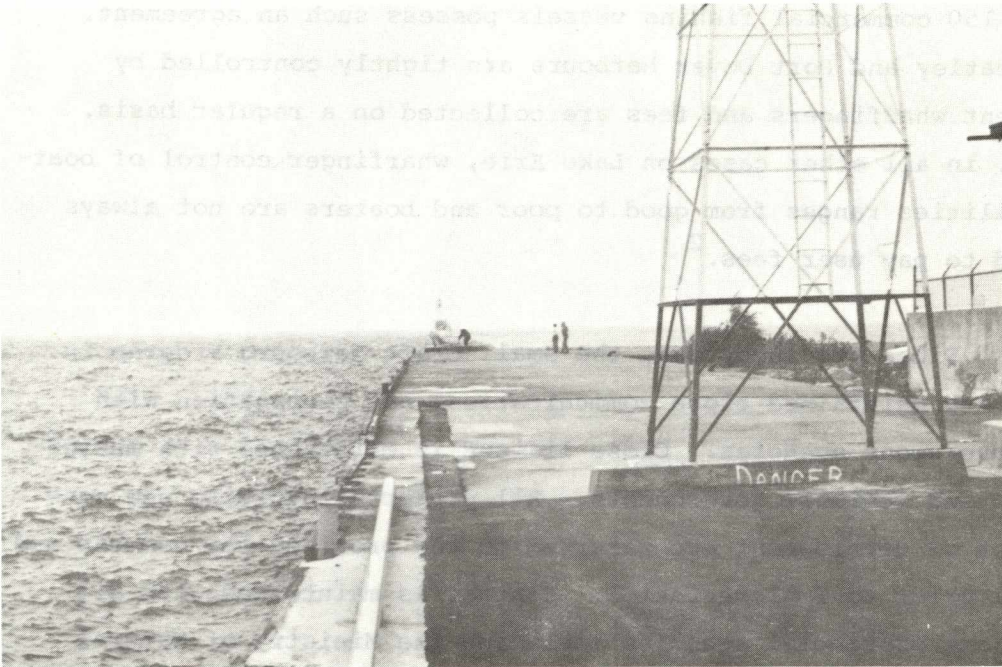
Construction of Harbour Facilities

In addition to the work done on those harbours administered by the Small Craft Harbours Branch, a substantial amount of work is

undertaken for the express purpose of helping recreational boaters through two special programs. The first is the Marina Policy Assistance Program. This program is meant to encourage the development of additional marina facilities for the use of the general boating public. Under the terms of this program, the federal government may build breakwaters, construct new wharfage, carry out dredging operations, or provide other boating services, if the private developer matches federal expenditures within a three year period.

The second program that is aimed at helping recreational boaters is the Tourist Wharf Program. This program is meant to stimulate the development of tourism. Under the terms of the program, the developer can receive an initial, one-time, capital expenditure of up to \$15,000 providing the developer furnishes the necessary access roads and parking areas at no cost to the Crown. The developer must have full title to the site or a perpetual easement over the approach roads and parking areas. The federal government is responsible for the maintenance of wharfage and launching ramps, but does not accept responsibility for improvements or extensions to structures.

Under the requirements of the Marina Policy Assistance and Tourist Wharf Programs, all developments must be at the request of the private developer. All facilities which receive assistance from the Small Craft Harbours Branch must allow full public access with no restrictions. The Marina Policy Assistance Program is aimed primarily at the private marina operator who is expected to operate his facilities for public benefit in conjunction with the existing business. The Tourist Wharf Program is aimed primarily at those communities or regional governments who indicate that they will operate harbour facilities in a business-like manner for public benefit. Whenever possible, the Small Craft Harbours Branch in Ontario attempts to establish leasing arrangements with anyone that receives assistance under one of these two programs.



Repairs Required - Erieau

In the vast majority of cases, whenever assistance is provided under the Marina Policy Assistance or Tourist Wharf Programs, utilization of facilities is carefully controlled. Use of facilities is administered and fees are collected by the private developer, or by those who have entered into a leasing arrangement. In contrast, those harbours that are administered and managed by the Small Craft Harbours Branch usually are not as tightly controlled. Wharfingers are appointed under ministerial authority and paid on a fees basis (commission). Commercial fishermen are required to pay a dollar per foot per year and recreational boaters are required to pay 10 cents per foot per day, or approximately \$12 per foot per year. However, with but a few exceptions, user activity is not monitored nor user fees collected. For example,

commercial fishermen have the option to enter into commutation agreements with Small Craft Harbours. On Lake Erie, only 86 of the approximately 150 commercial fishing vessels possess such an agreement. Both Wheatley and Port Dover harbours are tightly controlled by government wharfingers and fees are collected on a regular basis. However, in all other cases on Lake Erie, wharfinger control of boating facilities ranges from good to poor and boaters are not always required to pay user fees.²

Since its inception, the Small Craft Harbours Program in Ontario has maintained close communications and cooperation with other government agencies. Close liaison is maintained with municipalities and regional governments. All projects involving new construction or development are referred to the province for comment and approval prior to implementation. Contact is maintained with all appropriate provincial agencies including the Ministry of Natural Resources, the Ministry of Industry and Tourism, the Ministry of the Environment, the Ministry of Transport and Communications, the Ministry of Revenue, the Ministry of Government Services, and the Ministry of Treasury, Economics and Intergovernmental Affairs. Approvals also are sought from the federal Environmental Protection Service and the Ministry of Transport. The working relationship with these agencies is generally good. In many cases, over the last three years, the Small Craft Harbours Branch has altered, or made changes to plans for particular projects, on the basis of criticisms or concerns expressed by these agencies.

Although it is difficult to evaluate the operational success of the Ontario Small Craft Harbours Program on the basis of this early

² It should be understood that this is not meant as a criticism of the wharfingers or of the Small Craft Harbours Branch. In some cases, the facilities are so small that the ongoing presence of a wharfinger would not be appropriate. In other cases, it is difficult to employ a wharfinger who must accept the responsibility of managing a difficult harbour for minimal remuneration.

performance, it would appear fairly successful. Since virtually all developments have been requested by representatives in the private sector, it would seem that interference in the private sector has been minimal. By ensuring that free public access is a condition of involvement, the Small Craft Harbours Branch has helped to maintain good public access to water. The close links of communication with other government agencies suggests that conflicts with these agencies has probably been minimal. Finally, the Small Craft Harbours Program has improved the quality of harbour facilities available to the general public, and as a result, helped improve tourist potential and boating safety in Ontario.



Wheatley Harbour Under Construction

Future Requirements of the Small Craft Harbours Program

The successful implementation of Ontario's Small Craft

Harbours Program does not necessarily mean that the program will continue to be successful in future. There are many factors to be taken into account when reviewing the potential for future success. Among the most important of these is Ontario's large resident population and its location adjacent to one of the most heavily populated areas of North America. This population base has important implications on both existing competition for water resources and future boating demand.

It is important to recognize that water is used for a number of different purposes, all of which are closely linked to the size of the population. Aside from its use as a vehicle for discarding domestic sewage, water also is used for domestic purposes, for processing and manufacturing, and for transportation. Since Ontario is the centre of Canada's manufacturing industry, and can be expected to share the distinction of being the location of one of the most important financial centres in Canada for many years, it would seem reasonable to expect that the demand for water and shoreline property will continue to increase in future. As a consequence, it can be envisioned that there will be an even more acute shortage of recreational shoreline property in future. Recognition of this fact, draws attention to the question of who should benefit most from Small Craft Harbour developments. In this regard, there are two readily apparent sources of conflict. The first is between non-residents and residents, and the second is between different socioeconomic groups within the resident population. The former is of particular concern on Lake Erie, or other lakes or waterways, where the competition between resident and non-resident boaters is likely to be substantial in future.³ The latter is of primary concern in all government programs, where the conduct of the program may work to the disadvantage of particular segments of society.

³ Even though the information and analysis conducted in the previous chapters, and in this section, is directed mainly at Lake Erie, many of the observations and conclusions would be applicable to many lakes located in southern Ontario, and even to some northern lakes.



Yacht Visiting from United States

The development of Small Craft Harbour facilities provides resident boaters with the opportunity to share in a substantial amount of direct benefits.⁴ These benefits accrue to both boaters and to the general public, who through the provision of harbour facilities, have additional boating opportunities even if they choose not to use them. The provision of Small Craft Harbour facilities also provides a great number of indirect benefits for the Canadian and Ontario public through

4 It was shown in Chapter Two that resident boaters enjoyed an estimated 10,344,000 recreational hours on Lake Erie during 1977. Resident general recreationists enjoyed 47,233,000 Lake Erie related recreational hours during 1977.

the expenditure of tourist dollars.⁵ These indirect benefits are made available to the public in the form of new investment opportunities, jobs, and wages in those areas where the Small Craft Harbours Program helps attract non-resident visitors. Increased non-resident activity also helps the Canadian government earn foreign exchange and improve Canada's balance of payments.

Unfortunately, non-resident activity often detracts from the enjoyment of residents.⁶ Since the water resources of Canada are owned by the Canadian people, and Canadian tax dollars are used to finance the development of Small Craft Harbours, it can be argued that the non-resident use of Canadian lakes and waterways should be kept to a minimum. However, such a policy could lead to a serious decline in the expenditure of tourist dollars within certain regions. It would seem appropriate, therefore, to encourage both residents and non-residents to use government built harbour facilities when and wherever possible. However, it should be understood that both the type of benefits generated (direct and indirect) and the overall level of return to the Canadian public will ultimately depend upon the mixture of resident and non-resident boating within a particular area.

It is obvious from the socioeconomic information presented in Chapter Two, that the Small Craft Harbours Program caters mainly to two identifiable segments of society. The first is the commercial fisherman and the second is the recreational boater. Commercial fishermen, as a group, represent an occupational category that is known for independence and personal initiative. Insofar as commercial fishing is an important industry (particularly in some parts of Canada) that serves

5 It was estimated in Chapter Two that approximately \$3,769,000 in wages and salaries and 235 man-years of employment were generated by boaters' expenditures in the Lake Erie area during 1977.

6 William F. Sinclair and David J. Reid, "Conflicts Among Recreational Resource Users - The Case of Non-Canadian Participation in the Regional Sport Fisheries of British Columbia and the Yukon", The Annals of Regional Science, vol. 8, no. 2, June, 1974.

all of Canadian society, government support of commercial fishermen can be considered desirable. The same is not true of recreational boaters, who usually are readily identifiable privileged members of society.⁷

The apparent distinction between the recreational boater and the rest of the population is partially revealed by the information presented in Table 1:4 that shows a comparison of the age distribution of the Lake Erie recreational boater with the resident population of the Lake Erie area. The comparison presented in this table shows that only 9.3 percent of all recreational boaters are 50 years of age or over, while almost 26 percent of the resident population is in this same age group. More than 25 percent of all recreational boaters are in the 40 to 49 years of age category, while only 10.9 percent of the resident general population are 40 to 49 years of age. It also is interesting to note that slightly under 57 percent of all non-resident Canadian boaters are in the 40 to 49 years of age category, and 19.2 percent of non-resident boaters are 50 years of age or older. The age distribution of resident boaters is not appreciably different from that of the general population. This is probably due to a higher incidence of casual participation in boating activity among residents of the area. The information presented in this table suggests that the Lake Erie recreational boater is usually of an age that is associated with high personal career earning power, yet young enough (except maybe for non-residents) to remain an active outdoor enthusiast.

Table 2:4 is used to provide information on the occupational distribution of the head of recreational boating parties and of the head-of-households of the general population living in the Lake Erie area. According to the information presented in this table, 13.2 percent of all head of party recreational boaters are employed as managers or

7 The information gathered this summer in the Marina Clientele Survey revealed that the average recreational boater who used small harbour facilities had invested \$15,000 to \$20,000 on a boat or vessel which he and/or his family used an average of seven times per year.

TABLE 1:4

THE AGE DISTRIBUTION OF LAKE ERIE RECREATIONAL BOATERS AND THE
AGE DISTRIBUTION OF THE GENERAL POPULATION OF THE LAKE ERIE AREA

(Rounded to nearest 500)

Category	<u>RECREATIONAL BOATERS</u>								Resident General Population	
	Resident		Non-Resident Canadian		Non-Resident		Total		#	%
	#	%	#	%	#	%	#	%		
0 - 9	9,000	12.2	2,500	6.8	1,500	11.5	13,000	10.5	149,000	15.7
10 - 19	20,500	27.9	4,500	12.2	3,500	26.9	28,500	23.1	188,500	19.9
20 - 29	16,500	22.5	4,500	12.2	1,500	11.5	22,500	18.2	152,500	16.1
30 - 39	11,500	15.7	3,000	8.1	2,000	15.4	16,500	13.4	112,000	11.8
40 - 49	8,500	11.6	21,000	56.8	2,000	15.4	31,500	25.5	103,000	10.9
50 - 59	5,000	6.8	1,500	4.1	1,500	11.5	8,000	6.5	99,000	10.4
60 +	2,500	3.4	0	-	1,000	7.7	3,500	2.8	144,000	15.2
TOTAL	73,500	100.0	37,000	100.0	13,000	100.0	123,500	100.0	948,000	100.0

Source: Statistics Canada, Census Division, 1971

Marina Clientele and General Recreational Surveys - 1977

TABLE 2:4

THE OCCUPATIONAL DISTRIBUTION OF HEAD OF RECREATIONAL BOATING PARTIES
AND OF HEAD OF HOUSEHOLDS OF GENERAL POPULATION LIVING IN THE LAKE ERIE AREA

(Rounded to nearest 100)

Occupation Category	RECREATIONAL BOATERS								Resident Head of Household Population	
	Resident		Non-Resident Canadian		Non-Resident		Total			
	#	%	#	%	#	%	#	%	#	%
Managerial & Administrative	3,000	12.0	1,800	14.1	800	17.4	5,600	13.2	12,600	6.5
Sales	1,500	6.0	900	7.0	800	17.4	3,200	7.6	29,400	15.1
Natural Sciences	1,300	5.2	700	5.5	600	13.0	2,600	6.1	7,700	4.0
Social Sciences	300	1.2	1,000	7.8	200	4.3	1,500	3.5	2,400	1.2
Teaching	800	3.2	100	.8	100	2.2	1,000	2.4	11,300	5.8
Medicine & Health	800	3.2	700	5.5	100	2.2	1,600	3.8	10,400	5.3
Clerical	1,000	4.0	500	3.9	0	-	1,500	3.5	35,200	18.1
Farming	1,300	5.2	300	2.3	0	-	1,600	3.8	11,400	5.9
Food Processing	500	2.0	100	.8	0	-	600	1.4	6,000	3.1
Construction & Transport Equipment Operator	3,800	15.3	2,400	18.8	400	8.7	6,600	15.6	21,800	11.2
Machining Fabrication & Assembly Repairs	5,200	20.9	1,700	13.3	700	15.2	7,600	18.0	6,600	3.4
Artistic Literary & Recreational	400	1.6	700	5.5	0	-	1,100	2.6	2,300	1.2
Others	5,000	20.1	1,800	14.1	900	19.6	7,700	18.2	10,500	5.4
No Response	0	-	100	.8	0	-	100	.2	27,100	13.9
TOTAL	24,900	100.0	12,800	100.0	4,600	100.0	42,300	100.0	194,700	100.0

Source: Statistics Canada, Census Division, 1971: Marina Clientele & General Recreational Surveys - 1977

administrators while only 6.5 percent of the head-of-household members of the general population are employed in this same category. Almost 34 percent of all head of party recreational boaters are employed in construction, transportation, or as machinists, while only 14.6 percent of the resident head-of-household population are employed in these same categories. Similarly, only 3.5 percent of all leaders of boating parties are employed as clerks; more than 18 percent of the resident head-of-household population are employed in the clerical category. Although difficult to interpret, the information presented in this table suggests that a large percentage of Lake Erie recreational boaters are employed in higher paying occupations than is true of the general head-of-household population.



Boating as a Leisure Pastime

Tables 3:4 and 4:4 are used to present information on the

TABLE 3:4

INCOME DISTRIBUTION OF HEAD OF RECREATIONAL BOATINGPARTIES ON LAKE ERIE DURING THE SUMMER OF 1977

(Rounded to nearest 100)

<u>Income Category</u>	<u>RECREATIONAL BOATERS</u>							
	<u>Resident</u>		<u>Non-Resident Canadian</u>		<u>Non-Resident</u>		<u>Total</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Under \$10,000	2,400	9.6	1,100	8.7	300	6.5	3,800	9.0
\$10,000 - \$20,000	14,300	57.4	8,000	63.0	1,300	28.3	23,600	55.9
\$20,001 - \$30,000	5,000	20.1	2,600	20.5	1,700	37.0	9,300	22.0
\$30,001 - \$40,000	2,000	8.0	500	3.9	700	15.2	3,200	7.6
\$40,001 - \$50,000	100	.4	100	.8	300	6.5	500	1.2
Over \$50,000	1,100	4.4	400	3.1	300	6.5	1,800	4.3
TOTAL	<u>24,900</u>	<u>100.0</u>	<u>12,700</u>	<u>100.0</u>	<u>4,600</u>	<u>100.0</u>	<u>42,200</u>	<u>100.0</u>

Source: Marina Clientele and General Recreational Surveys - 1977

TABLE 4:4

DISTRIBUTION OF FAMILY INCOME AMONG
RESIDENT POPULATION OF LAKE ERIE AREA - 1971
(Rounded to nearest 1000)

<u>Income Category</u>	<u>FAMILY INCOME</u>	
	<u>General Population</u>	
Under \$5,000	41,000	18.3
\$5,000 - \$ 9,999	87,000	38.8
\$10,000 - \$14,999	63,000	28.1
\$14,000 - \$19,999	21,000	9.4
\$20,000 +	12,000	5.4
TOTAL	224,000	100.0
	224,000	100.0

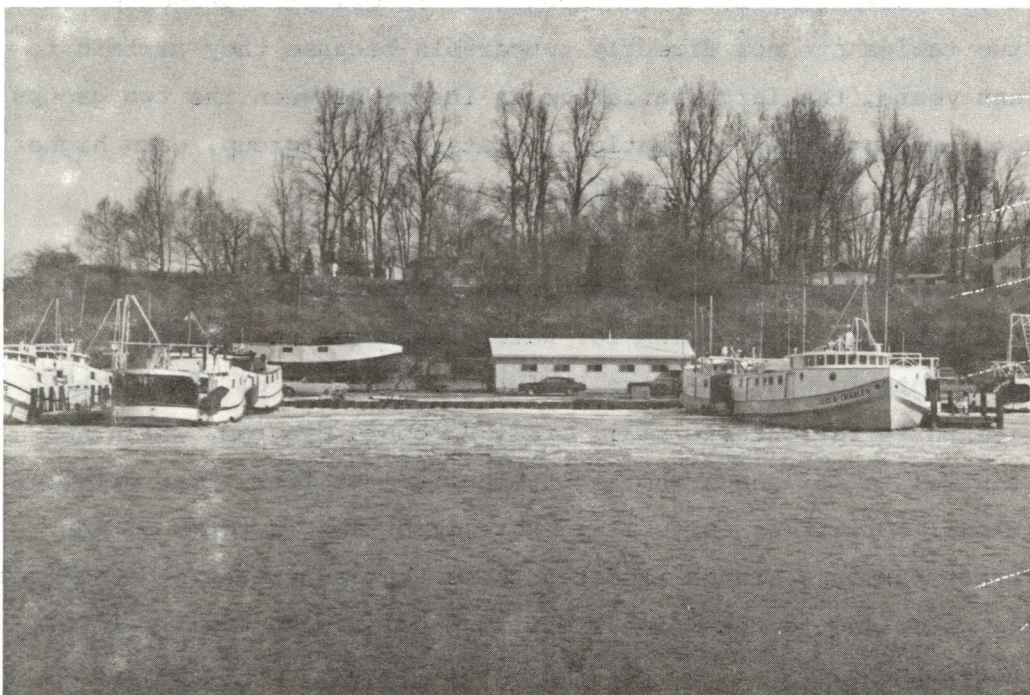
Source: Statistics Canada, Census Division, 1971

income distribution of recreational boaters and the family income levels of the general population. The information presented in these tables shows that more than 35 percent of all head of recreational boating parties on Lake Erie during the summer of 1977 earned \$20,001 per year or more. In contrast, only 5.4 percent of the general population had a family income of greater than \$20,000 during 1971. The tables also show that only nine percent of all head of recreational parties earned less than \$10,000 during 1977. In comparison, more than 57 percent of the general population had a family income of less than \$10,000 during 1971. Even though the information presented in these two tables are not directly comparable because they pertain to different years, the large variation in income between the two groups is strong evidence that recreational boaters, as a group, earn higher incomes than do the general population.

The information and discussion presented in this section has indicated that the competition for water resources on Lake Erie, and throughout Ontario will increase in future. This is of considerable significance to the Ontario Small Craft Harbours Program, which has the potential to influence who might benefit most from water oriented recreational activities in future. More important in terms of the Small Craft Harbours Branch mandate, those that administer the program have the potential to determine who will benefit most from small harbours development.

The future strategy of the Small Craft Harbours Branch should be such that it will contribute to the individual needs of a region. If the harbour facilities available within a particular region can easily accommodate resident boating needs, then it would seem appropriate to encourage non-resident participation and tourist expenditures in the area. This would be especially important in low income areas. However, if boating facilities are scarce in a particular area, then the Small Craft Harbours Program should consider adopting a strategy which gives residents priority over non-residents.

This could be accomplished by charging non-resident boaters higher fees for tourist accommodation or the use of boating facilities. Non-resident boating activity could be discouraged by building harbour facilities in subarea II where non-resident participation is small. According to the information presented in this section, this might also serve to encourage the participation of a greater cross section of the resident population in Lake Erie boating.



Icing Conditions - Port Dover

The Small Craft Harbours Branch should also be cognizant of the fact that the program as presently administered caters mainly to upper income groups. Future strategies should be designed to ensure that all segments of the population share equally in the benefits generated by the Small Craft Harbours Program. If the Small Craft Harbours Program in Ontario is to obtain some minimal amount of

success, efforts should be made to ensure that there is a sufficient amount of property set aside for future harbour developments. This would help assure the continued success of the Small Craft Harbours Program by ensuring that sufficient property is available to accommodate future demands. Second, it would help guarantee free public access to prime recreational shoreline areas for that segment of the population which does not participate in boating or own shoreline property.⁸

Special or Unique Requirements of the Ontario Region

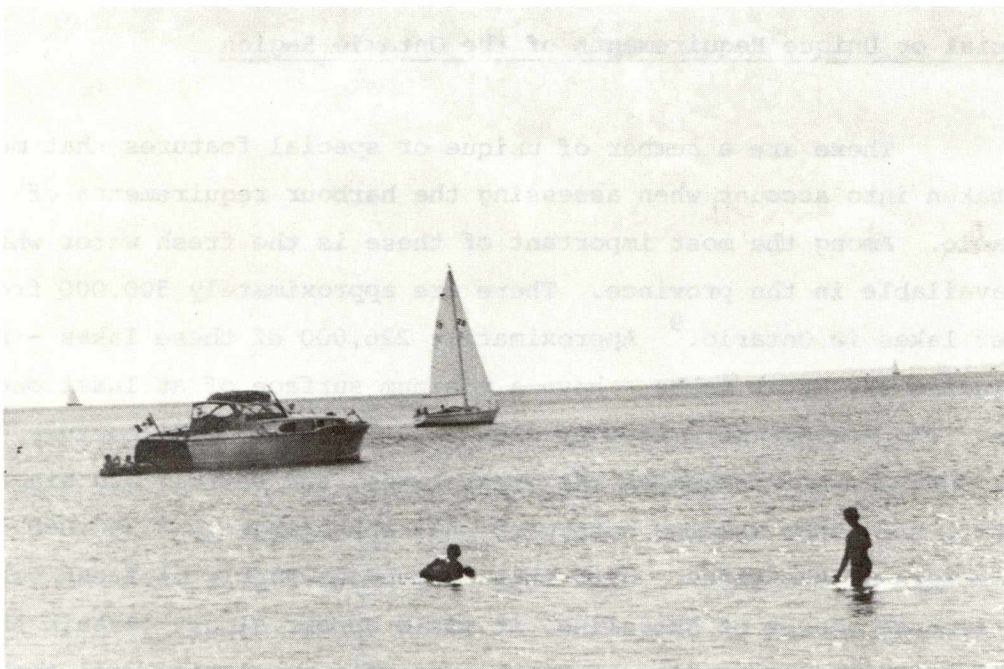
There are a number of unique or special features that must be taken into account when assessing the harbour requirements of Ontario. Among the most important of these is the fresh water which is available in the province. There are approximately 500,000 fresh water lakes in Ontario.⁹ Approximately 226,000 of these lakes - not including the Great Lakes - have a minimum surface of at least one acre. The average perimeter of each lake is about 15 kilometers.¹⁰ Thus Ontario, not including the Great Lakes, the Detroit and Niagara Rivers, nor other related waterways, has approximately 3,390,000 kilometers of shoreline. With this tremendous supply of fresh water, and immense amount of shoreline, it would appear almost certain that an ever increasing portion of North America's population will seek water oriented recreational opportunities in Ontario in future. This rapid rise in the domestic and industrial use of water will be

8 It should also be understood that the provision of public boat launching ramps, and other such public access services, does help to ensure that all segments of the population have an opportunity to participate in recreational or leisure boating.

9 This information was provided by W. H. Haras of Ocean and Aquatic Sciences, Fisheries and Marine Service, Department of Fisheries and the Environment, Burlington, Ontario.

10 The information on the average perimeter was estimated from a survey of 6,500 representative lakes by Ocean and Aquatic Sciences, Fisheries and Marine Service, Department of Fisheries and the Environment, Burlington, Ontario.

exacerbated by the rising use of water for recreational purposes. The overall consequence of this is that Small Craft Harbours will have to devote more time and effort to the planning and development of harbours in Ontario. It also may mean that a more substantial portion of the future Small Craft Harbour budget (depending on the needs of other parts of Canada) will have to be spent in the Ontario Region.



Port Dover

The need for additional resources is supported, to some extent, by the climatic conditions which prevail in Ontario. Unlike other parts of Canada where commercial fishing and recreational boating is substantial, Ontario has relatively cold winters. The ice and snow which is present every winter greatly increases the cost of maintaining harbour facilities. It also adds to the cost of providing the type of facilities that are necessary to accommodate boats over the winter.

Lift-out facilities are expensive, as is the bubbling system (which has not been proven fully satisfactory) that is used to keep ice away from boats that are moored in the water during winter. These are conditions which substantially increase the cost of building and maintaining harbour facilities in Ontario.

Summary and Recommendations

We may now summarize the discussion presented in this chapter.

- (1) During the initial five years of operation, the Small Craft Harbours Program in Ontario has been fairly successful. This is particularly true on Lake Erie where commercial fishing related developments appear to have greatly improved the quality of the harbour facilities available to commercial fishermen at very little cost to either the fishermen or the industry.
- (2) Successful introduction of the Small Craft Harbours Program does not necessarily imply that the program will continue to be successful in future. The demand for water oriented recreational opportunities in Ontario will greatly increase. With this increase in demand, the Branch will have to devote more resources to accommodate the needs of recreational boaters. There will be a need for greater planning to avoid conflict between resource users and other government agencies. This is important on Lake Erie because it is located within easy access of two large metropolitan areas of the United States and a very large portion of Ontario's population.
- (3) The Small Craft Harbours Program should continue to operate in a manner which avoids displacing the investment initiatives of the private sector. A primary objective of the program should be to create an atmosphere that will encourage

investment in privately owned public boating facilities. This is important on Lake Erie where public investment in harbour development probably will not keep pace with future boater demand.

- (4) Administrators of the program should be aware that they have the ability to influence who benefits most from government supported harbour developments. The program should operate in a manner which ensures all socioeconomic segments have an opportunity to share in the benefits of the program. Unless other government agencies can identify areas of greater needs, it should operate in a manner which serves regional interests. In some situations, this may mean adopting a strategy which gives resident boaters priority over non-residents. However, in most cases, concern for regional welfare would mean encouraging both resident and non-resident participation in boating activities. At least for the present, this would be the appropriate course of action for Lake Erie, where the benefits from tourist activity would greatly outweigh the potential dissatisfaction among resident boaters.

- (5) The increasing demand for water oriented recreational activity in Ontario may mean that a more substantial portion of Small Craft Harbours budget (depending on the needs of other parts of Canada) will have to be allocated to Ontario in future.

Conclusions and Recommendations

Lake Erie is a very valuable common property resource which is shared between Canada and the United States. Water from Lake Erie is used for industrial processing, domestic consumption, transportation and as a vehicle for waste disposal. More important for the purposes of this study, it is the focus of attention for a large amount of water oriented recreational activity and supports one of the largest fresh water commercial fisheries in the world. Since being introduced to Ontario in January of 1974, the federal Small Craft Harbours Program has made a significant contribution to the economic and social well-being of both commercial fishermen and recreational boaters. On Lake Erie, breakwaters have been built, additions to wharfage and marina facilities have been constructed, and harbours upgraded. Since the initial thrust of the Small Craft Harbours Program was primarily to help commercial fishermen, most of the early emphasis was on commercial fishing.

The information gathered for this presentation reveals that the Lake Erie commercial fishery generates a substantial amount of employment and income. It is estimated that approximately 1,000 persons were employed in the Lake Erie commercial fishery during 1977. During that same year, the overall level of direct fishing wages (not including profits or incomes generated as a result of successive rounds of spending) was \$13,000,000. It would appear that any small harbours investment which improves the safety, convenience or cleanliness of commercial fishing harbour facilities on Lake Erie will contribute to the economic viability of the Lake Erie commercial fishery.

Even though it is established that the Small Craft Harbours Program can continue to make some contribution to the Lake Erie commercial fishery in future, the overall impact will be limited. The obvious reasons for this are the early success of the Program in helping commercial fishermen and the somewhat limited growth potential of the industry

itself. Since 1971, harbour related developments have been carried out in Wheatley, Port Dover, Erieau and Port Rowan. These are four of the six communities where commercial fishing can be expected to remain important.

It is estimated that 860,500 individuals visited Lake Erie for recreational purposes during 1977. Of this total, 592,500 (or 69 percent) used the lake for approximately 45,132,000 days of recreational activity. An estimated 853 man-years of employment and \$13,655,000 of wages and salaries (not including employment or wages and salaries produced as a result of successive rounds of spending) is directly attributable to recreational activities associated with Lake Erie. During 1977, approximately \$3,769,000 in wages and salaries, and 235 man-years of employment were generated by boaters' expenditures in the Lake Erie area.

It is revealed that the boating services on the north shore of Lake Erie do not adequately serve the needs of recreational boaters. Not only is there a shortage of particular services, but the availability of those services that are provided is sporadic and inconsistent. This is more than merely a matter of providing variety, but a matter of dependability. Those individuals who choose to go boating on Lake Erie cannot depend on receiving particular services, nor can they depend on being charged consistent fees. Most evidence suggests that better quality services are required if Canada and Ontario are to fully exploit the boating potential of the lake.

Despite inadequate services, it appears almost certain that recreational boating activity will continue to grow on Lake Erie, as it will elsewhere in Ontario. Attracted by a "quiet, clean atmosphere" and its central location, both residents and non-residents alike, will continue to visit Lake Erie in increasing numbers. It is estimated that the requirements for water berthage will grow from roughly 5,400 in 1977 to 14,400 in 1986, and to 47,600 in 1996. However, it is

unlikely that either private investments or the Small Craft Harbours Program will be able to satisfy these demands, unless a great deal more resources are devoted to maintaining, upgrading and adding to the harbour facilities on the lake.

It would appear obvious from the information gathered in this study, that the Small Craft Harbours Program has the potential to generate a substantial amount of direct or free recreational benefits. It also has the potential to provide benefits for residents of Ontario and other Canadians by increasing the attractiveness of the Lake Erie area to non-resident boaters. However, the full potential of the lake as a recreational boating area will never be achieved unless specific operating policy objectives are adopted. According to the information gathered in this report, the Small Craft Harbours Branch should give careful consideration to the following recommendations:

- (1) Although the Small Craft Harbours Program in Ontario should continue to be concerned about providing Lake Erie commercial fishermen with adequate harbour facilities, a great deal more effort should be devoted to serving the needs of recreational boaters.
- (2) The Small Craft Harbours Program should be administered in a manner which avoids displacing investment initiatives in the private sector. The Program should promote an atmosphere that creates business confidence and that encourages private investment in public harbour facilities.
- (3) A primary objective of the Small Craft Harbours Program should be to ensure that all segments of the Canadian public share in the benefits of the Program. This requirement can be partially satisfied by maintaining free public access to prime recreational shoreline, ensuring that launching ramps and boat rental services are available and by continuing to maintain close communication with other government service agencies.
- (4) When and wherever possible, the Small Craft Harbours Program

should give priority to contributing to the economic and social needs of regions where Small Craft Harbour supported facilities are available. In some situations, this may require adopting a strategy which gives resident boaters priority over non-residents. However, in the vast majority of cases, concern for regional welfare would mean encouraging both resident and non-resident participation in boating activities.

- (5) Finally, it should be noted that a primary concern of all recreational boaters, especially those who travel great distances to visit Lake Erie, is a clean environment, clean water, and good fishing opportunities. The Small Craft Harbours Branch should be concerned with helping to maintain good water quality and healthy fishery resources. Both in construction and in operation, the Small Craft Harbours Branch can contribute to these important objectives.

APPENDIX ONE

SUMMARY OF SURVEYS AND RESULTS

APPENDIX ONE

SUMMARY OF SURVEY METHODS AND RESULTS

Any investigation that draws conclusions on the causal effects or relationships of uncontrolled empirical events usually requires a large amount of data. Data usually are available from at least two sources. Some data are collected on a regular basis by private organizations or public agencies to fulfill specific needs. Other data are collected as part of a general data-base reservoir, which adds to the depth of understanding about particular phenomenon. However, it often is found that data from these two sources are inadequate to serve all the unique or special requirements of particular studies. This is especially true of those studies that are designed to determine the economic and social consequences of public programs that have widespread impact. As a consequence, the investigator or scientist usually has three choices: (1) He (or she) may hire a private consultant or contractor to collect the data, (2) he (or she) may collect the data as part of a larger program, or (3) he (or she) may choose some combination of (1) or (2). There are advantages and disadvantages to all three approaches, but in this study it was decided that the most appropriate choice was to collect those data which were special or unique to the requirements of the study as part of a larger program.

Even though a substantial amount of the data contained in this study were provided by a number of different sources, most were collected in six surveys conducted by Economic Services of the Fisheries and Marine Service, Ontario Region, during the spring and summer of 1977. Each of the six surveys were designed to gather information on different population segments who either live or visit in the counties of Elgin, Essex, Haldimand, Norfolk, Kent or Niagara, which border on the north shore of Lake Erie. The six surveys were:

1. Commercial Fishermen Mail Survey

2. Marina Clientele Survey
3. Marina Operators Survey
4. General Recreationists Survey
5. Associated Businesses Survey
6. Camper Blitz Survey

The information gathered in each of these surveys and the results are presented in this Appendix. A copy of each questionnaire and the Field Assistants instructions for each type of survey are presented on pages 196 to 229.

Commercial Fishermen Mail Survey

During the spring of 1977, a mail survey of commercial fishermen was conducted. The survey was designed to gather information on the present and probable use of small harbour facilities by commercial fishermen on Lake Erie. It was intended that only those who owned or operated a commercial tug would be included in the survey. The initial mailing list was compiled from two separate lists provided by the London office of the Ontario Ministry of Natural Resources and the Ontario Council of Commercial Fishermen. Two hundred and seventeen individuals were included on the initial mailing list.

The first questionnaires were mailed out during February of 1977. Included with the questionnaire was a covering letter explaining the purpose of the questionnaire and urging fishermen to cooperate (see page 205).¹ During the remainder of the spring and the summer of 1977, four additional reminders were sent to individuals who failed to respond to the previous send or to those who failed to answer all the questions on the questionnaire. Each reminder contained a letter explaining what was required and drew attention to those questions which were answered incompletely (see pages 205 and 210). All mail returns were received by the last week of June 1977.

During the month of July, telephone enumerators were used to

¹ Please note covering letter and supplementary income questionnaire on pages 209 and 210.

follow up the mail survey. All those fishermen included on the mailing list who had either failed to answer all the questions or had not responded were telephoned. As a result of this telephone follow-up, misunderstandings were reduced to a minimum, a greater number of completed questionnaires were included in the final return, and two additional returns were received.

Table 1:I provides a breakdown of survey results. According to the information presented in this table, 56.5 percent of all the useable returns were received as a result of the initial mailing, 16.1 percent were received as a result of the first reminder, and 11.8 percent were received as a result of the second, third and fourth reminders. The telephone follow-up accounted for 1.2 percent of the total returns. The total number of useable returns received as a result of the survey

TABLE 1:I

Percentage Distribution of Commercial Fishermen
(Owner/Operators) Survey Returns

	<u>Number of</u> <u>Useable Returns</u>	<u>Percentage</u> <u>of Total</u> <u>Sample</u>
Initial Mailing	91	56.5
1st reminder	26	16.1
2nd reminder	9	5.6
3rd reminder	8	5.0
4th reminder	2	1.2
Telephone reminder *	2	1.2
TOTAL	<u>138</u>	<u>85.6</u>

* Telephone reminders were used primarily to clarify misunderstandings from the questionnaires and to fill in incomplete answers.

was 138, or 86 percent of the owner/operator fishermen who were identified.

As noted above, the initial mailing list was compiled from information provided by the Ontario Ministry of Natural Resources and the Ontario Council of Commercial Fishermen. Even so, the identification of the fishermen owner/operators was not a simple task. Of the initial list of 217 licensees, 37 (17 percent) were eliminated due to non-participation in the fishery. Nine were not active fishermen themselves, but permitted other fishermen to use their licensing privileges. Sixteen reported that they had sold their boat and license over the past two years. Two were deceased. One held a license, but neither he nor any other individual made use of the license. Others could not be located because they had moved without leaving a forwarding address. A number of those not included on the original list, were found to be active owner/operator commercial fishermen and were added to the list during the course of the survey. Eventually, the survey identified 159 people who appeared to be active owner/operator Lake Erie commercial fishermen.

The results of this survey are presented in Table 2:I. According to the information presented in this table, useable returns were

TABLE 2:I

Percentage Distribution of Commercial Fishermen
(Owner/Operators) Respondents by Location

<u>Permanent Place of Residence</u>	<u>Number of Respondents</u>	<u>Percentage of Total Sample</u>
Amherstburg	1	.7
Blenhiem	6	4.4
Dunnville	2	1.5
Erieau	5	3.6
Fort Erie	1	.7
Harrow	2	1.5

<u>Permanent Place of Residence</u>	<u>Number of Respondents</u>	<u>Percentage of Total Sample</u>
Kingsville	14	10.1
Leamington	8	5.8
Lowbanks	4	2.9
Nanticoke	1	.7
Pelee Island	3	2.2
Port Burwell	6	4.4
Port Colborne	2	1.5
Port Dover	25	18.1
Port Maitland	1	.7
Port Stanley	11	8.0
Port Rowan	10	7.3
Port Ryerse	1	.7
St. Williams	1	.7
Wheatley	24	17.4
Outside Lake Erie Area	7	5.1
Incomplete questionnaire	3	2.2
	<hr/>	<hr/>
TOTAL	138	100.0
	<hr/>	<hr/>

received from 20 different locations on the north shore of Lake Erie. Seven were received from locations outside the Lake Erie area and three useable returns did not indicate on the questionnaire their permanent place of residence.

A number of different problems were encountered during the survey. The most frequent problem, and the one which was not anticipated at the outset, was duplicate returns. Many owner/operators worked more than one vessel. As a result, some minor amount of overlap was encountered. Most duplication was eliminated through telephone or personal interviews.

Another problem that was encountered, and which does detract from the flexibility of the analysis, was the confusion between technical terms used on the questionnaire. For example, it was revealed during the course of the survey that some fishermen were not sure what was to be included under the headings Gross Income and Net Income. There was also confusion between Operating Expenses and Capital Investment. In those returns where this type of confusion was detected, the

fisherman was telephoned or personally interviewed so that adjustments could be made.

Many of the problems encountered in this survey were created by the fact that this is one of the first socioeconomic surveys of commercial fishermen on Lake Erie. Many fishermen were not accustomed to filling out information on their socioeconomic background. Perhaps a personal interview system would have been more effective in this initial attempt. The mail survey was hampered, as well, by the inaccuracy of the initial mailing list which caused a lot of confusion and additional work. Nonetheless, a great deal of time and effort was expended eliminating as much error as possible. It is expected that this extra effort, normally not undertaken as part of a routine mail survey, paid dividends and the overall results are more than adequate.

Marina Clientele Survey

Throughout the May to September period of 1977, a Marina Clientele Survey was conducted on the north shore of Lake Erie. The purpose of the survey was to gather socioeconomic information on resident and non-resident boaters who used marina facilities on the north shore of Lake Erie. It was intended that the survey would provide information on the current trends of recreational boating activity, and on the needs of those who choose to use the north shore of Lake Erie for recreational purposes. Three field enumerators visited each Lake Erie marina throughout the course of the summer. Marina clientele were approached on an individual basis and asked a series of questions about the type of boat they own, the type of facilities they most prefer, the location of the facilities they use most frequently, and the type of boating activities they normally pursue (see pages 211 to 213). Although information on every member of the party is included in the survey, the primary target of the field assistant was the oldest, or head-of-household member, of the recreational party.

During the course of the summer, the Field Assistants

completed 1,096 interviews. Of this 1,096, 563 (51.4 percent) were residents of the Lake Erie area, 533 (48.6 percent) were either residents of other parts of Canada or non-residents. Because of the length of the Lake Erie shoreline, it was considered important that enumerators conduct their interviews over the entire shoreline and not concentrate too heavily in any one area. As a result, interviews were undertaken at over 85 different sites along the Lake Erie shoreline. This is shown in Table 3:I. As can be seen from the information presented in this table, interviews were conducted at privately owned commercial marinas, private clubs, government owned harbour facilities and both public and private launching ramps.

TABLE 3:I

Percentage Distribution of Marina
Clientele Sample by Location

<u>Location</u>	<u>Number of Interviews</u>	<u>Percentage of Total Sample</u>
Acali Place	1	.1
Bayview Marina	1	.1
Bertie Boat Club	4	.4
Bluebill Marina Ltd.	2	.2
Booth's Harbour	48	4.4
Bragg's Marina	3	.3
Buffalo Canoe Club	9	.8
Buffalo Yacht Club	25	2.3
Burke's Cabins & Boats	1	.1
Casper's Marina	25	2.3
Cedar Island Yacht Club	26	2.4
Colchester Harbour	4	.4
Duff's Marina	6	.6
Duffy's Motor Inn & Dock	32	2.9
Dunnville Boat Club	18	1.6
Erieau Marina	32	2.9
Funny Farm Marina	8	.7
George The Baitman	3	.3
Glenn's Cove	3	.3
Graham's Boat Ramp	2	.2
Holiday Harbour	31	2.8

<u>Location</u>	<u>Number of Interviews</u>	<u>Percentage of Total Sample</u>
Hoover Marina	5	.5
Island View Marina	1	.1
Kanagio Yacht Club	19	1.7
Krestel's Marina	8	.7
Lakeside Yacht Club	3	.3
Lion's Club Port Stanley	10	.9
Marina Shores	33	3.0
Marlon Marina	5	.5
Melton Bros. Marina	27	2.5
Midlake Marina	7	.6
Niagara Parks Marina	18	1.6
Norm's Bayview Marina	31	2.8
North Erie Marina & Trailer Park	10	.9
Old Cut Boat Livery (Ray Ferris)	12	1.1
Old Cut Marina	10	.9
Park Haven Marina	1	.1
Port Colborne Yacht Harbour & Marine	6	.6
Port Dover Harbour	4	.4
Port Dover Yacht Club	42	3.8
Port Glasgow Yacht Club	15	1.4
Port Maitland Sailing Club	4	.4
Port Stanley Marina Ltd.	17	1.6
Port Stanley Sailing Squadron	9	6.8
Post's Marina	3	.3
Reaume's Motel & Marina	4	.4
Ridgewood Marina	128	11.7
River Shores Marina	7	.6
Rondeau Bay Marina Ltd.	21	1.9
Sandboy Marina	2	.2
Scholfield's Marina	3	.3
Stan's Marina	19	1.7
Strobridge Marina	3	.3
Sturgeon Creek Marina Ltd.	20	1.8
Sudder Dock	10	.9
The Harbour Lunch	4	.4
The Hut	74	6.8
West Dock	7	.6
No Response	3	.4
Outside Marina Facilities	10	.9
Public Launching Ramps	197	18.0
TOTAL	1,096	100.0

A great deal of care was taken to ensure that the survey sample at each of the sites was undertaken in a random manner. The

number of interviews conducted at each site was proportional to its popularity with boaters. The most notable concentration of boating activity occurred on Longpoint Bay shoreline (which includes Longpoint, Port Rowan, St. Williams, Turkey Point) with lesser concentrations in the Crystal Beach, Port Dover and Port Stanley areas. The enumerators also attempted to sample in a manner which would ensure that all segments of the population would be represented in the sample by conducting surveys at each site on a different day of the week. The weekday use of boating facilities generally was very light. Consequently, the greatest majority of interviews were gathered on weekends.

There were no difficulties with either the questionnaire or the interview techniques used during the survey. During the interviews, the boaters were generally pleasant, cooperative and appeared very interested in the project.

Marina Operators Survey

During the period May to September of 1977, a Marina Operators Survey was undertaken on the Canadian side of Lake Erie. The purpose of the survey was to provide information on the socioeconomic background of marina operators, assess the contribution of the marinas to the economy of the Lake Erie area, and ascertain the type of boating services available on the lake. Once again, three Field Assistants were used in this survey. Each was provided with a formal interview outline or questionnaire and given specific instructions on the application of the questionnaire and interviewing procedures (see pages 214 to 217).

A total of 79 marinas and harbours were included in the survey. It included commercial marinas (68 percent), federal Small Craft Harbour facilities (8 percent), private boat and yacht clubs (16 percent), and other public facilities (8 percent). The facilities included in the survey, listed geographically from east to west, are presented in Table 4:I. Only some Department of Transport harbours such as Port Stanley,

which does not cater to recreational boaters, and a few unmanaged federally owned shoreline areas (Nanticoke, Port Maitland, Selkirk), were omitted from the survey. Only one marina operator was not included because he refused to allow clientele interviews to be conducted in his marina.

TABLE 4:I

List of Marina Operators Sample

- 1) Bayview Marina, River Canard *
- 2) Mueller's Marina, River Canard *
- 3) Acali Place, LaSalle *
- 4) Island View Marina, LaSalle *
- 5) Park Haven Marina, LaSalle *
- 6) LaSalle Marina Ltd., LaSalle *
- 7) Sunset Marina, LaSalle *
- 8) Lou's Marina, LaSalle *
- 9) Tri-Community Boat Club, Amherstburg
- 10) Kole Dock, Amherstburg
- 11) Duff's Marina, Amherstburg
- 12) Riverside Marina, Amherstburg
- 13) Cooper's Marina, Amherstburg
- 14) Port of Call Marina, Amherstburg
- 15) The Hut, Colchester
- 16) Colchester Harbour, Colchester
- 17) Cedar Island Yacht Club, Cedar Creek
- 18) Melton Bros. Marina, Cedar Creek
- 19) Kingsville Harbour, Kingsville
- 20) Casper's Marina, Leamington
- 21) Sturgeon Creek, Marine Ltd., Leamington
- 22) Leamington Harbour, Leamington
- 23) Glenn's Cove, Leamington
- 24) Dick's Marina, Pelee Island
- 25) West Dock, Pelee Island
- 26) Sudder Dock, Pelee Island
- 27) Wheatley Harbour, Wheatley
- 28) Erieau Marina, Erieau
- 29) Burke's Cabins and Boats, Erieau
- 30) Graham's Boat Ramp, Erieau
- 31) Reaume's Motel and Marina, Erieau
- 32) Rondeau Bay Harbour, Erieau
- 33) Rondeau Bay Marina Ltd., Rondeau
- 34) Port Glasgow Yacht Club, Port Glasgow
- 35) Port Stanley Sailing Squadron, Port Stanley
- 36) Lions Club Dock, Port Stanley

- 37) Port Stanley Marina Ltd., Port Stanley
- 38) Midlake Marine, Port Stanley
- 39) Kanagio Yacht Club, Port Stanley
- 40) Stan's Marina, Port Stanley
- 41) Port Bruce Harbour, Port Bruce
- 42) Steven's Docks, Port Bruce
- 43) McGuires Landing, Port Bruce
- 44) Bee Lin Campground, Port Bruce
- 45) North Erie Marina and Trailer Camp, Port Bruce
- 46) Ray Ferris Bait Shop, Long Point
- 47) Sandboy Marina, Long Point
- 48) Marina Shores, Long Point
- 49) Old Cut Marina, Long Point
- 50) George The Baitman, Long Point
- 51) The Harbour Lunch, Long Point
- 52) Norm's Bayview Marina, Long Point
- 53) Post's Marina, Long Point
- 54) Port Rowan Harbour, Port Rowan
- 55) Krestel's Marina, Port Rowan
- 56) Bluebill Marina, Port Rowan
- 57) Funny Farm, Port Rowan
- 58) Holiday Harbour, St. Williams
- 59) Booth's Harbour, St. Williams
- 60) Hilltop Lodge, St. Williams
- 61) Bayshore Lodge, St. Williams
- 62) Ridgewood Marine, Turkey Point
- 63) Port Dover Yacht Club, Port Dover
- 64) Port Dover Harbour, Port Dover
- 65) Strobridge Marine, Port Dover
- 66) River Shores Marina, Port Dover
- 67) Hoover Marina, Nanticoke
- 68) Murphy's Harbour and Camping Park, Nanticoke
- 69) Dunnville Boat Club, Dunnville
- 70) Port Maitland Sailing Club, Port Maitland
- 71) Port Colborne Yacht Club, Port Colborne
- 72) Lakeside Yacht Club, Port Colborne
- 73) Marlon Marina, Port Colborne
- 74) Rite Trailer and Sports (Scholfield's Marina),
Port Colborne
- 75) Buffalo Yacht Club, Point Abino
- 76) Bertie Boat Club, Point Abino
- 77) Bragg's Marina, Point Abino
- 78) Buffalo Canoe Club, Crystal Beach
- 79) Niagara Parks Commission Marina, Fort Erie

* Located on Lower Detroit River.

The overall results of the survey are considered very good. Cooperation was excellent and everyone appeared interested in the

results. This is revealed by the fact that successful completion of surveys approached nearly one hundred percent.

General Recreationists Survey

Coincidental with the others, a General Recreational Survey was also conducted during the summer of 1977. The purpose of the General Recreational Survey was to establish a broader understanding of all the recreational activity that takes place on or near Lake Erie. It was intended that this would provide a framework for the more specialized study of boaters. The survey consisted of direct interviews with the oldest, or head-of-household, member of each general recreational party using the prepared questionnaire (see pages 218 to 224). The questionnaire was used to gather information on the background of general recreationists, the amount of time spent in each recreational activity and associated expenditures. Additional questions were directed at non-residents of the area. The intention of this was to solicit information on the main reasons for visiting Lake Erie. Questions very similar in structure to those on the Marina Clientele Survey were included for those general recreationists who either owned or rented boats.

The survey was carried out at 48 different sites along the north shore of Lake Erie. As in the other surveys, it was felt that the distribution of interviews should be such that the survey cover the entire length of the lake's shoreline and not concentrate on any one area. The percentage distribution of the interviews is presented in Table 5:I. It is shown in this table that the Field Assistants completed 1,044 interviews during the May to September period. Of the 1,044 interviews, 546 (52 percent) were from resident general recreationists and 498 (48 percent) were from non-resident Canadian or non-resident general recreationists. Only two locations accounted for more than seven percent of the total sample collected. The largest percentage sample at any one location was 9.7 percent at Rondeau Provincial Park.

TABLE 5:I

Percentage Distribution of General
Recreation Survey by Location

<u>Location</u>	<u>Number of Interviews</u>	<u>Percentage of Total Sample</u>
Backus Conservation Area	2	.2
Byng Island Conservation Area	7	.7
Cedar Creek	7	.7
Clearville	5	.5
Colchester	47	4.5
Deer Creek	5	.5
Dunnville	13	1.3
Duttona Beach	9	.9
Erieau	1	.1
Ernie M. Warwick Conservation Area	2	.2
Haldimand Conservation Area	2	.2
Hay Creek Conservation Area	32	3.1
Holiday Beach	81	7.8
Iroquois Beach Provincial Park	54	5.2
Long Beach	2	.2
Long Beach Conservation Area	23	2.2
Long Point (Potto Hawk)	21	2.0
Long Point Provincial Park	58	5.6
Morpeth	38	3.6
Norfolk Conservation Area	8	.8
Point Abino	1	.1
Point Pelee	1	.1
Port Bruce	50	4.8
Port Bruce Provincial Park	10	1.0
Port Burwell	30	2.9
Port Burwell Conservation Area	8	.8
Port Colborne (Nickel Beach)	3	.3
Port Dover	39	3.7
Port Glasgow (Lakewood States)	29	2.8
Port Maitland	13	1.3
Port Rowan	2	.2
Port Ryerse	2	.2
Port Stanley	81	7.8
Rainham Township	10	1.0
Rock Point Provincial Park	46	4.4
Rondeau Provincial Park	101	9.7
Sand Hills (Houghton)	17	1.6
Sea Cliff Park (Leamington)	13	1.3
Selkirk	1	.1
Selkirk Provincial Park	40	3.8
Sherkston	28	2.7

<u>Location</u>	<u>Number of Interviews</u>	<u>Percentage of Total Sample</u>
Springwater Conservation Area	5	.5
St. Williams (Woodland Park)	4	.4
Sturgeon Woods Trailer Park (Leamington)	6	.6
Turkey Point	45	4.3
Turkey Point Provincial Park	11	1.1
Wheatley	3	.3
Wheatley Provincial Park	28	2.7
TOTAL	1,044	100.0

Table 6:I is used to show the distribution of resident and non-resident general recreationists interviews by type of location. According to the information presented in this table, 75.1 percent of resident interviews and 80.3 percent of the non-resident interviews were conducted at public and private campsites or parks. Most of the interviews were completed on the weekends when the bulk of general recreational activity took place. Both day-use and extended trip recreationists were included in the interviews.

TABLE 6:I

Distribution of Resident, Non-Resident Canadian and Non-Resident General Recreationists by Type of Location

<u>Location Type</u>	<u>Resident</u>		<u>Non-Resident Canadian and Non-Resident</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Park	171	31.3	139	27.9
Public Campsite	133	24.4	156	31.3
Private Campsite	106	19.4	105	21.1
Public Beach	67	12.3	22	4.4
Wharfage	23	4.2	38	7.6
Roadside	27	4.9	22	4.4
Rest Area	19	3.5	16	3.2
TOTAL	546	100.0	498	100.0

The results from this survey are considered a success. There were no special or unusual problems encountered by those who conducted the general recreational survey.

Associated Businesses Survey

Concurrent with the other surveys, an Associated Businesses Survey was conducted during the summer of 1977. The primary purpose of the survey was to establish the contribution of each Lake Erie dependent business to the local economy. From these data the importance of each type of service was assessed, and the degree of dependence on Lake Erie was estimated. Two hundred and fifty-three businesses were included in the survey. All of these were located on the Lake Erie shoreline with the exception of some boat sales outlets, which were located in nearby communities (see pages 225 to 228).

Table 7:I is used to present information on the percentage of interviews conducted at each type of associated business during the summer of 1977. According to the information presented in this table, 52 (20.6 percent) of the 252 interviews conducted during the summer of 1977 were at restaurants, fast food outlets, or taverns. Another 44 (17.4 percent) were at grocery stores, variety stores or fresh fish

TABLE 7:I

Percentage Distribution of Associated Businesses
According to Business Categories

<u>Business Category</u>	<u>Number of Interviews</u>	<u>Percentage of Total Sample</u>
Restaurants/Fast Food/Taverns	52	20.6
Grocery/Variety/Fresh Fish	44	17.4
Campgrounds	33	13.0
Sporting Goods/Bait	34	13.4

<u>Business Category</u>	<u>Number of Interviews</u>	<u>Percentage of Total Sample</u>
Hotel/Motel/Cottage	27	10.7
Boat Rental/Service/Gasoline	21	8.3
Camping Supplies/Camping Rentals	9	3.6
Souvenir/Crafts	9	3.6
Other	24	9.5
	<hr/>	<hr/>
TOTAL	253	100.0
	<hr/>	<hr/>

outlets. Not surprisingly, 60 (or 23.7 percent) of all the associated businesses included in the survey were at hotels, motels, cottages or campgrounds. The information contained in this table suggests that a good cross section of associated businesses were captured in the survey.

As with the other surveys, excellent cooperation was received from the owners, managers and employees interviewed during the survey. The distributions of respondents contacted were as follows: owners accounted for 79 percent, managers 16 percent, employees three percent and others two percent.

As previously mentioned, the results of this survey are used to provide an indication of the importance of Lake Erie recreational activity to the service sector of the local economy. It was never intended that the information gathered in this survey would be used to estimate the total value of the Lake Erie resource. If this had been intended, a great deal more money and manpower would have been required to complete the project. This is revealed by the fact that many more businesses than 253 are dependent on the tourist trade in the Lake Erie area. In some communities, it is obvious that almost every business is either partially or totally dependent on the visitors attracted to the lake. Sometimes the influence of this recreational activity extends several miles from the shoreline of the lake itself. These observations

should be kept in mind when the reader interprets the results presented in the text of this presentation.

Camper Blitz Survey

During the summer of 1977, field enumerators visited 12 public campsites on or near the Lake Erie shoreline to conduct what were referred to as "Camper Blitz Surveys". These surveys were designed as an inexpensive method of gathering information that would provide estimates on the portion of visitors to the Lake Erie area, which participate in outdoor recreational activities, the percentage that came especially to use Lake Erie, and the total recreational population. The technique is termed a "blitz" because it entails asking every party in a campground two or three simple questions on a given evening. The surveys were conducted on Thursdays to Sundays between the hours of 6:00 to 8:00 p.m. throughout the summer period.

A copy of the format of the survey is presented on page 229. As can be seen from the questionnaire, the number of occupants in each campsite was noted. The oldest, or head-of-household member of the recreational party was asked if any persons in their party used any of the recreational facilities on Lake Erie during their trip. The second question about whether or not they had been asked these questions before, was included to eliminate the problem of double counting. The province or state of origin was noted either by observation of the license plate or by a third question.

The campgrounds varied in size from 45 to 295 campsites. Each campsite was "blitzed" (with a three to four week interval) throughout the summer. Over 2,000 recreational parties and a total of 7,899 individual campers were included in the survey. Table 8:I provides a list of the campgrounds included in the survey and the dates each was surveyed.

Table 8:I

List of Campgrounds and Dates Surveyed

<u>Campgrounds</u>	<u>Dates Surveyed</u>
* Backus Conservation Area:	Thursday 30/6/77 Saturday 23/7/77 Friday 19/8/77
* Byng Island Conservation Area:	Saturday 18/6/77 Saturday 9/7/77 Saturday 6/8/77
Holiday Beach Provincial Park:	Friday 17/6/77 Saturday 9/7/77 Saturday 30/7/77
Iroquois Beach Provincial Park:	Friday 8/7/77 Saturday 30/7/77 Saturday 27/8/77
Long Beach Conservation Area:	Friday 24/6/77 Saturday 16/7/77 Saturday 13/8/77
Long Point Provincial Park:	Thursday 30/6/77 Friday 22/7/77 Saturday 20/8/77
Rock Point Provincial Park:	Friday 24/6/77 Friday 5/8/77 Sunday 4/9/77
Rondeau Provincial Park:	Saturday 25/6/77 Saturday 16/7/77 Friday 5/8/77
Selkirk Provincial Park:	Saturday 2/7/77 Friday 29/7/77 Friday 26/8/77
* Springwater Conservation Area:	Saturday 2/7/77 Friday 5/8/77 Sunday 4/9/77
Turkey Point Provincial Park:	Friday 17/6/77 Friday 1/7/77 Saturday 23/7/77

Wheatley Provincial Park:

Saturday 2/7/77

Saturday 23/7/77

Saturday 20/8/77

* These campgrounds do not have direct access to the lake, but are located within three miles of the shore.

The information on the total number of campers who used the campgrounds included in the blitz was gathered from park superintendents for the period May to September 1977. On the basis of this information, it is estimated that seven percent of all the overnight campers who visited the Lake Erie area during 1977 were included in the survey.

Concluding Remarks

The data are subject to a certain amount of surveying and sampling error. For instance, in the mail survey there are practically always some problems which result from the interpretation that respondents apply to certain questions. There is also the problem of ensuring that the results are representative. Nonetheless, every precaution was taken to safeguard the accuracy of the information. All surveys were subject to careful scrutiny and the information was tested for response bias and cross-checked with the other surveys. Good sampling returns and excellent cooperation was experienced in all surveys.

QUESTIONNAIRE ON
LAKE ERIE
COMMERCIAL FISHERY

(CONFIDENTIAL WHEN FILLED OUT)

DEPARTMENT OF FISHERIES AND THE ENVIRONMENT

FISHERIES AND MARINE SERVICE

ONTARIO REGION

All questions are of equal importance. Everyone receiving a copy of the questionnaire should be in a position to answer every question except those in Section III which are solely for Captains, owners, renters or leasers of fishing vessels. Once again, all replies will be treated in strictest confidence. The information will be used to emphasize the importance of protecting the interests of commercial fishermen and for no other reason.

1 FIRST OF ALL SOME QUESTIONS ABOUT YOU:

(1) Name your permanent place of residence (town, city or village):

(Print)

(2) Please indicate your age?

under 20 _____ 40 to 49 _____

20 to 29 _____ 50 to 59 _____

30 to 39 _____ 60 to 65 _____

66 and over _____

(3) Please indicate the number of dependents you have (excluding yourself). _____

(Print)

(4) Please indicate education successfully completed.

Grades 1 to 6 _____ 2 years University _____

7 to 9 _____ completed Bachelor's degree _____

10 to 12 _____

13 _____ Master's degree or above _____

Other courses completed? _____
(Please list) _____

II SECOND, ABOUT YOUR FISHING?

(5) The number of years you fished on Lake Erie? _____
(Please specify)

(6) Please indicate anywhere else you have commercially fished?

(Please specify)

(7) Please state the number of years you commercially fished in
locations other than Lake Erie? _____
(Please specify)

(8) Are you licensed to fish on more than one Lake? _____
Yes No

(9) Please list the lakes on which you are presently licensed to fish?

(10) Are you licensed to fish in more than one area in Lake Erie?

Yes No

(11) In which areas of Lake Erie are you licensed to fish (Please specify)

(12) Are you involved in any other facets of the industry besides
fishing?
processing _____ leasing vessels _____
packing _____ fishing equipment _____
supply _____
retail fish sales _____ boat building _____
other (please specify) _____

(13) Where is the business referred to in (12) located?

(Please specify)

(14) What was your total (or gross) income earned fishing during 1976?

under \$5,000 _____ \$25,001 to \$30,000 _____
\$5,001 to \$10,000 _____ \$30,001 to \$35,000 _____
\$10,001 to \$15,000 _____ \$35,001 to \$40,000 _____
\$15,001 to \$20,000 _____ \$40,001 to \$50,000 _____
\$20,001 to \$25,000 _____ \$50,001 to \$60,000 _____
over \$60,000 _____

(15) What was your total (or gross) income earned fishing during 1975?

under \$5,000 _____ \$25,001 to \$30,000 _____
\$5,001 to \$10,000 _____ \$30,001 to \$35,000 _____
\$10,001 to \$15,000 _____ \$35,001 to \$40,000 _____
\$15,001 to \$20,000 _____ \$40,001 to \$50,000 _____
\$20,001 to \$25,000 _____ \$50,001 to \$60,000 _____
over \$60,000 _____

(16) Do you own a fishing vessel(s)?

Yes No

(17) Do you lease or rent a fishing vessel(s)?

Yes No

III ABOUT YOUR FISHING VESSEL?

SECTION III (questions 18 through 33) are meant for persons who operate their own commercial fishing vessel. If you did not operate a fishing vessel during 1976 as Captian, renter, leaser or owner please proceed

to question 34.

(18) If you own, lease or rent more than one fishing vessel, what length and on which lakes do they operate? (List locations and length of vessel)

_____ (area of operation) _____ (length of vessel)

_____ (area of operation) _____ (length of vessel)

_____ (area of operation) _____ (length of vessel)

(19) What is the beam of your vessel(s) in feet?

_____ ' _____ ' _____ .
(Please indicate)

(20) Please indicate the draft of your vessel in feet?

_____ ' _____ ' _____ .

(21) Do you have a commutation (berthing privilege agreement) agreement with the Federal government for berthing privileges?

_____ Yes _____ No

(22) If you have a commutation agreement, which port is named in the agreement?

_____ (Port name)

(23) Please indicate the main port from which your vessel operates during the fishing season on Lake Erie?

_____ (Port name)

(24) Please specify the port where your vessel is located during the off season?

_____ (Port name)

(25) Please indicate the port or location on Lake Erie where you land most of your catch?

_____ (Port name)

(33) Is your vessel insured by the Federal Insurance Program?

Yes

No

IV ABOUT YOUR NON-FISHING ACTIVITIES?

(34) Did you have any non-fishing employment during 1976?

none	_____	8 to 11 weeks	_____
under 4 weeks	_____	12 to 15 weeks	_____
4 to 7 weeks	_____	16 to 20 weeks	_____
longer	_____		
	(Please specify)		

(35) What type of non-fishing employment did you participate in during 1976?

agriculture	_____	clerical/sales	_____
food processing	_____	professional/technical	_____
maining or logging	_____	automotive industry	_____
construction	_____		
other	_____		
	(Please specify)		

(36) Please indicate your earnings after taxes in your non-fishing employment during 1976?

under \$2,000	_____	\$10,001 to \$15,000	_____
\$2,001 to \$5,000	_____	\$15,001 to \$20,000	_____
\$5,001 to \$10,000	_____	\$20,001 to \$25,000	_____
over \$25,000	_____		

(37) Were you temporarily unemployed during 1976?

Yes

No

(38) How long were you unemployed during 1976?

(Please specify)

(39) Did you collect unemployment insurance during 1976?

Yes

No

V FINALLY, WE WOULD LIKE TO KNOW ABOUT YOUR FUTURE PLANS?

(40) Do you intend to continue fishing as a major occupation?

Yes

No

Do you intend to continue fishing as a supplementary occupation?

Yes

No

Do you intend to cease fishing?

Yes

No

If you intend to cease fishing, what other type of employment do you contemplate? _____

(Please indicate)

VI WE WELCOME ANY COMMENTS ON FISHERIES PROGRAMS YOU MIGHT WISH TO MAKE? (ON SUBSIDIES, SMALL CRAFT HARBOURS FACILITIES, FISHERIES MANAGEMENT PROGRAMS, ETC.)

Would you like a copy or a summary of the final report, which will be prepared from this questionnaire?

Yes

No

THANK YOU FOR PROVIDING US
WITH INFORMATION WHICH WILL
HELP US SERVE THE NEEDS OF
COMMERCIAL FISHERMEN.



3050 Harvester Road
Burlington, Ontario
L7N 3J1

Your file *Voire référence*

Our file *Notre référence*

Please find enclosed a questionnaire prepared by the federal Department of Fisheries and the Environment. This is one of a series of surveys which is designed to help assess the effectiveness of Federal Fisheries programs on Lake Erie. This series of surveys will also provide our Service with valuable information which will help us determine the immediate and long-term needs for small craft harbour facilities in Ontario.

We wish to stress that these questionnaires are extremely important to both you and our Service. There is a valid reason for every question on the questionnaire and everyone receiving the questionnaire should be in a position to answer all questions except questions 18 through 33 which are intended solely for those who operated a commercial fishing vessel as a business Owner, Captain or Renter during 1976 (even if the vessel has changed hands since the end of the season). None of the questions are meant to violate your privacy. Income, education and such other information will be used to develop fishery related programs which are in your best interest. The information gathered will be treated in strictest confidence. Since it is against the law, the Official Statistics Act, to pass on information about individual respondents either intentionally or unintentionally to any other persons or agencies (including federal government agencies), you can be absolutely assured that the information you provide will not be used in a manner which would identify you or your family.

You will notice that the questionnaire is number coded. This coding merely provides us with a system for keeping track of returns. The coding will not be used to identify individual respondents. For my own protection, the coding list will be destroyed upon completion of the survey.

Continued.....

The questionnaire will take approximately ten minutes to complete. We hope that you feel, as we do, that ten minutes is a worthwhile investment towards developing economic and social information which will help us establish a rational development plan consistent with your needs and maintaining the natural physical attributes of the lake. Please read the questionnaire carefully and answer all questions as accurately as possible. Upon completion of the questionnaire, return it in the postage-paid self-addressed envelope provided. If you have any questions regarding the questionnaire, its contents, or about how we intend to use the information, please call 637-4611 in Burlington (collect) or write to the undersigned using the enclosed envelope.

We thank you for your assistance and cooperation.

Yours truly,

William F. Sinclair
Manager, Economic Services,
Ontario Region.

WFS/vj
Encl.



Your file Votre référence

Our file Notre référence

The Department of Fisheries and the Environment is conducting a survey of Lake Erie commercial fishermen to assess the effectiveness of Federal Fisheries programs on Lake Erie. The questionnaire sent to you has not been received yet. In case you have mislaid the original questionnaire, we are enclosing another which we would like you to complete and return in the postage paid envelope enclosed with this reminder.

All questionnaires are equally important in providing basic information on your activities. The information asked for is important only when analyzed collectively and will not be used or published in a manner which would identify you or your family. Please answer all questions so that we will be able to work in your best interests. The monetary questions which might appear irrelevant to you are important in that they will help us convince others of the importance of maintaining Small Craft Harbour facilities for commercial fishermen on Lake Erie.

If you feel that the questionnaire does not pertain directly to you, we would appreciate your calling (416) 637-4611 in Burlington (collect) or write to the undersigned using the enclosed envelope. If, on the other hand, you have sold your fishing vessel and license, we would very much appreciate you indicating the name and address of the individual you sold your vessel to.

Once again, your cooperation in assisting us with this survey is very much appreciated. If you have already returned the questionnaire, please disregard this reminder.

Yours truly,

William F. Sinclair
Manager, Economic Services
Ontario Region

WFS/vj
Encl.



3050 Harvester Road
Burlington, Ontario
L7N 3J1

Your file Votre référence

Our file Notre référence

The Department of Fisheries and the Environment is conducting a survey of Lake Erie commercial fishermen to assess the effectiveness of Federal Fisheries programs on Lake Erie. The questionnaires sent to you have not been received. In case you have mislaid the questionnaire or are reluctant to provide us with the requested information, we are enclosing another questionnaire and wish to clarify that this survey is being conducted for your benefit. We are not some bureaucratic, impersonal group which is snooping into your affairs, but a concerned group of professionals who wish to carry out our responsibilities to you as government officials. Please help us to accomplish this task.

Once again, all questions are equally important in providing basic information on your activities. The information asked for is important only when analyzed collectively and will not be used or published in a manner which would identify you or your family. Please answer all questions so that we will be able to work in your best interests. The monetary questions which might appear irrelevant to you are important in that they will help us convince others of the importance of maintaining Small Craft Harbour facilities for commercial fishermen on Lake Erie.

If you feel that the questionnaire does not pertain directly to you, we would appreciate your calling (416) 637-4204 in Burlington (collect) or write to the undersigned using the enclosed envelope. If, on the other hand, you have sold your fishing vessel and license, we would very much appreciate your indicating the name and address of the individual you sold your vessel to.

Once again, your cooperation in assisting us with this survey is very much appreciated. If you have already returned the questionnaire, please disregard this reminder.

Yours truly,

Stephen Kendall
Program Coordinator
Economic Services
Ontario Region

SK/mb
Encl.



Fisheries and Environment Canada
Fisheries and Marine
3050 Harvester Road
Burlington, Ontario
L7N 3J1

Pêches et Environnement Canada
Pêches et Mer

Your file Votre référence

Our file Notre référence

Dear Sir:

Thank you for returning our questionnaire on Lake Erie's commercial fishery. It would appear that we made an error in judgement in compiling the questionnaire. A large proportion of responses to questions 14 and 15 on gross income indicate that the highest gross income category included in these questions was often exceeded. This does not yield the kind of information we were looking for. Therefore, we have enclosed a re-statement of questions 14 and 15 from the original questionnaire with a larger number of gross income categories. Would you please answer these questions again and return them to our office.

Your cooperation will help to improve the quality of information which is being gathered through this program. Again we would like to emphasize that this data will be used to guide future harbour maintenance and development programs in your area which will be of benefit to all fishermen. All personal information will be regarded as strictly confidential. Your continuing cooperation is sincerely appreciated.

Yours truly,

Stephen Kendall
Program Coordinator
Economic Services

SK:mb
Encl.

14. What was your total (or gross) income earned fishing during 1976?

under \$5,000	_____	\$70,001 to \$80,000	_____
\$5,001 to \$10,000	_____	\$80,001 to \$90,000	_____
\$10,001 to \$15,000	_____	\$90,001 to \$100,000	_____
\$15,001 to \$20,000	_____	\$100,001 to \$110,000	_____
\$20,001 to \$25,000	_____	\$110,001 to \$120,000	_____
\$25,001 to \$30,000	_____	\$120,001 to \$130,000	_____
\$30,001 to \$35,000	_____	\$130,001 to \$140,000	_____
\$35,001 to \$40,000	_____	\$140,001 to \$150,000	_____
\$40,001 to \$50,000	_____	\$150,001 to \$160,000	_____
\$50,001 to \$60,000	_____	\$160,001 to \$180,000	_____
\$60,001 to \$70,000	_____	\$180,001 to \$200,000	_____
	over \$200,000	_____	

15. What was your total (or gross) income earned fishing during 1975?

under \$5,000	_____	\$70,001 to \$80,000	_____
\$5,001 to \$10,000	_____	\$80,001 to \$90,000	_____
\$10,001 to \$15,000	_____	\$90,001 to \$100,000	_____
\$15,001 to \$20,000	_____	\$100,001 to \$110,000	_____
\$20,001 to \$25,000	_____	\$110,001 to \$120,000	_____
\$25,001 to \$30,000	_____	\$120,001 to \$130,000	_____
\$30,001 to \$35,000	_____	\$130,001 to \$140,000	_____
\$35,001 to \$40,000	_____	\$140,001 to \$150,000	_____
\$40,001 to \$50,000	_____	\$150,001 to \$160,000	_____
\$50,001 to \$60,000	_____	\$160,001 to \$180,000	_____
\$60,001 to \$70,000	_____	\$180,001 to \$200,000	_____
	over \$200,000	_____	

MARINA CLIENTELE

SURVEY

Name of Marina _____ Date _____ Time _____

Location _____ Day of Week _____

1. Permanent place of residence _____
(Please specify)

2. Please indicate the ages of members of your household.

	<u>Male #</u>	<u>Female #</u>		<u>Male #</u>	<u>Female #</u>
0 - 9 Years	_____	_____	40 - 49 Years	_____	_____
10 - 19 Years	_____	_____	50 - 59 Years	_____	_____
20 - 29 Years	_____	_____	60 - 69 Years	_____	_____
30 - 39 Years	_____	_____	70 + Years	_____	_____

3. What is the occupation of your head of the household?

Managerial & Administrative	_____	Service	_____
Occupation in Natural Sciences	_____	Farming	_____
Occupation in Social Sciences	_____	Other Primary Occupations	_____
Artistic, Literary & Recreational Occupations	_____	Processing Occupations	_____
Teaching	_____	Machining, Prod. Fab. Assembly & Repair	_____
Medicine & Health	_____	Construction	_____
Clerical	_____	Trades & Equipment Operation	_____
Sales	_____	Transport Equipment Operator & Materials Handling	_____
Other (Please Specify)	_____		_____
	_____		_____
	_____		_____

4. What is the gross income of your household? \$ _____/year

5. How long have you and your family used these facilities? _____

6. Do all members of your household use these facilities? _____
Yes No

7. How many times do you use the boating facilities provided here
each year? _____
Number

8. What is the main reason(s) you use these facilities? _____

(rate structure, close, service, etc. - specify)

9. On average, how many members of your household come on each
occasion? _____

10. Do you use the boating facilities at any other location?
_____ No _____ (Please specify)

11. What is the main reason(s) you use these other boating facilities?

(rate structure, close, service, etc. - specify)

12. What type of boat do you own or rent?

	Rent _____	Own _____
Sail	_____	Canoe _____
Sail (fixed keel)	_____	Power Boat under 10 H.P. _____
Sail (retractable keel)	_____	Power Boat 10 - 20 H.P. _____
Sail (auxillary power)	_____	Power Boat over 20 H.P. outboard _____
Rowboat	_____	Power Boat inboard _____
Car Top	_____	Power Boat in/out _____

13. What is the length of your boat in feet? _____

14. What is the beam of your boat in feet? _____

15. What is the draft of your boat in feet? _____

16. How many times each year do you use your boat for each of these activities?

Cruising

No. of times

How many persons

Fishing

No. of times

How many persons

Water Skiing

No. of times

How many persons

Diving

No. of times

How many persons

Racing

No. of times

How many persons

Over Water

Transportation

No. of times

How many persons

Other

(Specify number of occasions and persons)

17. What are your future boating plans?

Keep Same Boat _____

Sell Your Boat Outright _____

Purchase Larger Boat _____

Purchase Smaller Boat _____

Purchase Another Type of Boat _____
(Specify)

18. Enumerator's Comments:

MARINA OPERATOR SURVEY

LAKE ERIE - 1977

Date _____

Name of Establishment _____

Location _____

Type of Business _____

Respondent's Position

Owner _____ Manager _____ Employee _____ Title (_____)

1. How many people are employed here or receive income from this business? Year-round _____ Seasonal _____
Number Man Months

2. Does your establishment operate throughout the year or on a seasonal basis?
Year-round _____ Seasonal _____

3. For Single Proprietorships: In round figures, could you estimate your gross total yearly revenues: \$ _____ /year
For Multiple Proprietorships: In round figures, could you estimate the amount you pay in gross wages and salaries each year? (If speaking to the owner, ask him to impute a salary to himself.)
\$ _____ /year

4. What proportion of the business would you say is due to the expenditure of boating fishermen visiting Lake Erie? _____ %

5. If you operate another facility in connection with your marina operation, what percentage of the total business is attributable to boating? _____ %

15. Do you have boats for rent (type and fee)?

<u>Type</u>	<u>No</u>	<u>Fee Per Hour</u>	<u>Fee Per Day</u>
(Sail, motor, Cruiser, row boat, canoe)			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

16. On average, how many rentals do you have each year? _____

17. What percentage of rentals are used for:

Sailing _____ % Fishing _____ % Skiing _____ % Diving _____ %
 Other _____ %
 (Specify)

18. Do you have a package deal for the services provided, what does it include and how much is it?

19. If there was no sport fishing in this area, would there then be enough business to support this enterprise? Yes _____ No _____

20. Do you require a membership or club fee of any kind to use the facilities:

Totally public _____ Some Memberships _____ All Memberships _____
 %

21. How long have you owned this business? _____

22. How is business this summer?

Up by how much? _____ %
 Down by how much? _____ %

23. Enumerator's Comments: (Note: Enumerators - impression of marina;
e.g. organization of yard, neatness,
safety, etc.)

GENERAL RECREATION

QUESTIONNAIRE

Date _____ Time _____ Day of Week _____

Location Type: Roadside _____ Private Campsite _____
Rest Area _____ Public Campsite _____
Park _____ Wharfage _____

Location of Interview _____

1. Permanent Place of Residence: _____
(City, Town, Village, etc.)

2. How many persons reside in your household? _____

3. Residence Category:
Resident of Lake Erie Area _____ (within 35 miles)
Resident of Ontario _____
Resident of Canada _____
Non-Resident: From U.S.A. _____
Non-Resident: From other
than Canada and U.S.A. _____

4. Please indicate the ages of members of your party.

	<u>Male #</u>	<u>Female #</u>		<u>Male #</u>	<u>Female #</u>
0 - 9 Years	_____	_____	40 - 49 Years	_____	_____
10 - 10 Years	_____	_____	50 - 59 Years	_____	_____
20 - 29 Years	_____	_____	60 - 69 Years	_____	_____
30 - 39 Years	_____	_____	70 + Years	_____	_____

5. What are the occupations of members of your party? Indicate number.

Managerial & Administrative	_____	Service	_____
Occupations in Natural Sciences	_____	Farming	_____
Occupation in Social Sciences	_____	Other Primary Occupations	_____
Artistic, Literary & Recreational Occupations	_____	Machining, Prod. Fab. Assembly & Repair	_____
Teaching	_____	Construction Trades & Equipment Operation	_____
Medicine & Health	_____	Transport Equipment Operator & Materials Handling	_____
Clerical	_____		
Sales	_____		
Other (Please specify)	_____		

6. What are your average daily expenditures on this trip in this area?

Transportation & Gas	\$ _____	Accommodation	\$ _____
Food & Beverage	\$ _____	Incidentals (e.g. recreational & entertainment)	\$ _____

TOTAL \$ _____

7. (a) How many days (or hours) have you been on this trip?

_____ days _____ hours

(b) How many days (or hours) have you spent in areas adjacent to Lake Erie?

_____ days _____ hours

8. On average, how many hours of your day is spent participating in activities associated with Lake Erie? _____ hours

9. What recreational activities do members of your party participate, and what percentage of your leisure time is devoted to these activities (on this trip) associated with Lake Erie?

	Percent of Discretionary			Percent of Discretionary	
	<u>No.</u>	<u>Time</u>		<u>No.</u>	<u>Time</u>
Fishing (boat)	_____	_____	Picnicking (day use only)	_____	_____
Fishing (pier)	_____	_____	Outdoor Games (sports)	_____	_____
Swimming	_____	_____	Walking for Pleasure	_____	_____
Hunting	_____	_____	Hiking (trails)	_____	_____
Sailing	_____	_____	Horseback Riding	_____	_____
Boating	_____	_____	Sight Seeing (driving, etc.)	_____	_____
Canoeing	_____	_____	Nature Study	_____	_____
Photography	_____	_____			
Other (specify)	_____	_____			

10. What is your gross household income? \$ _____

RESIDENTS OF ONTARIO, OHIO, MICHIGAN, PENNSYLVANIA, NEW YORK

11. How far do you live from Lake Erie? _____ Miles

12. How many times a year do you visit Lake Erie? _____

13. How many of these visits are to places on the Canadian side of the Lake? _____ Number

14. What are the three main reasons for visiting Lake Erie in order of importance?

(1) _____ (2) _____ (3) _____

15. What are the three favourite locations you visit on Lake Erie in order of importance?

(1) _____ (2) _____ (3) _____

16. Do you own a boat?

_____ Yes _____ No

17. What type of boat do you own?

Sail	_____	Canoe	_____
Sail (fixed keel)	_____	Power Boat under 10 H.P.	_____
Sail (retractable keel)	_____	Power Boat 10 to 20 H.P.	_____
Sail (auxillary power)	_____	Power Boat over 20 H.P. outboard	_____
Rowboat	_____	Power Boat inboard	_____
Car Top	_____	Power Boat in/out	_____

18. What is the length of your boat in feet? _____

19. What is the beam of your boat in feet? _____

20. What is the draft of your boat? _____

21. Are you using boating facilities on Lake Erie on a regular basis or occasionally (name facilities)?

	<u>Regular Basis</u>	<u>Period or Trip</u>
Boat Launching	_____	_____
Wharfage	_____	_____
Moorage	_____	_____

Dry Sailing	_____	_____
Dry Storage	_____	_____
Wet Storage	_____	_____
Anchorage	_____	_____

22. Where are these facilities that you use regularly located on Lake Erie?

Public Unknown	Public Prov.	Public Fed.	Private
----------------	--------------	-------------	---------

23. How many times a year do you use these Lake Erie boating facilities (regular)?

Year round _____ OR _____
 Number of times

24. If you use boating facilities elsewhere, what type and where are they located?

Type (wharfage, etc.)	Location
-----------------------	----------

25. Are these (elsewhere facilities) public or private?

Public Unknown	Public Prov.	Public Fed.	Private
----------------	--------------	-------------	---------

26. How many times a year do you use other facilities? _____

27. Do you ever rent a boat? (What type and how long?)

Type	Length of Rental
------	------------------

28. What are the three main purposes for which you use a boat in order of importance? (fishing, cruising, etc.)

(1) _____ (2) _____ (3) _____

29. Have you any comments (complaints or compliments) on the boating facilities that are available on the north side of the Lake?

ASSOCIATED BUSINESS SURVEY

LAKE ERIE 1977

Enumerator _____ Date _____

Name of Establishment _____

Location _____

Respondent's Position

Owner _____ Manager _____ Employee _____ Title (_____)

1. Type of Business: % of each type of service

Motel/Cottages _____

Commercial Campground _____

Gas Station _____

Grocery _____

Camping Supplies _____

Camping Equipment Sales & Rentals _____

Bait Sales _____

Sporting Goods _____

Fresh Fish Retail _____

Other _____

2. How many people are employed here or receive income from this business?

Year round _____ Seasonal _____

3. Do you operate your establishment throughout the year or on a seasonal basis?

Year round _____ Seasonal _____

4. For Single Proprietorships: In round figures, could you estimate your gross total yearly revenues: \$ _____ / year

For Multiple Proprietorships: In round figures, could you estimate the amount you pay in gross wages and salaries each year? (If speaking to the owner ask him to impute a salary to himself.)

\$ _____ /year

5. Would you say that your enterprise is mainly dependent on business which is attracted to the area because of activities associated with Lake Erie?

Yes _____ No _____

6. What percentage of your total business is due to Lake Erie related activities?

_____ %

7. Would your business continue to operate if the activities associated with the Lake were not present?

Yes _____ No _____

8. What percentage of your business would you estimate is from people who visit Lake Erie for recreational purposes?

_____ %

9. What percentage of your business would you estimate is from sport fishermen visiting Lake Erie?

_____ %

10. What percentage of your business would you estimate is due to boating activities on Lake Erie?

_____ %

11. How long have you owned/operated this business? _____ years.

12. How is business this summer? Up by how much? _____ %

Down by how much? _____ %

13. For Boat Retailers only:

What type(s) of boat do you sell and are sales of each type up or down over the past year (percent)?

	<u>Up</u>	<u>Down</u>	<u>Per cent</u>
Sail (fixed keel)	_____	_____	_____
Sail (retractable keel)	_____	_____	_____
Rowboat	_____	_____	_____
Car Top	_____	_____	_____
Canoe	_____	_____	_____
Outboard under 10 h.p.	_____	_____	_____
Outboard 10 - 20 h.p.	_____	_____	_____
Outboard over 20 h.p.	_____	_____	_____
Inboard	_____	_____	_____
Inboard/Outboard	_____	_____	_____

What type of boat has been traditionally most popular with your customers? _____

PARK BLITZ SURVEY

Name of Campground _____

Date _____ Time _____

Number of Campsites _____ Number in Use _____

FOR OCCUPANTS OF EACH CAMPSITE:

HAVE YOU USED ANY RECREATIONAL FACILITIES ON LAKE ERIE THIS TRIP?

HAVE YOU BEEN ASKED THIS QUESTION BEFORE?

YES

NO

YES

NO

RESIDENT

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

NON-RESIDENT CANADIAN

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

NON CANADIAN

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Total YES _____ Total NO _____

Total YES _____ Total NO _____

SELECTED REFERENCES

- Baird, W., Kyle, G. and Skafel, M. G. Wheatley Harbour Study. Public Works Canada, Prepared for Small Craft Harbours Branch, Department of Fisheries and the Environment, 1977.
- Balmer, Crapo and Associates, Inc. Tourism Development in Ontario: A Framework For Opportunity. Prepared for Ministry of Industry and Tourism, Province of Ontario, Waterloo, March 1976.
- Balmer, Crapo and Associates, Inc. Tourism Development in Ontario: A Framework For Opportunity. Prepared for Ministry of Industry and Tourism, Province of Ontario, Waterloo, March 1976.
(Appendices)
- Boland, John P. The Socio-Economic Importance of Fishery Resources to the Bella Coola Valley. Technical Report Series No. PAC/T-74-12, NOB/ECON 7-74, Northern Operations Branch, Pacific Region, 1974.
- Central Waterfront Planning Committee. "The Central Waterfront Information Base Study." Environment, Toronto, February 1976.
- Clawson, Marion and Knetsch, Jack L. Economics of Outdoor Recreation Resources for the Future, John Hopkins Press, Baltimore, 1977.
- Dillon, M. M. Limited in Association with Gugula, Smedley and Barban. Waterfront Development Study. Sault Ste. Marie Region Conservation Authority, October 1976.
- Foundation of Canada Engineering Corporation Limited. Small Craft Harbours Study, British Columbia. Prepared for the Department of the Environment, August 1972.
- Frick, Harold C. Economic Aspects of the Great Lakes Fisheries of Ontario. The Fisheries Research Board of Canada (bulletin no. 149), Ottawa, 1965.
- Glodowski, C. W. and Baird, W. F. Thornbury Harbour. Department of Public Works, Marine Directorate, Ottawa, Ontario. Prepared for Small Craft Harbours, Ontario Region, December 1977.

Glodowski, C., Baird W. and Guertin, D. Kingston Olympic Marina.
Department of Public Works, Marine Directorate, Ottawa, Ontario.
Prepared for Small Craft Harbours, Ontario Region, July 1977.

Grant, Janet Leslie. Recreational Behaviour Perceptions and Characteristics of Summer Visitors to Point Pelee National Park, Ontario.
Waterloo, Ontario, 1976.

Greenland, Gary. Historical Review of Lake Erie Commercial Fishery.
Prepared for Ontario Ministry of Natural Resources, London, 1973.
(Unpublished manuscript)

Hooper, R. A. Assessing the Recreational Potential of Waterways: A Description and Evaluation of Selected Systems. Navigable Mountain Rivers Study, Natural History Research Division, Parks Canada, Western Region, Research Paper 77-1, January 1977.

Johnson, Sustronk, Weinstein and Associates Limited. Small Craft Harbours Study. Metropolitan Toronto and Region Waterfront, March 1975.

Kendall, Stephen, Paine, J. R. and Sinclair, William F. Lake Erie Fisheries Management Plan. Prepared for Southwestern Region, Ontario Ministry of Natural Resources, April 1977.

Kilborn Engineering Limited, P. S. Ross and Partners. Small Craft Harbours Systems Study: Central Region. Prepared for Small Craft Harbours Branch, July 1974.

Small Craft Harbours Systems Study: Central Region. Prepared for Small Craft Harbours Branch. (Appendices, 3 vols.)

Leach, J. H. and Nepszy, S. J. "The Fish Community in Lake Erie." Journal of the Fisheries Research Board of Canada, vol. 33, no. 3, (March 1976), pp. 622-638.

Meleg, L. J. and Grant, J. L. Visitor Use and Attitude Survey, Point Pelee National Park Summer, 1976. 1976. (Unpublished manuscript)

Ministry of Industry and Tourism. Framework for Opportunity. A Guide for Tourism Development in Ontario/Canada. Province of Ontario, Queen's Park, Toronto, Canada, 1977.

Ministry of Natural Resources. Annual Statistical Report. Ontario Government, 1977.

Annual Reports. Toronto, Province of Ontario.

Ministry of Treasury, Economics and Intergovernmental Affairs, Regional Planning Branch. Ontario's Changing Population Volume 2. Directions and Impact of Future Change, 1971-2001. March 1976.

Economics and Intergovernmental Affairs, Regional Planning Branch. Ontario's Changing Population Volume 1. Patterns and Factors of Change/1941-1971, A Background Report. March 1976.

Economics and Intergovernmental Affairs, Regional Planning Branch. Ontario's Future: Trends and Options. March 1976.

Economics and Intergovernmental Affairs, Regional Planning Branch. Statistical Appendix to the Northeastern Ontario Regional Strategy. March 1976.

Economics and Intergovernmental Affairs, Regional Planning Branch. Toronto - Centred Region Program Statement. March 1976.

Ontario Region, Parks Canada. Recreation Plan, Point Pelee National Park, 1976. (Unpublished draft report)

Outdoor Recreation Research Section. Trends in Participation in Outdoor Recreation Activity. National and Historic Parks Branch, Parks Canada, Cord Technical Note No. 22, draft report, August 1973.

Outdoor Recreation Work Group. Appendix 21 Outdoor Recreation. Great Lakes Basin Framework Study. Public Information Office, Great Lakes Basin Commission, Ann Arbor Michigan, 1975.

Recreational Boating Task Group of the Navigation Work Group. Appendix R9 Recreational Boating. Public Information Office, Great Lakes Basin Commission, Ann Arbor Michigan, 1975.

Resources Agency, State of California. The Department of Navigation and Ocean Development, Ninth Biennial Report July 1, 1972 to June 30, 1974. 1975.

Sinclair, William F. and Reid, David J. "Conflicts Among Recreational Resource Users - The Case of Non-Canadian Participation in the Regional Sport Fisheries of British Columbia and the Yukon." The Annals of Regional Science, June 1974.

The Importance of the Commercial Fishing Industry to Selected Remote Coastal Communities of British Columbia. Department of the Environment, Fisheries Service, Pacific Region, August 1971.

The Socio-Economic Importance of Maintaining the Quality of Recreational Resources in Northern British Columbia: The Case of Lakelse Lake. Fisheries and Marine Service, PAC/T-74-10, Northern Operations Branch, Pacific Region, 1974.

Skafel, M. G. Wheatley Harbour Model Study. Hydraulics Research Division, Canada Centre for Inland Waters, May 1977. (Unpublished)

Statistics Canada, Canada Census Survey, 1971. Population School Attendance and Schooling.

1976, Population Census Data. Compiled in December 1977.

Weiss, Steven J. and Gooding, Edwin C. "Estimation of Differential Employment Multipliers in a Small Regional Economy." Regional Economics, ed. H. W. Richardson, McMillan & St. Martins Press, 1969.

Williams, Kuebelbeck and Associates, Inc. Marina Management Study: Management and Operating Guidelines for Public Marinas. Prepared for the State of California, The Resources Agency, Department of Navigation and Ocean Development, vol. 1, 1977.

Williams, Kuebelbeck and Associates, Inc. Marina Management Study:
The Economic Impact of the Boating Industry & Marinas in the State
of California. Prepared for the State of California, The Resources
Agency, Department of Navigation and Ocean Development, vol. 2,
1977.

