

Biological Services Program

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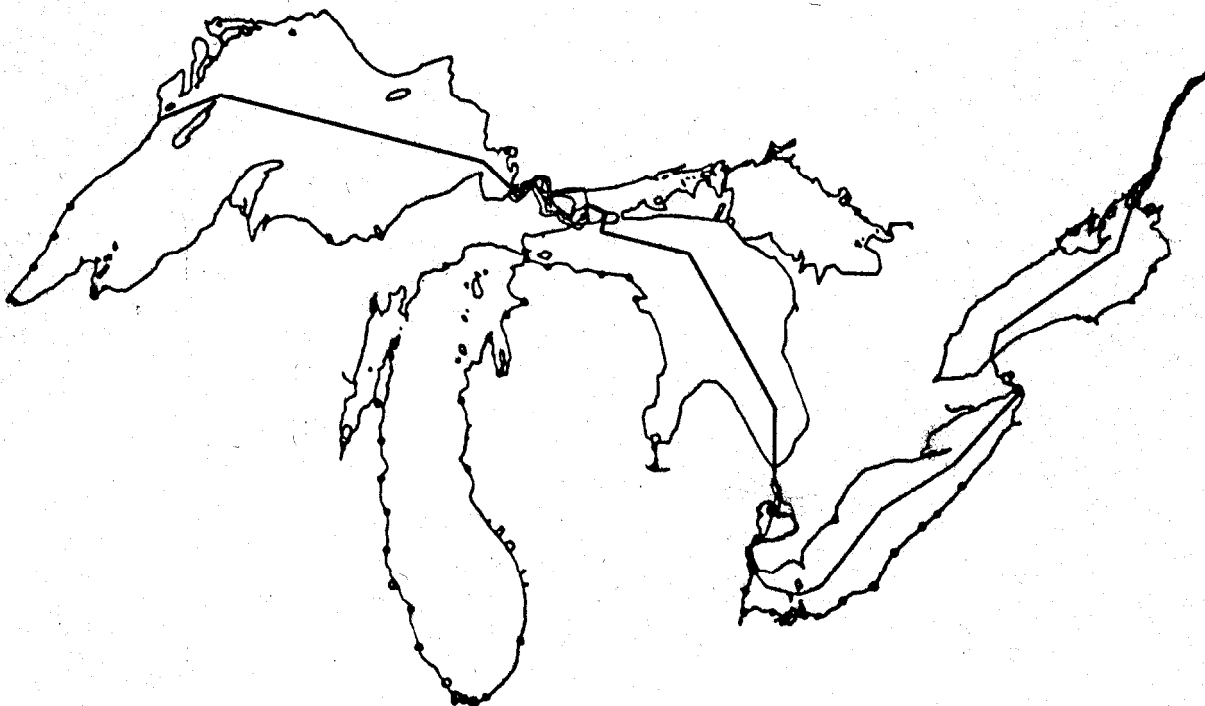
SEPTEMBER 1982

ATLAS OF THE SPAWNING AND NURSERY AREAS OF GREAT LAKES FISHES

Volume I - A Summary by Geographic Area

Great. Lakes-St. Lawrence Seaway

Navigation Season Extension Program



Fish and Wildlife Service
U.S. Department of the Interior

Corps of Engineers
U.S. Department of the Army

The Biological Services Program was established within the U.S. Fish and Wildlife Service to supply scientific information and methodologies on key environmental issues that impact fish and wildlife resources and their supporting ecosystems. The mission of the program is as follows:

- To strengthen the Fish and Wildlife Service in its role as a primary source of information on national fish and wildlife resources, particularly in respect to environmental impact assessment.
- To gather, analyze, and present information that will aid decisionmakers in the identification and resolution of problems associated with major changes in land and water use.
- To provide better ecological information and evaluation for Department of the Interior development programs, such as those relating to energy development.

Information developed by the Biological Services Program is intended for use in the planning and decisionmaking process to prevent or minimize the impact of development on fish and wildlife. Research activities and technical assistance services are based on an analysis of the issues, a determination of the decisionmakers involved and their information needs, and an evaluation of the state of the art to identify information gaps and to determine priorities. This is a strategy that will ensure that the products produced and disseminated are timely and useful.

Projects have been initiated in the following areas: coal extraction and conversion; power plants; geothermal, mineral and oil shale development; water resource analysis, including stream alterations and western water allocation; coastal ecosystems and Outer Continental Shelf development; and systems inventory, including National Wetland Inventory, habitat classification and analysis, and information transfer.

The Biological Services Program consists of the Office of Biological Services in Washington, D.C., which is responsible for overall planning and management; National Teams, which provide the Program's central scientific and technical expertise and arrange for contracting biological services studies with states, universities, consulting firms, and others; Regional Staffs, who provide a link to problems at the operating level; and staffs at certain Fish and Wildlife Service research facilities, who conduct in-house research studies.

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ATLAS OF THE SPAWNING AND NURSERY AREAS
OF GREAT LAKES FISHES

VOLUME I
Spawning and Nursery Areas
of Great Lakes Fishes:
A Summary by Geographic Area

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PREFACE

The fish resources of the Great Lakes have changed markedly since the settlement of the Great Lakes Basin began in the late 1700s-early 1800s. Local declines in the abundance of some highly valued species that supported early fisheries were reported in the 1800s. By the late 1950s-early 1960s, a number of important native species had disappeared from the catch, most once-productive stocks were depleted, and the fisheries that persisted were supported mainly by species of low value and utility. These undesirable changes have been attributed to the overharvest of desirable species, the invasion and introduction of undesirable exotic species, lowered water quality, and the destruction of portions of the physical habitat, including spawning grounds, vital to the maintenance of the resource base.

Since the 1950s, intensive efforts have been mounted to reestablish stable, self-sustaining fish communities, mainly by reducing sea lamprey abundance, limiting the harvest of remnant native stocks, and stocking desirable native or exotic species to replace or supplement depleted populations. Many of the native species and some of the desirable, introduced species have responded favorably and are now supporting valuable, productive fisheries. These successes suggest that continued judicious exercise of established management strategies will result in further significant improvements in the fish resources and the fisheries. An emerging perspective suggests, however, that enduring, major improvements in the fish resources and the fisheries will require greater emphasis on rehabilitation efforts directed more specifically at safeguarding and improving the quality of the fish habitat in general, and on ensuring fuller utilization of the specialized habitat required by sensitive, embryonic-juvenile life stages of species that are to be included in any future, self-sustaining resource base. We prepared this atlas to provide a comprehensive information base against which changes in the condition and use of spawning and nursery habitat of Great Lakes fishes could be viewed and evaluated and the needs of the future, self-sustaining resource base could be projected.

The atlas is composed of the following 14 volumes:

- | | |
|---|---|
| I. Spawning and Nursery Areas
of Great Lakes Fishes: A
Summary by Geographic Area | VIII. Detroit River |
| II. Lake Superior | IX. Lake Erie |
| III. St. Marys River | X. Niagara River |
| IV. Lake Michigan | XI. Lake Ontario |
| V. Lake Huron | XII. St. Lawrence River |
| VI. St. Clair River | XIII. Reproductive Characteristics
of Great Lakes Fishes |
| VII. Lake St. Clair | XIV. Literature Cited |

Volume I is designed to permit the reader to determine quickly whether a particular geographic area of interest contains fish spawning or nursery areas that are described in volumes II-XII. Volumes II-XII consolidate existing information describing spawning and nursery areas used by stocks of fish, including anadromous stocks, considered to be residents of the Great Lakes and their connecting waters. The information presented for each spawning or nursery area identified in volumes II-XII includes, when known, the area's precise location, history of use, season of use, water temperatures during the season of use, major substrate type, and water depth. Pre- and post-spawning migrations of mature fish and movements of young fish are also described, insofar as this information serves to better delineate spawning or nursery areas. Volume XIII contains concise descriptions of the reproductive characteristics of species included in volumes I-XII.

In the preparation of the atlas we found that considerable information was available for most of the species that support (or supported) major recreational or commercial fishes, or that are or were major components of the forage base; conversely, relatively little information was available for many other species not included in these general categories. For most species, spawning areas were more completely described than were nursery areas. The historical information in particular provided more extensive descriptions of spawning areas than of nursery areas, because much of this information was obtained from records of fisheries that had been conducted for spawning fish. Thus, although the information available to us for compilation was relatively extensive, it was nonetheless incomplete for the reasons given above. Users of the atlas are therefore cautioned not to view the lack of explicit reference to a given area as conclusive evidence that the area is not or was not a spawning or nursery area of Great Lakes fishes.

Published and unpublished information incorporated in the atlas was obtained from the following sources:

1) Computerized Information Services

Aquatic Sciences and Fisheries Abstracts, BIOSIS, Denver Public Library Fish and Wildlife Reference Service, Dissertation Abstracts, INFORUM (Atomic Industrial Forum), National Technical Information Service, SCISEARCH, and Smithsonian Science Information Exchange.

2) State Agencies

Indiana, Minnesota, Ohio, and Wisconsin Departments of Natural Resources, Illinois Department of Conservation; New York Department of Environmental Conservation, Pennsylvania Fish Commission, Ohio Environmental Protection Agency, and Pennsylvania Department of Environmental Resources.

3) Federal Agencies

Canada Great Lakes Biolimnology Laboratory (Sault Ste. Marie and Burlington), Canada National Water Research Institute, Canada Sea Lamprey Control Centre, Great Lakes Basin Commission, Great Lakes Fishery Commission, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and U.S. Fish and Wildlife Service.

4) Academic Institutions (by State)

Illinois--Loyola University, Northern Illinois University, University of Illinois (Champaign).

Indiana--Ball State University, University of Notre Dame.

Michigan--Eastern Michigan University, Lake Superior State College, Macomb Community College, Michigan State University, Northern Michigan University, Oakland University, University of Michigan, Wayne State University.

Minnesota--University of Minnesota (Duluth and St. Paul).

New York--Cornell University, State University College at Buffalo, State University of New York (Brockport, Buffalo, Oswego, Postsdam, and Syracuse).

Ohio--John Carroll University, Ohio State University, University of Toledo.

Ontario--Lakehead University, University of Guelph, University of Toronto, Western Ontario University.

Pennsylvania--Behrend College, Edinboro State College, Gannon College, Pennsylvania State University.

Wisconsin--University of Wisconsin (Green Bay, Madison, Milwaukee, Stevens Point, Superior, and Washington County).

5) Electric Utility Companies

Cleveland Electric Illuminating Company, Commonwealth Edison-Indiana, Consumers Power Company, Detroit Edison Company, Minnesota Power and Light Company, New York Power Pool, Niagara Mohawk Power Corporation, Northern Indiana Public Service Corporation, Ohio Edison Company, Ontario Hydro, Power Authority of the State of New York, Rochester Gas and Electric Corporation, Toledo Edison, Wisconsin Electric Power Company, Wisconsin Power and Light Company, and Wisconsin Public Service Corporation.

6) Consulting Firms

Aquatic Ecology Associates, Aquatic Systems Inc., Bio Systems Research Inc., Eco-Research, Gilbert Commonwealth Associates, Hazleton Environmental Sciences Corporation, and Lawler, Matusky, and Skelly Engineers.

7) Other Institutions and Organizations

Argonne National Laboratory, Buffalo Waterfront Development Commission, Cranbrook Institute of Science, Illinois Field Museum of Natural History, Philadelphia Academy of Natural Science, Royal Ontario Museum, and St. Lawrence-Eastern Ontario Commission.

8) Fishermen

Commercial fishermen in Indiana, Minnesota, and Ohio, and recreational and charter boat fishermen on Lake St. Clair and the St. Clair River.

Most of the unpublished information included in the atlas was obtained from interviews conducted with individuals associated with the various agencies, institutions, or user groups identified above.

CONTENTS

Volume I. Spawning and Nursery
Areas of Great Lakes Fishes: A
Summary by Geographic Area.

	<u>Page</u>	
PREFACE		iii
ACKNOWLEDGMENTS		X
INTRODUCTION		1
	Map	Table
Lake Superior	3	19
M-1	4	19
-2	5	19
-3	6	20
Wisc.	7	23
MS-1	8	22
-2	9	22
-3	10	23
-4	11	24
-5	12	25
-6	13	26
OS-1	14	26
-2	14	26
-3	15	27
-4	15	27
-5	16	28
-6	17	28
-7	18	29
St. Marys River	31	32
Lake Michigan	34	51
WM-1	35	51
-2	36	51
-3	37	52
-4	38	53
-5	39	53
-6	40	54
Ill.	41	55
Ind.	42	56
MM-1	43	56
-2	44	58
-3	45	59
-4	46	59
-5	47	60

	Map	Table
-6	48	60
-7	49	61
-8	50	62
Lake Huron	66	84
MH-1	67	84
-2	68	85
-3	69	86
-4	70	86
-5	71	87
-6	72	88
OH-1	73	88
-2	74	89
-3	75	89
-4	76	90
-5	77	90
NC-1	78	90
-2	79	91
-3	79	91
GB-1	80	92
-2	81	92
-3	82	92
-4	83	93
St. Clair River	96	97
Lake St. Clair	98	99
Detroit River.	100	101
Lake Erie	102	114
Mich.	103	114
0-1	104	115
-2	105	116
-3	106	117
Penn.	107	120
N.Y.	108	120
OE-1	109	121
-2	110	122
-3	111	122
-4	112	123
-5	113	124
Niagara River	126	127

	Map	Table
Lake Ontario	128	136
No-1	129	136
-2	131	137
-3	131	138
00-1	132	139
-2	133	140
-3	134	141
-4	135	141
-5	135	142
St. Lawrence River	144	145
Species Code	-	147

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INTRODUCTION

We prepared this volume to permit the reader to determine quickly whether a particular geographic area of interest in the Great Lakes or their connecting waters contains fish spawning or nursery areas that are identified in volumes II-XII of the atlas. In this volume we present the information for each of the five Great Lakes by lake, by statistical fishing district (Smith et al. 1961) within the lake and by geographic area within the statistical fishing district. Each geographic area includes about 20 miles of mainland shoreline (island shoreline in MS-1), together with the adjacent littoral and offshore waters. Because the connecting waters have not been assigned to statistical fishing districts, we present the information for them by waterbody and by geographic area within the waterbody. We divided the rivers, which together with Lake St. Clair form the Great Lakes connecting waters, into geographic areas; each such riverine geographic area includes all of the waters between adjacent mainland shorelines (sometimes adjacent mainland and island shorelines in the St. Marys River), for a distance of about 15-20 miles along the course of the river. We divided Lake St. Clair into four geographic areas each including about 15-20 miles of shoreline, together with the adjacent littoral waters.

To use this volume the reader should first locate the geographic area of interest on one of the maps provided herein and then refer to the corresponding table in which the spawning or nursery area information for the geographic area of interest is summarized.

Tables 1-11 list the species or taxonomic groups that have spawning or nursery areas in each geographic area; indicate whether the spawning or nursery areas are located in tributary, littoral, offshore, or navigation channel waters within the geographic area; list the spawning or nursery areas as confirmed, probable, or potential; and identify species whose continued existence was considered to be in jeopardy (i.e. those species designated as "rare and protected," "threatened," "endangered," etc. on State or Federal listings current in August, 1981; see also footnotes to tables 1-11).

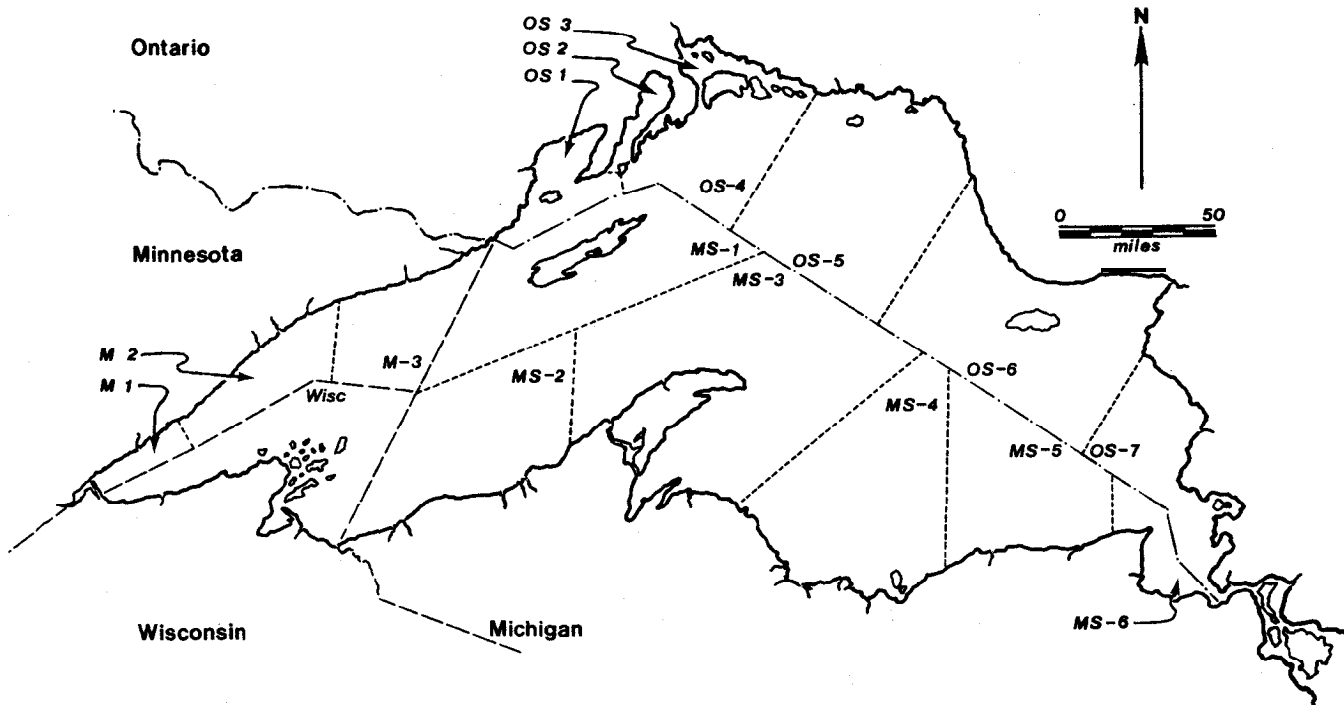
The terms used in Tables 1-11 are defined as follows:

Tributary waters are those streams or rivers which flow directly into the Great Lakes or their connecting waters. For the Great Lakes proper, littoral mainland waters are those between the mainland shoreline and the adjacent 30 ft depth contour, offshore waters are those outside the littoral mainland waters, and littoral offshore waters are offshore waters that lie within the 30 ft depth contour surrounding an island, shoal, or reef. For the connecting waters, littoral waters are those between the shoreline and the edge of the navigation channel, and navigation channel waters are those within the navigation channel as that channel is delineated on USDOC-NOAA National Ocean Survey maps for the Great Lakes and Connecting Waters.

Confirmed spawning areas are those positively identified in the literature or by personal communication as spawning areas. Identification is usually based on observation in typical spawning

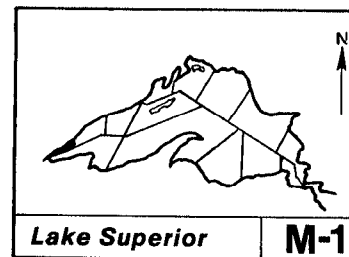
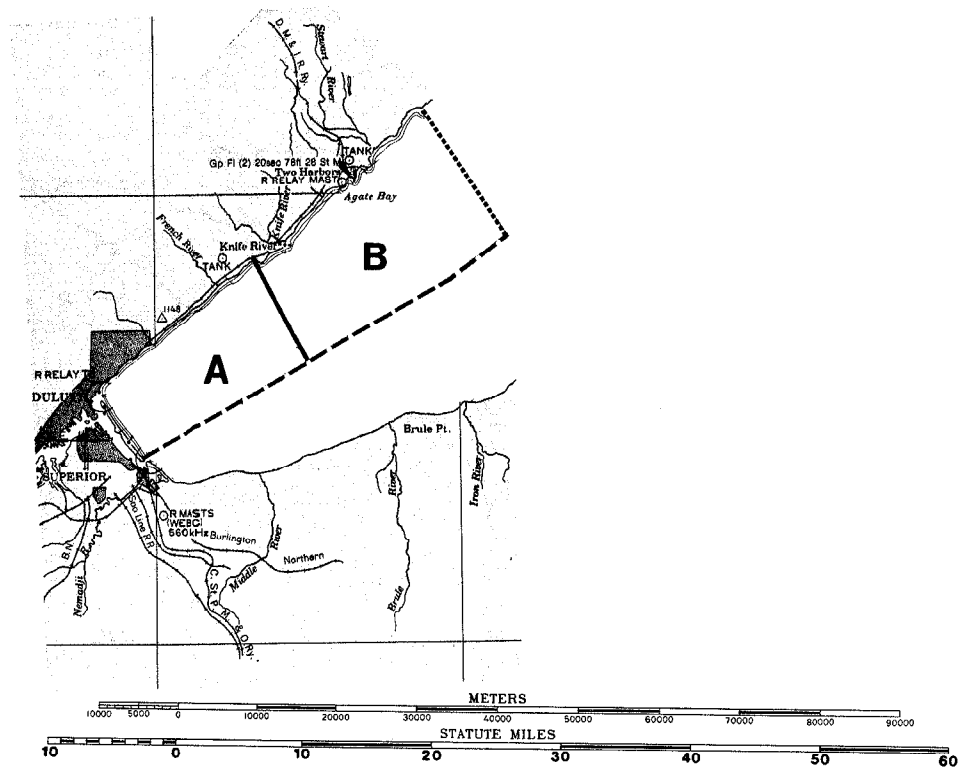
habitat during the spawning season of (1) concentrations of ripe individuals, (2) reproductive behavior typically associated with the spawning site, (3) alterations of the substrate typically produced by spawning fish, (4) deposited eggs, or (5) newly hatched prolarvae or sac fry (only for species with demersal eggs). Most spawning areas identified in volumes I-XI of the atlas fall into this category. Probable spawning areas are those identified in the literature or by personal communication as probable spawning areas. Identification is usually based on the observation in typical spawning habitat of (1) concentrations of nearly ripe or recently spent fish, or (2) the presence of advanced prolarvae or swim-up fry. Potential spawning areas are those identified in the literature or by personal communication as potential or possible spawning areas. Identification is usually based on the observation that habitat in the area is similar to that elsewhere which typically permits spawning and production of viable fry.

Confirmed nursery areas are those positively identified in the literature or by personal communication as nursery areas. Identification is usually based on the observation of concentrations of young-of-the-year fish in spring-summer in typical nursery habitat. Most nursery areas identified in volumes I-XI of the atlas fall into this category. Probable nursery areas are those identified in the literature or by personal communication as probable nursery areas. Potential nursery areas are those identified in the literature or by personal communication as potential or possible nursery areas. Identification is usually based on the observation that the habitat appears similar to that elsewhere which typically permits survival of fish from hatching through the first summer of life.



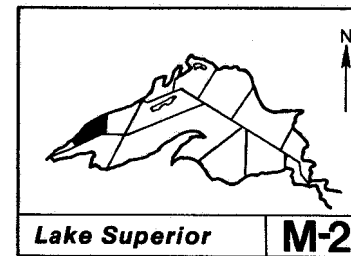
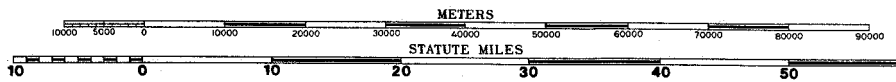
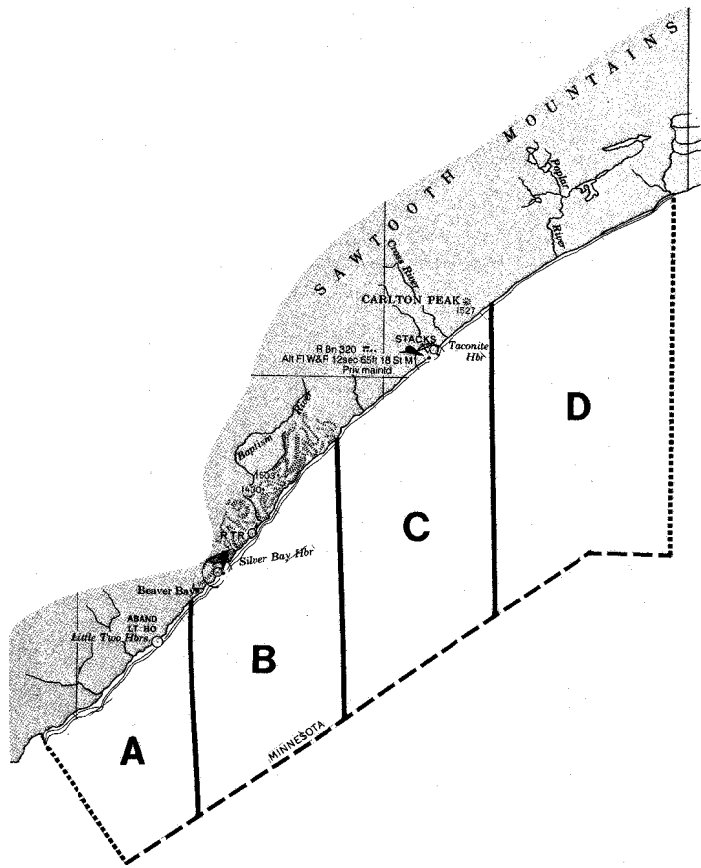
LAKE SUPERIOR

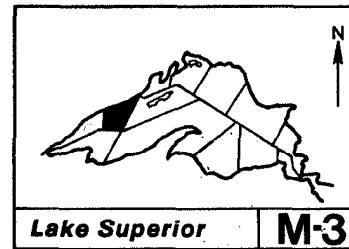
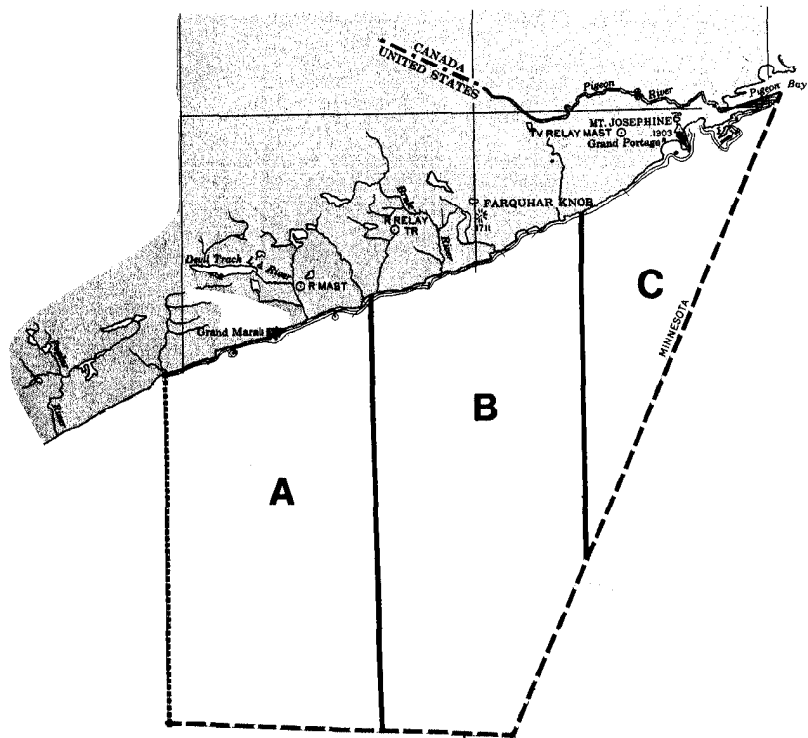
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- State Boundary - - - - -
- Statistical Fishing District
 - Geographic area —————

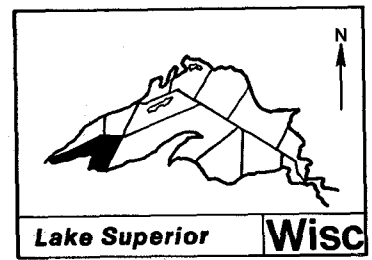
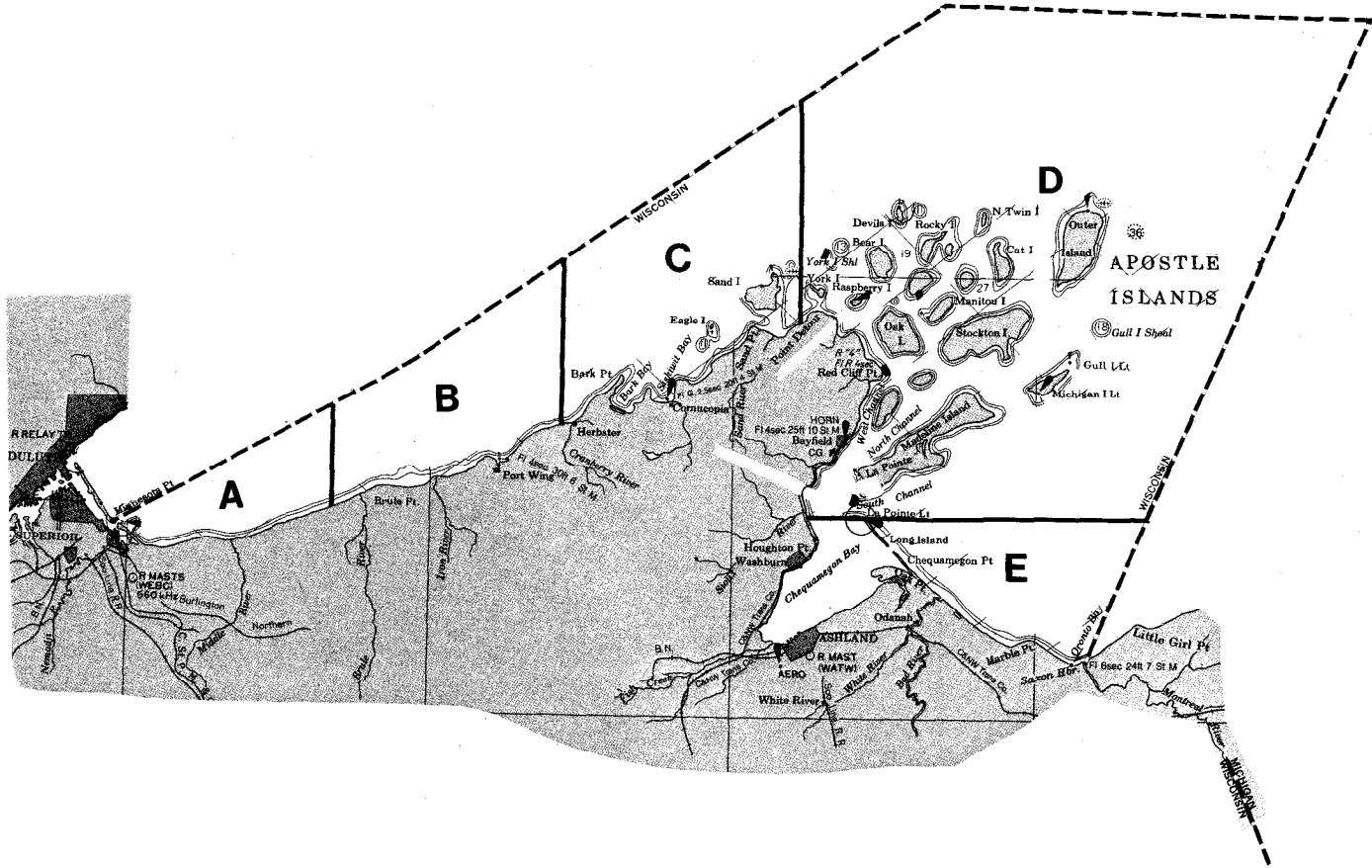


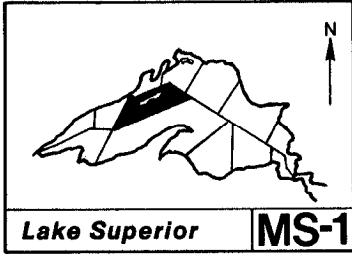
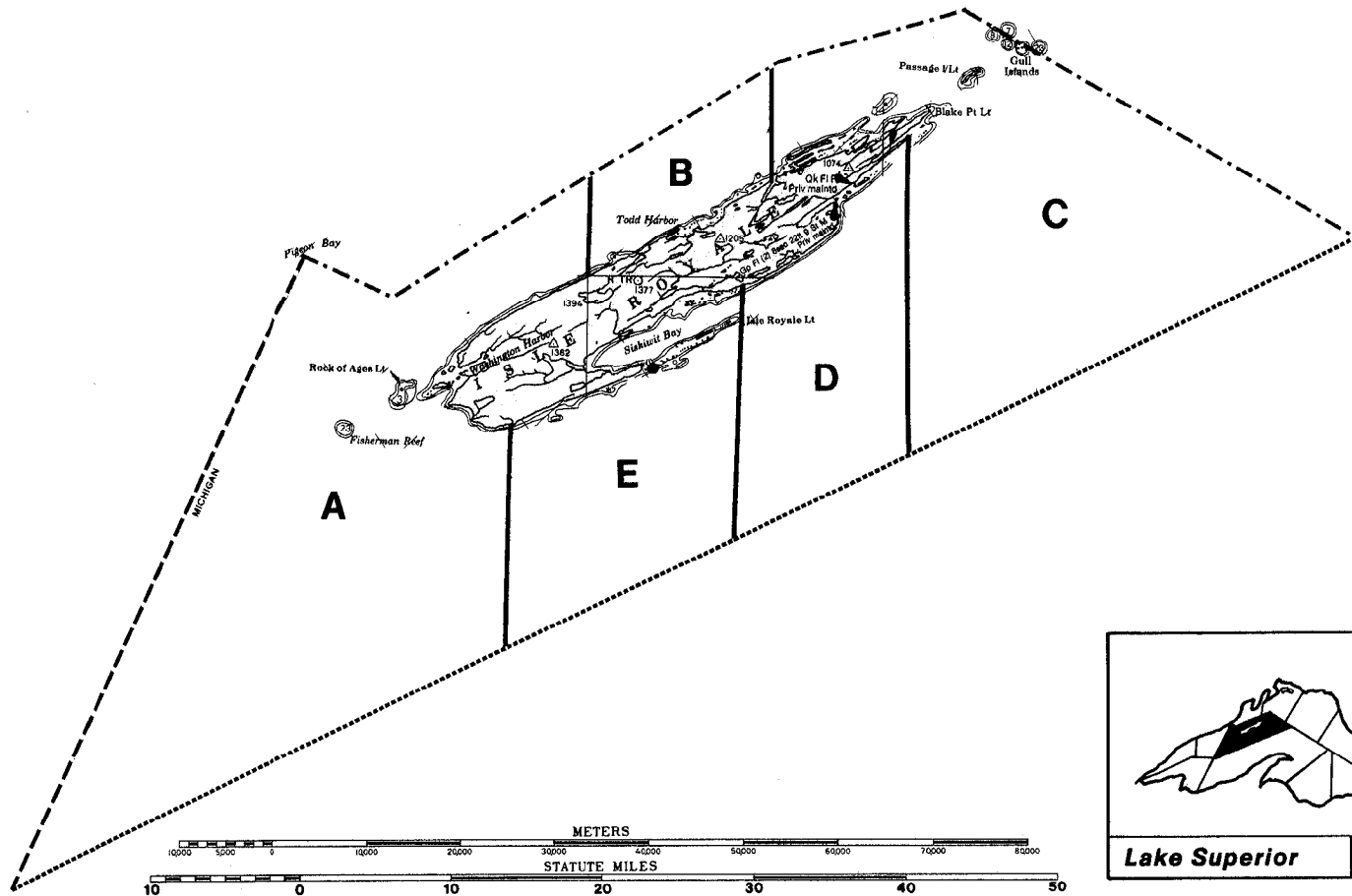
Lake Superior

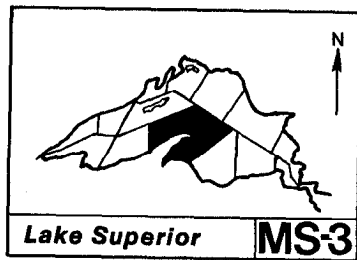
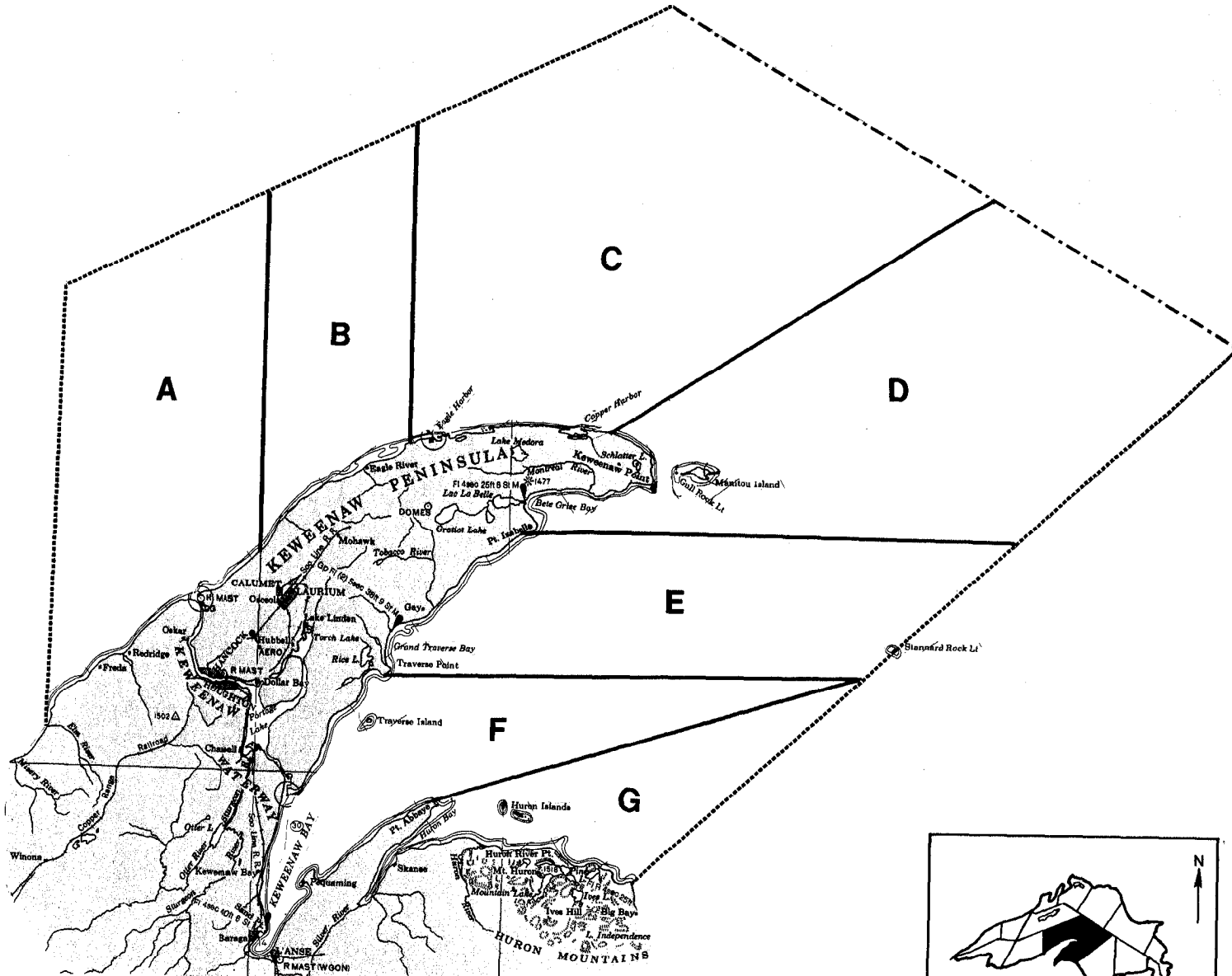
M-1



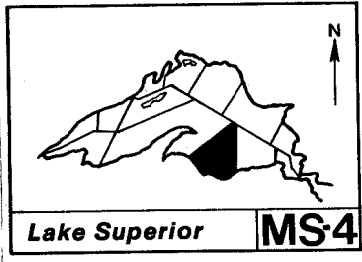
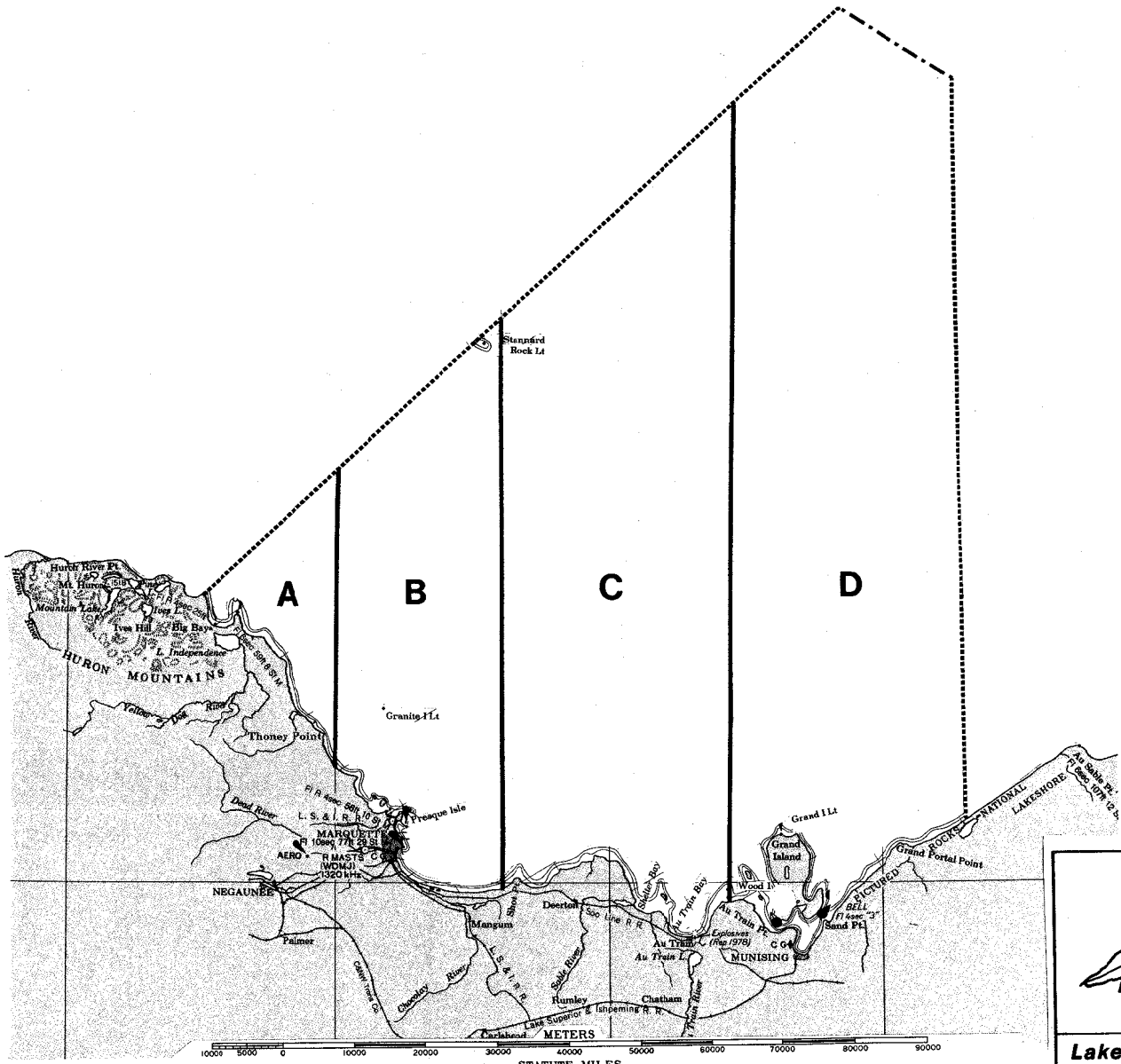




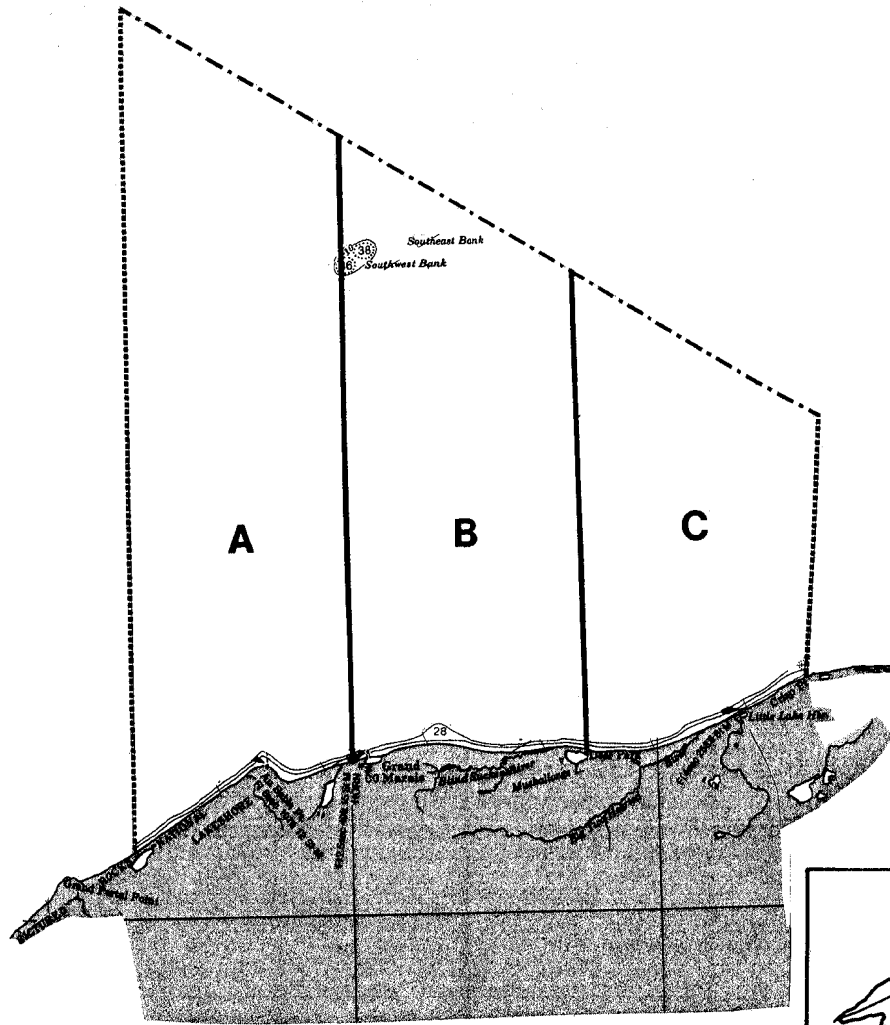


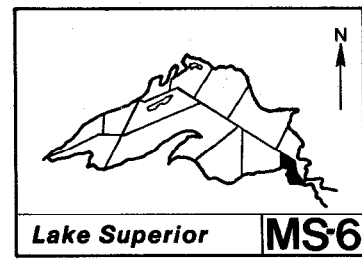
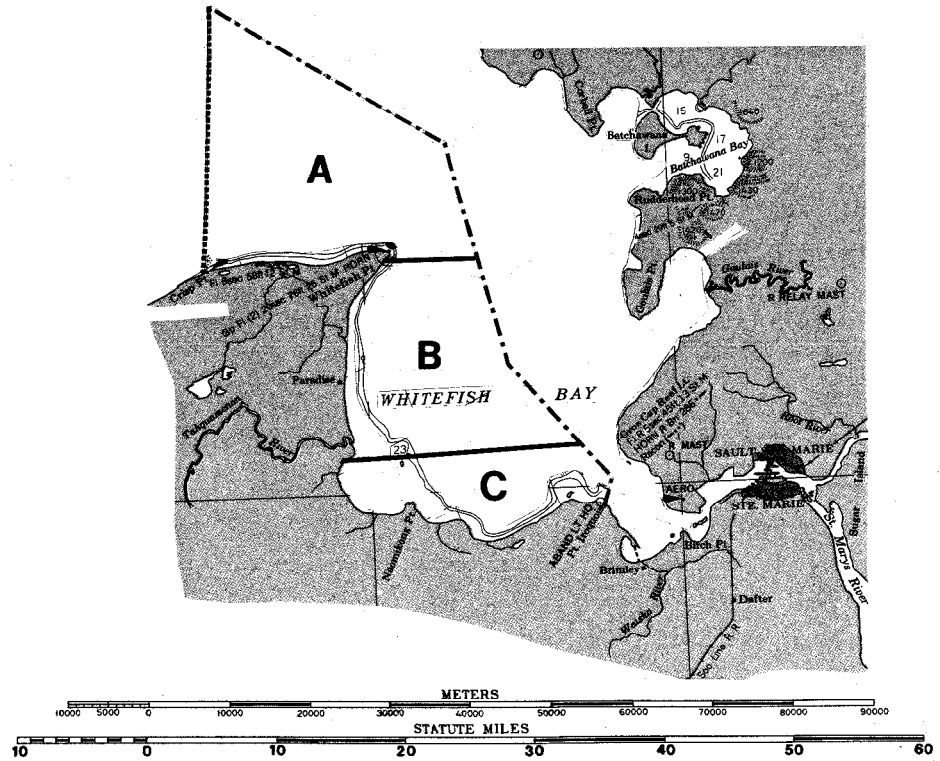


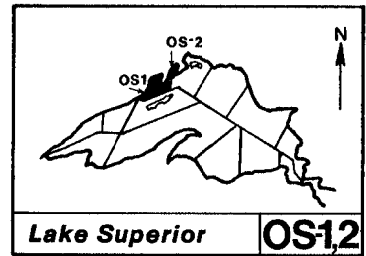
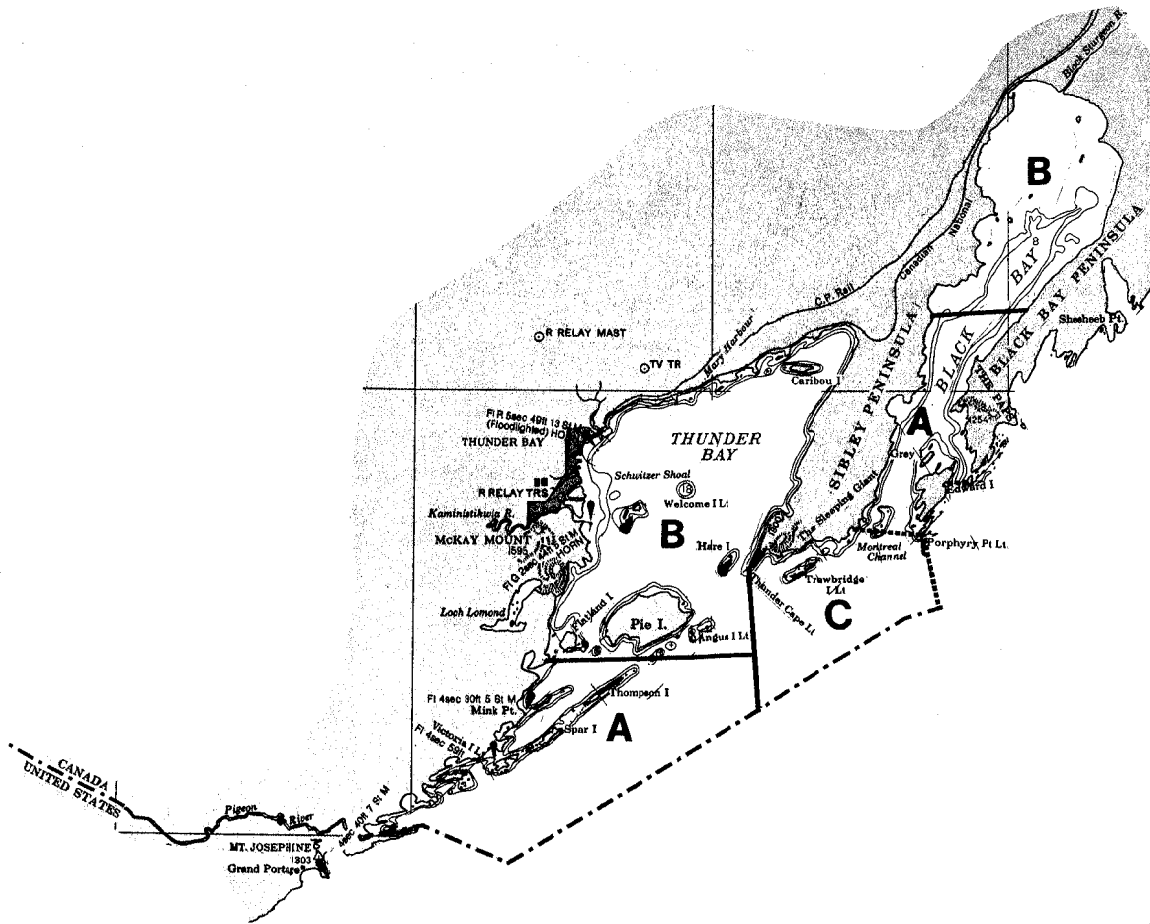
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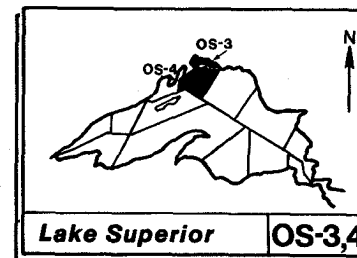
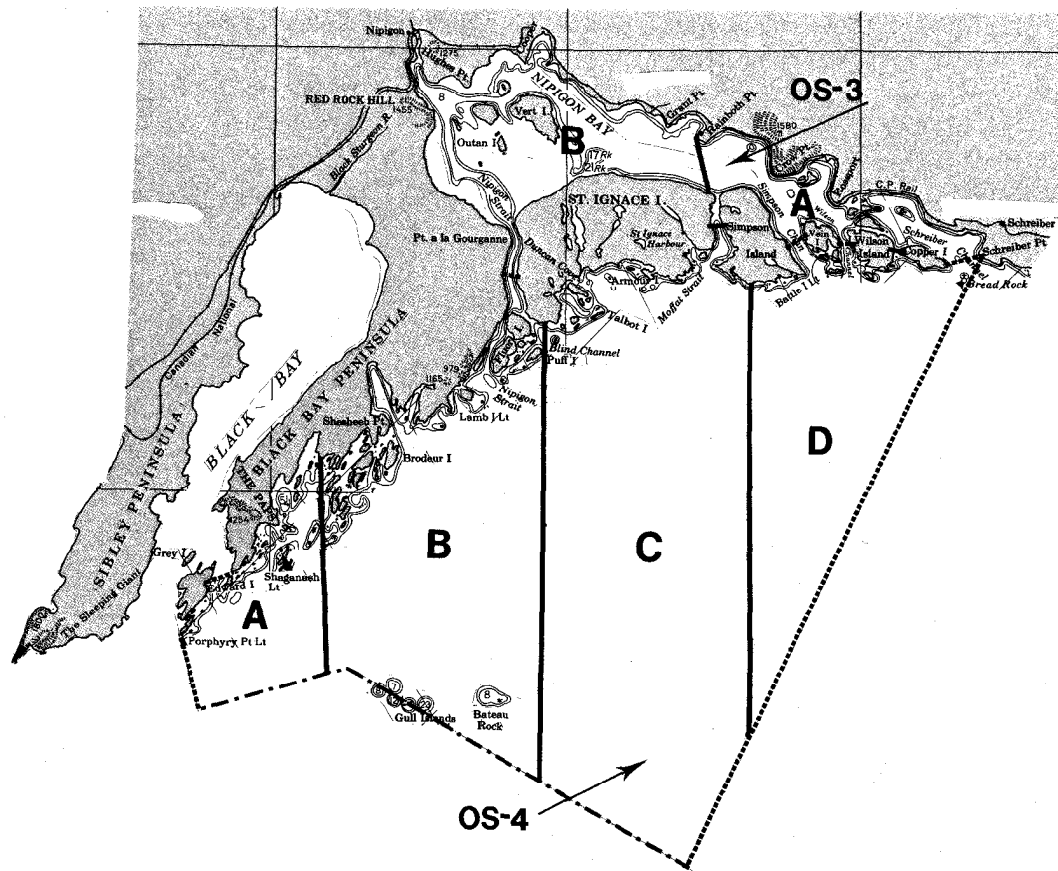


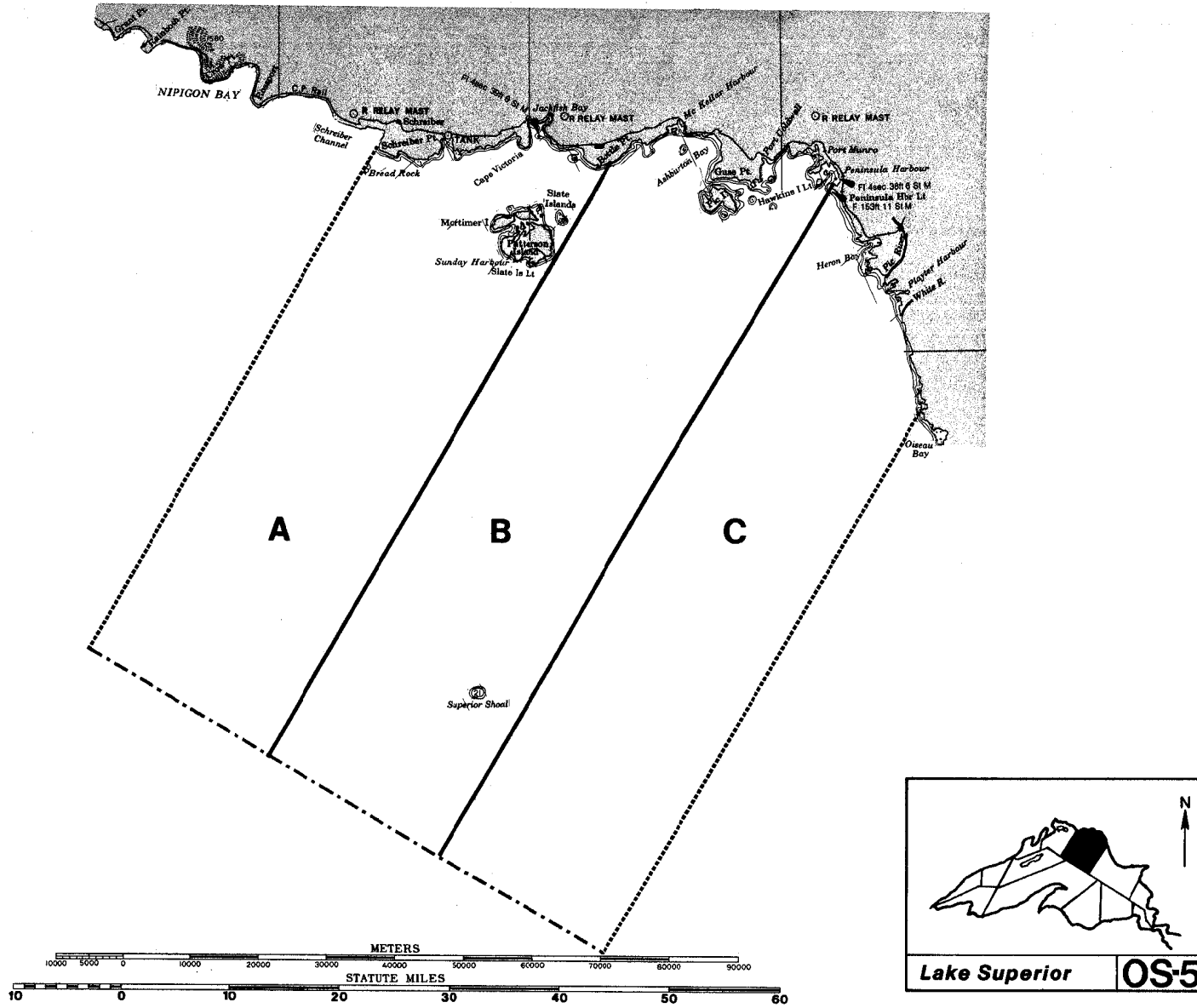
Lake Superior MS4

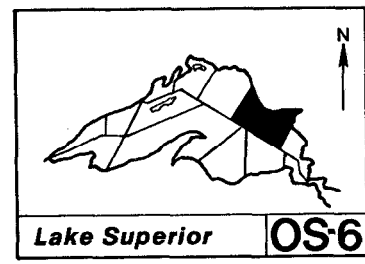
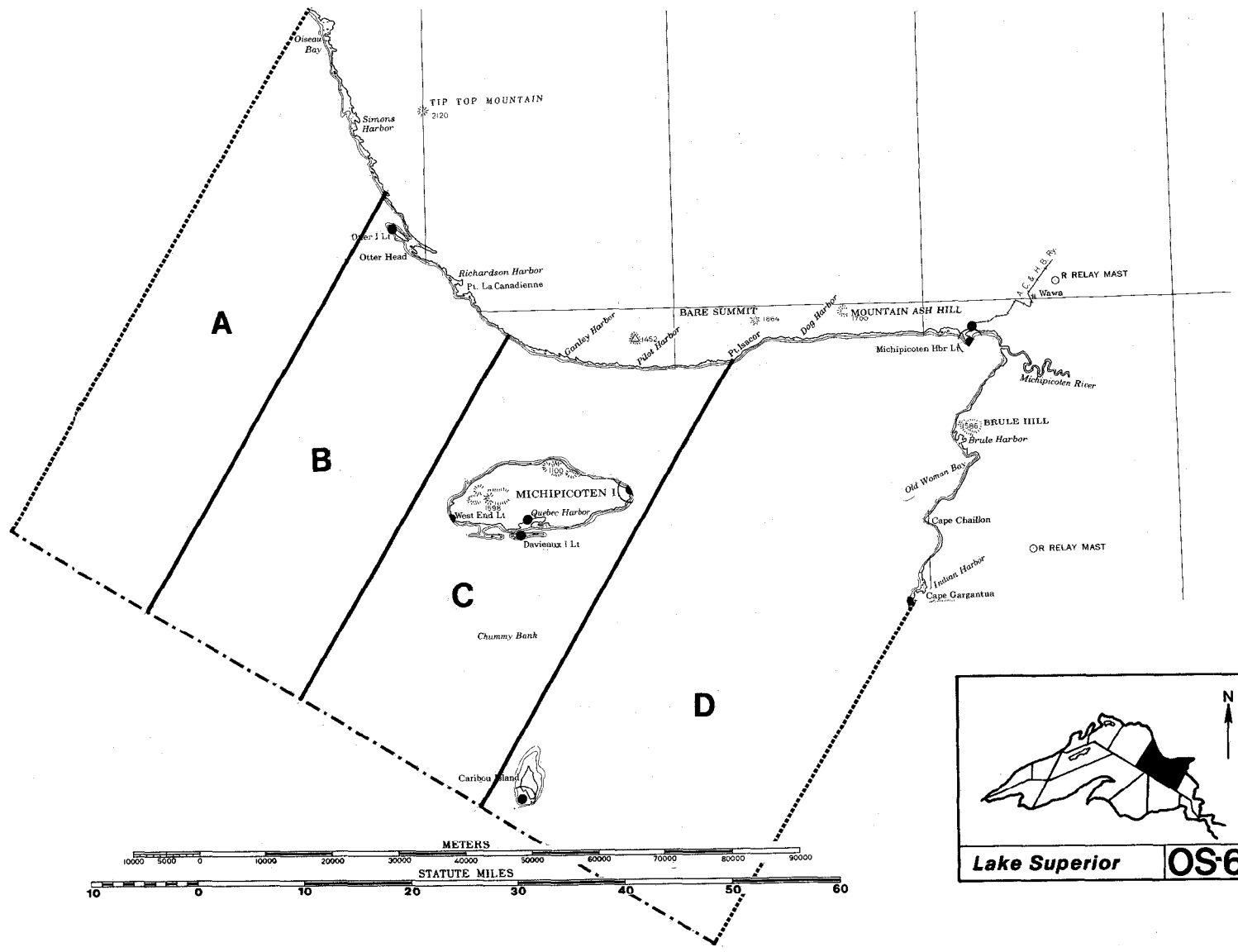


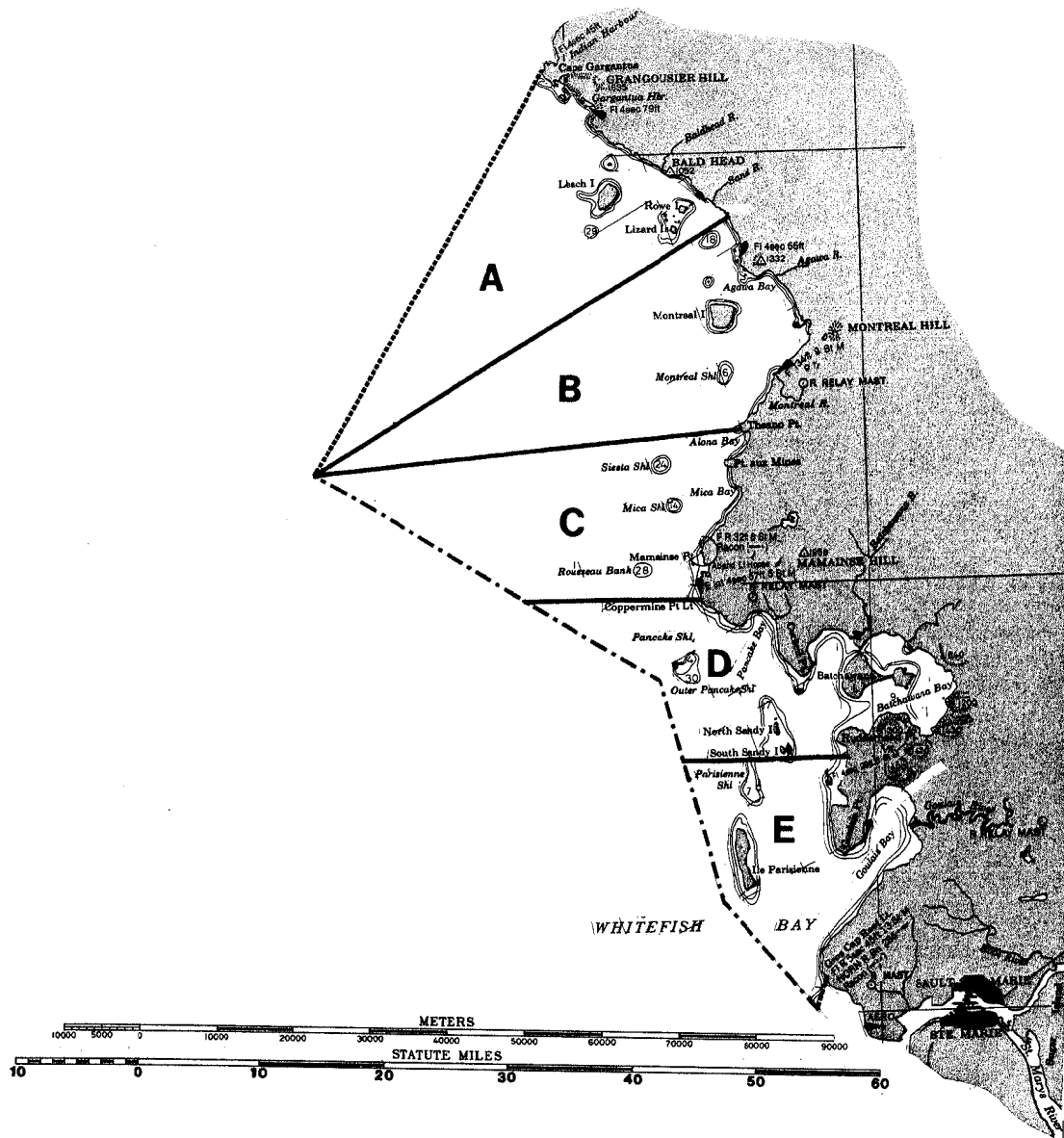












Lake Superior OS-7

Table 1. Fishes^{1/} with spawning or nursery areas^{2/} in tributary, littoral mainland, offshore, or littoral offshore waters^{3/} of Lake Superior.

Statistical fishing district	Geographic area	Spawning area	Nursery area
M-1	A	T: 1 (C), 24 (C), 21 (C,P), 22 (C), 24 (C), 27 (C), 29 (C), 38 (C), 41 (C), 42 (C), 46 (C), 75 (C), 76 (C), 87 (C), 81 (C), 84 (C), 90 (C), 108, 113, 116, 126 (C), 130 (C)	T: 1 (C), 22 (C), 38 (C), 76 (C), 87 (C), 90 (C), 126 (C), 130 (C)
		LM: 8 (C), 13 (C), 14 (C), 25 (C), 26 (C), 31 (C,Po), 38 (C), 41 (C), 42 (C), 46 (C), 75 (C), 76 (C), 81 (C), 84 (C), 90 (C), 125 (C), 126 (C)	LM: 8 (C), 13 (C), 26 (C), 38 (C), 41 (C), 52 (C), 75 (C), 76 (C), 87 (C), 81 (C), 84 (C), 99 (C), 126 (C), 130 (C)
		O: 13 (C), 15 (C), 31 (C,Po)	
	B	T: 1 (C), 13 (C), 21 (P), 22 (C), 27 (C), 29 (C), 30 (C), 38 (C), 75 (C), 100 (C)	T: 1 (C), 22 (C), 100 (C)
		LM: 13 (C), 15 (C), 25 (C), 26 (C), 31 (C,Po), 38 (C)	LM: 26 (C)
		O: 13 (C), 31 (C,Po)	
M-2	A	T: 1 (C), 21 (C,P), 22 (Po), 27 (C), 29 (C), 38 (C), 41 (C), 75 (C)	T: 1 (C), 8 (C)
		LM: 13 (C), 25 (C), 26 (C), 31 (C,Po)	
		O: 13 (C), 15 (C), 31 (C,Po)	
	B	T: 1 (C), 21 (p), 22 (Po), 24 (C), 27 (C), 29 (C), 38 (C), 75 (C)	T: 1 (C)
		LM: 13 (C), 25 (C), 26 (C), 31 (c,pO)	
		O: 13 (C), 15 (C), 31 (C,PO)	

Table 1. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
M-2	C	T: 1 (C), 21 (C,P), 22, 27 (C), 29 (C), 75 (C)	T: 1 (C)
		LM: 13 (C), 25 (C), 26 (C), 31 (C,Po), 38 (C)	
		O: 13 (C), 15 (C), 31 (C,Po)	
	D	T: 1 (C), 21 (C,P), 24 (C), 27 (C), 38 (C), 75 (C)	T: 1 (C)
		LM: 13 (C), 25 (C), 26 (C), 31 (C,Po)	
		O: 13 (C), 15 (C), 31 (C,Po)	
M-3	A	T: 1 (C), 21 (P), 22 (Po), 27 (C), 38 (C), 75 (C)	T: 1 (C)
		LM: 13 (C), 25 (C), 26 (C), 31 (C,Po)	LM: 13 (C)
		O: 13 (C), 15 (C), 20, 31 (C,Po)	
		LO: 31 (C)	
	B	T: 1 (C), 21 (P), 22 (Po), 27 (C), 38 (C), 75 (C)	T: 1 (C)
		LM: 13 (C), 25 (C), 26 (C), 31 (C,Po)	LM: 13 (C), 31 (C)
		O: 13 (C), 15 (C), 31 (C,Po)	
	C	T: 1 (C), 24/, 21 (c,P), 27 (C), 30 (C), 38 (C), 75 (C), 100 (Po), 130 (C)	T: 1 (C), 13 (C)
		LM: 13 (C), 14 (C), 25 (C), 26 (C), 31 (C,PO), 38 (C), 126 (C)	LM: 13 (C), 14 (C), 26 (C), 126 (C), 130 (C)
O: 13 (C), 15 (C), 31 (C,Po)			

Table 1. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area	
Wisconsin	A	T: 1 (C), 24 (C), 27 (C), 29 (C), 38 (C), 41 (C), 42 (C), 46 (C), 75 (C), 76 (C), 81 (C), 84 (C), 100 (C), 130 (C)	T: 1 (C), 38 (C), 130 (C)	
		LM: 8 (C), 13 (C), 14 (C), 38 (C), 41 (C), 42 (C), 46 (C), 52 (C), 58 (Po), 87 (P), 90 (C), 95 (C), 99 (C), 116 (C), 126 (C)	LM: 8 (C), 14 (C), 38 (C), 41 (C), 52 (C), 75 (C), 76 (C), 81 (C), 84 (C), 87 (C), 126 (C), 130 (C)	
		B	T: 1 (C), 21 (C), 22 (C), 24 (C), 27 (C), 29 (C), 30 (C), 38 (C), 41 (C), 76 (C)	T: 1 (C), 24 (C), 76 (C)
		LM: 13 (C), 14 (C), 41 (C), 126 (C)	LM: 76 (C)	
	C	T: 1 (C), 22 (C, Po), 27 (C), 29 (C), 30 (C), 113 (C)	T: 1 (C), 113 (C)	
		LM: 13 (C), 14 (C), 31 (C), 41 (C), 46 (C), 113 (C), 126 (C)	LM: 113 (C)	
		O: 13 (C), LT (C)	O: 13 (C)	
		LO: 14 (C), 31 (C)		
	D	T: 1 (C), 21 (C), 22 (C), 27 (C), 29 (C), 30 (C), 41 (C), 46 (C), 75 (C)	T: 1 (C)	
		LM: 2, 13 (C), 14 (C), 26 (C), 31 (C)		
		O: 13 (C), 14 (C), 15 (C), 17 (C), 31 (C), 100 (P), 105 (C), 138 (C)	O: 13 (C), 26 (C), 31 (C), 38 (C), 100 (C), 138	
		LO: 13 (C), 14 (C), 26 (C), 37 (C), 38 (C), 41 (C), 75 (C), 76 (C), 105 (C)	LO: 13 (t), 31 (C), 38 (C)	
E	T: 1 (C), 2 (C), 21 (C), 22 (C), 27 (C), 29 (C), 30 (C), 38 (C), 41 (C), 46 (C), 75 (C), 76 (C), 100 (C), 130 (C)	T: 1 (C), 113 (C)		

Table 1. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area	
Wisconsin	E (Cont'd.)	LM: 8, 13(C), 14(C), 31(C), 38(C), 41(C), 46(C), 100(C), 113(C), 126(C)	LM: 8(C), 126(C), 130(C)	
		O: 13(C), 14(C)		
		LO: 14(C), 26(C), 31(C), 113(C)		
		MS-1	T: 75(C)	LM: 75(C)
		A	T: 1(C), 27(C), 30(C)	T: 1(C)
			O: 31(C)	
			LO: 14(C), 26(C), 31(C)	LO: 13?(C), 14(C), 26(C)
		B	LO: 26(C), 31(C)	LO: 14(C), 26(C)
		C	O: 31(C)	
			LO: 14(C), 26(C), 31(C)	LO: 135/(C), 14(C), 26(C)
D	LO: 26(C)	LO: 14(C), 26(C)		
E	T: 30(C), 67(P)	T: 67(C)		
	LM: 67(P)	LM: 38(C), 67(C)		
	O: 13?(C), 31(C)	O: 25(C)		
	LO: 13?(C), 14(C), 26(C), 31(C)	LO: 14(C), 26(C)		
MS-2	A	T: 22(C), 27(C), 30(C)		
		LM: 31(C)		
	B	T: 1(C), 21(C), 22(C), 27(C)	T: 1(C)	
		LM: 31(C)		
	O: 31(C)			

Table 1. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area	
MS-2	C	T: 1 (C), 22 (C), 27 (C)	T: 1 (C), 22 (C), 27 (C)	
		LM: 31 (C)		
		O: 131/ (C), 31 (C)		
	D	T: 1 (C), 21 (C), 22 (C), 27 (C), 29 (C), 38 (C), 130 (C)	T: 1 (C)	
		LM: 13⁵/ (C) , 31 (C)		
		O: 135. (C), 36 (C)		
	E	T: 1 (C), 21 (C), 22 (C), 27 (C), 38 (C)	T: 1 (C)	
		LM: 13⁵/ (C) , 31 (C)		
		O: 31 (C), 36 (C)		
	MS-3		T: 130 (P)	
		A	T: 1 (C), 21 (C), 22 (C), 27 (C)	T: 1 (C)
			LM: 135/ (C), 14 (C), 31 (C)	
O: 31 (C)				
B		T: 1 (C), 21 (C), 27 (C)	T: 1 (C), 27 (C)	
		LM: 14 (C), 31 (C)		
C		T: 21 (C), 22 (C), 27 (C)	T: 27 (C)	
		LM: 13⁵/ (C) , 31 (C)		
		O: 31 (C)		
D		T: 1 (C), 21 (C), 27 (C)	T: 1 (C)	
		LM: 14 (C), 26 (C), 31 (C)		
		O: 26 (C), 31 (C)		
	LO: 13?/ (C), 14 (C), 26 (C), 31 (C)			

Table 1. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MS-3	E	T: 1 (C), 21 (C), 27 (C)	T: 1 (C)
		LM: 135/(C) , 14 (C), 31 (C)	
		O: 14 (C), 31 (C), 36 (C)	
		T: 1 (C), 25/(C) , 21 (C), 22 (C), 27 (C), 38 (C), 87 (C), 100 (C), 130 (C)	T: 1 (C), 22 (C)
		LM: ,3/(C), 14 (C), 26 (C), 31 (C), 41 (C), 100 (C), 126 (C)	
		O: f3y(C), 14 (C), 26 (C), 31 (C), 36 (C), 41 (C), 99 (C), 100 (C), 126 (C)	O: 25 (C), 31 (C)
		LO: 14 (C), 31 (C)	
		T: 1 (C), 25/(C) , 21 (C), 22 (C), 24 (C), 27 (C), 30 (C), 31 (C), 38 (C), 75 (C), 130 (P)	T: 1 (C), 22 (C), 27 (C)
		LM: 14 (C), 31 (C)	IM: 14 (C)
		O: 14 (C), 31 (C), 36 (C)	
LO: 14 (C), 31 (C)			
MS-4	A	T: 1 (C), 21 (C), 22 (C), 27 (C), 30 (C), 126 (C), 130 (C)	T: 1 (C), 27 (C), 126 (C)
		LM: 14 (C), 31 (C)	
		O: 13 (C), 14 (C), 31 (C)	
	B	T: 1 (C), 21 (C), 22 (C), 24 (C), 27 (C), 29, 30 (C), 38 (C), 41 (C), 46 (C), 75 (C), 76 (C), 100 (C), 102, 113 (P), 126 (C)	T: 1 (C), 76 (C), 113 (C)
		LM: 14 (C), 26 (P), 29 (P), 31 (C), 32 (p), 38 (C), 100 (C), 105 (C), 107, 113 (p), 126 (C), 135 (C), 136 (C), 137 (P), 138 (P)	LM: 135/(C) , 14 (C), 26 (C), 31 (C), 38 (C), 41 (C), 76 (C), 100 (C),

Table I. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MS-4	B (Cont'd.)		LM: 105 (C), 113, 126 (C), 135 (C), 136 (C), 137 (C), 138 (C)
		O: $13\frac{5}{6}/(C)$, $15\frac{5}{6}/$, 172/ (C), $20\frac{6}{6}/(C)$, 31 (C)	
		LO: 14 (C), 31 (C)	
	C	T: 1 (C), 21 (C), 22 (C), 27 (C), 30 (C)	T: 1 (C)
		LM: 14 (C,P), 31 (C)	
		O: 20, 25 (P), 31 (C)	O: 25 (C), 31 (C)
	D	T: 1 (C), 21 (C), 22 (C), 24 (C), 27 (C), 29 (C), 30 (C), 38 (C)	T: 1 (C), 22 (C), 24 (C), 27 (C)
		LM: 14 (C,P), 31 (C)	
		O: 31 (C)	
		LO: 14 (C)	
MS-5	A	T: 1 (C), 21 (C), 22 (C), 27 (C)	T: 1 (C), 27 (C)
		LM: 14 (C), 31 (C)	
		O: 31 (C)	
	B	T: 1 (C), 21 (C), 22 (C), 27 (C), 38 (C)	T: 1 (C)
		LM: $13\frac{5}{6}/(C)$, 14 (C), 31 (C)	
		O: $18\frac{6}{6}/(C)$, $20\frac{6}{6}/(C)$, 31 (C), 36 (C)	
		LO: 31 (C)	
	C	T: 1 (C), 21 (C), 22 (C), 26 (C), 27 (C), 30 (C), 38 (C)	T: 1 (C)
		LM: 14 (C), 26 (C), 31 (C), 38 (C)	

Table 1. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MS-6	A	LM: 14 (C), 31 (C), 41 (P), 136 (C)	LM: 135/(C) , 14 (C)
	B	T: 1 (C), 2 (C), 21 (C), 27 (C), 38 (C,P), 126 (P), 130 (P)	T: 1 (C)
		LM: 31 (C), 38 (P) O: 31 (C)	
	C	T: 1 (C), 21 (C), 22 (C), 24 (C), 27 (C), 29 (C), 30 (C), 38 (C,P), 75 (C), 76 (C), 130 (P)	T: 1 (C)
		LM: 135/(C) , 14 (C), 31 (C), 38 (P), 126 (C)	
		O: 135/(C) , 31 (C)	
OS-I	A	T: 1 (C), 27 (C)	T: 1 (C)
	B	T: 1 (C), 21 (C), 22 (C), 27 (C), 30 (C), 38 (C), 130	T: 1 (C)
		LM: 26 (P), 31 (C) O: 13 (C), 19 (P)	LM: 26
		LO: 31 (C)	
	C	LM: 31 (C) LO: 31 (C)	
OS-2		T: 38 (C)	
		LM: 14 (C)	
		T: 27 (C)	
			LM: 13 (C)
		O: 13 (C)	O: 13 (C)
		T: 1 (C), 21 (C), 27 (C), 30 (C), 130 (C)	

Table 1. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
OS-2	B (Cont'd.)	LM: 31 (C), 126 (C), 130 (C)	LM: 13 (C)
		0: 13 (C)	0: 13 (C)
		LO: 31 (C)	
OS-3	A	T: 1 (C), 21 (C), 27 (C), 41 (C), 87 (C), 130 (C)	T: 1 (C)
		LM: 31 (C)	
		0: 18 (C), 31 (C)	
	B	LO: 31 (C)	
		T: 1 (C), 21 (C), 22 (C), 26 (P), 27 (C), 30 (C), 75 (C), 76 (C), 130 (C)	T: 1 (C)
		LM: 14 (C), 31 (C)	LM: 26 (C), 38 (C)
0: 31 (C)	0: 38 (C)		
OS-4	A	LM: 31 (C)	
		LO: 31 (C)	
	B	T: 1 (C), 27 (C)	
		LM: 31 (C)	
		0: 31 (C)	
	C	LO: 31 (C)	
		T: 27 (C)	
		LM: 31 (C)	
0: 31 (C)			
LO: 31 (C)			

Table 1. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area	
OS-4	D	LM: 31 (C)		
		O: 31 (C)		
		LO: 31 (C)		
OS-5	A	T: 1 (C), 21 (C), 22 (C), 27 (C), 30 (C)	T: 1 (C)	
		LM: 14 (C), 31 (C)		
		O: 31 (C)		
	B	LO: 31 (C)		
		T: 1 (C), 21 (C), 27 (C), 30 (C)	T: 1 (C)	
		LM: 31 (C)		
	C	O: 31 (C, P)		
		LO: 31 (C, P)		
		T: 1 (C), 2 (C), 21 (C), 27 (C), 31 (C)	T: 1 (C)	
OS-6	A	LM: 31 (C)		
		O: 31 (C)		
		LO: 31 (C)		
	B	T: 27 (C), 31 (C)		
		LM: 31 (C)		
		O: 31 (C)		
			LO: 31 (C)	

Table 1. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
OS-6	C	T: 26 (P), 27 (C), 31 (C)	
		LM: 31 (C)	
		O: 31 (C)	
		LO: 31 (C)	
	D	T: 1 (C), 14 (C), 21 (C), 22 (C), 24 (C), 27 (C), 29 (C), 31 (C)	T: 1 (C)
		LM: 31 (C)	
		O: 31 (C)	
		LO: 31 (C)	
OS-7	A	T: 1 (C), 26 (P), 27 (C), LT (C), 38 (C)	T: 1 (C)
		LM: 14 (C), 31 (C)	
		O: 31 (C)	
		LO: 31 (C)	
	B	T: 1 (C), 21 (C), 22 (C), 24 (C), 27 (C), 31 (C), 38 (C), 130	T: 1 (C)
		LM: 14 (C), 31 (C)	
		O: 31 (C)	
		LO: 31 (C)	
	c	T: 2 (C), 27 (C), 31 (Po), 38 (C)	T: 2 (C)
		LM: 31 (C)	
		LO: 31 (C)	
		D	T: 1 (C), 24 (C), 27 (C), 31 (Po), 38 (C), 58 (C), 75 (C), 76 (C), 88 (C), 130

Table 1. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
OS-7	D (Cont'd.)	LM: 14(C), 31(C), 58(C) O: 31 (C) LO: 14(C), 31(C) T: 1(C), 27(C), 38(C), 76(C), 88(C), 130(C) LM: 14(C), 31(C) O: 31 (C), 100(C) LO: 14(C), 31 (C)	T: 1 (C)

1/ Numerical species code according to Table 12.

2/ Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (Po); see text for definitions. When information was not available to unequivocally support the assignment of one of the classifications, no classification was given.

3/ Waters within the geographic area are classified as tributary (T), littoral mainland (LM), offshore (O), or littoral offshore (LO); see text for definitions.

4/ Species listed by State of Minnesota as "rare and protected."

5/ Species listed by State of Michigan as "threatened."

6/ Species listed by State of Michigan as "endangered."

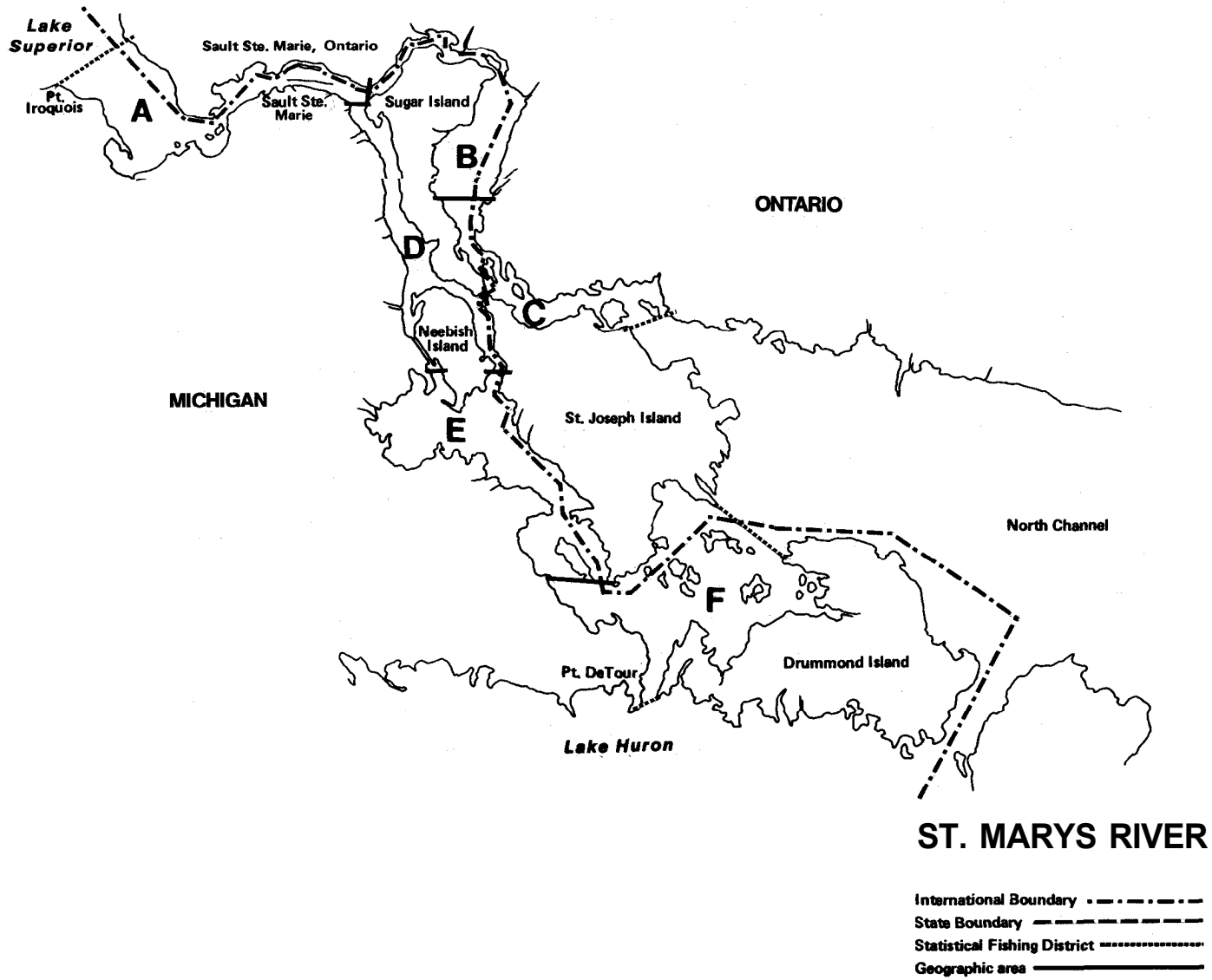


Table 2. Fished with spawning or nursery **areas^{2/}** in tributary, littoral or navigation channel water^{3/} of the St. Marys River.

Geographic area	Spawning area	Nursery area
A	T: 1(C), 22(C), 27(C), 30(C), 38(Po), 75(Po), 76(C), 136	T: 1(C), 22(C), 30(C), 76(C)
	L: 1(c), 2^{4/}(C) , 8, 14(C,Po), 21(P,Po), 22(Po), 24(P,Po), 26, 27(C), 30(C), 38(C), 41(C,Po), 52(C), 58(C), 62, 63(C), 75, 99, 100, 108(Po), 113(PO), 125(C), 126(C,Po), 127, 130(C), 136(C)	L: 1(C), 27(C), 58(C), 76(C), 126(C)
	T: 1(C), 27(C), 38(C), 76(C), 130(C)	T: 1(C)
	L: 41(C,P), 46, 125(C), 126(P)	L: 1(C), 41(C), 70(C), 86(C), 126(C)
	T: t(C), 27(C), 38(C)	T: 1(C)
	L: 31(c,po), 41(P), 113(C), 126(C,P), 136(C)	
N: 2^{4/}(C)		
D	T: 76(C), 81(C), 84(C), 130(C)	
	L: 13^{4/}(Po) , 14(C,P,Po), 41(C), 46(C), 92(C,P), 100(C), 126(C)	L: 76(C)
	N: 41 (PO)	
	T: 1(C), 27(C), 38(C), 76(C,P), 81 (C,Po), 130(P,Po)	T: 1(C)
	L: 13^{4/}(Po) , 14(P,Po), 37(C), 46, 113(Po), 130(C,P)	L: 92(C), 107(C), 110(C)

Table 2. Cont'd.

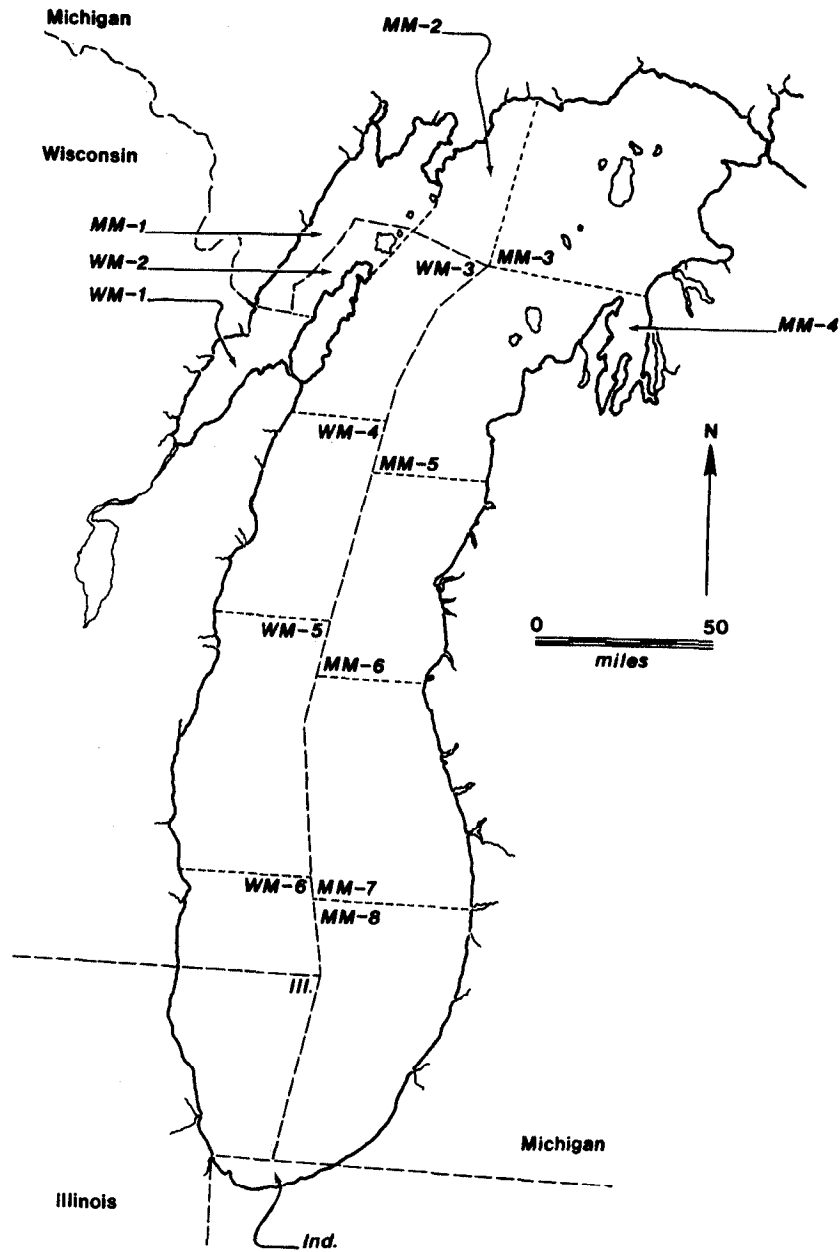
Geographic area	Spawning area	Nursery area
F	T: 1 (C), 38(C), 41(C), 76(C) L: 14(C), 130	T: 1(C) L: 1(C), 14(C), 38(C), 58(C), 76(C), 92(C), 99(C), 107(C), 126(C)

1/ Numerical species code according to Table 12.

2/ Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (PO); see text for definitions. When information was not available to unequivocally support the assignment of one of the classifications, no classification was assigned.

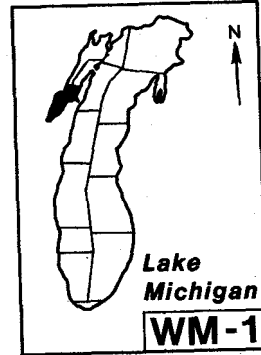
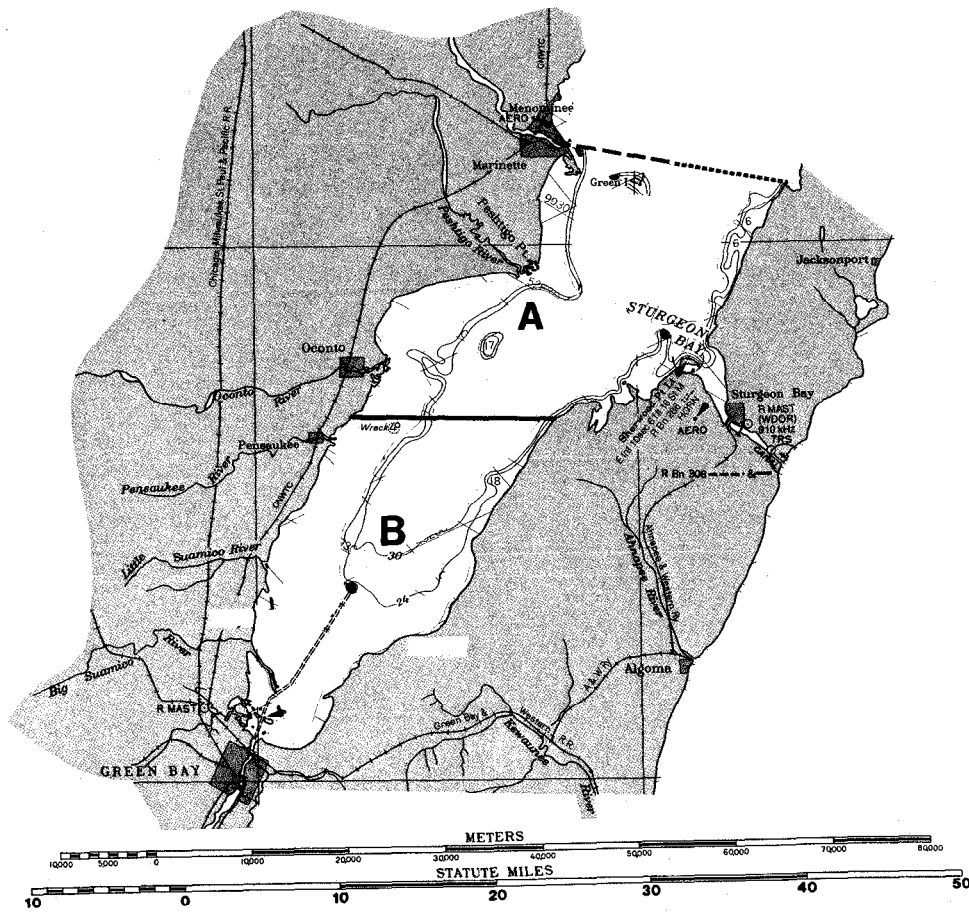
3/ Waters within the geographic area are classified as tributary (T), littoral (L) or navigation channel (N); see text for definitions.

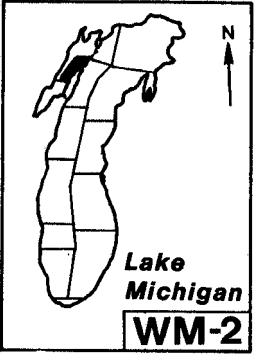
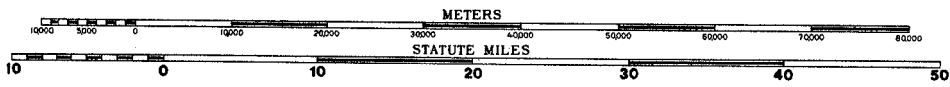
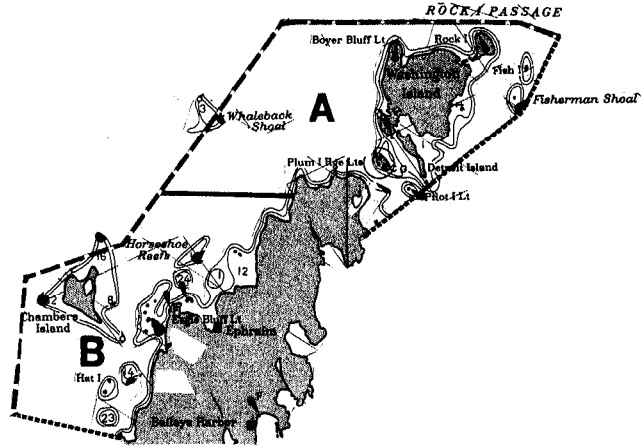
4/ Species listed by State of Michigan as "threatened".

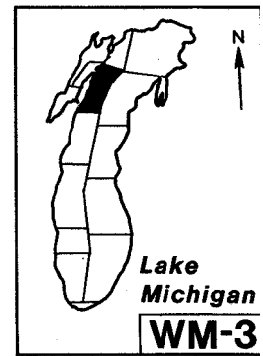
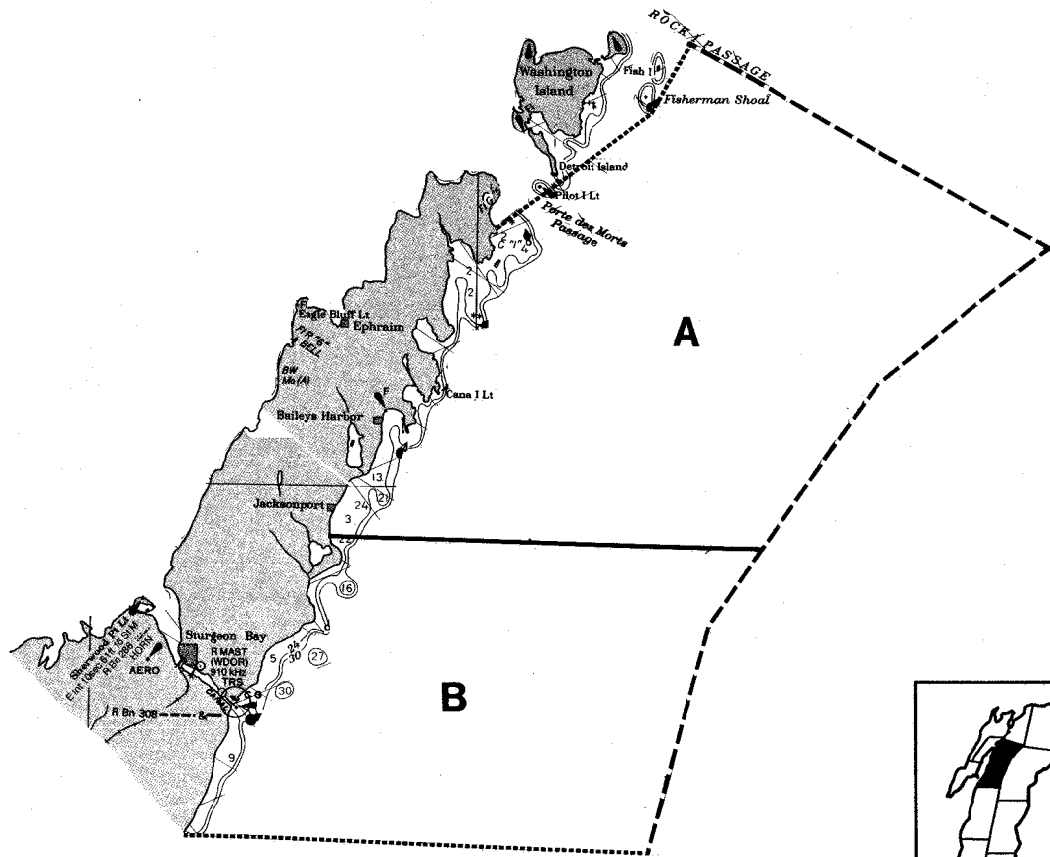


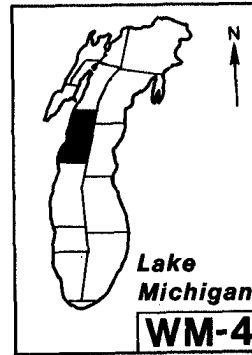
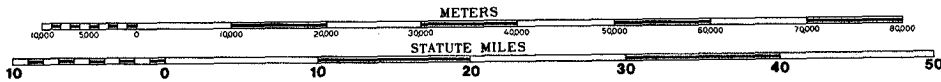
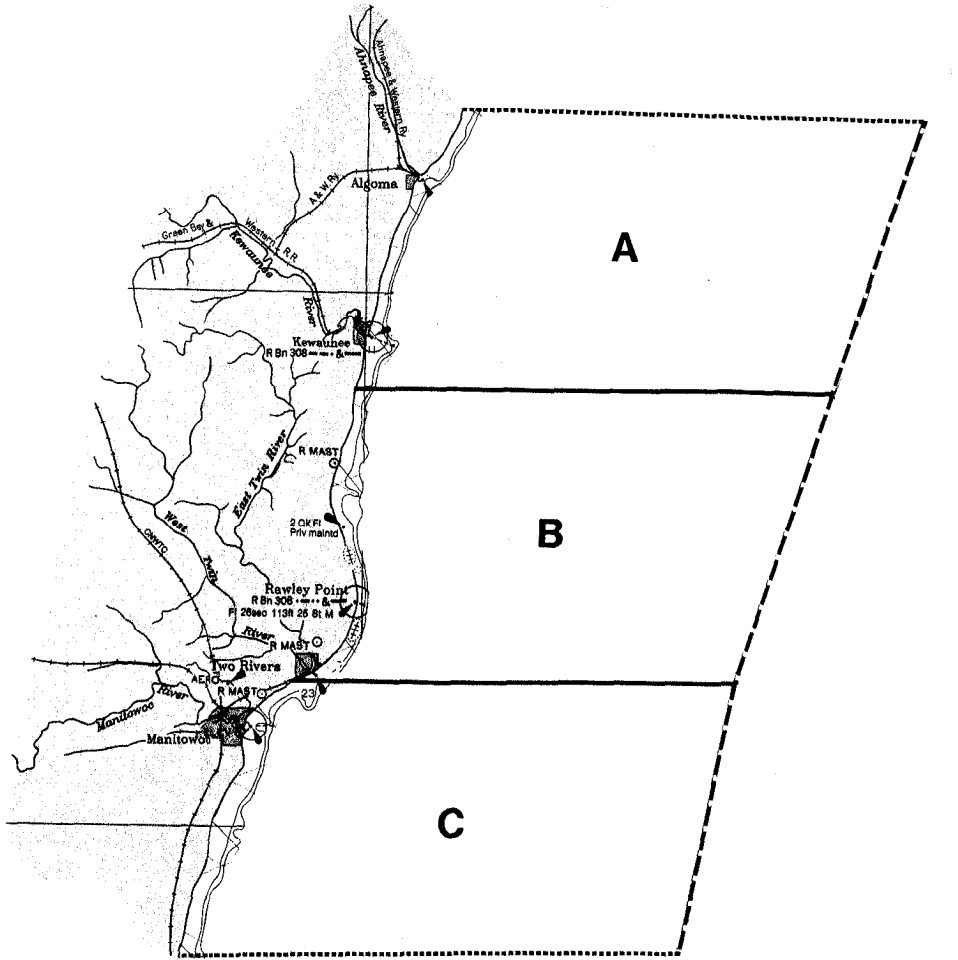
LAKE MICHIGAN

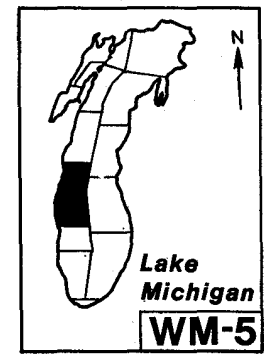
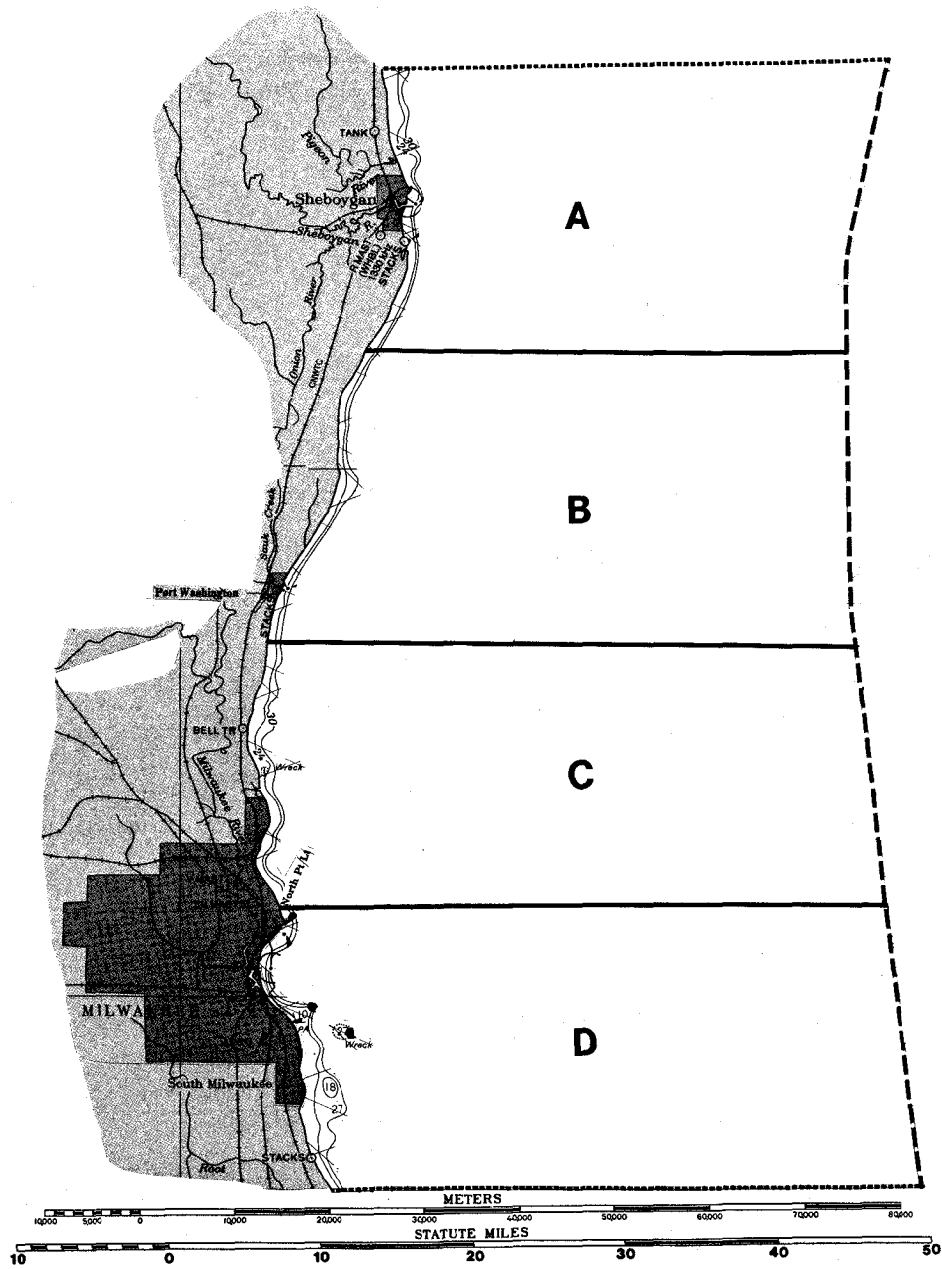
- International Boundary - - - - -
- State Boundary - - - - -
- Statistical Fishing District
- Geographic area _____

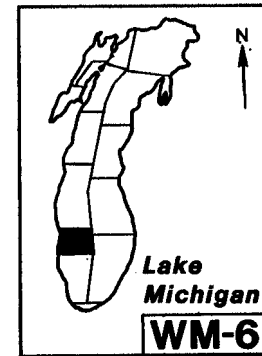
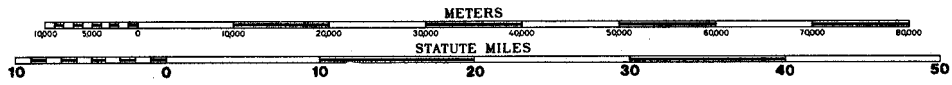
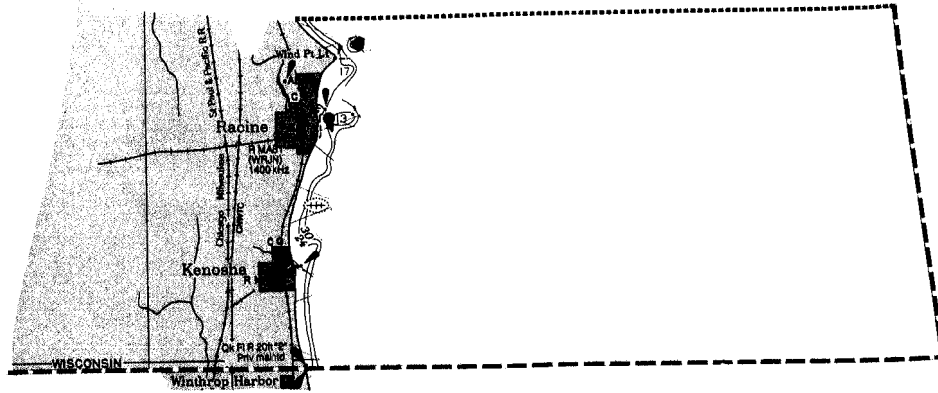


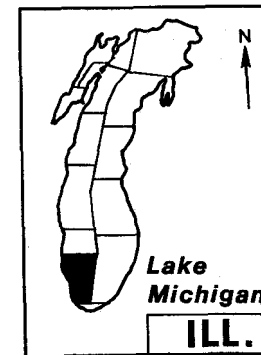
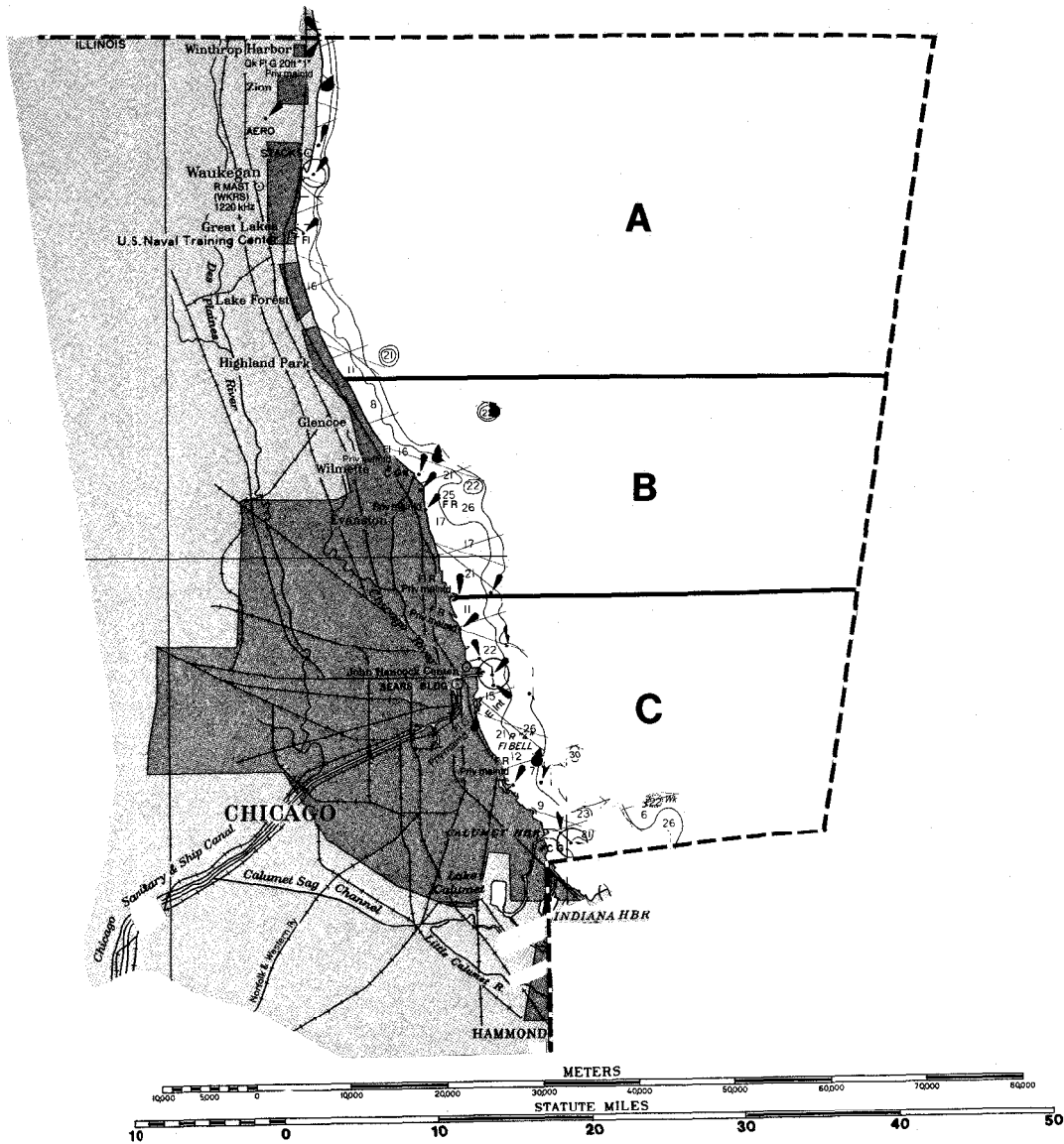


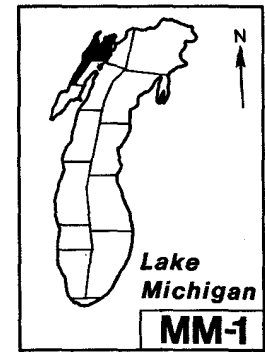
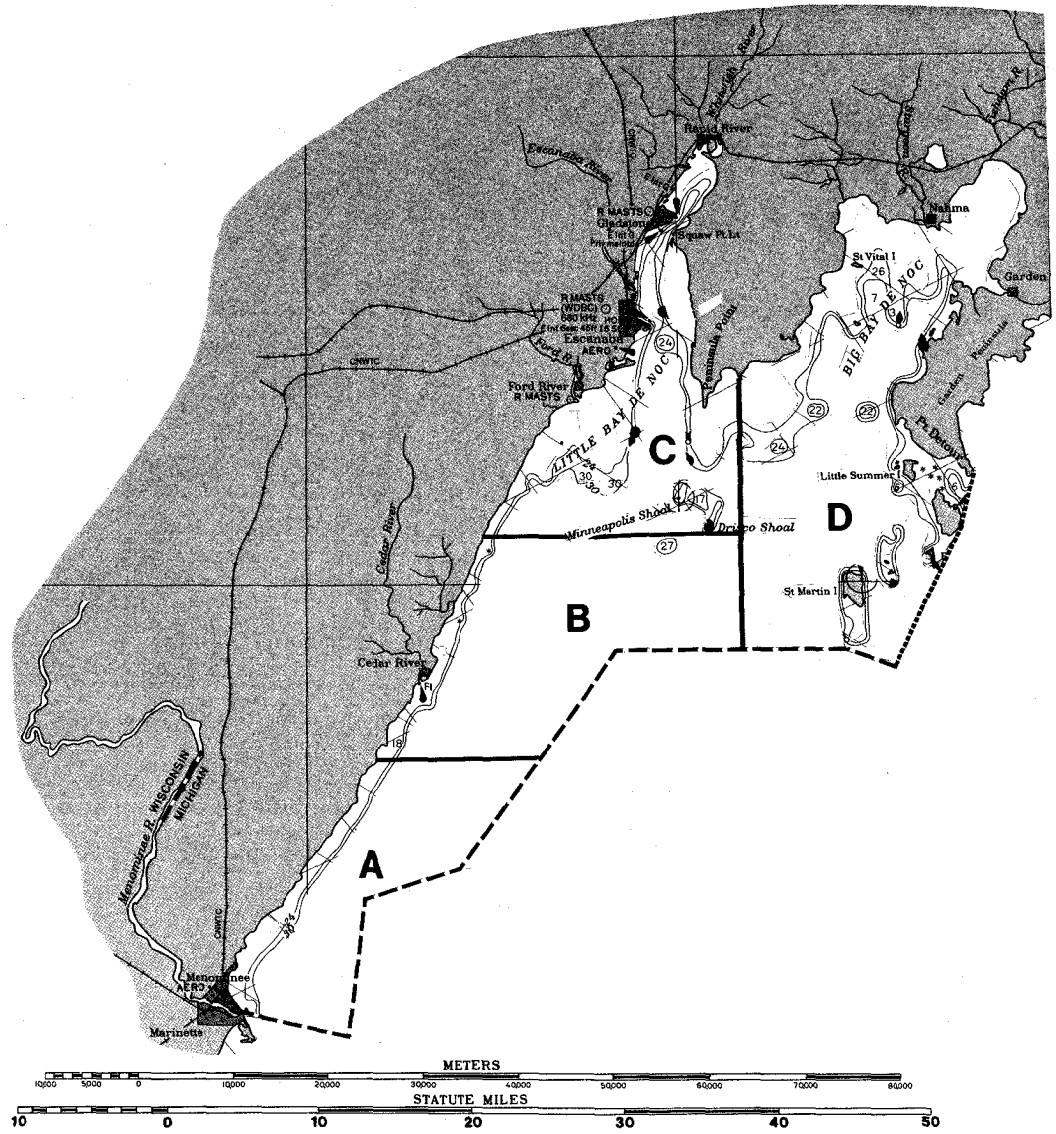


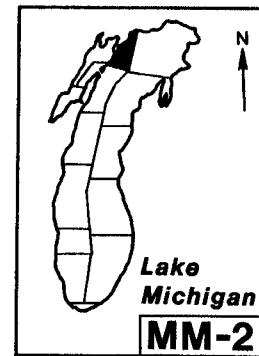
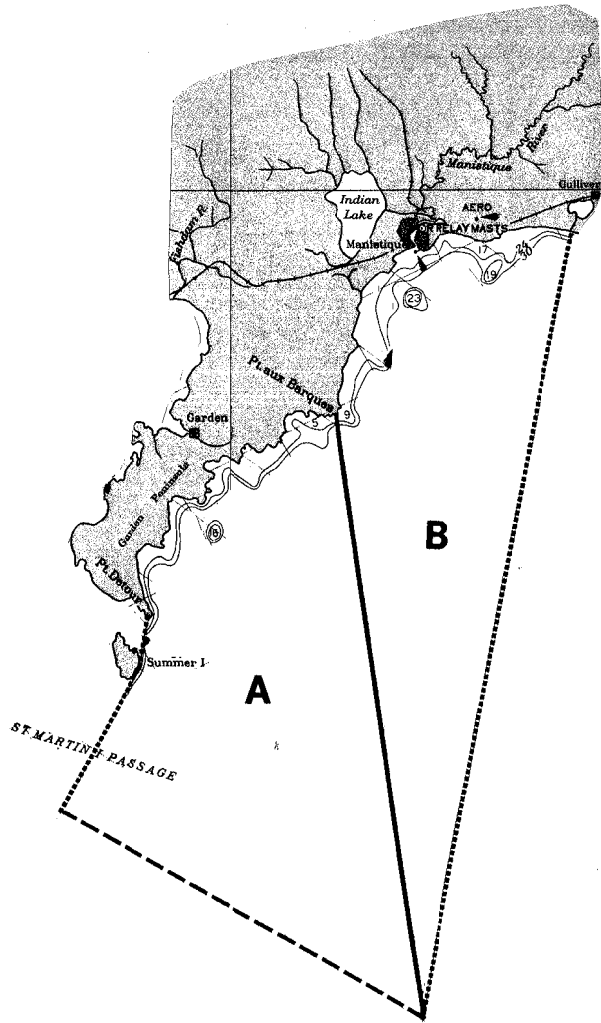


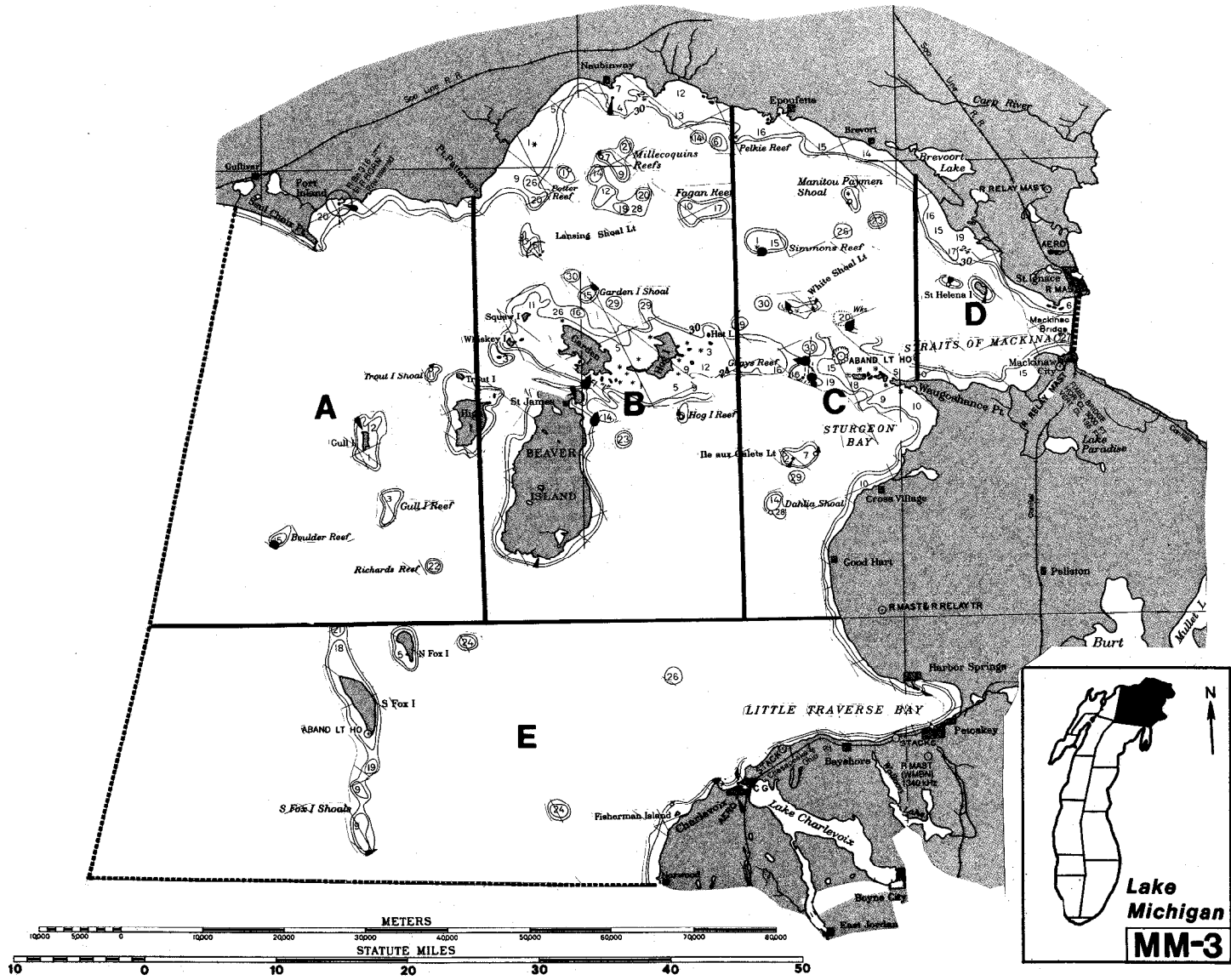


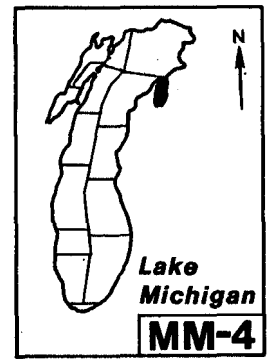
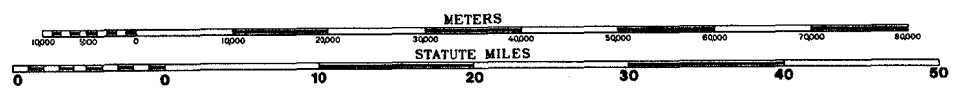
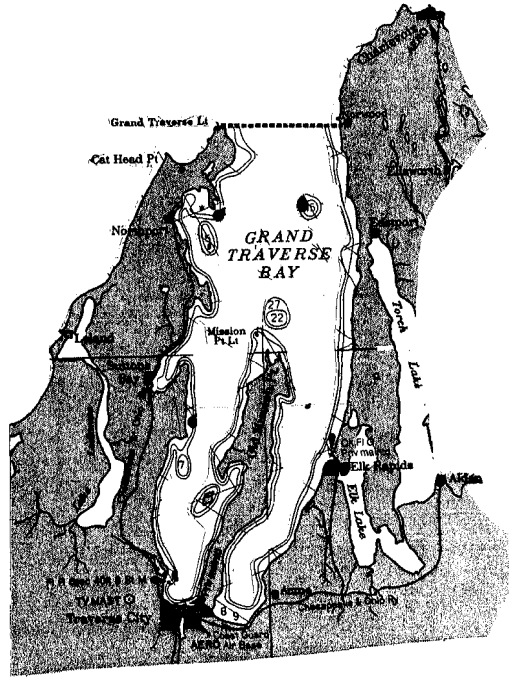


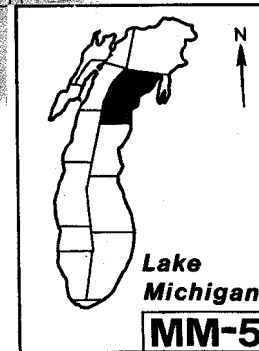
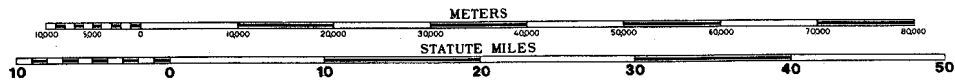
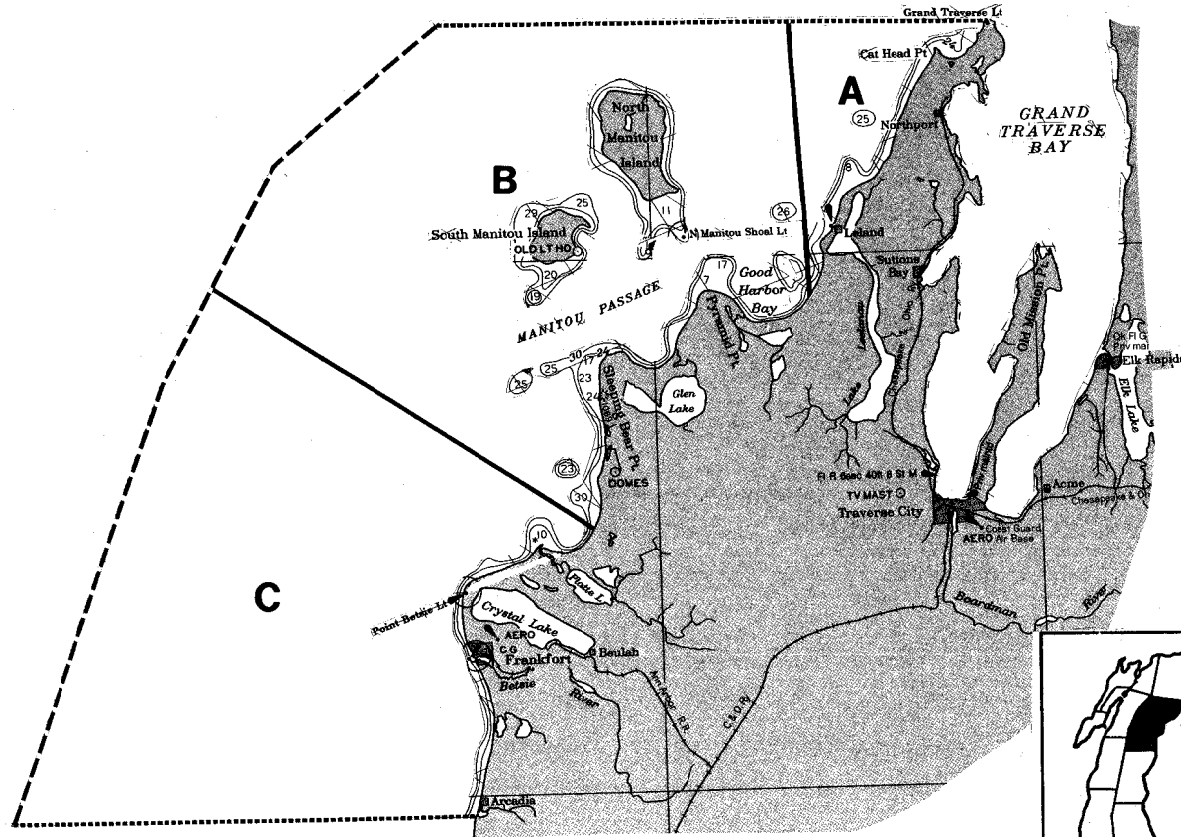


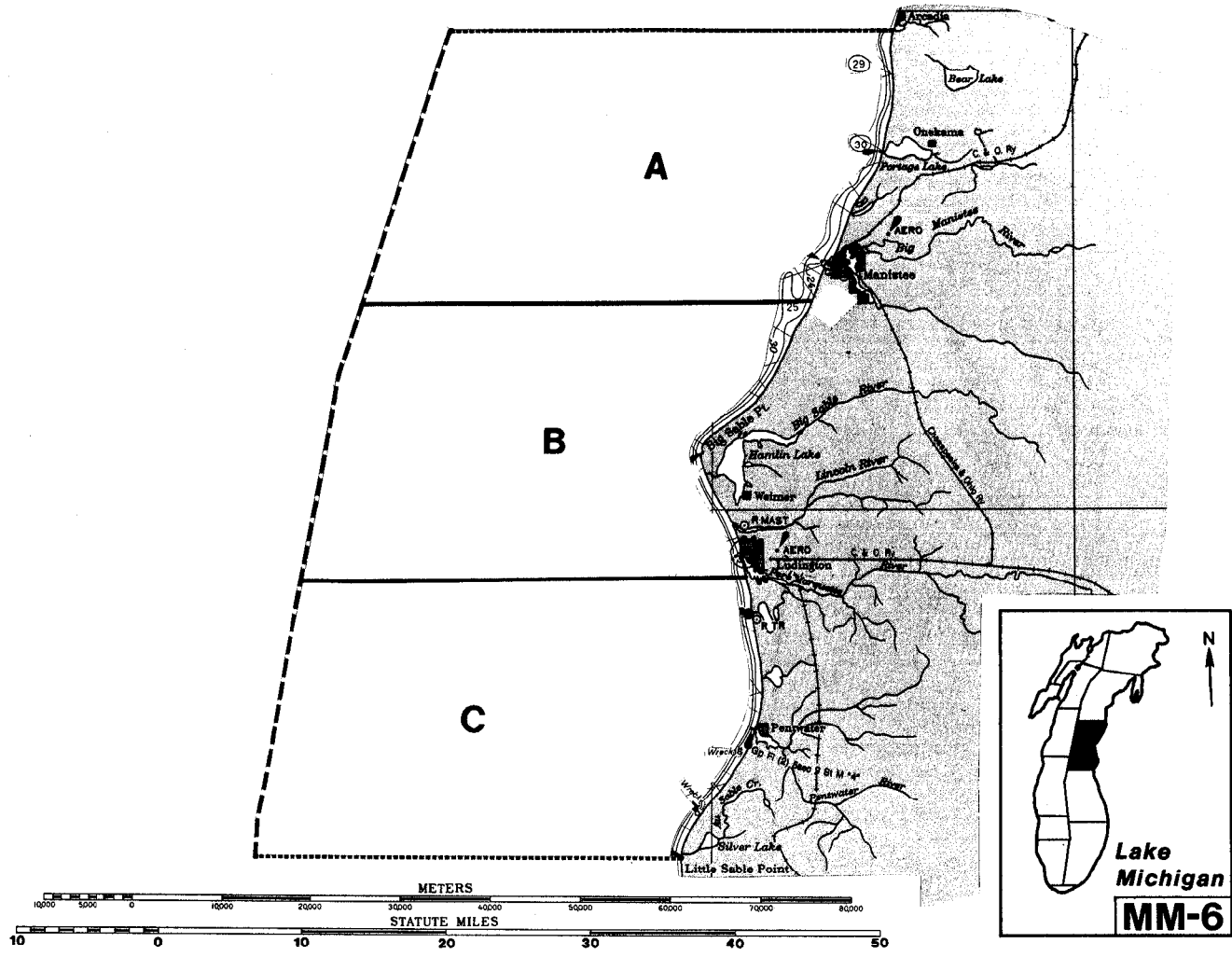


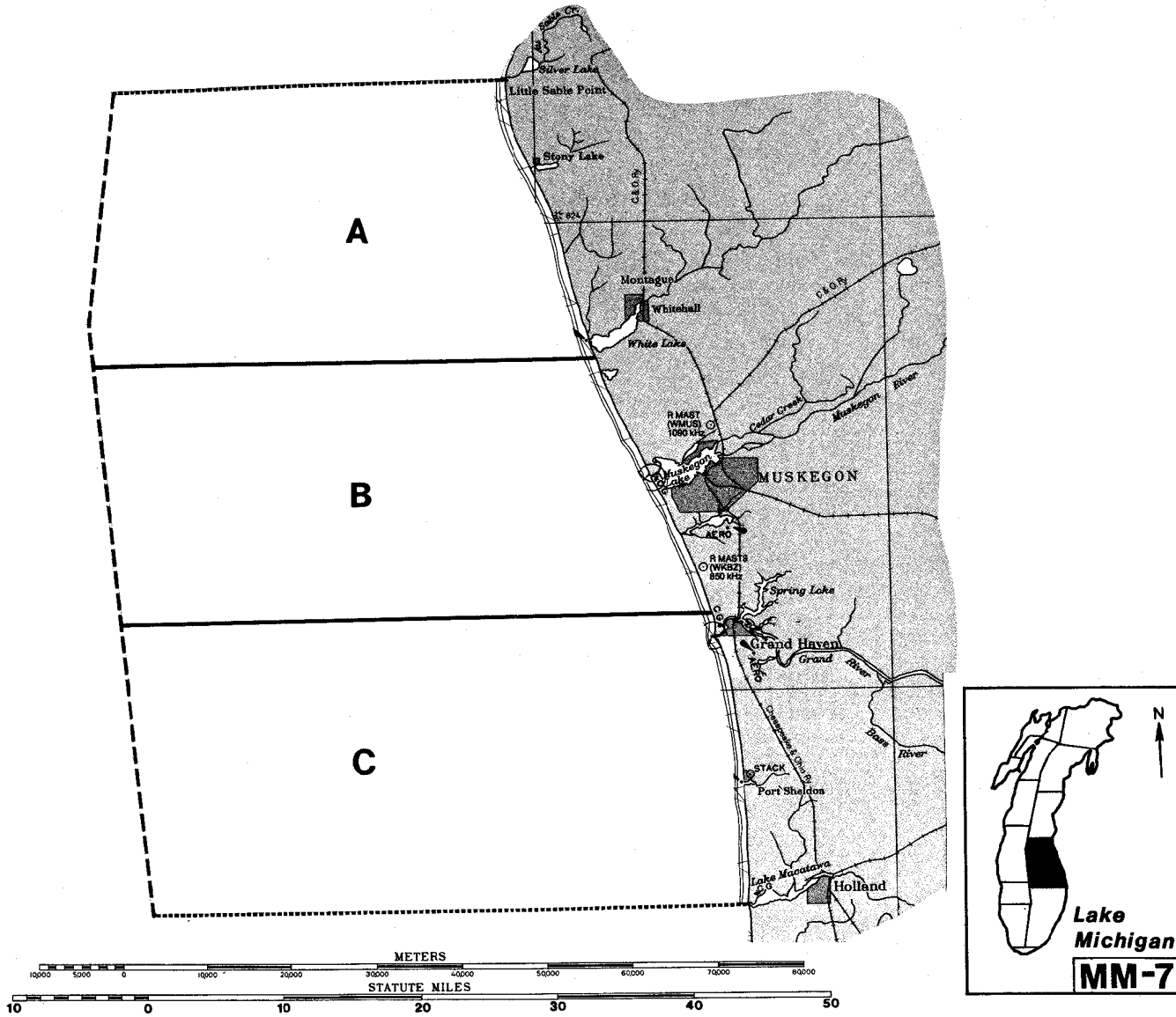












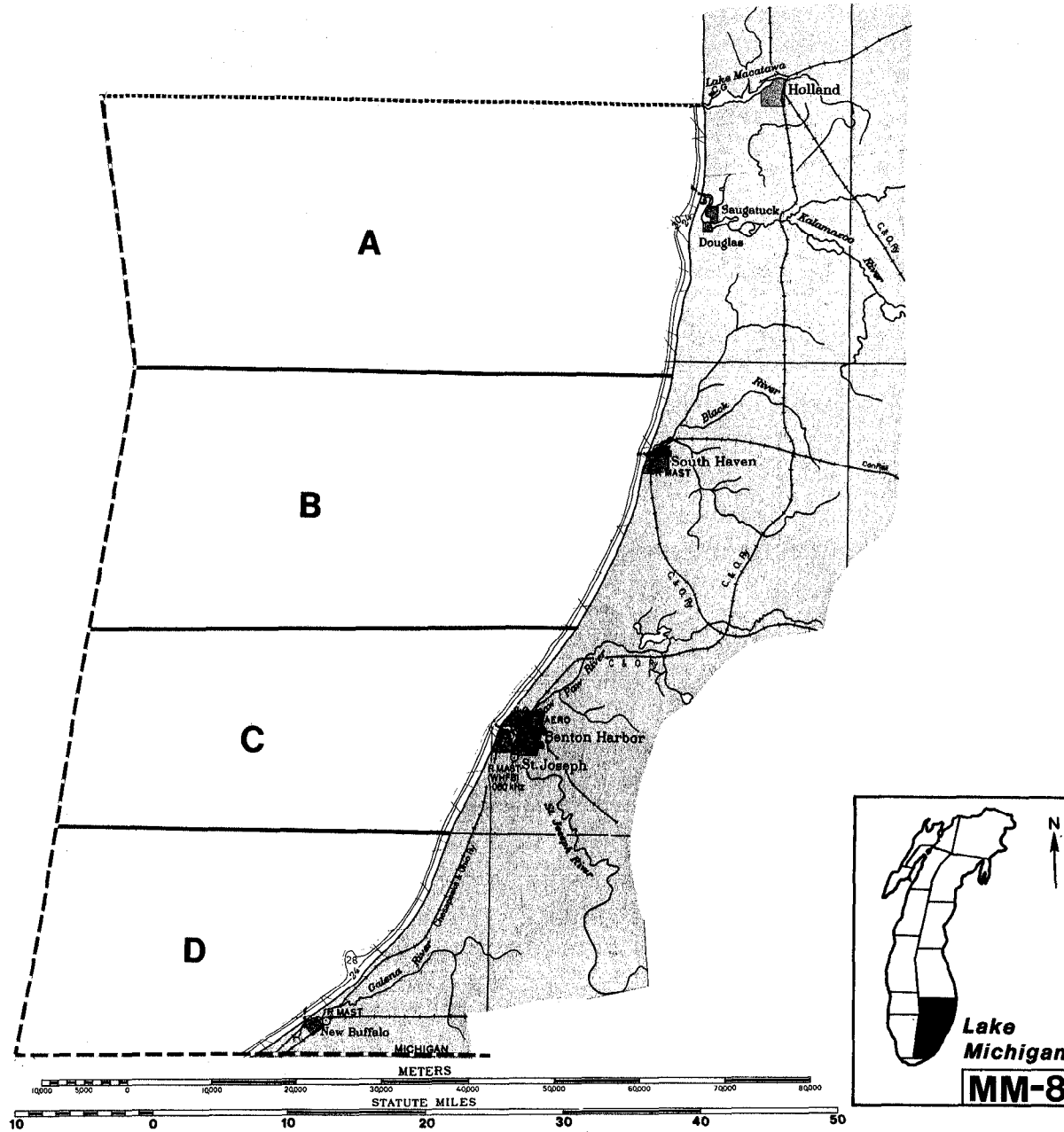


Table 3. **Fishes^{1/}** with spawning or nursery **areas^{2/}** in tributary, littoral mainland, offshore, or littoral offshore water^{3/} of Lake Michigan.

Statistical fishing district	Geographic area	Spawning area	Nursery area
WM-1	A	T: 1 (C), 2 (C,Po), 6 (C,P), 9 (Po), 14 (C), 21 (C), 22 (C), 24 (C), 27 (C), 29 (C), 30 (C), 38 (C,P), 41 (C), 46 (P), 76 (C), 83 (Po), 84 (Po), 113 (C), 126 (C), 130 (C)	T: 1 (C), 6 (P), 41 (C), 76 (P)
		LM: 6 (C,P), 8 (C,Po), 13 (C), 14 (C), 31 (C), 38 (Po), 41 (P), 42 (C), 46 (C,P), 58 (P), 76 (C), 90 (P), 110 (P), 113 (C), 126 (C,P), 129 (C), 130 (C)	LM: 6 (P), 8 (C), 38 (C), 41 (C), 46 (C), 58 (P), 76 (C), 113 (C), 126 (C)
	LO: 13 (C), 14 (C), 31 (C), 100 (C)		
	O: 19 (C)		
	B	T: 1 (C), 2 (C), 8 (C), 9 (P,Po), 22 (C), 24 (C), 27 (C), 29 (C), 30 (C), 38 (C,p), 41 (C), 46 (C,P), 75 (C), 76 (C), 85 (C), 87 (C), 99 (C), 100 (C), 113 (C), 126 (C,P), 129 (C), 130 (C), 134 (C)	T: 1 (C), 8 (C), 9 (C), 41 (C), 76 (C,p), 87 (C), 100 (C), 107 (C), 134 (C)
		LM: 2 (C), 8 (C,Po), 38 (Po), 41 (C), 42 (C), 58 (p), 90 (P), 93 (C), 107 (C), 113 (C), 126 (C,P), 129 (C), 130 (C), 134 (C)	LM: 8 (C), 9 (C), 38 (C), 41 (C), 42 (C), 46 (C), 58 (P), 76 (C), 93 (C), 107 (C), 126 (C), 130 (C)
WM-2		LM: 29 (C)	
	A	T: 9 (Po), 30 (C), 38 (P)	
		LM: 8 (C,Po), 13 (C), 14 (C), 31 (C), 38 (Po), 58 (C,P), 100 (C), 113 (C), 126 (C)	LM: 8 (C), 38 (C), 58 (P), 113 (C)

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
WM-2	A (Cont'd.)	O: 13 (C), 14 (C), 15 (P), 16 (P), 19 (C), 31 (C), 100 (C)	O: 13, 15 (P)
		LO: 13 (C), 14 (C), 31 (C), 41 (C), 113 (C), 126 (C)	
	B	T: 1 (C), 9 (Po), 30 (C), 38 (C,P), 130 (C)	T: 1 (C)
		LM: 8 (C,Po), 13 (C), 14 (C), 31 (C), 38 (Po), 58 (C,P), 113 (C)	LM: 8 (C), 14 (C), 38 (C), 58 (P), 113 (C)
		O: 13 (C), 15 (P), 31 (C)	O: 15 (P)
		LO: 14 (C,P), 31 (C), 100 (C), 113 (C)	LO: 126 (C)
WM-3	A	LM: 29 (C)	
		T: 1 (C), 6 (C), 8 (C), 22 (C), 27 (C), 38 (C,P,Po), 41 (C,Po), 45 (Po), 75 (C), 76 (C), 87 (Po), 113 (C)	T: 1 (C)
		LM: 6 (C), 8 (C,Po), 13 (C,P), 14 (C), 26 (C), 29, 31 (C), 38 (Po), 41 (C), 46 (C), 58 (C,P), 75 (C), 76 (C), 98 (C), 113 (C), 139 (C)	LM: 8 (C), 13 (C), 14 (C), 15 (C), 26 (C), 38 (C), 41 (C), 58 (P), 113 (C)
	O: 14 (C), 15 (P), 17 (Po), 31 (C,P)	O: 14 (C), 15 (P)	
	B	T: 1 (C), 22 (C), 27 (C), 38 (C,P,Po), 41 (C), 76 (C), 87 (C)	T: 1 (C), 27 (C)
		LM: 8 (C,Po), 14 (C), 26 (P), 31 (C,Po), 58 (P), 87 (Po)	LM: 8 (C), 38 (C), 58 (P)
O: 15 (P), 17 (Po), 31 (C,P)			
		LO: 31 (C)	

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area	
WM-4	A	T: 1 (C), 22 (C), 24 (C), 27 (C), 29 (C), 30 (C), 38 (C,p), 41 (C), 42 (P), 46 (C), 76 (C), 87 (C)	T: 1 (C), 22 (C), 27 (C)	
		LM: 8 (C,Po), 14 (C), 31 (C), 58 (P), 126 (C)	LM: 8 (C), 38 (C), 58 (P)	
		O: 15 (P), 17 (C,Po), 19 (C), 31 (C)	O: 15 (P)	
		B	T: 1 (C), 8 (C), 22 (C), 24 (C), 27 (C), 29 (C), 30 (C), 38 (C,P), 41 (C), 45 (P), 46 (C), 75 (p), 76 (C), 84, 85 (C), 126 (C), 130	T: 1 (C), 75 (P)
			LM: 8 (C,Po), 13 (C), 14 (C), 26 (C), 31 (Po), 38 (C), 45 (P,Po), 58 (P), 67 (C), 70 (C), 75 (P), 87 (C), 105, 126 (C), 136 (P), 139 (C)	LM: 8 (C), 15 (C), 38 (C), 45 (C), 46 (C), 58 (P), 67 (C), 75 (p), 87 (C), 100 (C), 126 (C), 136 (C), 139 (C)
			O: 13 (C), 15 (P), 17 (Po)	O: 15 (P)
	C	T: 1 (C), 22 (C), 24 (C), 27 (C), 29 (C), 38 (C,p), 76 (C), 84	T: 1 (C)	
		LM: 8 (C,Po), 14 (C), 31 (C), 52 (P), 58 (C,P), 126 (C), 139 (C)	LM: 8 (C), 38 (C), 58 (P), 139 (C)	
		O: 13 (C), 15 (P), 17 (Po), 31 (C)	O: 15 (P)	
	LO: 31 (C)			
	WM-5	A	T: 1 (C), 22 (C), 24 (C), 27 (C), 29 (C), 38 (C,P), 41 (C), 45 (C), 46 (Po), 67 (Po), 76 (C), 87 (C)	T: 1 (C), 76 (C)
			LM: 8 (C,Po), 14 (C), 37, 26 (C), 31 (Po), 38 (C), 58 (P), 67 (C), 103, 126 (C), 136 (C,P), 139 (P),	LM: 8 (C), 15 (C), 37 (C), 38 (C), 45 (C), 58 (P), 67 (C), 100 (C), 105 (C), 126 (C), 136 (C), 138 (C), 139 (C)

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area	
WM- 5	A (Cont'd.)	O: 125/(P) , 13(C), 15(P), 17(C,Po), 19(C)	O: 15(P), 138(C), 139(C)	
		B	T: 27(C), 29(C), 38(C,P), 45(C), 76(C)	
		LM: 8(C,Po), 13(C), 14(C), 31(P), 38(C), 58(P), 67(C), 105(C), 126(C), 136(P), 139(C)	LM: 8(C), 13, 15(C), 38(C), 58(P), 100, 105(C), 136(C), 138(C), 139(C)	
			O: 13(C), 15(C,P), 17(Po), 19(C), 20(C), 37(C), 31(C,P)	O: 15(P), 138(C)
	C	T: 38(C,P), 76(C)		
		LM: 8(C,Po), 14(C), 31(C), 38(C), 45(C), 58(P), 126(C)	LM: 8(C), 38(C), 58(P)	
		O: 13(C), 15(C,P), 17(Po), 20(C), 37(C), 31(C), 136(C)	O: 15(P), 136(C)	
	D	T: 8(C), 22(C), 27(C), 38(C,P), 41(C), 44(C), 75(p), 87(C), 130(C)	T: 44(C)	
		LM: 8(C,Po), 14(C), 31(C), 38(C), 45(C), 58(C,P), 67(C), 99(C), 105(C), 126(C), 136(P)	LM: 8(C), 38(C), 44(C), 58(P), 67(C), 139(C)	
		O: 125/ , 13(C), 15(C,P), 17(Po), 19(C), 20(C), 37(C), 31(C), 136(C)	O: 15(P)	
		LO: 31(C)		
	WM-6		T: 8(C), 24(C), 27(C), 38(C,P), 76(C)	
		LM: 8(C,Po), 14(C), 31(C), 38(C), 58(P), 126(C)	LM: 8(C), 38(C), 58(P)	

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
WM-6	(Cont'd.)	O: <u>125</u> /(P), 15(C,P), 17(C,Po), 18(C), 19(C), 31(C)	O: 15(P)
		LO: 31(C)	
Ill.	A	T: 22(C), 24(C), 27(C), 29 41(C), 76(C)	
		LM: 8(C,Po), 13, 38(C,Po), 44(P), 46(C,P), 52(C,P), 58(C,P), 64(C), 65(C), 67(C), 75(C), 76(C), 90(P), 99(C), 105(C), 109(Po), 112(P), 114(P), 126(C)	LM: 8(C), 14, 15(C), 38(C), 46(C), 52(C), 58(C,P), 64(C), 67(C), 76(C), 99(C), 100(C), 105(C), 110(C), 114(C), 126(C), 138(C)
		O: 8(C), <u>126</u> /(P), 15(P), 17(Po), 31(C,Po), 126(P), 136(C)	O: 8(C), 15(P), 136(C)
		LO: 31(C)	
	B	T: 22(C), 24(C)	
		LM: 8(C,Po), 31(P), 38(Po), 44(p), 46(P), 52(C,P), 58(P), 64(C), 65(C), 90(P), 108(Po), 109(Po), 112(P), 114(P), 115(Po), 116(Po), 126(C), 135(P)	LM: 8(C), 38(C), 58(P), 114(C), 126(C), 135(C)
		O: 8(C), 15(P), 17(Po), 31(C,Po), 126(P)	O: 15(P), 135(C)
	C	T: 2(P), 22(C), 24(C), 107(C), 118, 130(C)	
		LM: 2(C), 8(C,Po), 38(Po), 44(P), 46(p), 52(P), 58(P), 64(C), 65(C), 90(P), 108(Po), 109(Po), 112(P), 114(P), 115(Po), 116(Po), 126(C)	LM: 8(C), 38(C), 58(P), 114(C), 126(C)

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
Ill.	C (Cont'd.)	O: 8 (C), 15 (P), 31 (C,Po), 126 (P)	O: 15 (P)
Ind.		T: 89 (C)	
	A	T: 1 (C), 8 (C), 22 (C), 24 (C), 27 (C), 38 (C), 46 (C), 87 (C)	T: 1 (C)
		LM: 8 (C,Po), 13 (C), 14 (C), 29 (C), 31 (C), 38 (C), 46 (C), 58 (C,P), 99 (C), 125 (P), 126 (C), 134 (C), 136 (C,P)	LM: 8 (C), 38 (C), 46 (C), 58 (C,P), 99 (C), 125 (C), 126 (C), 136 (C)
		O: 8 (C), 13 (C), 126 (C)	O: 8 (C)
	B	T: 8 (C), 22 (C), 24 (C), 27 (C), 29 (C), 38 (C), 46 (C), 87 (C), 93 (C), 112 (P)	T: 112 (P)
		LM: 8 (C,po), 9 (C), 13 (C), 29 (C), 31 (C), 33 (C), 38 (C), 52 (Po), 58 (C,P), 70 (C), 99 (C), 126 (C), 136 (C)	LM: 8 (C), 38 (C), 46 (C), 58 (C,P), 70 (C), 99 (C), 125 (C), 126 (C), 132, 136 (C)
		O: 8 (C), 13 (C), 14 (C), 17 (P), 19 (C), 20 (C), 31 (C), 126 (C), 138	O: 8 (C), 138
MM-1	A	T: 1 (C), 9 (Po), 27 (C,P), 38 (C,P)	T: 1 (C)
		LM: 8 (C,Po), 134/(C), 14 (C), 31 (C), 58 (P), 113 (C), 114 (C), 126 (C)	LM: 8 (C), 38 (C), 58 (P)
		O: 8 (C), 31 (C)	
		LO: 14 (C)	

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area	
MM-1	B	T: 1 (C), 9 (Po), 14 (C), 21 (C), 22 (C), 27 (C), 38 (C,P), 45 (Po), 75 (C), 76 (C), 130 (C)	T: 1 (C)	
		LM: 8 (C,Po), 131 (C), 31 (C), 58 (C,P), 70 (C), 99 (C), 113 (C), 114 (C), 126 (C)	LM: 8 (C), 14 (C), 37 (C), 38 (C), 46 (C), 54 (C), 58 (C,P), 67 (C), 76 (C), 100 (C), 126 (C), 130 (C)	
		O: 31 (C)		
		LO: 31 (C), 100 (C)		
		C	T: 1 (C), 9 (Po), 14 (C), 21 (C), 22 (C), 27 (C), 29 (C), 30 (C), 31 (C), 38 (C,P), 41 (C), 75 (C), 76 (C), 87 (C), 99 (C), 107 (C), 126 (C), 130 (C)	T: 1 (C), 76 (C)
			LM: 8 (C,Po), 18 (C), 14 (C), 31 (C), 41 (C), 58 (C,P), 113 (P), 126 (C), 129 (C), 130 (C)	LM: 8 (C), 14 (C), 38 (C), 46 (C), 54 (C), 58 (C,p), 64 (C), 67 (C), 76 (C), 99 (C), 100 (C), 105 (C), 126 (C)
	O: 13⁴/(C), 18⁸/(P) , 31 (C)			
	LO: 14 (C), 31 (C)			
	D		T: 1 (C), 9 (Po), 22 (C), 27 (C), 38 (C,P), 75 (C), 76 (C), 99 (C)	T: 1 (C)
			LM: 8 (C,Po), 14 (C), 26 (C), 31 (C), 58 (P), 113 (P), 126 (C), 129 (C), 130 (C)	LM: 8 (C), 14 (C), 38 (C), 58 (P)
		O: 13+/(C) , 14 (C), 31 (C)		
		LO: 14 (C), 31 (C)		

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MM-2	A	T: 1 (C), 38 (P)	T: 1 (C)
		LM: 8 (C, Po), 14 (C, P), 31 (C), 58 (P)	LM: 8 (C), 14 (P), 38 (C), 58 (P)
	O: 154/ (P), 174/ (Po)	O: 154/ (P)	
	LO: 14 (C), 31 (C)		
	B	T: 1 (C), 21 (C), 22 (C), 24 (C), 27 (C), 38 (C, P)	T: 1 (C)
		LM: 8 (C, Po), 134/ (C) , 14 (C), 26 (C), 31 (C), 58 (P), 87 (C)	LM: 8 (C), 38 (C), 58 (P)
		O: 127/ , 154/ (C, P) , 174/ (Po) , 198/ (C) , 31 (C)	O: 154/ (P)
		LO: 31 (C)	
MM-3	A	T: 1 (C), 38 (P)	T: 1 (C)
		LM: 8 (C, Po), 13?/ (C), 14 (C), 26 (C), 58 (P)	LM: 8 (C), 38 (C), 58 (P)
		O: 154/ (P), 174/ (Po) , 37 (C), 31 (C)	O: 154/ (P)
		LO: 14 (C), 31 (C)	
	B	T: 1 (C), 21 (C), 22 (C), 27 (C), 38 (C, P), 75 (C), 76 (C)	T: 1 (C), 27 (C)
		LM: 8 (C, Po), 134/ (C) , 14 (C), 26 (C), 31 (C), 58 (P), 87 (C), 108 (C), 113 (C), 126 (C)	LM: 8 (C), 38 (C), 58 (P)
		O: 127/ (C) , 14 (C), 154/ (P) , 174/ (Po) , 31 (C)	O: 154/ (P)
		LO: 14 (C), 26 (C), 31 (C)	

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MM-3	C	T: 1 (C), 21 (C), 38 (C,p)	T: 1 (C)
		LM: 8 (C,po), 13/ (C), 14 (C), 26 (C), 31 (C), 46 (C), 54 (C), 58 (P), 87 (C), 108 (C), 113 (C), 114 (C), 126 (C)	LM: 8 (C), 38 (C), 46 (C), 54 (C), 58 (P)
		O: 154/ (P) , 37 (C), 38 (C), 100 (C)	O: 154/ (P)
		LO: 14 (C), 26 (C), 31 (C) n 100 (C)	
	D	T: 1 (C), 21 (C), 22 (C), 38 (C,P), 45 (C), 54 (C), 67 (C), 76 (C), 113 (C)	T: 1 (C)
		LM: 9 (C,Po), 14 (C), 54 (C), 58 (P), 87 (C), 108 (C), 113 (C)	LM: 8 (C), 38 (C), 54 (C), 58 (P)
		O: 154/ (P) , 26 (C)	O: 154/ (P)
		LO: 14 (C), 26 (C), 31 (C)	
	E	T: 1 (C), 21 (C), 22 (C), 24 (C), 27 (C), 28 (C), 29 (C), 38 (C), 99 (P)	T: 24 (C), 27 (C), 28 (C)
		LM: 8 (C,Po), 14 (C), 31 (C), 38 (C), 58 (P)	LM: 8 (C), 154/ (C) , 38 (C), 58 (P)
		O: 127/ (C) , 154/ (P) , 174/ (Po) , 199/ (C), 37 (C), 31 (C)	O: 154/ (P)
		LO: 2 ⁴ / (C), 14 (C), 26 (C), 31 (C)	
MM-4		T: 1 (C), 24/ (C) , 14 (C), 22 (C), 24 (C), 27 (C), 30 (P), 31 (C), 38 (C), 58 (C), 87 (C)	T: 1 (C)
		LM: 8 (C,Po), 134/ (C) , 14 (C), 26 (C), 31 (C), 38 (C), 41 (C), 58 (C), 126 (C)	LM: 8 (C), 31 (C), 38 (C), 58 (p)

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MM-4	(Cont'd.)	O: 127/(C) , 14(C), 154/(P) , 174/(Po) , 188/(C) , 198/(C) , 26(C), 31(C), 37(C), 126(C)	O: 154/(P)
		LO: 14(C), 31(C), 126(C)	
MM-5	A	T: 22(C), 24(C), 27(C), 38(C)	
		LM: 8(C,Po), 14(C), 26(C), 31(C), 58(P), 126(C)	LM: 8(C), 38(C), 58(P)
		O: 154/(P) , 174/(Po)	O: 154/(P)
	B	T: 1(C), 21(C), 22(C), 24(C), 27(C), 38(C)	T: 1(C), 24(C)
		LM: 8(C,Po), 14(C), 31(C), 58(P), 126(C)	LM: 8(C), 38(C), 58(P)
		O: 154/(P) , 174/(Po) , 37(C), 31(C), 105(C)	O: 154/(P)
		LO: 14(C), 26(C), 31(C)	
	C	T: 1(C), 22(C), 27(C), 29(C), 38(C), 75(C), 76(C), 126(C)	T: 1(C), 22(C), 27(C), 29(C), 126(C)
		LM: 8(C,Po), 14(C), 31(C), 58(P)	LM: 8(C), 38(C), 58(P), 126(P)
		O: 154/(P) , 174/(C,Po) , 37(C)	O: 154/(P)
MM-6	A	T: 1(C), 22(C), 24(C), 27(C), 41(C), 130(C)	T: 1(C), 22(C), 24(C), 27(C)
		LM: 8(C,Po), 14(C), 31(C), 41(C), 58(P), 126(C), 130(C)	LM: 8(C), 38(C), 58(P), 126(P)
		O: 14(C), 154/(P) , 174/(Po) , 1&/(C), 37(C), 31(C), 126(C)	O: 154/(P)
		LO: 14(C), 31(C)	

Table 3. Cont'd.

Statistical fishing district	Geographic area	spawning area	Nursery area
MM-6	B	T: 1(C), 9(Po), 22(C), 24(C), 27(C), 29(C), 38(C), 46	T: 1(C), 22(C), 24(C), 100(C)
		LM: <u>24</u> /(C), 8(C,Po), 14(C), 26(C), 31(C), 38(C), 58(P), 126(C), 130(C)	LM: 8(C), 38(C), 58(P), 126(P)
		O: <u>127</u> /, 14(C), <u>154</u> /(P), <u>174</u> /(P,Po), <u>198</u> /(C), 37(C), 31(C), 126(C)	O: <u>154</u> /(P)
	C	T: 1(C), 6(P), 9(PO), 22(C,Po), 24(C,P), 27(C), 38(C), 75(p), 76(P)	T: 1(C), 22(C), 24, 27(C)
		LM: 2 ⁴ /(C), 8(C,Po), 14(C), 26(C), 29(C), 31(C), 38(C), 41, 45(C), 46(C), 58(C,P), 67(C), 83, 99(C), 105(C), 125(C), 126(C), 136(C)	LM: 8(C), 9(C), 14(C,P), 26(C), 38(C), 58(C,P), 67(C), 99(C), 100(C), 105(C), 125(C), 126(C,P), 136(C)
		O: 14(C), <u>154</u> /(P), <u>174</u> /(Po), 37(C), 31(C), 87(C), 126(C)	O: <u>154</u> /(P), 38(C), 138(C)
MM-7	A	T: 1(C), 22(C), 24(C), 27(C), 76(C), 88(C)	T: 1(C), 24(C)
		LM: 8(C,Po), <u>134</u> /(C), 14(C), 27(C), 31(C), 38(C), 58(P), 126(C)	LM: 8(C), 14(P), 38(C), 58(P), 126(P)
		O: 14(C), <u>154</u> /(P), <u>174</u> /(Po), 37(C), 31(C), 126(C)	L: <u>154</u> /(P)
	B	T: 1(C), 8(P), 22(C), 24(C), 27(C), 29(C), 33(C), 38(C), 76(C), 88(C), 100(p), 130(C)	T: 1(C), 24(C)

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MM-7	B (Cont'd.)	LM: 8 (C, Po), 13⁴/(C) , 14 (C), 31 (C), 38 (C), 46 (C), 58 (P), 126 (C)	LM: 8 (C), 14 (P), 15⁴/ , 38 (C), 58 (P), 126 (P), 130
		O: 14 (C), 15⁴/(C,P) , 17⁴/(C,Po) , 20⁸/(C) , 37 (C), 31 (C), 46 (C), 126 (C)	O: 15⁴/(P)
	C	T: 1 (C), 8 (C), 9 (P, Po), 22 (C), 24 (C), 27 (C), 38 (C), 58 (Po), 74, 75 (P), 76 (P), 93 (P), 113	T: 1 (C), 9 (C), 24, 74 (C), 93 (P)
		LM: 6 (P), 8 (C, Po), 14 (C), 29, 31 (C), 38 (C), 41, 52 (C), 58 (C, P), 90, 99 (C), 100 (C), 105 (C), 110, 112 (P), 114 (C), 125 (C), 126 (C)	LM: 6 (C), 8 (C), 9 (C), 14 (C, P), 22, 29 (C), 31 (C), 38 (C), 46 (C), 52 (C), 58 (C, P), 64 (C), 70 (C), 76 (C), 87 (C), 99 (C), 105 (C), 110 (C), 112 (C), 113 (C), 114 (C), 120 (C), 125 (C), 126 (C, P), 136 (C)
		O: 14 (C), 15⁴/(C,P) , 17⁴/(Po) , 19⁸/(C) , 20⁸/(C) , 37 (C), 31 (C), 84, 126 (C), 136 (C)	O: 9 (C), 15⁴/(P) , 31 (C), 38 (C), 99 (C), 126 (C), 138 (C)
MM-8	A	T: 1 (C), 2⁴/(C) , 8 (C), 9, 27 (C), 38 (C, P), 45 (C)	T: 1 (C)
		LM: 2⁴/(C) , 8 (C, Po), 13⁴/(Po) , 14 (C, P), 31 (C), 38 (C), 58 (P), 99 (P), 126 (C), 130 (C)	LM: 8 (C), 14 (P, Po), 31 (Po), 38 (C), 58 (P), 126 (C, P)

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MM-8	A (Cont'd.)	O: $13^4/(C)$, 14 (C), $15^4/(C,P)$, $17^4/(Po)$, $18^8/(C)$, 37 (C), 31 (C), 126 (C), 136 (C)	O: 8 (C), $15^4/(C,P)$, 38 (C), 136 (C)
		B	T: 1 (C), 24 (C), 27 (C), 29 (C), 75 (C), 76 (C)
		LM: $2^4/$, 8 (C, Po), $13^4/(Po)$, 14 (C, p), 31 (C), 38 (C), 58 (C, P), 99 (P), 100 (C), 125 (C), 126 (C), 130 (C), 136 (C)	LM: 8 (C), 14 (p), $15^4/(C,P)$, 31 (Po), 38 (C), 58 (C, P), 99 (C), 100 (C), 125 (C), 126 (C, p)
		O: 14 (C), $15^4/(C,P)$, $17^4/(Po)$, 37 (C), 31 (C), 126 (C)	O: 38 (C)
	C	T: 1 (C), & (C), 8 (C), 22 (C), 24 (C), 27 (C), 93 (p)	T: 1 (C)
		LM: 8 (C, Po), $13^4/(Po)$, 14 (C, P), 31 (C), 58 (P), 87 (C), 126 (C, Po), 130 (C)	LM: 8 (C), 14 (p), 31 (Po), 38 (C), 58 (P), 126 (C, P)
		O: $15^4/(P)$, $17^4/(Po)$, $19^8/(C)$, 37 (C), 31 (C), 126 (C)	O: 1 $5^4/(P)$, 38 (C)
	D	T: 1 (C), $2^4/(C)$, 27 (C), 38 (C), 75 (p), 76 (P), 87 (C)	T: 1 (C), 76 (C)
LM: $2^4/(C)$, 8 (C, Po), $13^4/(Po)$, 14 (C, P), 29 (P), 31 (C), 38 (C), 48 (C), 58 (C, P), 99 (C), 100 (C), 105, 125 (C), 126 (C), 136 (C)		LM: 8 (C), $13^4/$, 14 (P), $15^4/(P)$, 22, 29 (C), 31 (Po), 38 (C), 46 (C), 58 (C, P), 76 (C), 93 (C), 99 (C), 100 (C), 105, 125 (C, Po), 126 (C, p), 136 (C)	

Table 3. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MM-8	D (Cont'd.)	O: 14 (C), <u>15⁴</u> /(C,P), <u>17⁴</u> /(Po), 37(C), 31(C), 126(C), 138(C)	O: 8 (C), <u>15⁴</u> /(P), 38(C), 138(P)
		LO: 14 (C), 31(C), 126(C)	LO: 14(Po)

1/ Numerical species code according to Table 12.

2/ Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (Po); see text for definitions. When information was not available to unequivocally support the assignment of one of the classifications, no classification was given.

3/ waters within the geographic area are classified as tributary (T), littoral mainland (LM), offshore (O), or littoral offshore (LO); see text for definitions.

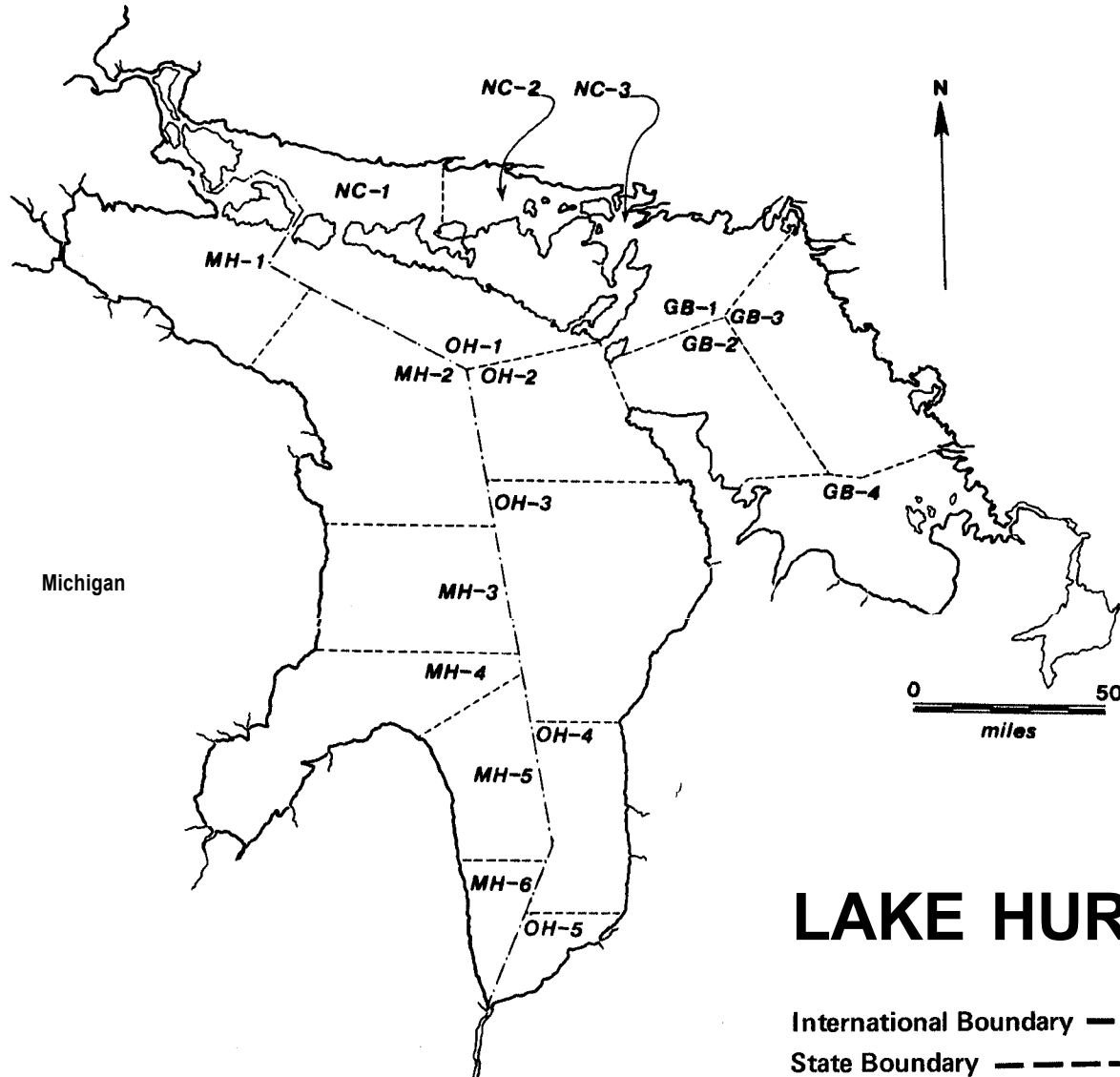
4/ Species listed by State of Michigan as "threatened."

5/ Species listed by U.S. Department of Interior as "endangered."

6/ Species listed by State of Illinois and U.S. Department of Interior as "endangered."

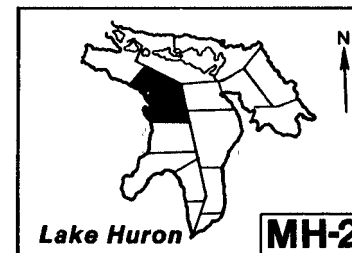
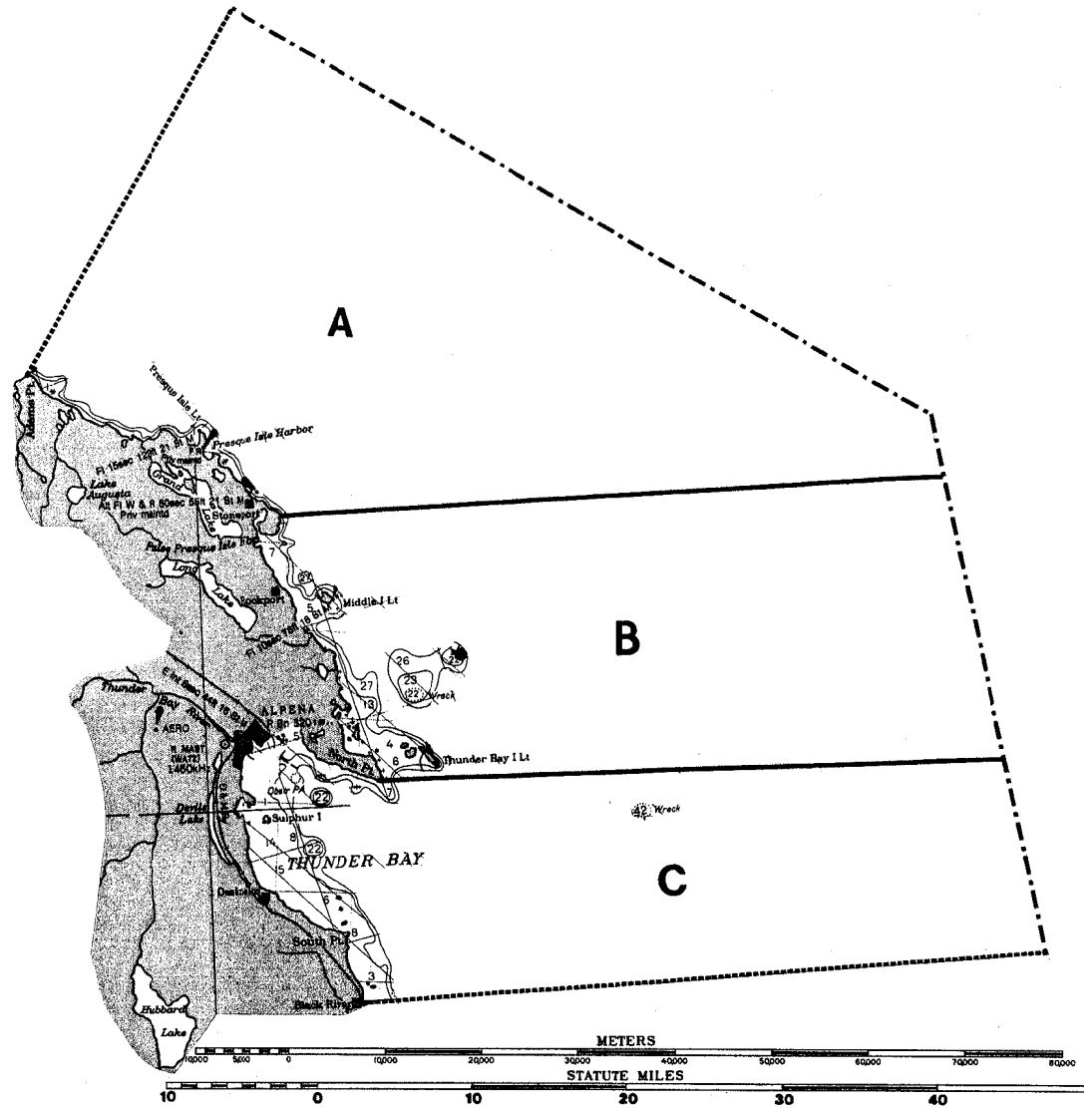
7/ Species listed by State of Michigan and U.S. Department of Interior as "endangered".

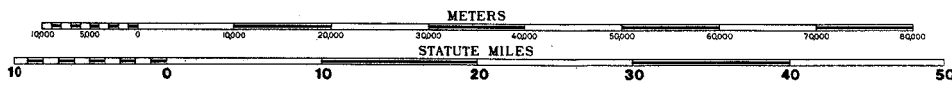
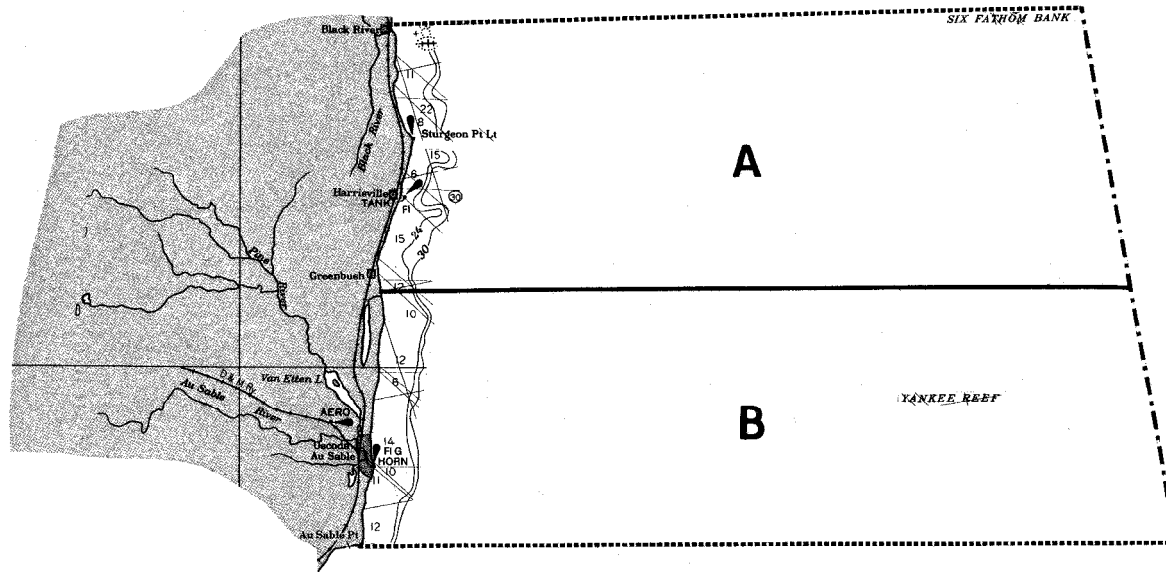
8/ Species listed by State of Michigan as "endangered."

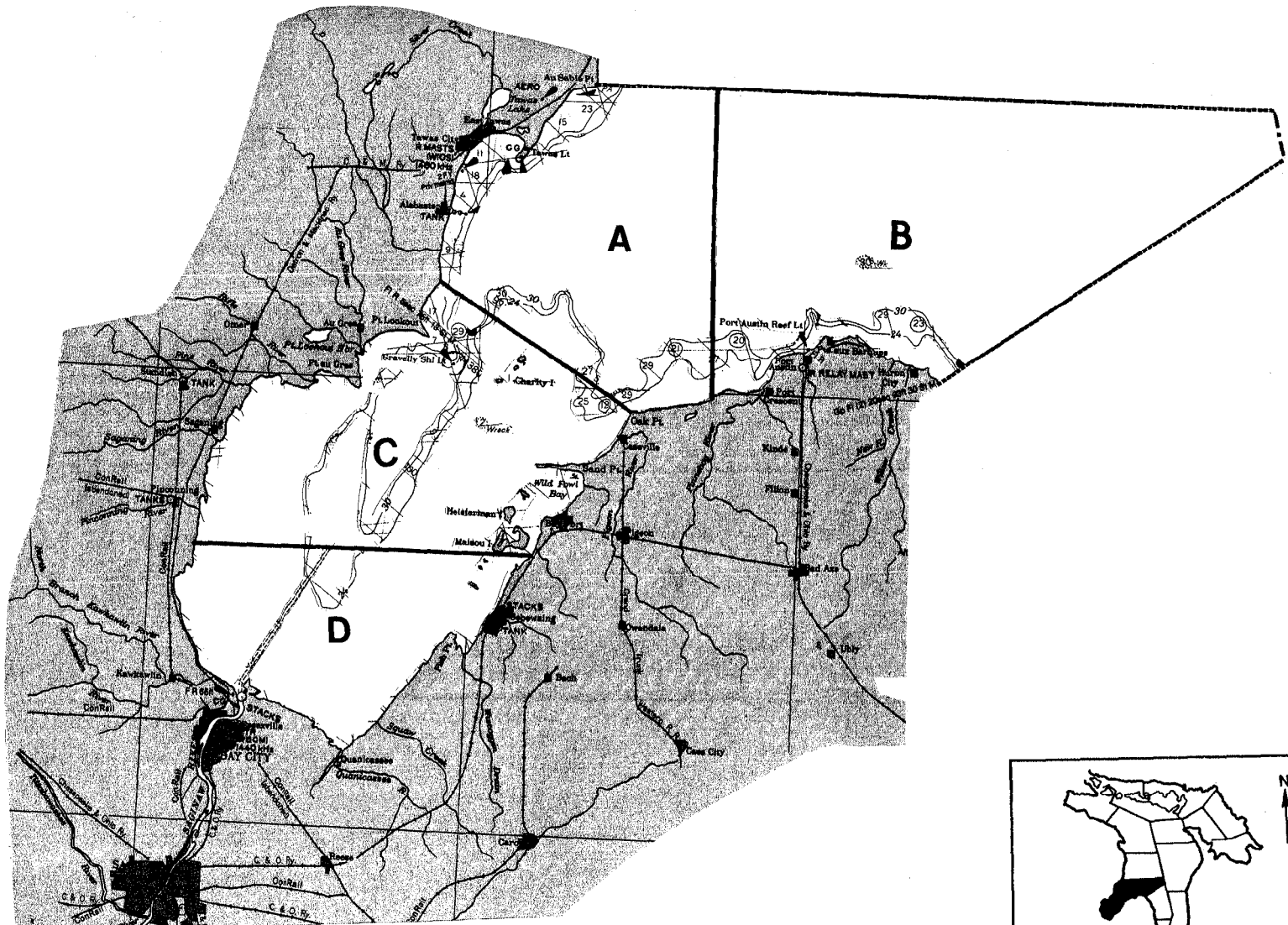


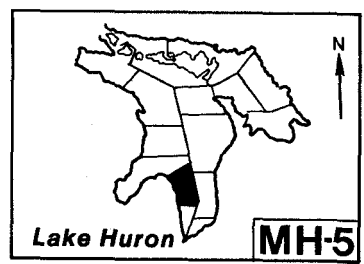
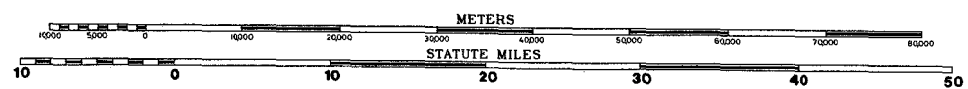
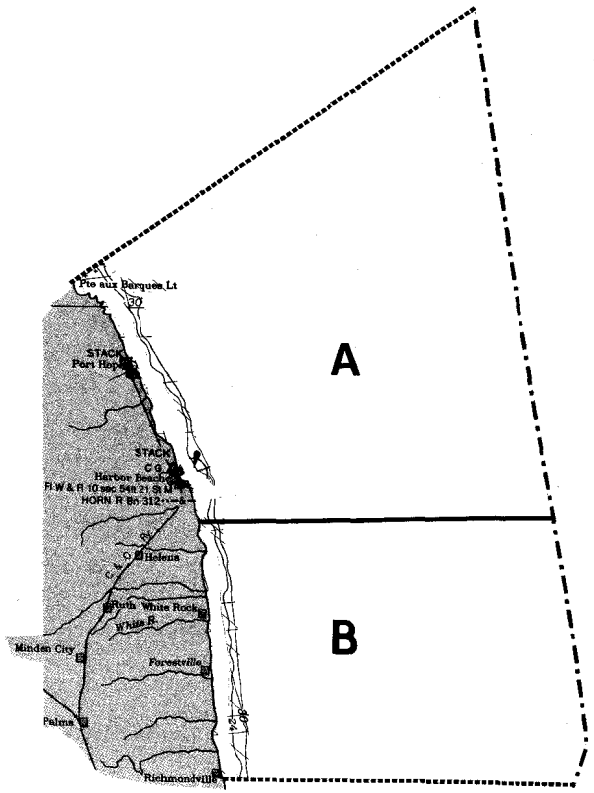
LAKE HURON

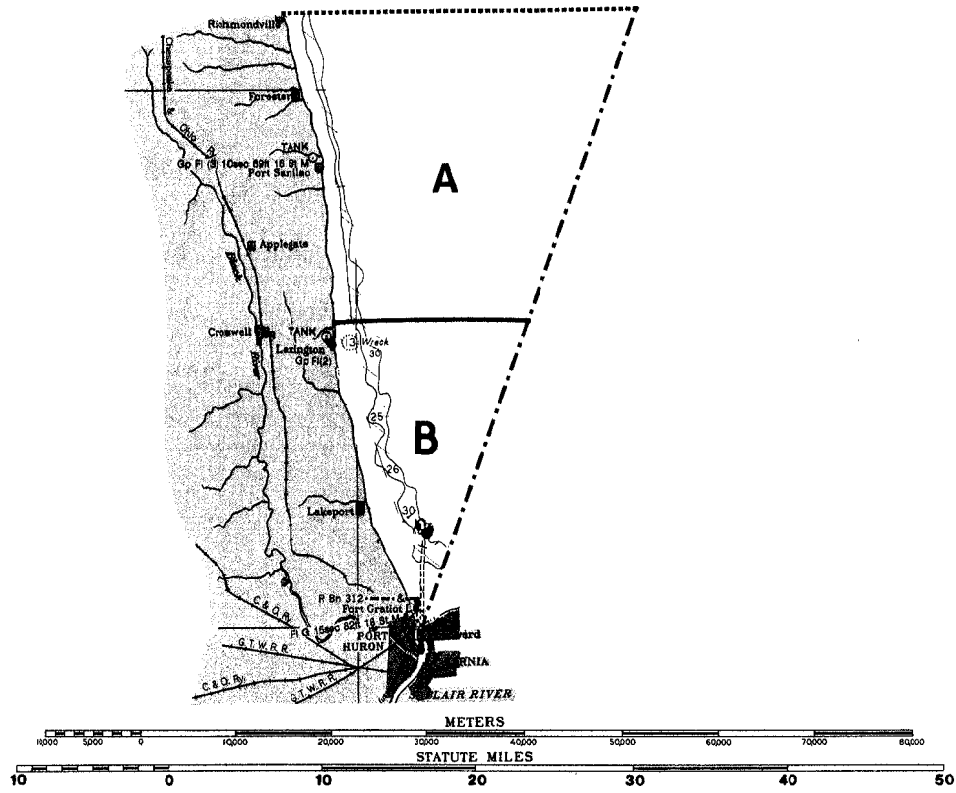
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- State Boundary - - - - -
- Statistical Fishing District
- Geographic area —————

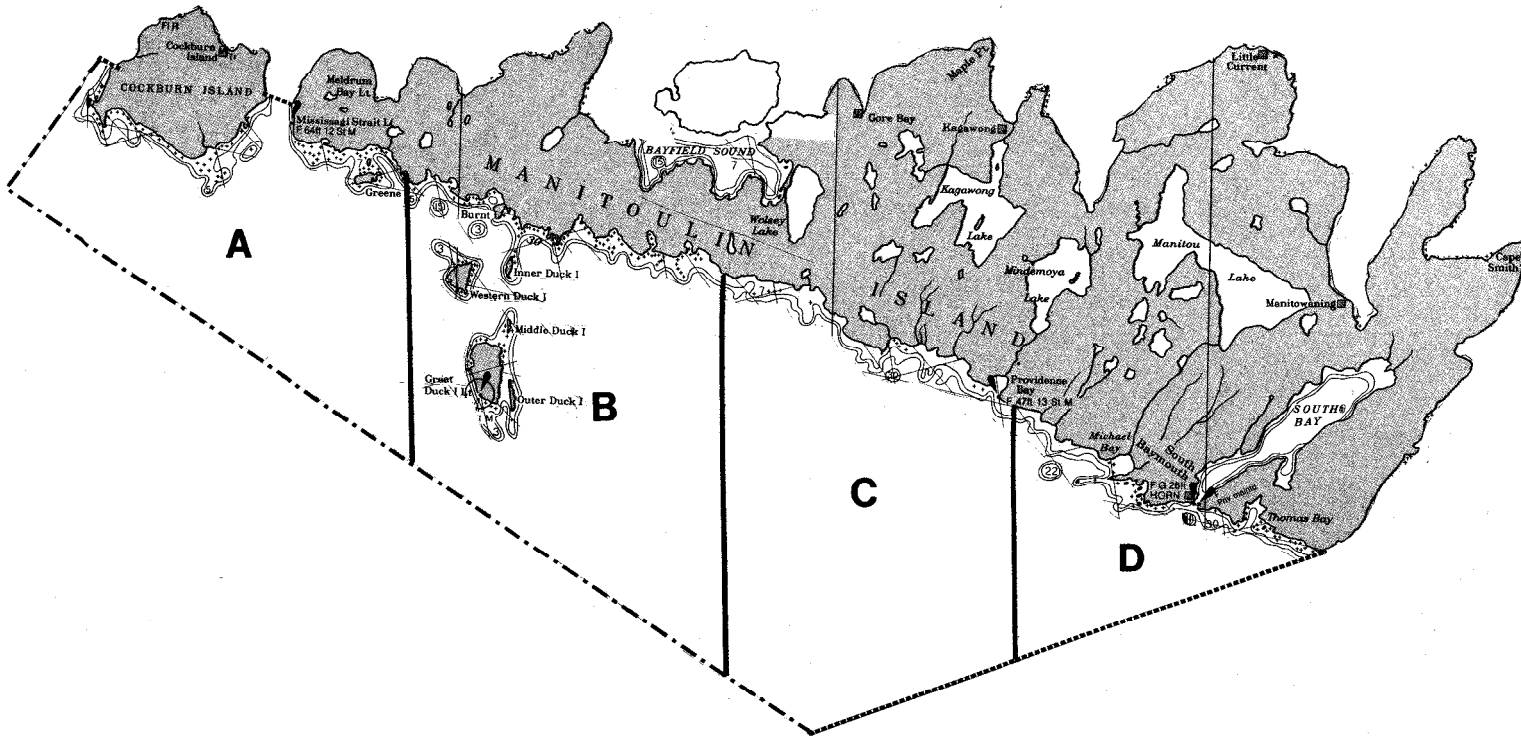


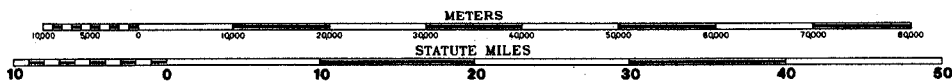
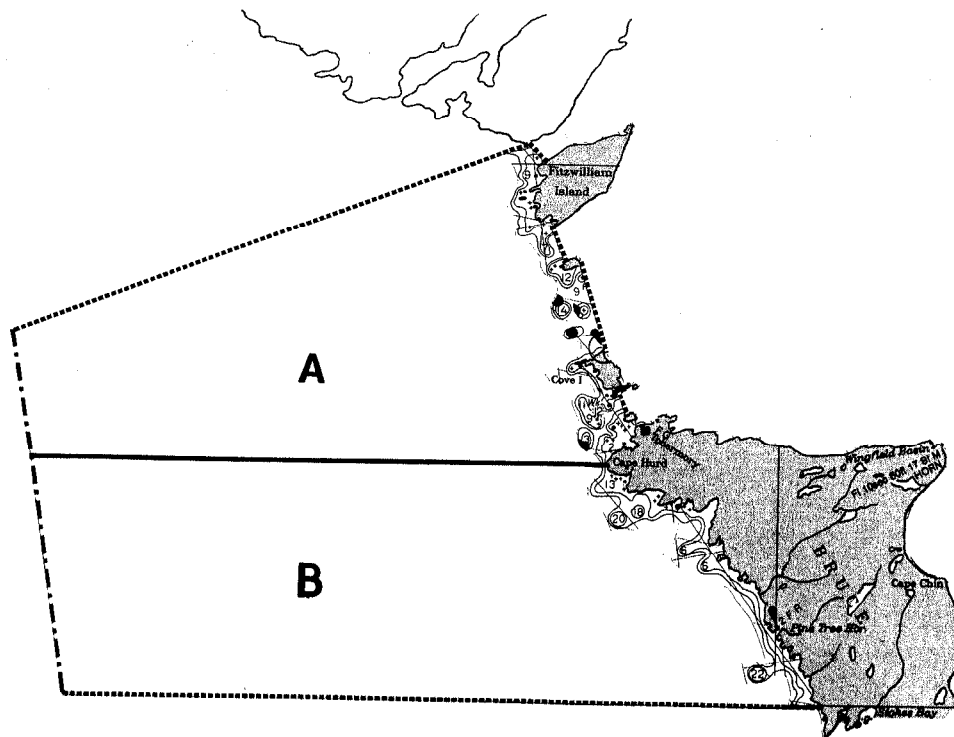


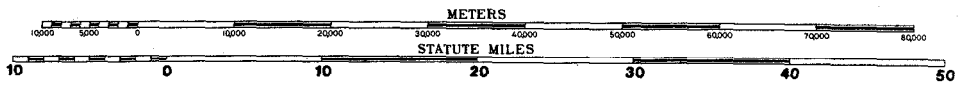
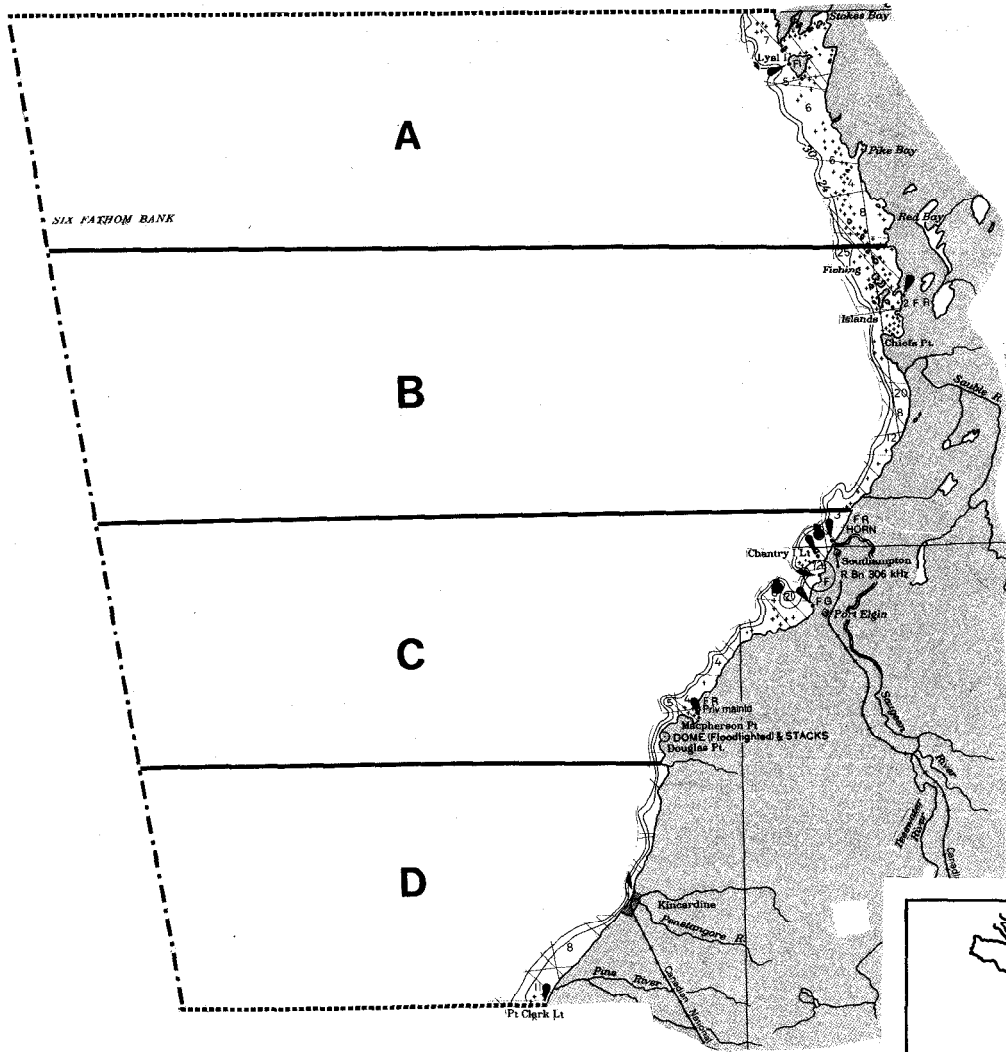


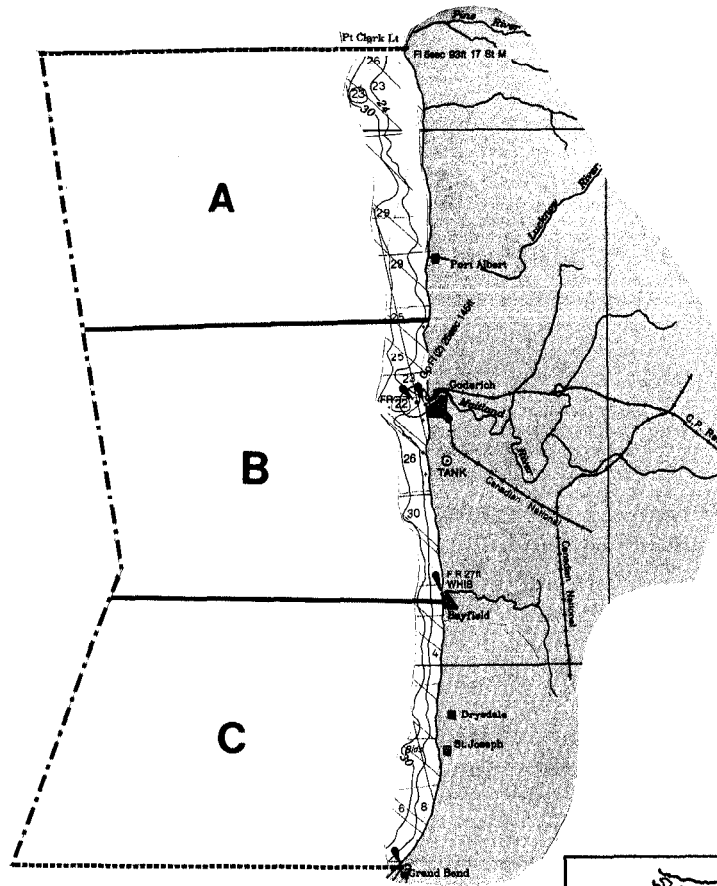


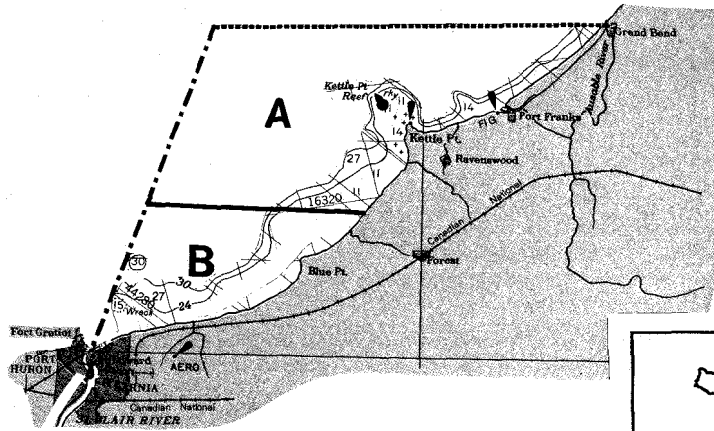


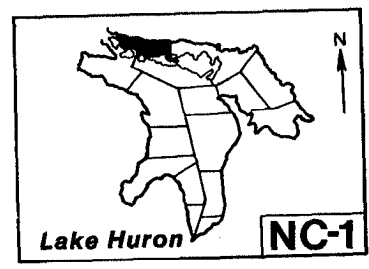
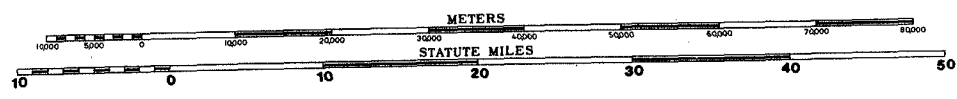
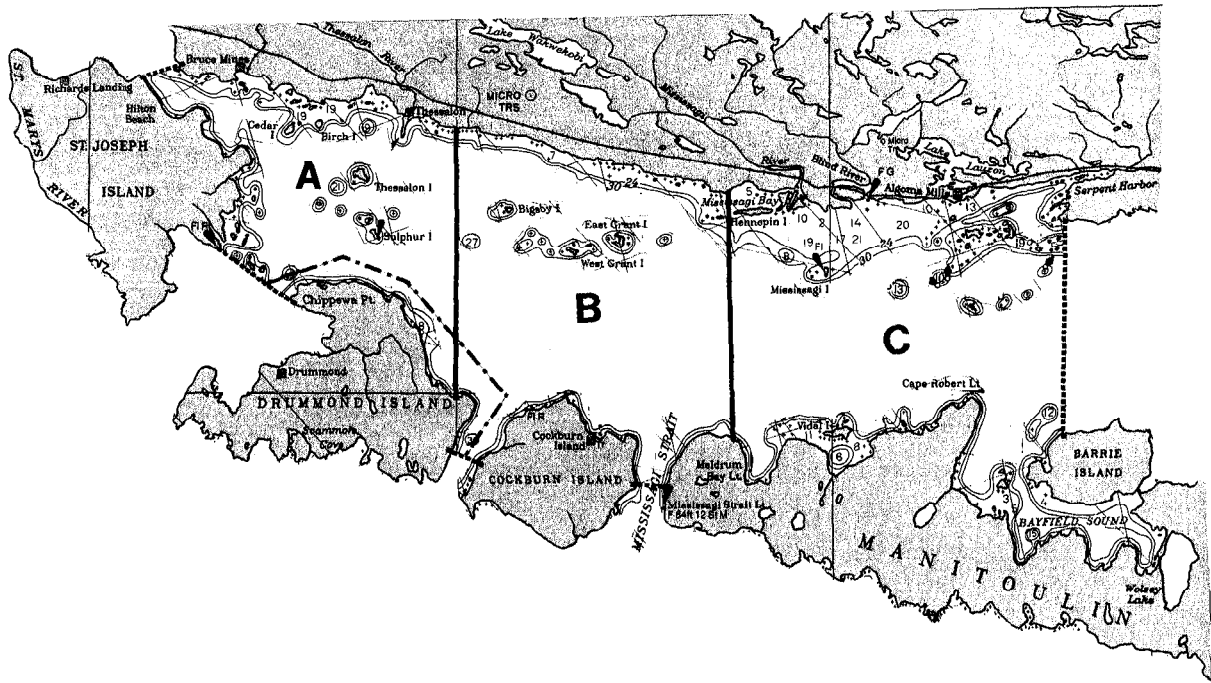


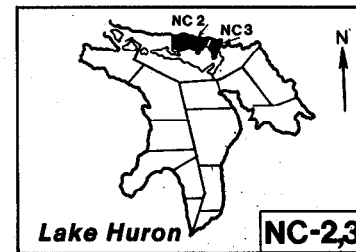
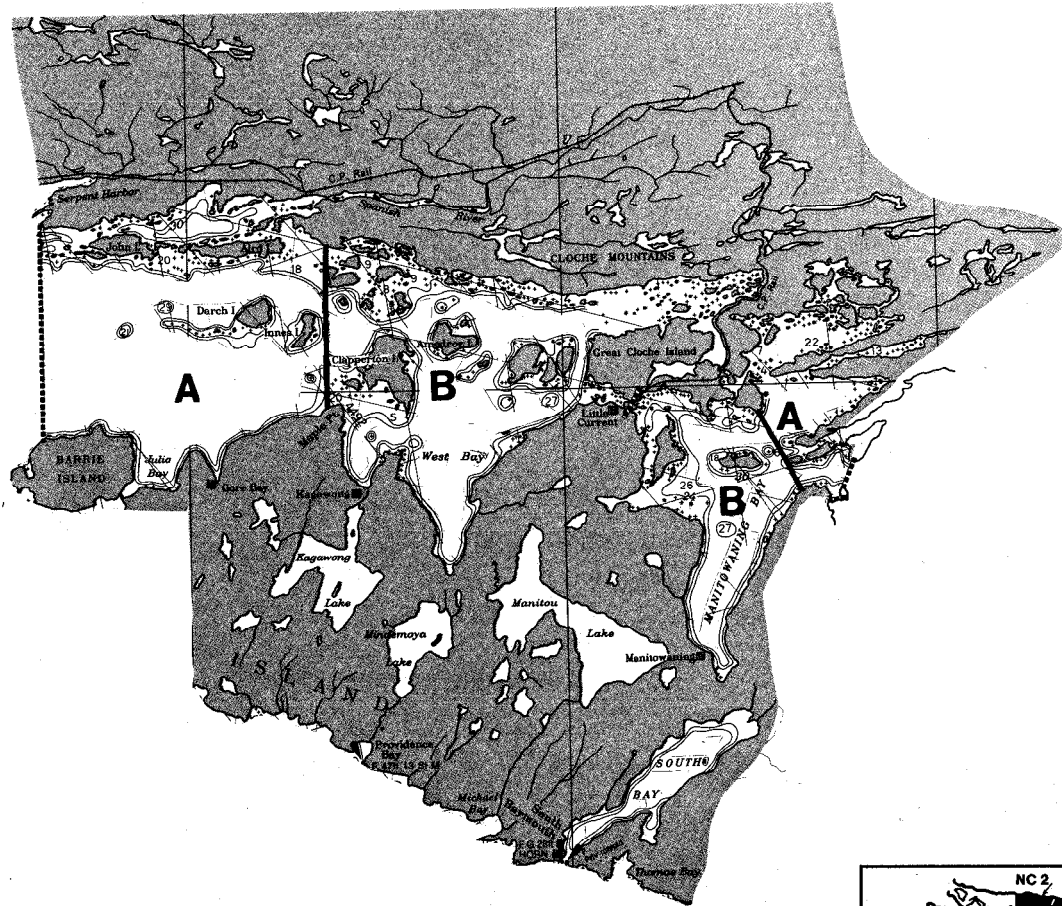


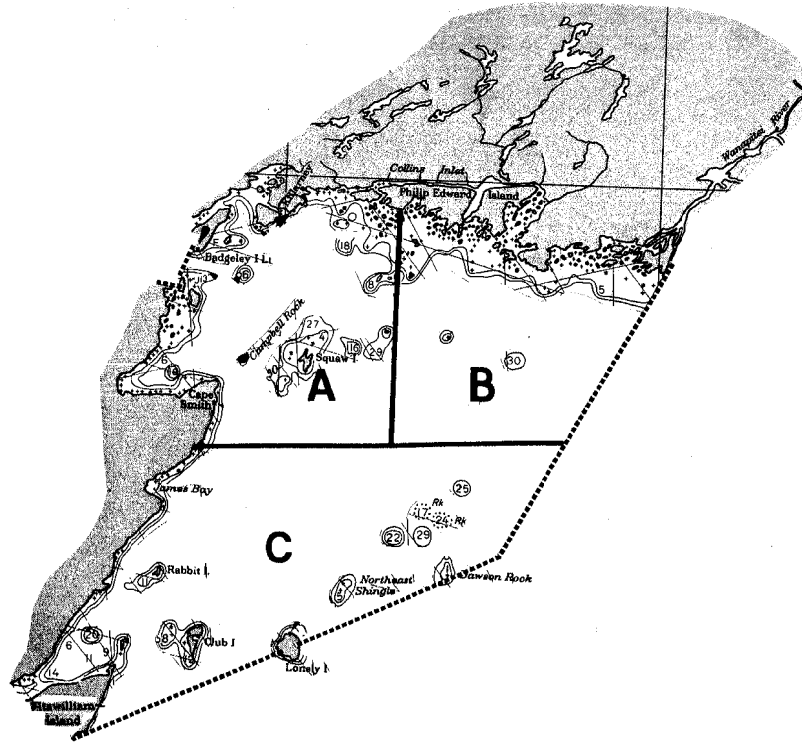


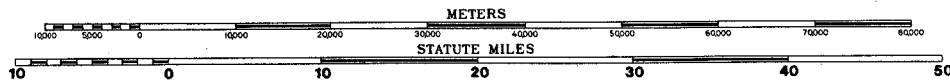
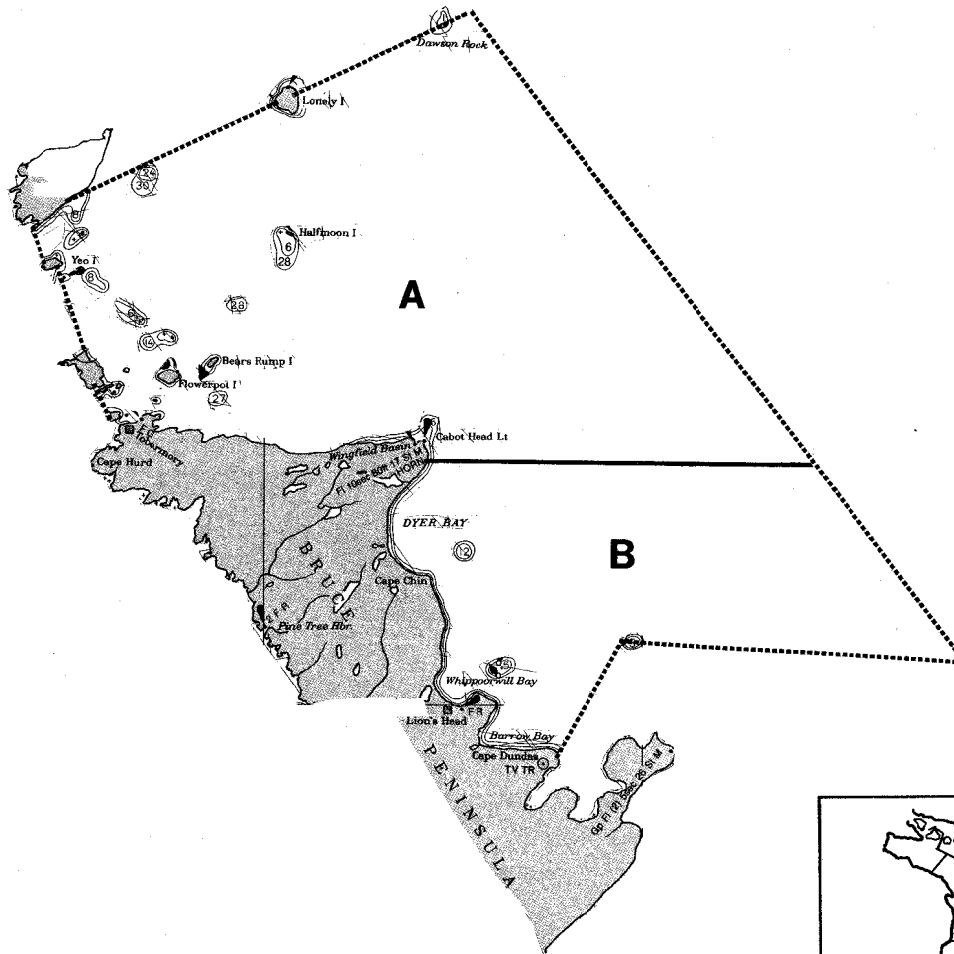


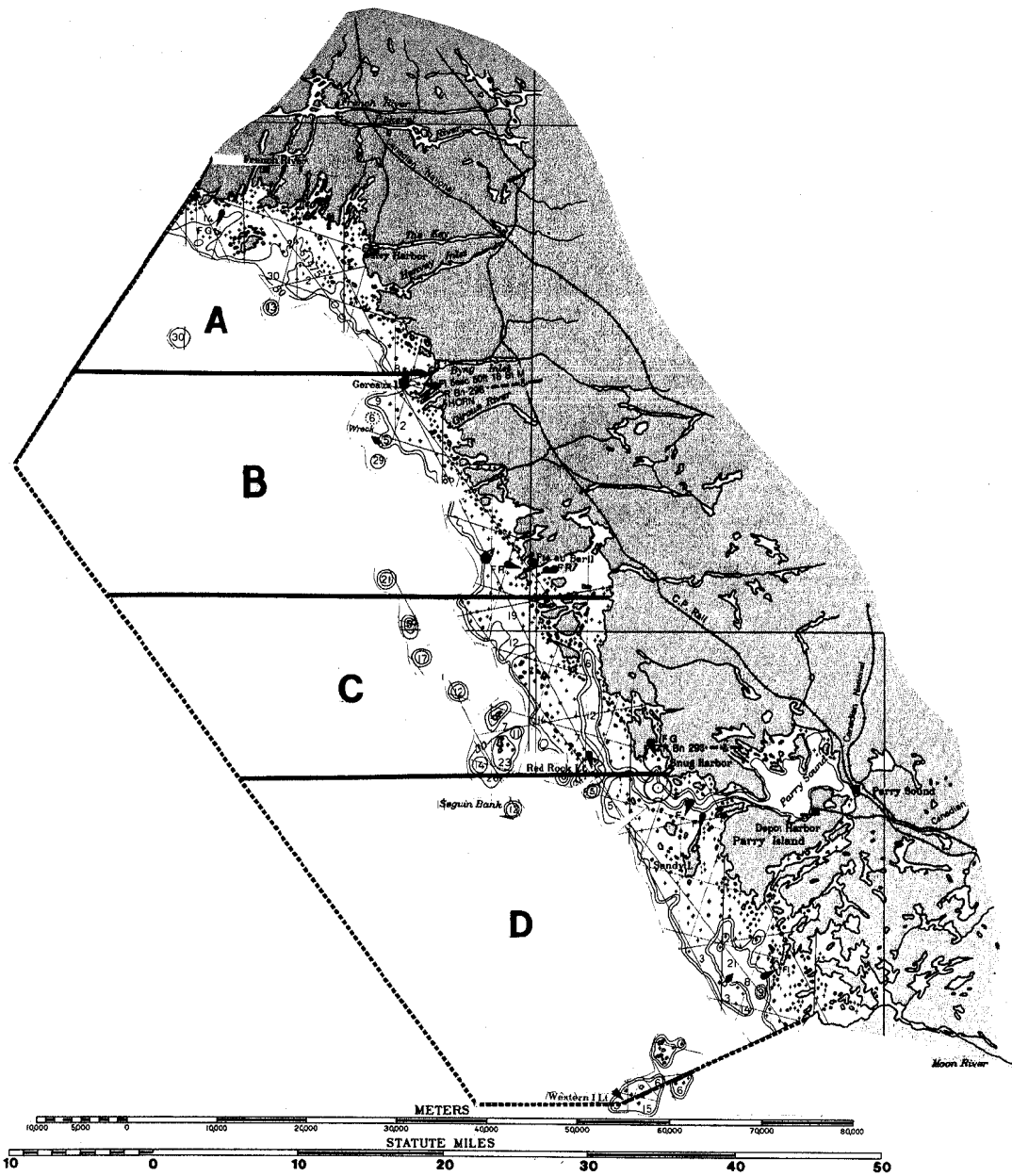












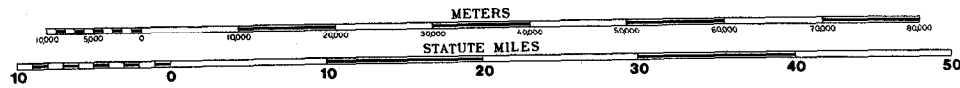
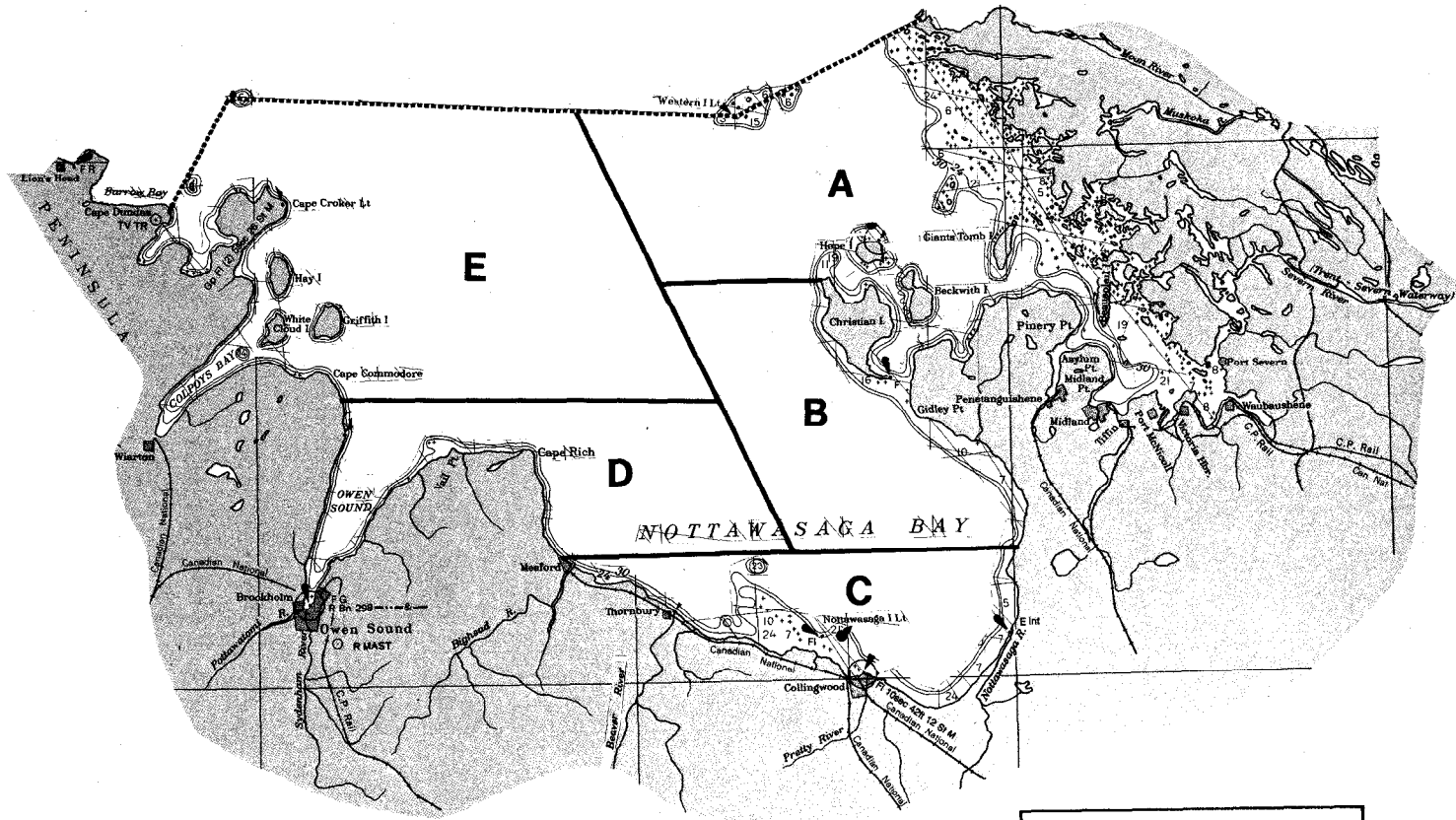


Table 4. **Fishes**^{1/} with spawning or nursery area^{2/} in tributary, littoral mainland, offshore, or littoral offshore water^{3/} of Lake Huron.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MH-1	A	LM: 13^{4/}(C)	
		T: 1(C), 130	T: 1(C)
		LM: 14(C), 31(C)	
		O: 14(C)	
	B	LO: 14(C)	
		T: 1(C), 21(C)	T: 1(C)
		LM: 8(C), 13^{4/}(C) , 14(C), 41(C), 126(C)	LM: 8(C), 15^{4/}(C) , 38(C), 100(C)
		O: 13^{4/}(C) , 14(C), 36(C)	
	C	LO: 13^{4/}(C) , 14(C), 31(C)	
		T: 1(C), 21(C), 22(C), 29, 38(C), 76(C)	T: 1(C)
		LM: 8(C), 139(C), 14(C), 41(C), 126(C)	LM: 8(C), 14(C), 15^{4/}(C) , 38(C), 138
		O: 13^{4/}(C)	
	D	LO: 139(C), 14(C)	
		T: 1(C), 21(Po), 22(C), 26(C), 27(C), 38(C), 41(C), 42(C), 76(C), 113(C), 128(C), 130(C)	T: 1(C), 76(C)
		LM: 8(C), 14(C), 31(C), 41(C), 42(C)	LM: 8(C), 14(C)
		O: 14(C), 36(C)	O: 14(C)
		LO: 13^{4/}(C) , 14(C), 31(C)	LO: 8(C), 38(C)

Table 4. Cont'd

Statistical fishing district	Geographic area	Spawning area	Nursery area
MH-1	E	T: 1 (C), 8 (C), 9 (C), 21 (C,Po), 22 (C), 24 (C), 27 (C), 38 (C), 45 (C), 46 (C), 67 (C), 75 (C), 76 (C), 83 (C), 113 (P), 126 (C), 130	T: 1 (C), 22 (C), 24 (P), 113 (C)
		LM: 8 (C), 27 (C), 31 (C), 46 (C), 75 (C)	LM: 8 (C), 14 (C), 15 (C), 38 (C), 126 (C), 138 (C)
		O: 20⁵/(C) , 36 (C), 31 (C)	
		LO: 14 (C), 31 (C)	
	F	T: 1 (C), 21 (Po), 24 (C), 26, 27 (C), 38 (C), 41 (C), 75 (C), 76 (C), 105 (C)	T: 1 (C)
		LM: 8 (C), 31 (P), 32 (P), 41 (C)	LM: 8 (C)
O: 20⁵/(C) , 36 (C), 31 (C)			
MH-2		LM: 13⁴/(C)	
	A	T: 21 (Po), 41 (C)	
		LM: 8 (C), 14 (C), 31 (C), 46 (C)	LM: 8 (C), 14 (C), 38 (C), 138
		O: 14 (C), 36 (C), 31 (C)	
	B	T: 1 (C)	T: 1 (C)
		LM: 8 (C), 13⁴/(C) , 14 (C), 26 (C), 31 (C,Po), 32 (C), 38 (C,Po), 105 (P), 125 (P)	LM: 8 (C), 14 (C), 26 (C), 38 (C), 99 (C), 100 (C), 105 (C), 125 (C), 126 (C), 138 (C)
		O: 134/(C), 14 (C), 26 (C), 31 (C)	
		LO: 14 (C), 26 (C), 31 (C)	
	C	T: 1 (C), 14 (C), 24 (C), 27 (C), 38 (C), 75 (C), 87 (C), 130 (C)	T: 1 (C)

Table 4. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MH-2	C (Cont'd.)	LM: 8 (C), 13+/(C) , 14 (C), 26 (C), 29 (C), 31 (C), 38 (C), 41 (C,P,Po), 90 (P), 113 (Po), 126 (C), 129 O: 16⁵/(P)	LM: 8 (C), 14 (C), 38 (C), 100 (C), 126 (C), 138
MH-3	A	LM: 13⁴/(C) T: 1 (C), 24 (P), 27 (C), 38 (C) LM: 8 (C), 14 (C), 26 (C), 31 (C), 126 (C) O: 36 (C), 31 (C)	T: 1 (C) LM: 8 (C), 38 (C)
	B	T: 1 (C), 25/(C), 21 (C), 24 (p), 27 (C), 38 (C), 130 (C) LM: 8 (C), 139 (C), 14 (C), 26 (C), 31 (C) O: 15⁴/(C) , 31 (C)	T: 1 (C)
MH-4	A	LM: 13⁴/(C) T: 1 (C), 22 (C), 27 (C), 38 (C) LM: 8 (C), 13&/(C), 14 (C), 26 (C), 27 (C), 29 (C), 31 (C,PO), 38 (Po), 41 (C), 46 (C), 87 (C), 100 (C), 120 (C), 125 (P), 126 (C), 130 (C) O: 13⁴/(C) , 14 (C),	LM: 8 (C), 13⁴/(P) O: 8 (C) T: 1 (C) LM: 8 (C), 38 (C), 46 (P), 99 (C), 100 (C), 125 (C), 126 (C), 138 (C)
	B	LM: 139 (C), 14 (C), 26 (C), 31 (C), 41 (C), 46 (C), 87 (C), 100 (C), 120 (C), 126 (C), 130 (C) O: 36 (C)	LM: 8 (C), 38 (C), 46 (P), 100, 126 (C)

Table 4. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MH-4	C	T: 1 (C), 24, 27 (C), 38 (C), 75 (C), 87 (C), 126 (C), 130 (C)	T: 1 (C), 130 (C)
		LM: 2 ⁴ / (C), 5 (C), 6 (C), 8 (C), ,3+/ (C), 14 (C), 26 (C), 31 (C), 38 (C), 41 (C), 44 (C), 46 (C), 87 (C), 86 (C), 93 (C), 98 (C), 100 (C), 108 (C), 110 (C), 112 (C), 113 (C), 114 (C), 120 (C), 126 (C), 129 (C), 130 (C), 134 (C)	LM: 8 (C), 38 (C), 46 (C,P), 58 (C), 100, 126 (C), 130 (C), 138
	O: 14 (C)		
	D	T: 1 (C), 22 (C), 24 (C), 27 (C), 29, 38 (C), 41 (P,Po), 46 (C), 76 (C), 107 (P), 110 (P), 126 (C), 130 (C)	T: 1 (C), 107 (C), 110 (C), 130 (C)
	LM: 2 ⁴ / (C), 5 (P), 6 (C), 8 (C), 9 (P), 139 (C), 14 (C), 26 (C), 31 (C), 38 (C), 41 (c,p), 46 (C), 52 (p), 58 (P,Po), 74 (C), 87 (C), 91 (P), 92 (C), 93 (C), 98 (C), 99 (C), 108 (C), 112 (C), 113 (C), 114 (C), 120 (C), 126 (C), 130 (C)	LM: 8 (C), g (C), 38 (C), 46 (p), 52 (C), 58 (C), 93 (C), 99 (C), 107 (C), 126 (C), 130 (C), 134 (C)	
MH-5		LM: 13⁴/ (C)	
	A	T: 1 (C)	T: 1 (C)
		LM: 8 (C), 14 (C), 38 (C), 41 (C), 126 (C), 130 (C)	LM: 8 (C), 38 (C), 100 (C), 126 (C), 138 (C)
		O: 8 (C), 14⁴/ (P) , 36 (C), 31 (C), 38 (C)	O: 8 (C), 20⁵/
	B	T: 1 (C)	T: 1 (C)
	LM: 41 (C), 130 (C)	LM: 8 (C), 126 (C)	
	O: 36 (C), 31 (C)		

Table 4. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
MH-6		LM: 13 ⁴ /(C)	
	A	T: 1(C), 130(C)	T: 1(C)
		LM: 38(C), 41(C), 52, 126(C), 130(C)	LM: 38(C)
		O: 14, 36(C), 31(C)	
	B	T: 1(C), 130(C)	T: 1(C)
		LM: 38(C), 41(C), 126(C), 130(C)	
O: 36(C), 26(C)			
OH-1		LM: 13(C)	
	A	T: 1(C)	T: 1(C)
		LM: 31(C)	
		O: 31(C)	
		LO: 14(C), 31(C)	
	B	LM: 31(C), 32(C)	
		O: 31(C)	
	C	LO: 14(C), 31(C)	
		T: 1(C), 21(C), 22(C), 23(C), 24(C), 27(C), 38(C)	T: 1(C), 21(C)
		LM: 31(C)	
		O: 31(C)	
	D	T: 1(C), 8(P), 22(C), 23(C), 24(C), 27(C), 38(C), 75(C), 76(C)	T: 1(C), 23(2)
LM: 13, 14(C), 23(C), 31(C), 58(C), 99(C), 100(C), 105(C), 113, 126(C)		LM: 8(C), 13(C), 14(C), 26(C), 38(C), 58(C), 99(C), 100(C), 105(C), 108(C), 112, 113(C), 138(C)	

Table 4. Cont'd.

Statistical. fishing district	Geographic area	Spawning area	Nursery area	
OH-1	D (Cont'd.)	O: 31 (C)	O: 13 (C), 14 (C), 38 (C), 100 (C)	
		LO: 31 (C)		
OH-2		LM: 13 (C)		
		A	LM: 31 (C)	
		O: 31 (C)		
	B	LO: 31 (C)		
		T: 22 (C), 23 (C), 24 (C), 27 (C), 29 (C)		
		LM: 31 (C)		
		O: 31 (C)		
OH-3	A	LM: 13 (C)		
		LM: 13 (C), 14 (C), 31 (C), 46 (C), 126 (C)	LM: 13 (C), 14 (C), 76 (C), 126 (C)	
	B	T: 1 (C), 22 (C), 24 (C), 27 (C)	T: 1 (C)	
		LM: 13 (C), 14 (C), 31 (C), 46 (C)	LM: 13 (C), 126 (C)	
			O: 31 (C)	
	C	T: 1 (C), 22 (C), 23 (C), 24 (C), 27 (C), 29 (C), 38 (C), 87 (C), 108 (C), 113 (C)	T: 1 (C)	
		LM: 8 (C), 14 (C), 38 (C), 108 (C), 110 (C), 113 (C), 125 (C)	LM: 8 (C), 9 (C), 38 (C), 76 (C), 103 (C), 108 (C), 110 (C), 113 (C), 125 (C), 126 (C), 136 (C), 138 (C)	
			O: 36 (C), 31 (C)	

Table 4. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
OH-3	D	T: 1 (C), 22 (C), 24 (C), 27 (C), 38 (C) O: 31 (C)	T: 1 (C)
OH-4		LM: 13 (C) T: 1 (C), 22 (C), 24 (C), 27 (C), 38 (C) LM: 31 (C) O: 31 (C) LO: 31 (C) T: 1 (C), 8 (P), 22 (C), 24 (C), 27 (C), 29 (C), 38 (C), 41 (C), 46 (C), 75 (C), 76 (C), 83 (C), 88 (C), 130 (C)	T: 1 (C)
OH-5	<u>c6/</u>	LM: 13 (C), 130 (C) A T: 27 (C) LM: 14 (C), 31 (C) O: 31 (C) LO: 31 (C) B LM: 110 (C), 112 (C), 118 (C)	
NC-1	A	LM: 13 (C) T: 1 (C), 8 (P), 14, 22 (C), 27 (C), 38 (C), 75 (C), 76 (C) LM: 31 (C) O: 31 (C) LO: 31 (C)	T: 1 (C)

Table 4. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
NC-1	B	T: 1 (C), 22 (C), 38 (C)	T: 1 (C)
		O: 31 (C)	
		LO: 31 (C)	
	C	T: 1 (C), 22 (C), 27 (C), 38 (C), 130 (C)	T: 1 (C)
		LM: 14 (C), 31 (C), 130	
		O: 31 (C)	
NC-2	A	LM: 13 (C)	T: 1 (C)
		T: 1 (C), 38 (C), 76 (C), 130 (C)	
		LM: 13 (C), 14 (C), 26, 31 (C)	
	B	O: 31 (C), 130 (C)	T: 1 (C)
		LO: 31 (C)	
		T: 1 (C), 38 (C), 130 (C)	
NC-3	A	LM: 14, 26, 31 (C)	T: 1 (C)
		O: 31 (C)	
		LO: 31 (C)	
	B	LM: 13 (C)	T: 1 (C)
		LM: 31 (C)	
		O: 31 (C)	
B	LM: 31 (C), 113 (C)	T: 1 (C)	
	O: 31 (C)		
	LO: 31 (C)		

Table 4. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
GB-1		LM: 13 (C), 14 (C)	
		T: 1 (C)	
		LM: 31 (C), 113	
		O: 31 (C)	
		LO: 14 (C), 31 (C)	
	A	LM: 113	
		O: 31 (C)	
		LO: 31 (C)	
	B	LM: 31 (C)	
		O: 31 (C)	
		LO: 31 (C)	
C	LM: 31 (C)		
	O: 31 (C)		
	LO: 31 (C)		
GB-2		LM: 13 (C)	
		LM: 31 (C)	LM: 38 (C)
		O: 16 (C), 31 (C)	
		LO: 31 (C)	
	A	T: 23 (C)	
		LM: 31 (C)	
		O: 16 (C), 31 (C)	
	B	LO: 31 (C)	
C	LM: 13 (C)		
	T: 1 (C), 14 (C), 38 (C), 76 (C), 83 (C), 130 (C)	T: 1 (C)	

Table 4. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
GB-3	A (Cont'd.)	LM: 14 (C), 31 (C)	
		0: 31 (C)	
		LO: 14 (C)	
	B	T: 1 (C), 27 (C), 38 (C), 76 (C), 83 (C), 126 (C), 130 (C)	T: 1 (C)
		LM: 108 (C), 113 (C), 130 (C)	LM: 126 (C)
	C	LM: 31 (C), 130 (C)	
		0: 31 (C)	
		LO: 31 (C)	
	D	T: 1 (C), 27 (C), 38 (C), 130 (C)	T: 1 (C), 130 (C)
		LM: 31 (C), 118 (C)	
		0: 31 (C)	
		LO: 14 (C)	
GB-4	A	LM: 13 (C)	
		T: 9 (C), 23 (C)	
		LM: 13 (C), 14 (C), 26, 31 (C)	
		0: 12 (C), 13 (C), 31 (C)	
	B	LO: 14 (C), 31 (C)	
		T: 1 (C), 22 (C), 23 (C), 24 (C), 27 (C), 29 (C), 38 (C)	T: 1 (C)
		LM: 31 (C)	
		0: 12 (C), 31 (C)	

Table 4. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
GB-4	C	T: 1(C), 2(C), 14(C), 22(C), 23(C), 24(C), 27(C), 29(C), 75(C), 130(C)	T: 1(C), 27(C)
		LM: 14(C), 31(C), 118(C), 138	LM: 138(C)
		O: 12(C), 14(C), 31(C)	
	D	T: 1(C), 22(C), 76(C)	T: 1(C)
		LM: 14(C), 31(C)	
		O: 31(C)	
	E	T: 1(C), 2(C), 23(C), 24(C), 27(C), 29(C), 38(C), 46(C), 76(C), 87(C), 130(C)	T: 1(C)
		LM: 4(C), 41(C), 42(C), 46(C), 113(C), 118(C), 116(C), 130(C)	LM: 8(C), 13(C), 14(C), 46(C), 52(C), 107(C), 110(C), 118(C), 125(C), 126(C)
		O: 31(C)	
LO: 31(C)			

1/ Numerical species code according to Table 12.

2/ Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (PO); see text for definitions. When information is not available to unequivocally support the assignment of one of the classifications, 'no classification was given.

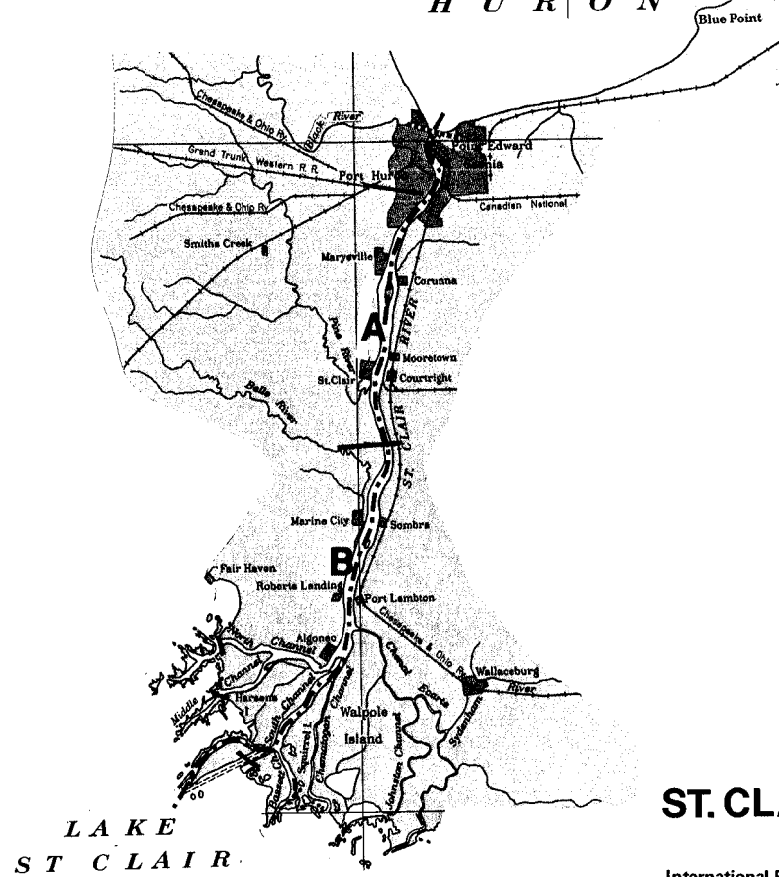
3/ Waters within the geographic area are classified as tributary (T), littoral mainland (LM), offshore (O), or littoral offshore (LO); see text for definitions.

4/ Species listed by State of Michigan as "threatened."

5/ Species listed by State of Michigan as "endangered."

6/ No information.

L A K E H U R O N



ST. CLAIR RIVER

- International Boundary - - - - -
- State Boundary - - - - -
- Statistical Fishing District - - - - -
- Geographic area - - - - -

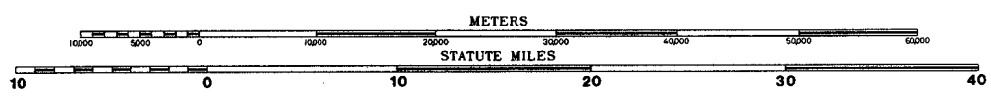


Table 5. Fishes^{1/} with spawning or nursery areas^{2/} in tributary, littoral or navigation channel waters^{3/} of the St. Clair River.

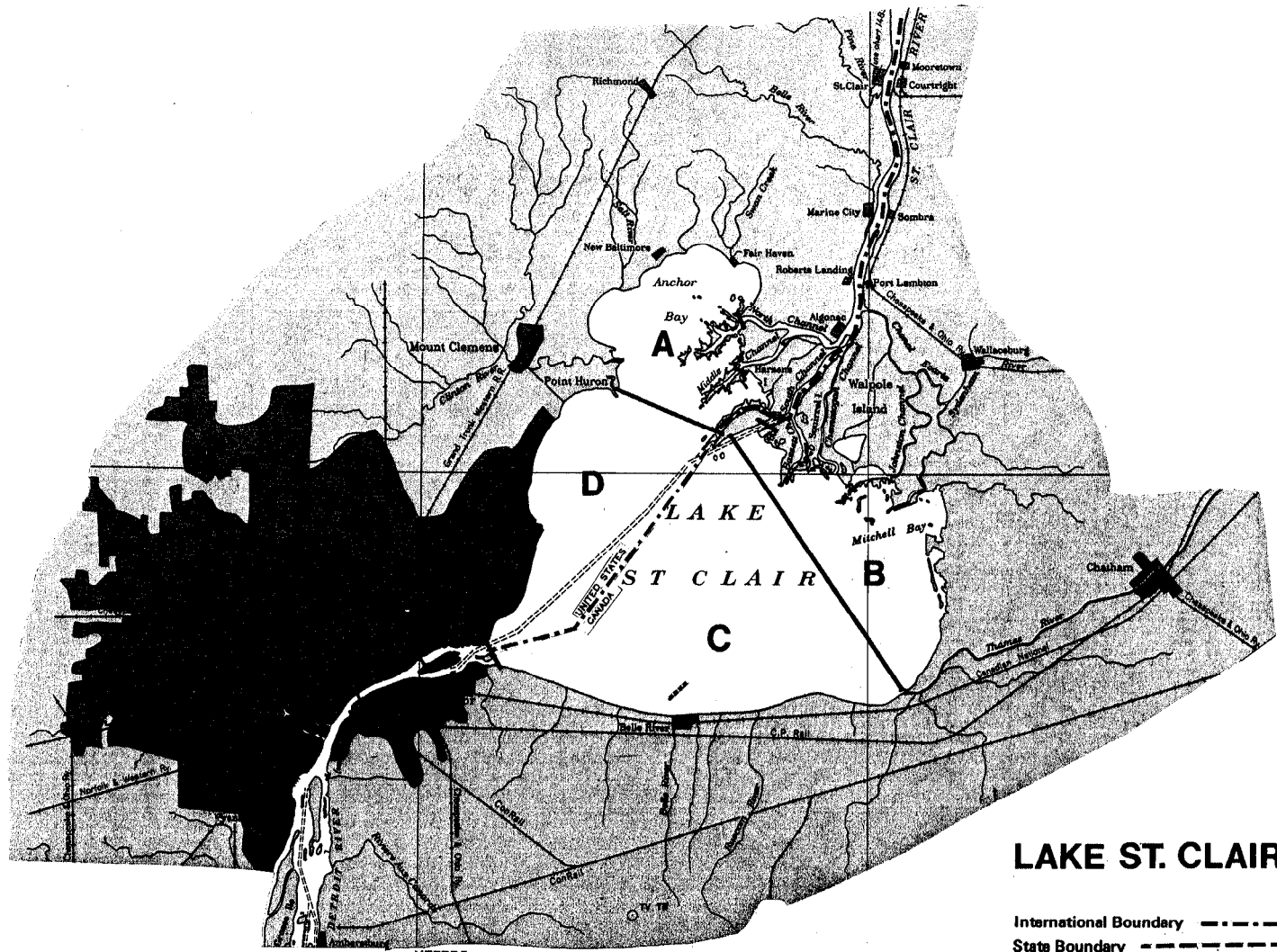
Geographic area	Spawning area	Nursery area
A	T: 1(C), 8(C), 27(C), 34(C), 87(C), 88(C), 113(C), 126(C), 130(C)	T: 1(C)
	L: 1(C), 8(C), 9(C), <u>13^{4/}(C)</u> , 14(C), 27(C), 38(C), 113(C,Po), 126(C), 130(Po), 139(C)	L: 1(C), <u>2^{4/}</u> , 8(C), 14(C), 38(C), 46(C), 48(C), 72(C), 76(C), W(C), 100(C), 126(C), 127(C), 130(C), 133(C), 138(C)
	N: 8(C), 38(C), 126(C), 139(C)	N: 8(C), 9(C), 14, 38(C), 52(C), 72(C), 76(C), 99(C), 100(C), 107, 126(C), 127(C), 133(C), 138(C)
B	T: 87(C), 88(C), 113(C)	
	L: <u>2^{4/}(C)</u> , 8(C), <u>13^{4/}(C)</u> , 14(C), 33(C), 38(C), 46(C), 76(C), 108(C), 113, 118, 126(C), 130(C,P), 139(C)	L: 2 ^{4/} (C), 8(C), 9(C), 14, 38(C), 46(C), 52(C), 72(C), 76(C), 79(C), 92(C), 99(C), 100(C), 107(C), 113(C), 126(C), 127(C), 130(C), 133(C), 134(C), 135(C), 136(C), 138(C)
	N: <u>2^{4/}(C)</u> , 8(C), 38(C), 42(C), 126(C), 130(C), 139(C)	N: 8(C), 38(C), 46(C), 52(C), 72(C), 76(C), 79(C), 92(C), 99(C), 100(C), 107(C), 113(C), 126(C), 127(C), 130(C), 133(C), 134, 135(C), 136(C), 138(C)

1/ Numerical species code according to Table 12.

2/ Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (PO); see text for definitions. When information was not available to unequivocally support the assignment of one of the classifications, no classification was given.

3/ Waters within the geographic area are classified as tributary (T), littoral (L) or navigation channel (N); see text for definitions.

4/ Species listed by State of Michigan as "threatened."



LAKE ST. CLAIR

- International Boundary - - - - -
- State Boundary - - - - -
- Statistical Fishing District
- Geographic area —————



Table 6. Fishes^{1/} with spawning or nursery area^{2/} in tributary, littoral or navigation channel waters^{3/} of Lake St. Clair.

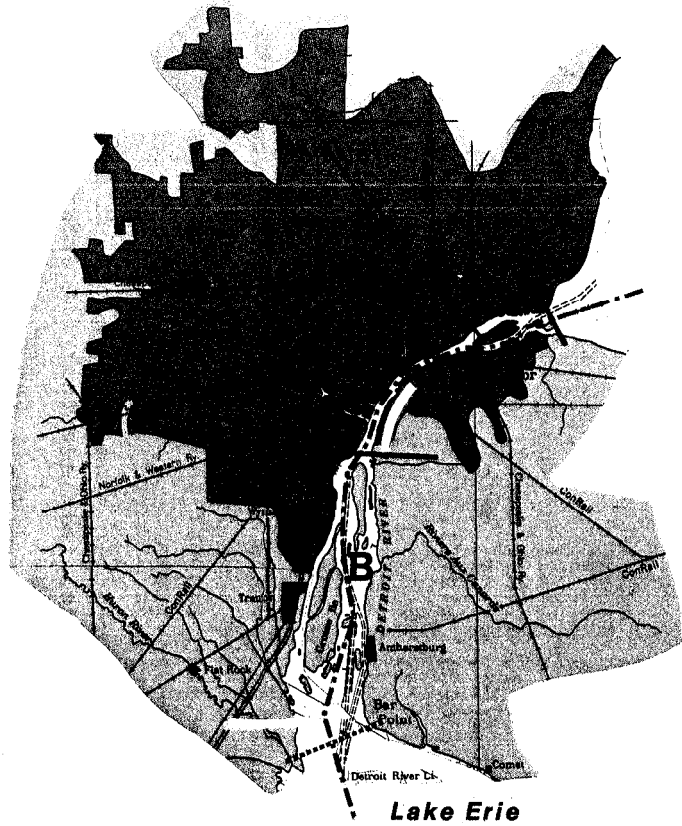
Geographic area	Spawning area	Nursery area
A	T: 1(C), <u>2^{4/}</u> (C), 41(C), 42(P), 87(C), 88(C), 130(C) L: 4, 6(C), 8(C), 9(C), 14, 41(C), 42(C), 44(C), 46(C), 50(C), 52(C), 54(C), 58(C), 60(C), 64(C), 65(C), 92(C), 93(C), 98(C), 108(C), 110(C), 112(C), 113(C), 114(C), 115(C), 116(C), 119(C), 120(C), 121(P), 126(C), 130(C)	L: 2 ^{4/} (C), 6(C), 8(C), 9(C), 38(C), 41(C), 42(C), 46(C), 50(C), 58(C), 93(C), 98(C), 108(C), 110(C), 112(C), 113(C), 114(C), 115(C), 116(C), 119(C), 120(C), 126(C), 130(C)
B	L: 4(C), 41(C), 42(C), 44(C), 46(C), 50(C), 52(C), 54(C), 58(C), 60(C), 93(C), 108(C), 110(C), 112(C), 113(C), 114(C), 115(C), 116(C), 118(C), 119(C), 126(C), 130(C)	L: 6(C), 46(C), 113(C), 114(C), 119(C)
C	T: 1(C), 93(C), 107(C), 130(C) L: 130(C)	T: 1(C) L: 58(C)
D	T: 130(C) L: 14(P), 42(C), 44(C), 46(C), 52(C), 54(C), 93(C), 107(C), 108(C), 112(C), 113(C), 126(C)	L: 4(C)

1/ Numerical species code according to Table 12.

2/ Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (PO); see text for definitions. When information was not available to unequivocally support the assignment of one of the classifications, no classification was given.

3/ Waters within the geographic area are classified as tributary (T), littoral (L) or navigation channel (N); see text for definitions.

4/ Species listed by State of Michigan as "threatened."



DETROIT RIVER

- International Boundary - - - - -
- State Boundary - - - - -
- Statistical Fishing District - - - - -
- Geographic area - - - - -

Table 7. Fishes^{1/} with spawning or nursery areas^{2/} in tributary, littoral or navigation channel water^{3/} of the Detroit River.

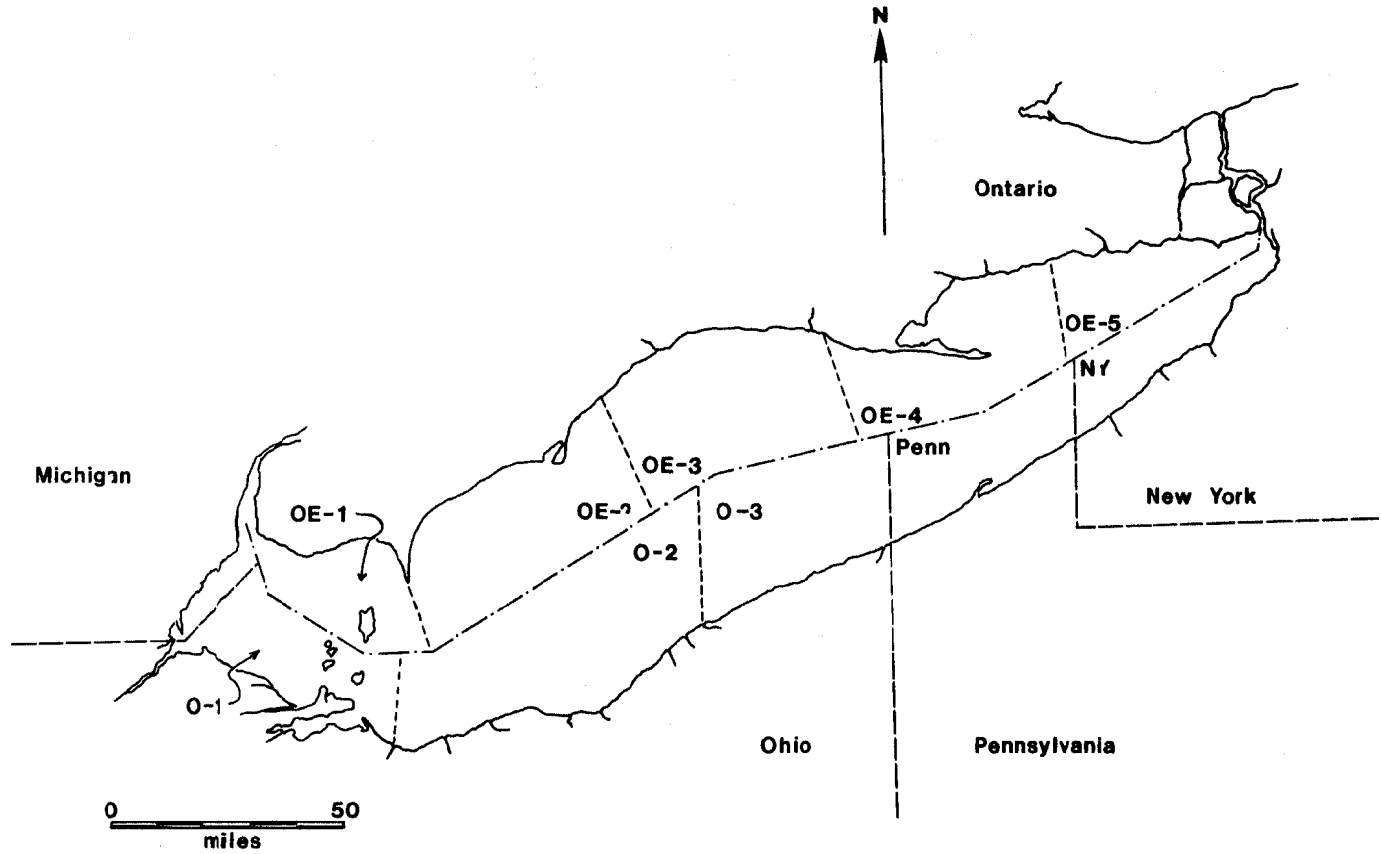
Geographic area	Spawning area	Nursery area
A	L: <u>24/</u> (P), 14 (C,P), 38 (C), 42 (C)	L: 8 (C), 9 (C), 14 (C), 38 (C), 46 (C), 52 (C), 58 (C), 72 (C), 76 (C), 100 (C), 102 (C), 99 (C), 107 (C), 117 (C), 125 (C), 126 (C), 127 (C), 130 (C), 134 (C), 138 (C)
		N: 8 (C), 9 (C), 14 (C), 38 (C), 46 (C), 52 (C), 58 (C), 72 (C), 76 (C), 100 (C), 102 (C), 99 (C), 107 (C), 125 (C), 117 (C), 126 (C), 127 (C), 130 (C), 134 (C), 138 (C)
B	L: <u>24/</u> (C), 3 (C), 5 (C), 9 (C), 13 ^{4/} , 14 (C,P), 31 (C), 38 (C), 41 (C), 42 (C), 44 (C), 46 (C), 52 (C), 72 (C), 93 (C), 98 (C), 107 (C), 108 (C), 112 (C), 113 (C), 114 (C), 115 (C), 120 (C), 126 (C), 129 (C), 130 (C), 134 (C)	L: 3 (C), 14 (C), 38 (C), 41 (C), 44 (C), 46 (C), 52 (C), 107 (C), 126 (C), 130 (C)
	N: <u>24/</u> (C), 113 (C)	N: 8 (C), 9 (C), 14 (C), 38 (C), 46 (C), 52 (C), 58 (C), 72 (C), 76 (C), 99 (C), 100 (C), 107 (C), 113 (C), 117 (C), 125 (C), 126 (C), 127 (C), 130 (C), 134 (C), 138 (C)

1/ Numerical species code according to Table 12.

2/ Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (PO); see text for definitions. When information was not available to unequivocally support the assignment of one of the classifications, no classification was given.

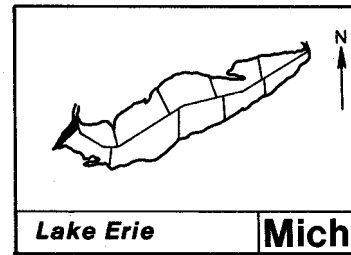
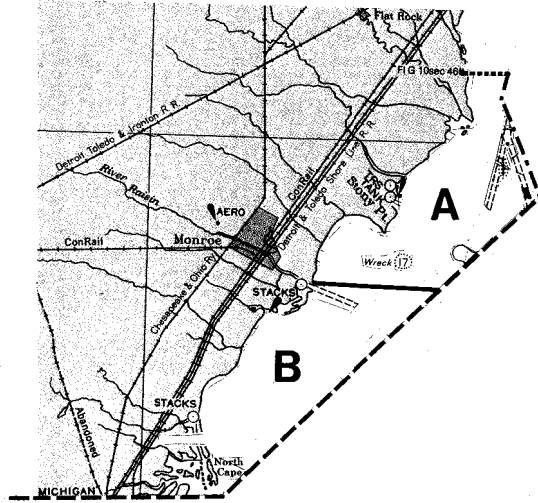
3/ Waters within the geographic area are classified as tributary (T), littoral (L) or navigation channel (N); see text for definitions.

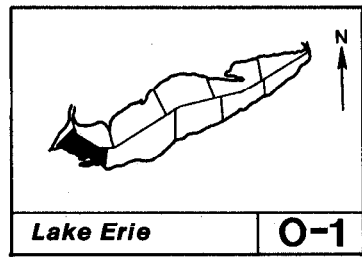
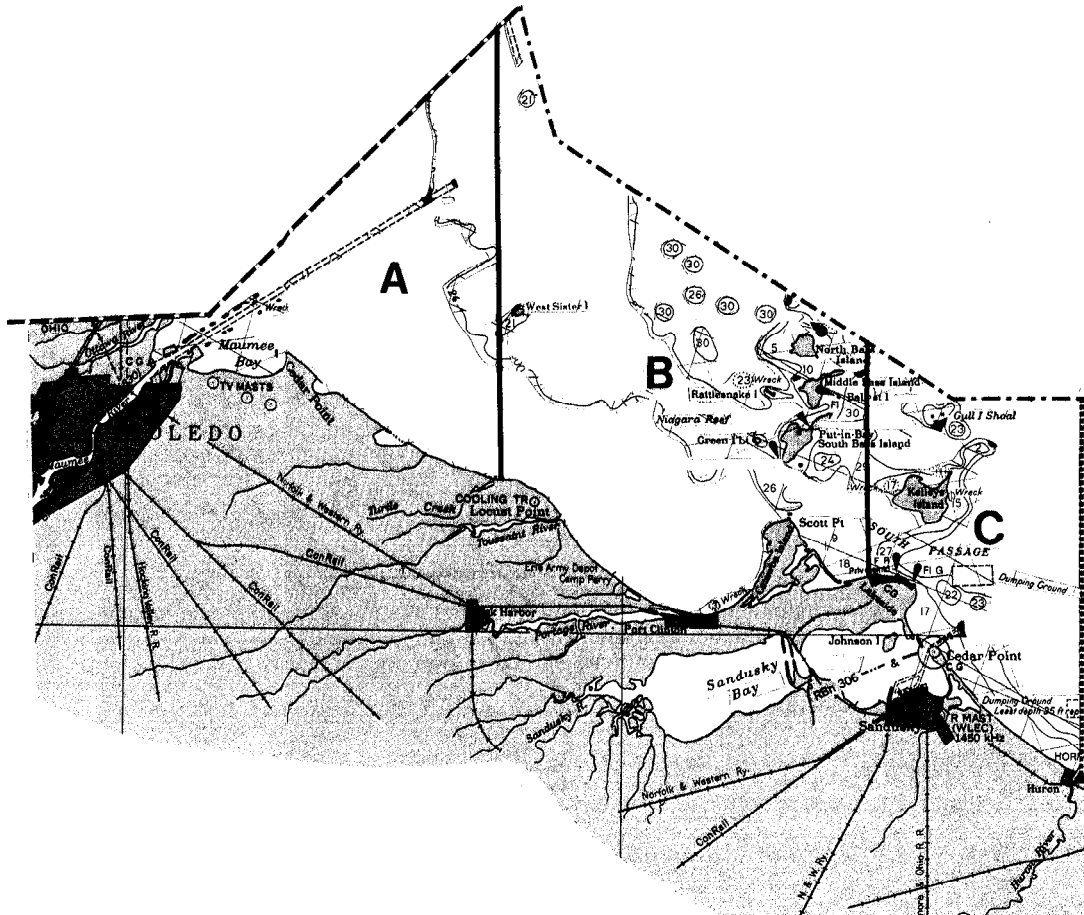
4/ Species listed by State of Michigan as "threatened."

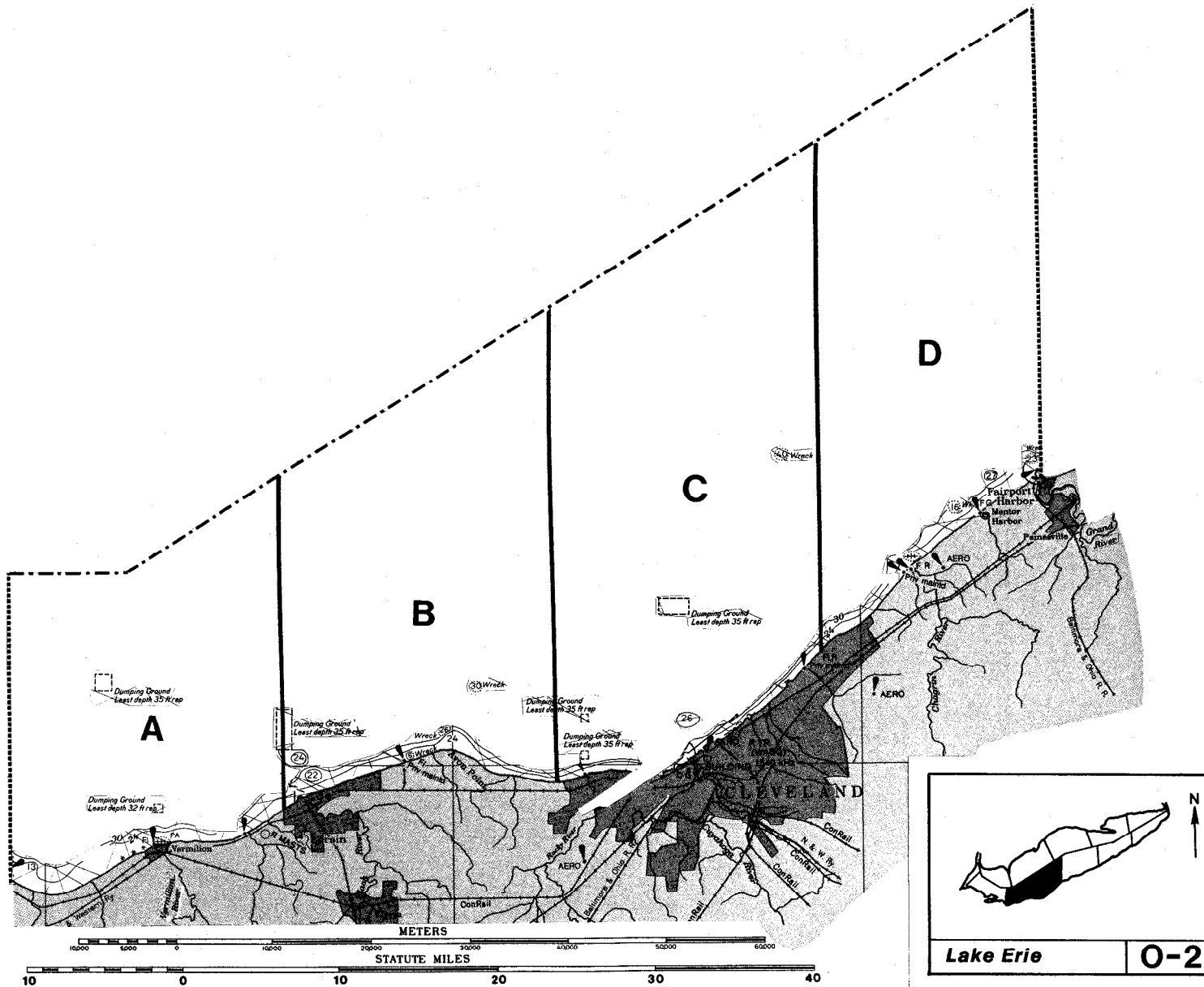


LAKE ERIE

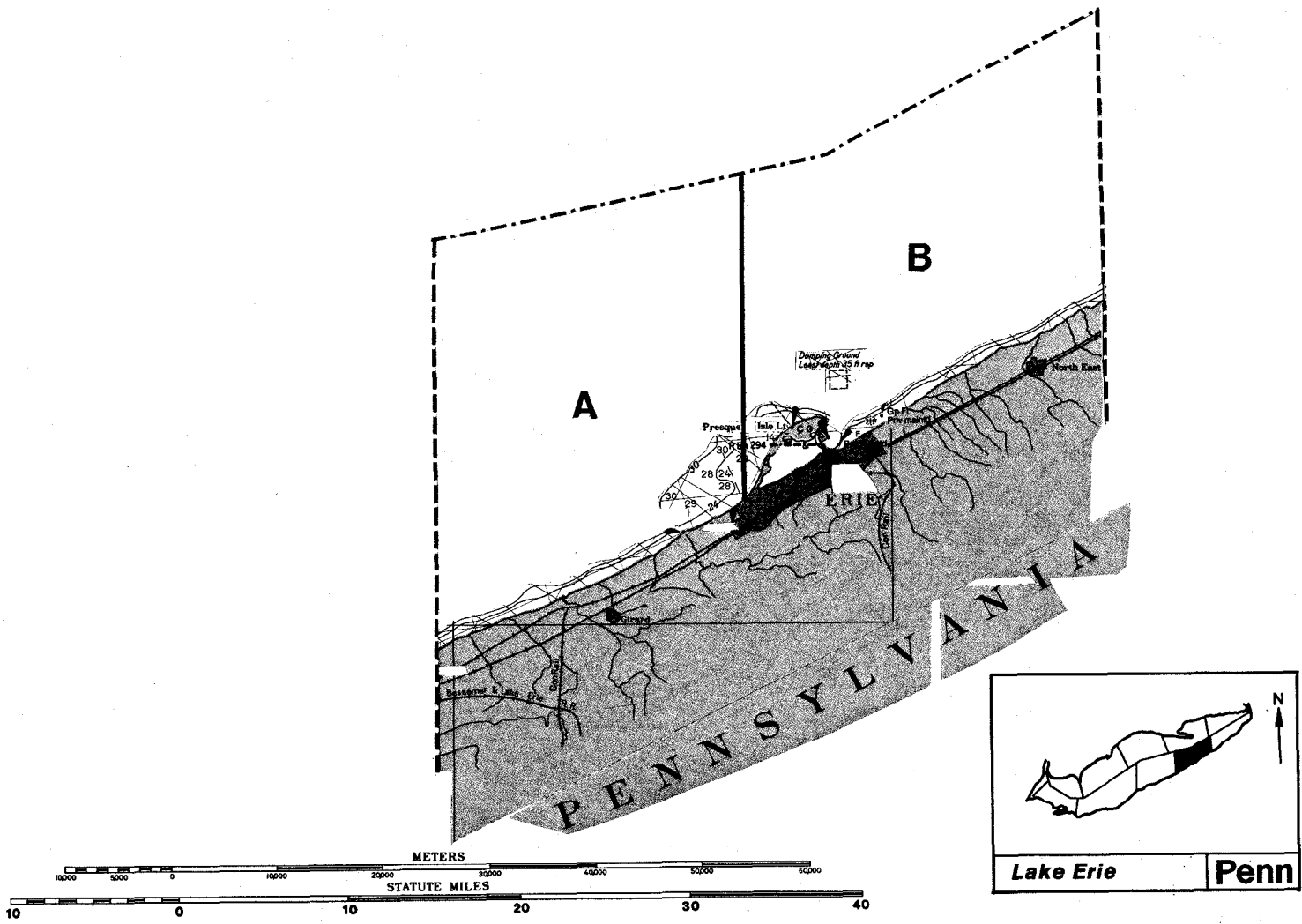
- International Boundary - - - - -
- State Boundary - - - - -
- Statistical Fishing District
- Geographic area —————

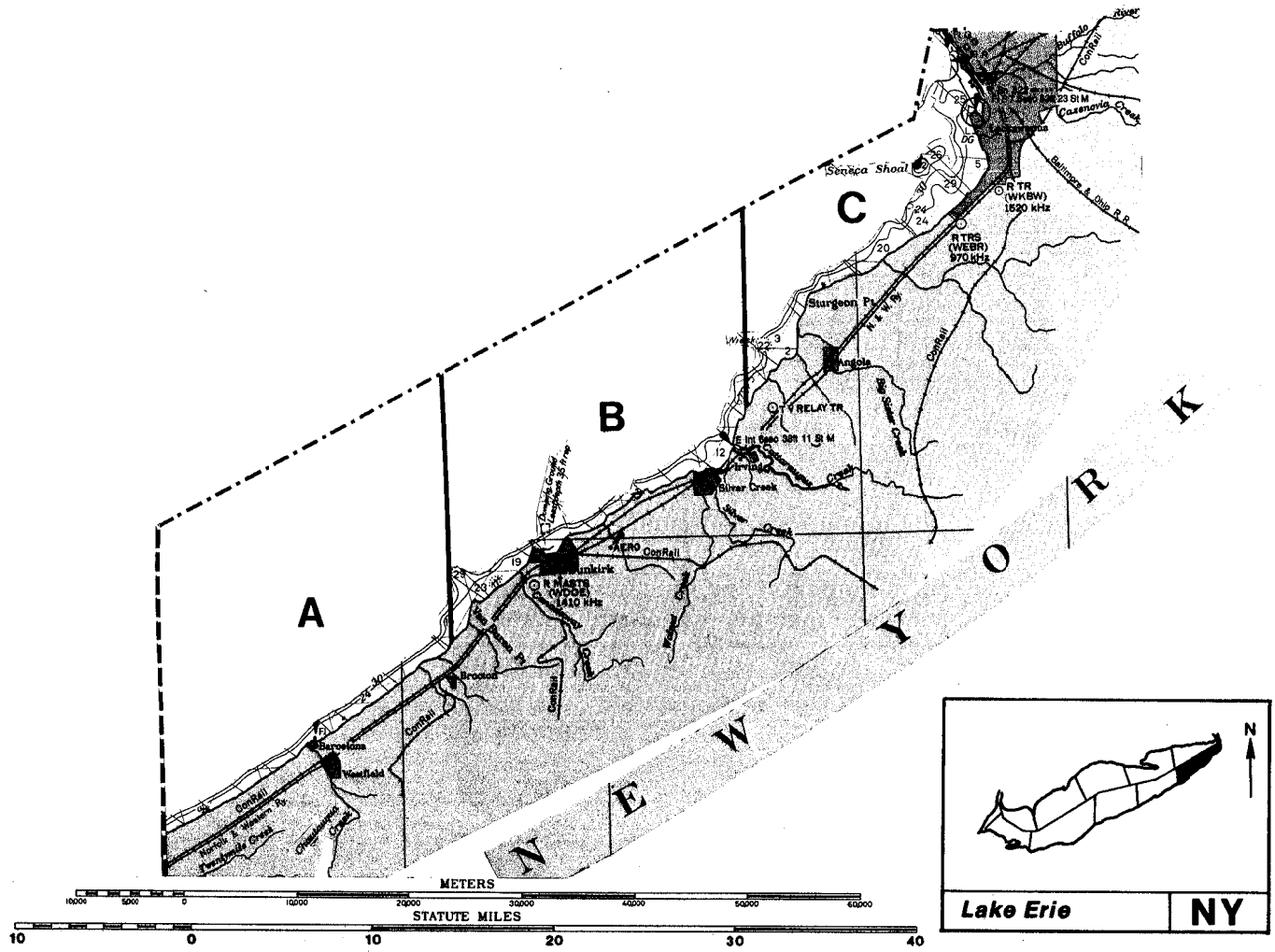


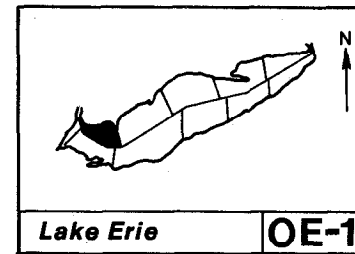
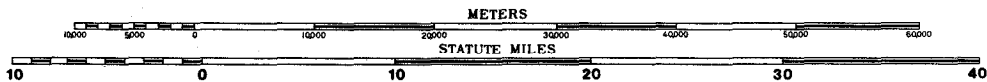
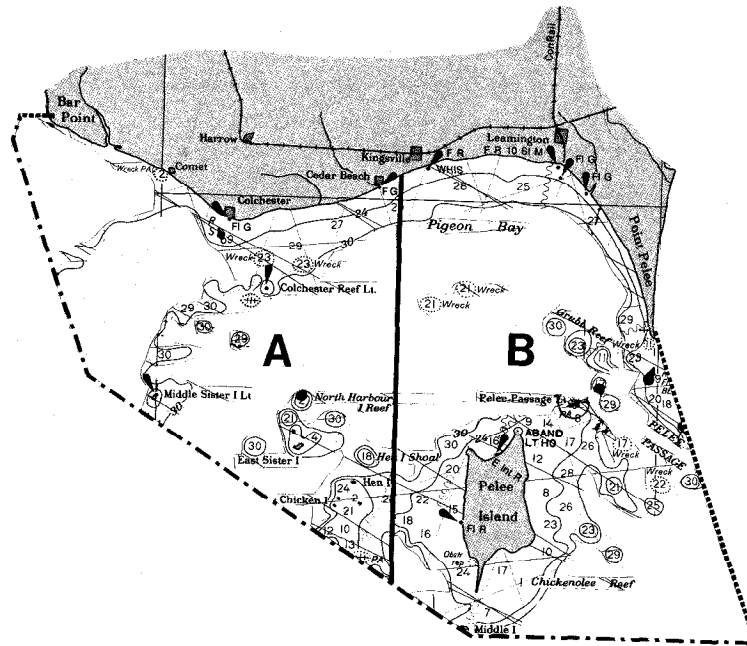


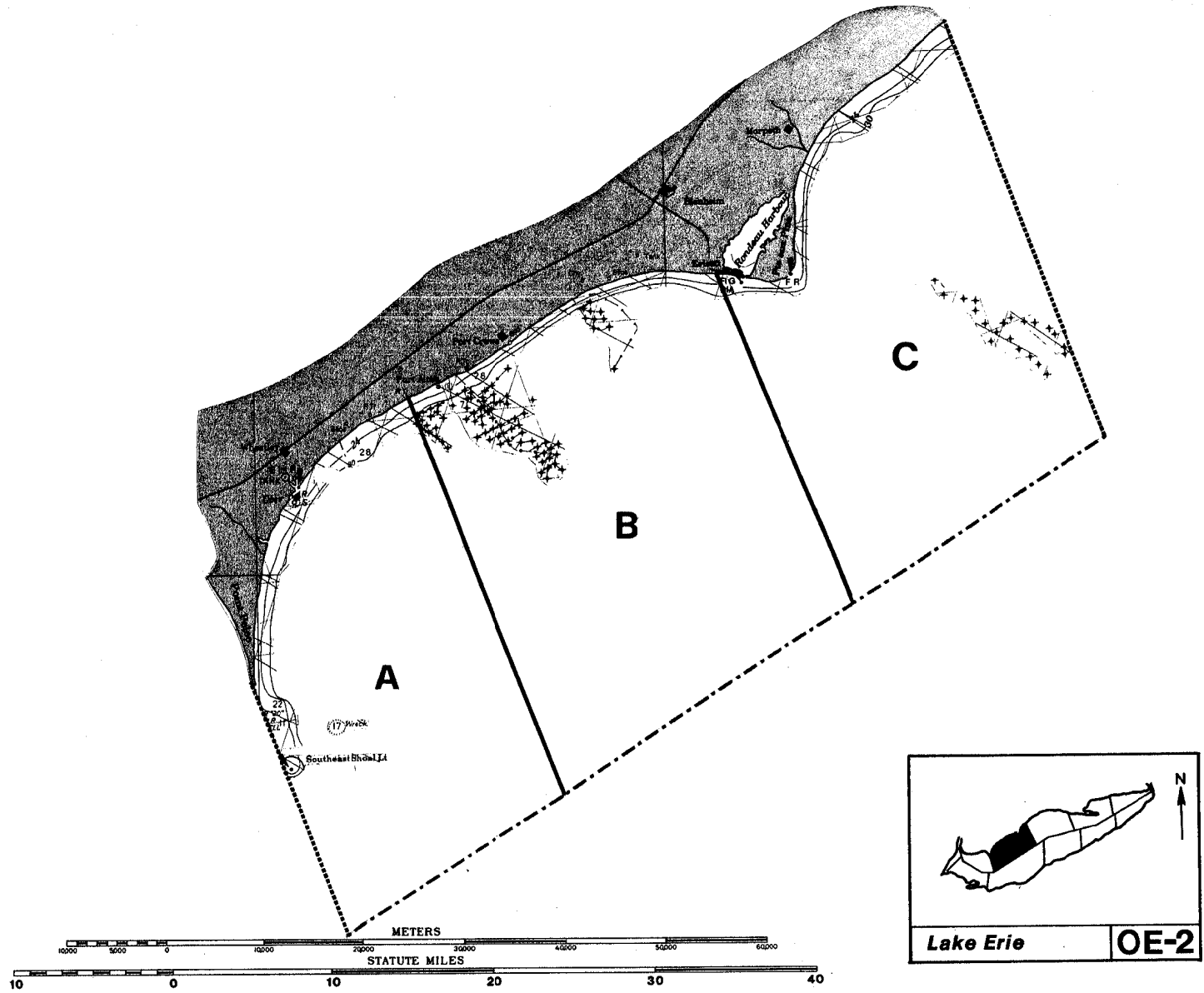


Lake Erie O-2









C

B

A

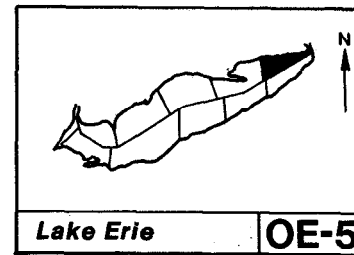
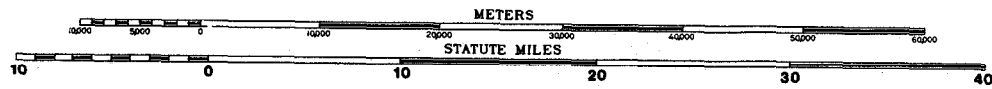
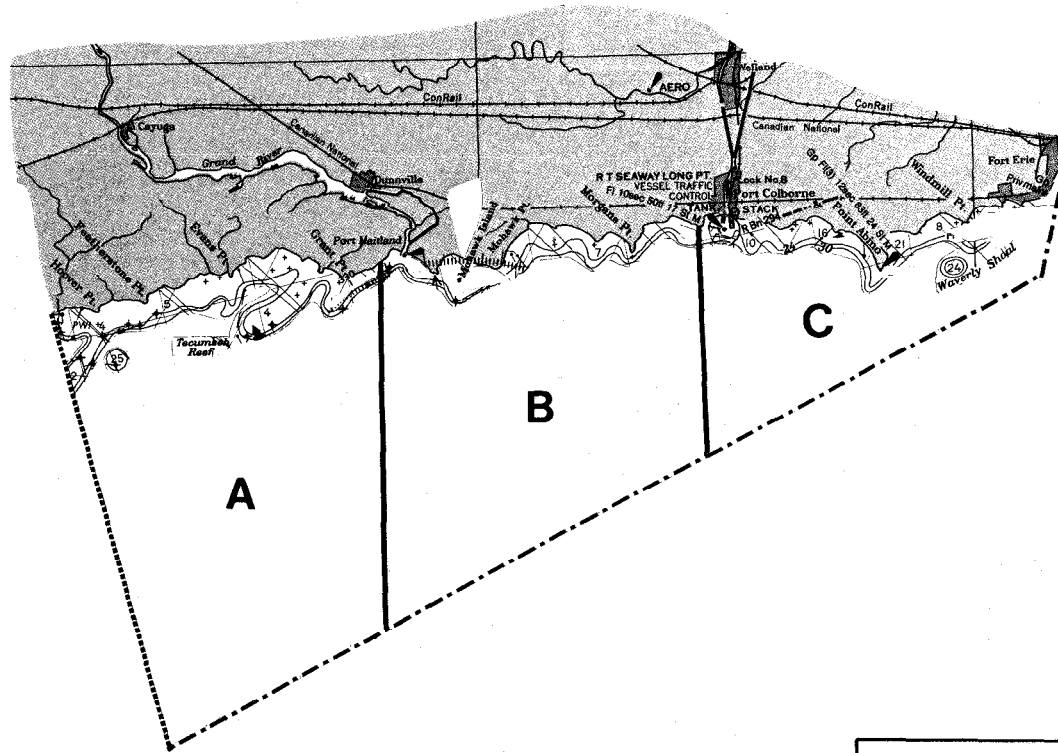


Table 8. **Fishes^{1/}** with spawning or nurser **areas^{2/}** in tributary, littoral mainland, offshore, or littoral offshore water^{3/} of Lake Erie.

Statistical fishing district	Geographic area	Spawning area	Nursery area
Mich.		LM: 42 (Po)	
	A	T: 1 (C), 29 (C), 8 (C), 9 (C), 13^{4/} , 41 (C), 42 (C), 86 (C), 118 (C), 126 (C), 130 (C)	T: 1 (C), 41 (C), 118 (C), 126 (C)
		LM: 2.&/ (C), 8 (C), 9 (C), 14 (C), 38 (P), 41 (C), 44 (C), 46 (C), 80 (C), 93 (C), 98 (C), 100 (C), 106 (P), 107 (C), 120 (C), 126 (C), 129 (C), 131^{8,9/} , 130 (C), 134 (C,P)	LM: 9 (C), 10 (C), 14 (C), 38 (C), 41 (C), 42 (C), 46 (C), 52 (C), 58 (C), 86 (C), 93 (C), 99 (C), 100 (C), 102 (C), 106 (C), 107 (C), 119 (C), 118 (C), 126 (C), 127 (C), 128 (C), 130 (C), 134 (C)
	B	T: 4 (C), 9 (Po), 10 (C), 38 (C), 41 (C), 44 (C), 46 (C), 93 (C,P), 98 (C), 107 (C,Po), 119 (P), 120 (C), 126 (C)	T: 4 (C), 9 (C), 10 (C), 44 (C), 46 (C), 58 (C), 70 (C), 93 (C), 107 (C), 119 (C), 126 (C)
		LM: 6 (C), 8 (C), 9 (C), 14 (C), 27 (C), 38 (C), 41 (C), 44 (C), 46 (C,P), 80 (C), 86 (C), 93 (C), 98 (C), 100 (C), 107 (C), 112 (C), 120 (C), 126 (C), 129 (C), 130 (C), 134 (C)	LM: 4 (C), 9 (C), 10 (C), 14 (C), 38 (C), 44 (C), 46 (C), 52 (C), 58 (C), 71 (C), 70 (C), 93 (C), 99 (C), 106 (C), 107 (C), 119 (C), 126 (C), 127 (C), 129 (C), 130 (C), 134 (C)

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
0-1		T: 96(C) LM: 96(C)	
	A	T: 1(C), 22/(C), 4(C), 9(C), 13⁵/(C) , 41(C) 42⁵/(C) , 46(C), 81(C), 83(C), 84(C), 93(C), 107(C) 129(C), 130(C), 134(C) LM: 1⁵/(C) , 9(C), 10, 14(C), 27(C), 38(C), 41(C), 44(C), 46(C), 52(C), 58(C,P), 74(C), 80(C), 8' (C)r 83(C), 84(C), 92(C), 93(C), 99(C), 106(C), 107(C), 110(C), 115(C), 116(C), 126(C,P,Po), 129(C), 130(C,P), 134(C)	T: 1(C), 9(C), 46(C), 52(C), 107(C), 126(C), 127(C), 129(C), 130(C) LM: 8(C), 9(C), 11⁵/(C) , 38(C), 46(C), 52(C), 58(C), go(C), 92(C), 93(C), 99(C), 107(C), 126(C), 127(C), 129(C), 130(C), 134(C)
	B	T: 2 ⁵ /(C), 38(C), 41(C), 46(P), 93(C), 94(C), 100 ⁵ /(C) 107(C), 130(C), 134(C), '35 LM: 4(C), 6(P), 9(C), 13⁵/(C) , 14(C), 38(C), 41(C), 44(C), 46(C), 48⁵/(C) , 52(C,P), 55>/(C), 58(C), 60(C), 61(C), 62(C), 75?/(C), 92(C), 93(C), 94(C), 96(C), 99(C), 100 ⁵ /(C), 107(C), 108(C), 110(C), 113(C), 114(C), 115(C), 116(C), 126(C,Po), 1285/(C), 129(C,P), 130(C), 134(C,P)	O: 76(C) T: 38(C), 93(C), 94(C), 134(C) LM: 4(C), 8(C), 9(C), 14(C), 38(C), 44(C), 46(C), 52(C), 58(C), 62(C), 92(C), 102(C), 107(C), 108(C), 109(C), 113(C), 114(C), 115(C), 116(C), 121(C), 124(C), 126(C), 127(C), 129(C), 130(C), 134(C), 135(C)

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
0-1	C	<p>T: 1 (C), <u>25/(C)</u>, 9 (C), 14 (C), 22 (C), 41 (C), <u>425/(C)</u>, 46 (C), 80 (C), 93 (C), 107 (C), 113 (C), 126 (C), 129 (C), 130 (C), 134 (C)</p> <p>LM: 4 (C), 8 (C), 9 (C), <u>135/(C)</u>, 14 (C), 38 (C), 39 (Po), 41 (C), 44 (C), 46 (C), 485/(C), 52 (C), 58 (C), 74 (C), <u>755/(P)</u>, 90 (C), 91 (C), w (C), 93 (C), 98 (C), 107 (C), 108 (C), 110 (C), 112 (C), 113 (C), 114 (C), 115 (C), 116 (C), 120 (C), 126 (C), 129 (C), 130 (C), 134 (C)</p> <p>O: 129 (P)</p>	<p>T: 1 (C), 9 (C), 38 (C), 41 (C), 46 (C), 52 (C), 127 (C), 134 (C)</p> <p>LM: 6 (C), q (C), <u>115/(C)</u>, 38 (C), 44 (C), 46 (C), 52 (C), 58 (C), 59 (C), 62 (C), 64 (C), 90 (C), 91 (C), 92 (C), 93 (C), 99 (C), 102 (C), 106 (C), 107 (C), 112 (C), 113 (C), 115 (C), 116 (C), 125 (C), 126 (C), 127 (C), 129 (C), 130 (C), 134 (C)</p> <p>O: 93 (C), 134 (C)</p>
0-2	A	<p>T: 1 (C), 6 (Po), 9 (C), 22 (C), 41 (C, Po), <u>425/(C)</u>, 81 (C), 82 (C), 90 (C), 92 (C, Po), 93 (C), 98 (C), 94 (C), 97 (C, Po), 99 (C, P), 107 (C, P), 113 (C), 114 (Po), 115 (Po), 116 (po), 130 (C), 134 (C)</p> <p>LM: 8 (C, P), 9 (C, P), 10 (C), <u>32/(C)</u>, 14 (C), 38 (C), 46 (C), 52 (C, P), 76 (C), 93 (Po), 97 (Po), 99 (C), 110 (C), 113 (C, Po), 126 (P), 130 (C, p), <u>1315,9/(C)</u>, 134 (C)</p>	<p>T: 1 (C), 8 (C), 9 (C, Po), 52 (C), 93 (C), 99 (C)</p> <p>LM: 8 (C), 9 (C, Po), 10 (C), 38 (C), 46 (C), 52 (C), 58 (C), 67 (C), 74 (C), 76 (C), 93 (C), 99 (C), 107 (C), 113 (C), 126 (C), 127 (C), 130 (C), 134 (C)</p>

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
0-2	A (Cont'd.)	O: 8 (P), 9 (C), 38 (C), 52 (P), 58 (C), 99 (C), 107 (C), 126 (P), 130 (P), 131^{5,9}/(C) , 134 (C)	O: 8 (C), 9 (C), 38 (C), 46 (C), 52 (C), 58 (C), 99 (C), 107 (C), 126 (C), 127 (C), 130 (C), 134 (C)
	B	T: 9 (C), 22, 24, 41 (C), 81 (C), 82 (C), 99 (P), 107 (C,P), 126 (C)	T: 134
		LM: 132/(C), 14 (C), 38 (C,P), 46 (Po), 52 (C), 58 (C), 93 (C), 107 (C), 110 (C), 114 (C), 126 (C), 127 (P), 130 (C), 131=/(C), 134 (C)	LM: 8 (C), g (C), 14, 38 (C), 46 (C), 52 (C), 58 (C), 71 (C), 72 (C), 73 (C), 74 (C), 76 (C), 77 (C), 93 (C), 99 (C), 102 (C), 107 (C), 126 (C), 127 (C), 129 (C), 130 (C), 134 (C), 135 (C)
		O: 131^{5,9}/(C)	O: 14, 38 (C)
	C	T: 2⁵/(C) , 9 (C), 22 (C), 27 (C), 38 (Po), 39 (C), 41 (C), 425/(C), 46 (Po), 47 (C), 50 (Po), 52 (Po), 61 (Po), 64 (Po), 74 (C), 76 (Po), 81 (C), 82 (C), 83 (Po), 84 (C), 90 (C), 92 (C), 103 (Po), 107 (p), 108 (Po), 109 (C,Po), 110 (Po), (112 (P), 113 (Po), 114 (Po), 115 (C), 116 (C), 126 (Po), 130 (C), 134 (C)	T: 8 (C), 9 (C), 38 (C), 44 (C), 46 (C), 47 (C), 50 (C), 52 (C), 61 (C), 64 (C), 74 (C), 76 (C), 83 (C), 92 (C), 103 (C), 107 (C), 108 (C), 109 (C), 110 (C), 112 (C), 113 (C), 114 (C), 115 (C), 126 (C), 134 (C)
		LM: 8 (Po), 9 (C), 13⁵/(C) , 38 (C,Po), 44 (C), 46 (C), 50 (Po), 52 (C), 58 (C), 60 (C), 64 (Po), 65 (Po), 67 (C), 74 (C), 76 (Po), 98 (C), 99 (Po), 102 (C), 108 (Po), 109 (Po), 110 (C,Po), 112 (P), 114 (C), 115 (Po),	LM: 8 (C), g (C), 38 (C), 44 (C), 46 (C), 50 (C), 52 (C), 58 (C), 60 (C), 64 (C), 65 (C), 67 (C), 71 (C), 74 (C),

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
0-2	C (Cont'd.)	LM: 120(C), 126(C), 127(C,Po), 131^{5,9}/_(C) , 133(C)	LM: 76(C), 83(C), 93(C), 99(C), 102(C), 107(C), 108(C), 109(C), 110(C), 112(C), 114(C), 115(C), 126(C), 127(C), 130(C), 133(C)
		O: 131^{5,9}/_(C)	
	D	T: 1(C), 8(Po), 9(C), 22(C), 24(C), 27(C), 29(C), 38(P,Po), 44(Po), 41(C), 42⁵/_(C) , 44(C), 46(C), 47(Po), 50(Po), 52(Po), 58(P), 60(Po), 61(Po), 64(Po), 68(Po), 74(C), 76(P), 81(C), 82(C), 83(C), 90(P), 92(Po), 93(C), 102(Po), 107(P), 108(Po), 109(P), 110(P), 111(Po), 112(P), 113(Po), 114(Po), 115(C), 116(C), 125(Po), 126(C), 127(P), 134(P)	T: 1(C), 4(C), 8(C), 9(C), 38(C,P), 40(C), 44(C), 46(C), 47(C), 50(C), 52(C), 58(C), 60(C), 61(C), 64(C), 67(C), 68(C), 74(C), 76(C), 82(C), 83(C), go(C), 92(C), 93(C), 102(C), 107(C), 108(C), 109(C), 111(C), 112(C), 113(C), 114(C), 115(C), 116(C), 125(C), 126(C), 134(C)
		LM: 8(Po), 9(C), 13⁵/_(C) , 38(C,Po), 44(C), 46(P), 50(Po), 52(P), 58(P), 60(Po), 67(C,P), 76(P), 76(C,P), 99(C), 100⁵/_(C) , 107(C), 110(C,P), 115(P), 126(p), 127(P), 131^{5,9}/_(C) , 134(C)	LM: 4(C), 8(C), 9(C), 38(C), 44(C), 46(C), 50(C), 52(C), 58(C), 60(C), 71(C), 74(C), 76(C), 82(C), 83(C), 90(C), 92(C), 93(C), 99(C), 107(C), 111(C), 112(C), 115(C), 126(C), 127(C), 129(C), 130(C), 134(C)
		O: 100⁵/_(C) , 131^{5,9}/_(C)	

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
0-3	A	T: 1(C), 38(C), <u>42⁵/(C)</u> , 46(C), <u>48⁵/(C)</u> , 81(C), 82(C), 107(P), 130(C)	T: 1(C), 107(C)
		LM: 8(P), 9(P), 14, 38(C), 39(P), 40(C), 46(P), 67(C), 76(C), 99(C), 108(C), 110(C), 126(C), 127(C,P), 131(C), 130, 134(C)	LM: 8(C), 9(C), 37, 38(C), 46(C), 52(C), 58(C), 99(C), 107(C), 126(C), 127(C), 134(C)
		O: <u>131^{5,9}/(C)</u>	O: <u>100⁵/(C)</u>
	B	T: 1(C), 9(C), 22(C), 24, 27(C), 40(Po), 41(Po), 76(C), 79(Po), 81(C), 82(C), 83, 84, 86(P), 92, 93(C), 107(P), 113(C), 126(C), 127(C), 134(C), 139(P)	T: 1(C), 9(C), 27(C), 38(C), 46(C), 52(C), 72(C), 76(C), 86(C), 93(C), 94(C), 107(C), 113(C), 114(C), 119(C), 120(C), 126(C), 127(C), 134(C), 139(C)
		LM: <u>2⁵/(C)</u> , 8(C), 9(C), 14(C), 38(C), 41(C), 46(C), 58(C), 60(C), 61(C), 62(C), 67(C), 72(C), 93(C), 100 ⁵ /(C), 101?/(C), 107(C), 108(C), 110(C), 113(C), 114(Po), 125(C), 126(C), 127(C), 130(C), <u>131^{5,9}/(C)</u> , 134(C)	LM: 4(C), 8(C), 9(C), 38(C), 46(C), 52(C), 58(C), 71(C), 72(C), 76(C), 86(C), 94(C), 99(C), 100z(tc) , 102(C), 108(C), 112(C), 114(C), 119(C), 120(C), 125(C), 126(C), 127(C), 134(C), 135(C), 139(C)
		O: 46(C), 100z(tc),, 131519/(C)	O: 38(C), 46(C), 52(C), 99(C), <u>100⁵/(C)</u>

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
Penn.	A	T: 1 (C), 9 (C), 22 (C), 24 (C), 27 (C), 38 (C), 43 (C), 44 (C), 46 (C), 76 (C), 81 (C), 83 (P), 93 (Po), 113 (C), 114 (C), 122 (C), 127 (C), 134 (C)	T: 1 (C), 9 (C), 38 (C), 52 (C), 72 (C), 76 (C), 113 (C), 114 (C), 127 (C), 134 (C)
		LM: 26/ , 8 (C), 137/ (C) , 14 ⁷ / (C), 38 (C), 44 (C), 46 (C), 52 (C), 58 (C), 67 (P), 93 (C), 94 (c), 99 (C), 107 (C), 113 (C), 122 (C), 126 (C), 130 (C), 134 (C)	LM: 8 (C), 9 (C), 38 (C), 46 (C), 52 (C), 76 (C), 99 (C), 107 (C), 122 (C), 125 (C), 126 (C), 127 (C), 130 (C), 134 (C)
		O: 147/ (P) , 46 (C), 58 (C), 93 (C), 94 (C), 99 (C), 107 (C), 134 (C)	O: 46 (C), 99 (C), 107 (C), 125 (C), 127 (C), 130 (C)
	B	T: 27 (C), 38 (C), 46 (C), 76 (C), 93 (Po), 113 (C), 122 (C), 127 (C)	T: 76 (C), 127 (C)
		LM: 37/ (C) , 4 (C), 6 (C), 9 (C), 131/ (C), 147/ (C) , 38 (C), 40 (C), 41 (C), 42 (C), 46 (C,P), 52 (C), 58 (C), 67 (P), 92 (P), 93 (C), 98 (P), 94 (C), 99 (C), 113 (C), 114 (C), 118 (C), 120 (C), 122 (C), 126 (C), 130 (C), 134 (C)	LM: 4 (C), 6 (C), 9 (C), 40 (C), 41 (C), 46 (C), 52 (C), 76 (C), 99 (C), 122 (C), 126 (C), 130 (C), 134 (C)
		O: 137/ , 58 (C), 93 (C), 94 (C), 99 (C), 1007/ (C) , 131^{9,10/} , 134 (C)	O: 99 (C), 1007/ (C) , 125 (C), 127 (C), 130 (C)
New York	A	T: 27 (C), 29 (C), 33 (C), 38 (C), 46 (C), 108 (C), 113 (C)	T: 27 (C), 108 (C), 113 (C)
		LM: 31 (C), 46 (C), 126 (C), 130 (C)	LM: 38 (C), 58 (C), 100 (C) O: 38 (C), 136 (C)

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
New York	B	T: 1 (c), 2 (p), 22 (C), 24 (C), 27 (C), 29 (C), 38 (C), 46 (C), 54 (c,p), 74 (C), 76 (C), 81 (C), 84 (C), 99 (C), 108 (C), 113 (C), 130 (C)	T: 1 (C), 27 (C), 74 (C), 76 (C), 93, 108 (C), 113 (C)
		LM: 1 (C,P), 8 (C,P), 9 (C,P), 13, 14 (C), 29 (C), 31 (C), 38 (C), 41 (p), 42 (P), 44 (C,P), 46 (C,P), 52 (C), 58 (C), 71 (C), 72 (C), 70 (C,P), 76 (p), 92 (C), 93 (C), 99 (C), 100 (C,P), 107 (C,P), 113 (C,P), 126 (C), 127 (C,P), 130 (C), 134 (C,P), 136 (P)	LM: 8 (C), 9 (C), 38 (C), 44 (C), 46 (C), 52 (C), 58 (C), 70 (C), 71 (C), 72 (C), 76 (C), 93, 99 (C), 107 (C), 108 (C), 113 (C), 126 (C), 127 (C), 139 (C), 134 (C), 136 (C)
		O: 38 (C), 61 (C), 100 (C), 136 (C)	
	C	T: 1 (c), 22 (C), 24 (C), 27 (c), 29 (C), 64 (C), 76 (C,P), 93 (C), 94 (C), 113 (c,p), 128 (c), 130 (C)	T: 1 (C), 61 (C), 64 (C), 74, 76 (C), 81 (C), 82, 92 (C), 113 (C), 134 (C)
	LM: 2 (C,P), 58 (C), 93 (C), 113 (C), 125 (C), 126 (p), 130 (C)	LM: 38 (C), 61 (C), 81 (C), 82, 100 (C), 125 (C), 126 (C)	
		O: 38 (C), 61 (C), 126 (C), 136 (C)	
		LO: WY (C)	LO: 100 (C)
OE-1		LM: Ca (Po)	
	A	T: 41 (C)	

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
OE-1	A (Cont'd.)	LM: 14 (C), 130 (C)	LM: 8 (C), 41 (C), 52 (C), 102 (C), 126 (C)
		LO: 130 (C, Po)	LO: 126 (C)
	B	T: 38 (C)	
		LM: 2 (C), 14 (C), 31 (Po), 38 (C), 52 (C), 107 (C), 119 (C), 118 (C), 126, 130 (C)	LM: 38 (C), 52 (C), 61 (C), 107 (C), 126 (C), 130 (C)
		O: 54, 134 (C)	
OE-2	A	LM: 13, 38 (C), 46 (C), 107 (C), 130 (C)	LM: 38 (C)
			O: 38 (C)
	B	T: 38 (C)	
		LM: 13, 38 (C), 130 (C)	LM: 38 (C)
			O: 38 (C), 100 (C)
	C	T: 46 (C)	
LM: 2 (C), 6 (C), 8, 13, 31 (pO), 38 (C), 41 (C), 42 (C), 112 (C), 113 (C), 114 (C), 118 (C), 119 (C), 130 (C)		LM: 8 (C), 38 (C), 41 (C), 114 (C), 126 (C)	
		O: 38 (C), 126 (C)	
OE-3	A	LM: 14 (C), 38 (C)	LM: 38 (C)
			O: 38 (C)
	B	T: 34 (C), 27 (C)	
		LM: 13 (C), 14 (C), 38 (C)	LM: 38 (C)
	O: 100 (C)	O: 38 (C), 100 (C)	

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
OE-3	C	T: 1 (C), 22 (C), 24 (C), 34 (C), 27 (C), 29 (C), 38 (C), 130 (C)	T: 1 (C)
		LM: 13 (C), 14 (C), 38 (C)	LM: 38 (C)
		O: 14 (C)	O: 38 (C)
OE-4	A	T: 2 (C), 22 (C), 24 (C), 27 (C), 38 (C)	
		LM: 38 (C)	LM: 38 (C)
		O: 14 (C)	O: 38 (C), 100 (C)
	B	LM: 13 (C), 38 (C)	LM: 38 (C), 67 (C)
			O: 38 (C), 100 (C)
	C	T: 1 (C), 11 (C), 22 (C), 24 (C), 27 (C), 29 (C), 38 (C), 41 (C), 74 (C), 76 (C), 78 (C), 80 (C), 84 (C), 86 (C), 126 (C), 129 (C), 130 (C), 131 (C)	T: 1 (C)
LM: 2 (C), 4 (P), 6 (C), 9 (C), 13 (C), 14 (C), 38 (C), 40 (P), 41 (C), 42 (C), 44 (C), 46 (C), 50 (C), 58 (P), 61 (P), 64 (C), 78 (C), 92 (C), 93 (C), 95 (C), 99 (P), 102 (P), 107 (C,P), 108 (C), 110 (C), 112 (C), 113 (C), 114 (C), 116 (C), 118 (C), 120 (C), 126 (C), 130 (C), 131 (C)		LM: 4 (C), 6 (C), 9 (C), 14 (C), 38 (C), 40, 41 (C), 44, 46 (C), 50 (C), 57 (C), 58 (C), 61 (C), 64 (C), 78 (C), 92 (C), 95 (C), 96, 99 (C), 101 (C), 102 (C), 107 (C), 108 (C), 110 (C), 112 (C), 114 (C), 116 (C), 123 (C), 126 (C), 129 (C), 135 (C)	

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
OE-4	C (Cont'd.)	O: 126(C)	O: 38(C)
	D	T: 1(C), 22(C), 24(C), 27(C), 29(C), 31(C), 38(C), 86(C)	T: 1(C)
		LM: 12(C,P), 13, 14, 31(C), 38(C), 29(C), 41(C), 126(C)	LM: 9(C), 13(C), 38(C), 29, 46(C), 52(C), 58(C), 76(C), 84(C), 99(C), 107(C), 113(C), 114(C), 126(C), 127(C)
		O: 14(C), 100(P), 126(C)	O: 38(C), 54(C), 61(C), 100(C)
OE-5	A	LM: 14, 38(C)	LM: 38(C)
			O: 38(C), 61(C), 100(C), 136(C)
	B	T: 1(C), 11(C), 12(C), 14(C), 22(C), 24(C), 27(C), 41(C), 86(C), 130(C)	T: 1(C)
		LM: 13, 14, 38(C), 113(C)	LM: 38(C)
		O: 14(C), 131(C)	O: 38(C), 61(C), 136(C)
	C	T: 38(C)	

Table 8. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
OE-5	C (Cont'd.)	LM: 38 (C), 113 (C), 114 (C), 126 (C)	LM: 38 (C), 58 (C), 101 (C), 114 (C), 126 (C) 0: 38 (C), 61 (C), 100 (C), 136 (C)

1/ Numerical species code according to Table 12.

2/ Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (PO); see text for definitions. When information was not available to unequivocally support the assignment of one of the classifications, no classification was given.

3/ Waters within the geographic area are classified as tributary (T), littoral mainland (LM), offshore (O), or littoral offshore (LO); see text for definitions.

4/ Species listed by State of Michigan as "threatened."

5/ Species listed by State of Ohio as "endangered."

6/ Species listed by State of Pennsylvania as "endangered or threatened."

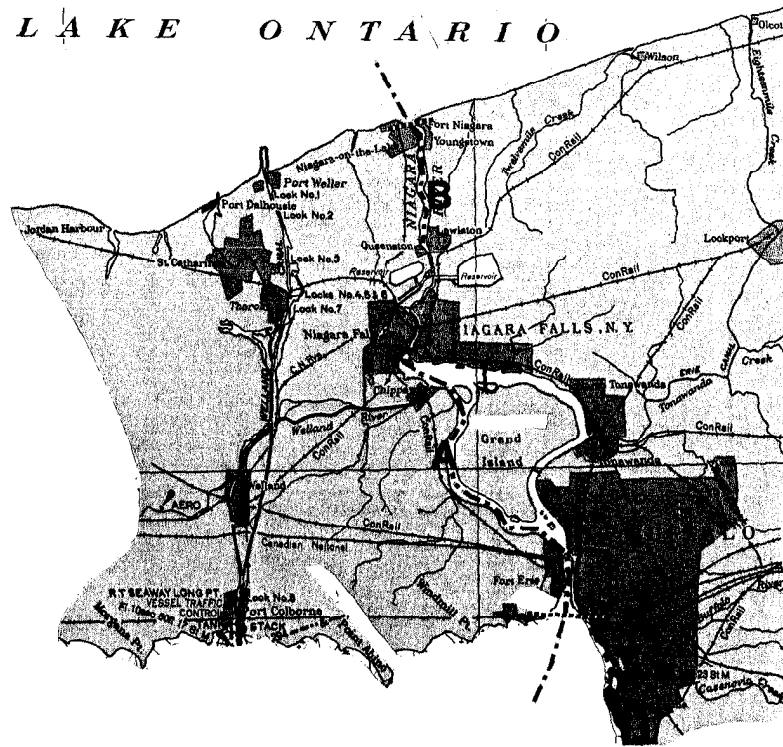
7/ Species listed by State of Pennsylvania as "uncommon or rare."

8/ Species listed by State of Michigan as "endangered."

9/ Species listed by U.S. Department of Interior as "endangered."

10/ Species listed by State of Pennsylvania as "endangered or threatened" and "probably extinct."

LAKE ONTARIO



126

NIAGARA RIVER

- International Boundary - - - - -
- State Boundary - . - . - .
- Statistical Fishing District
- Geographic area —————



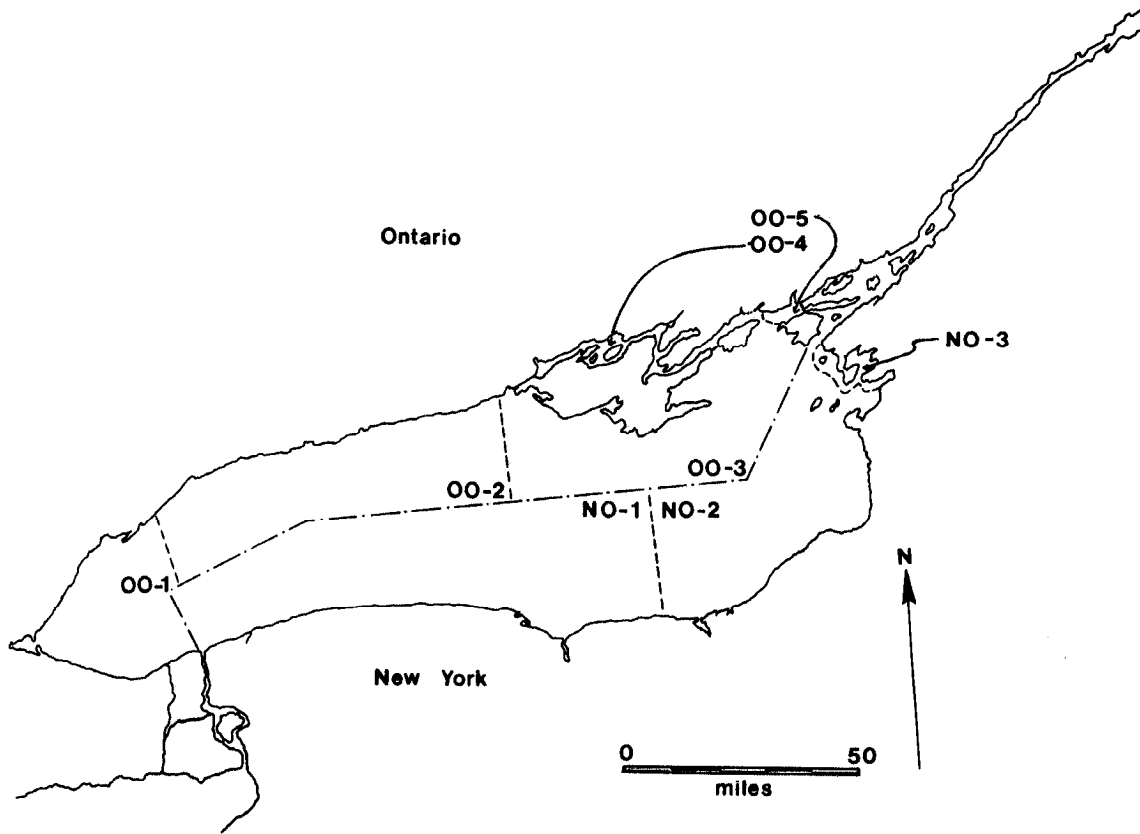
Table 9. **Fishes**^{1/} with spawning or nursery **areas**^{2/} in tributary, littoral or navigation channel water^{3/} of the Niagara River.

Geographic area	Spawning area	Nursery area
A	T: 41(C), 42(P), 85(C), 86(C), 114(C), 118(C), 130(C)	T: 85(C)
	L: 2(C), 38(C), 41(C,Po), 42(C), 108(C), 113(C), 114(C), 118(C)	L: 4(C), 42(C), 58(C), 76(C), 108(C), 113(C), 126(C), 130
B	L: 13(C), 27(C), 28(C), 41(C), 113(C), 118(C)	L: 1(Po), 104(C), 130

^{1/} Numerical species code according to Table 12.

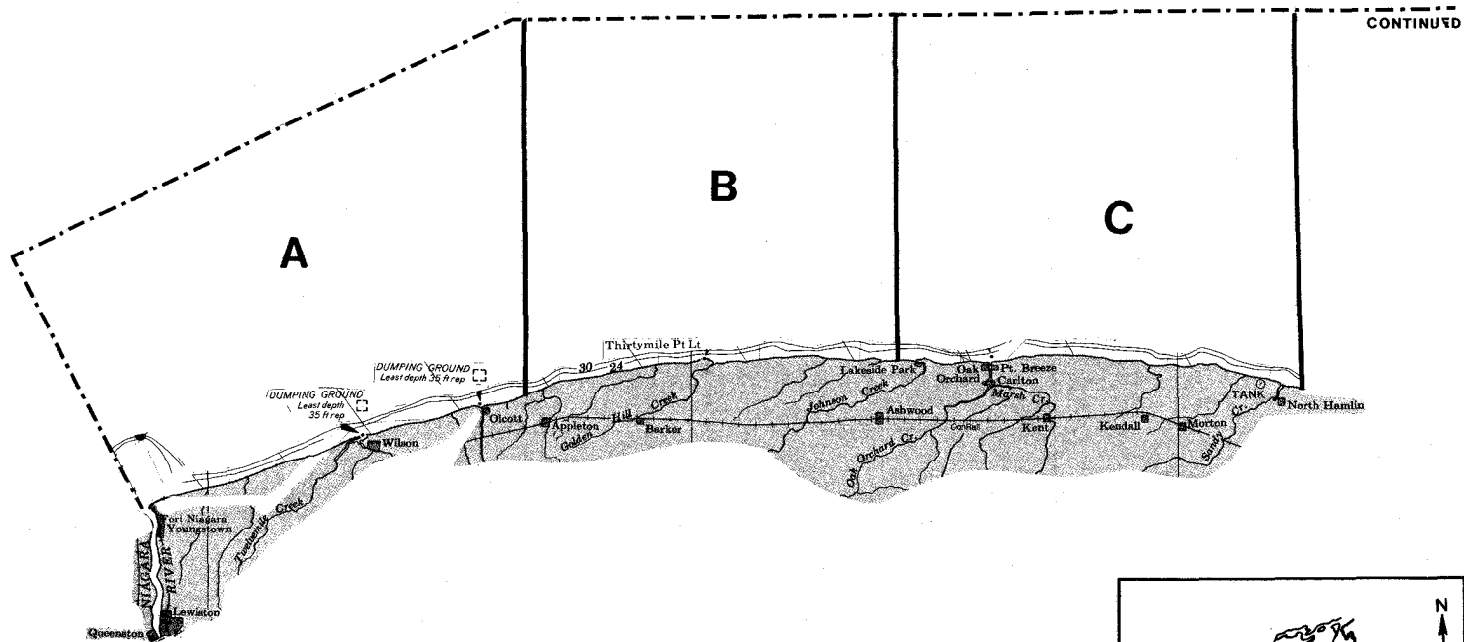
^{2/} Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (PO); see text for definitions.

^{3/} Waters within the geographic area are classified as tributary (T), littoral (L) or navigation channel (N); see text for definitions.

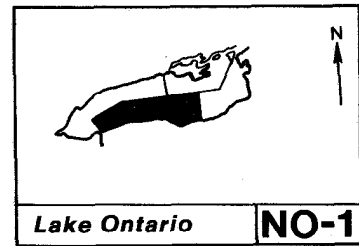


LAKE ONTARIO

- International Boundary - - - - -
- State Boundary ————
- Statistical Fishing District ······
- Geographic area —————



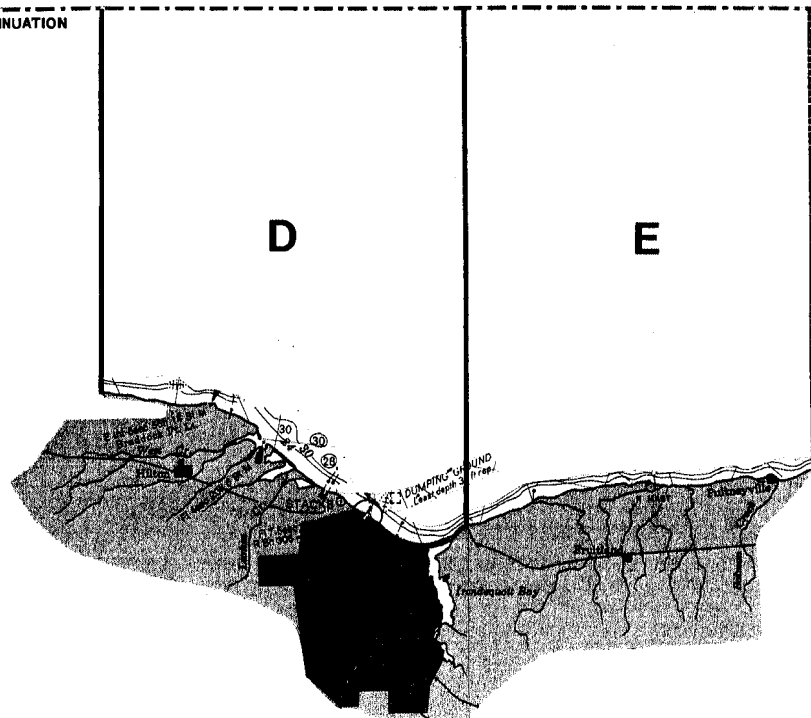
CONTINUED

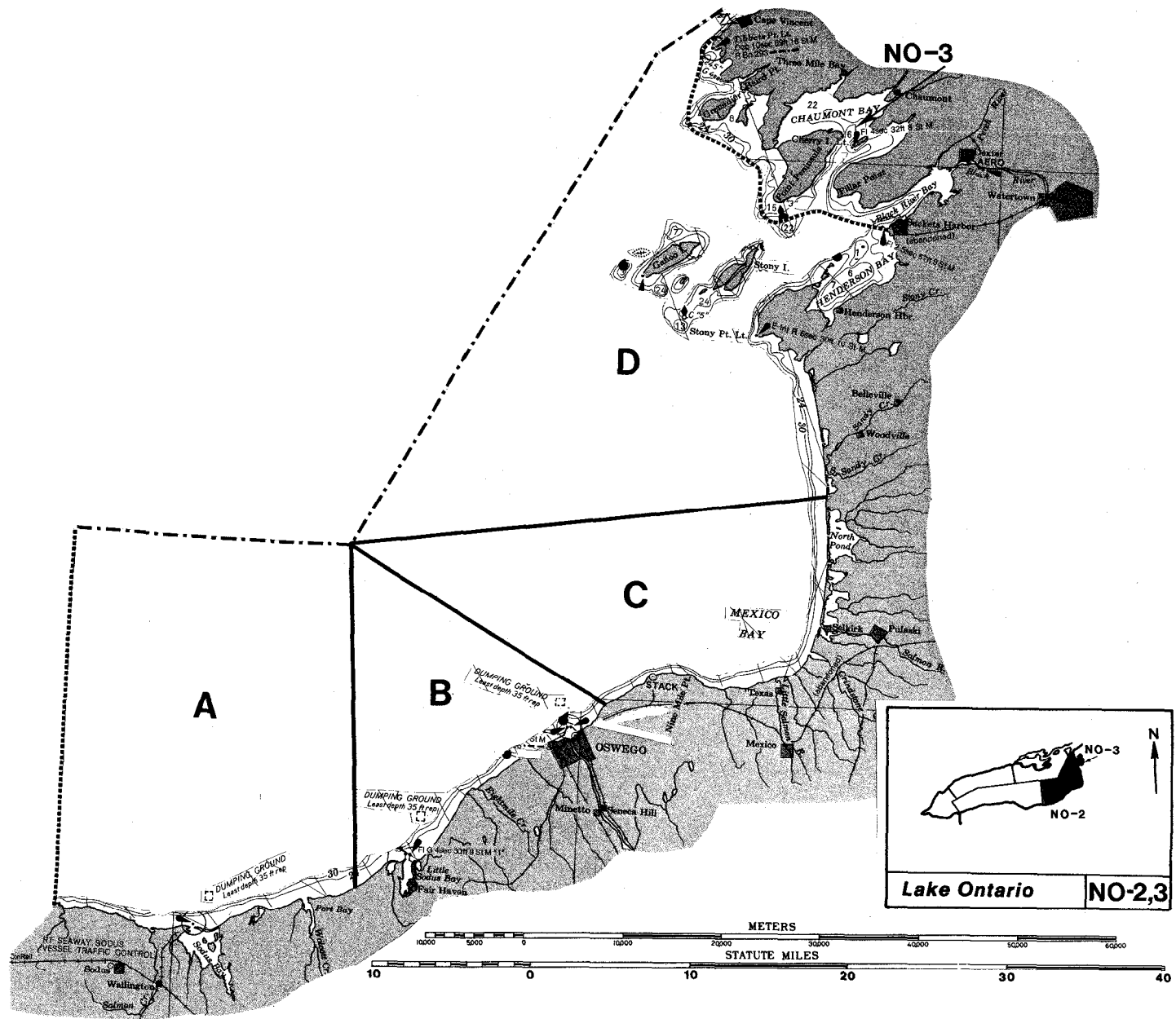


Lake Ontario

NO-1

CONTINUATION





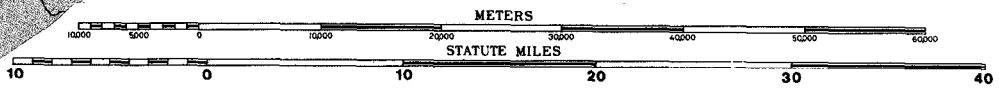
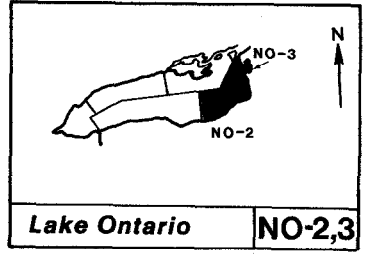
NO-3

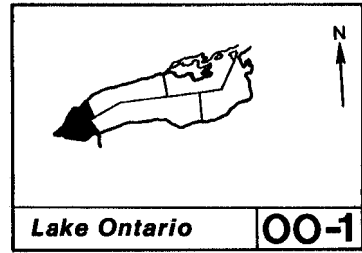
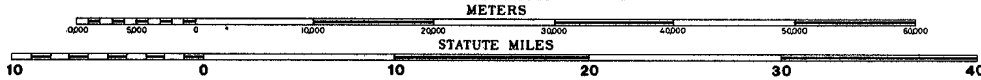
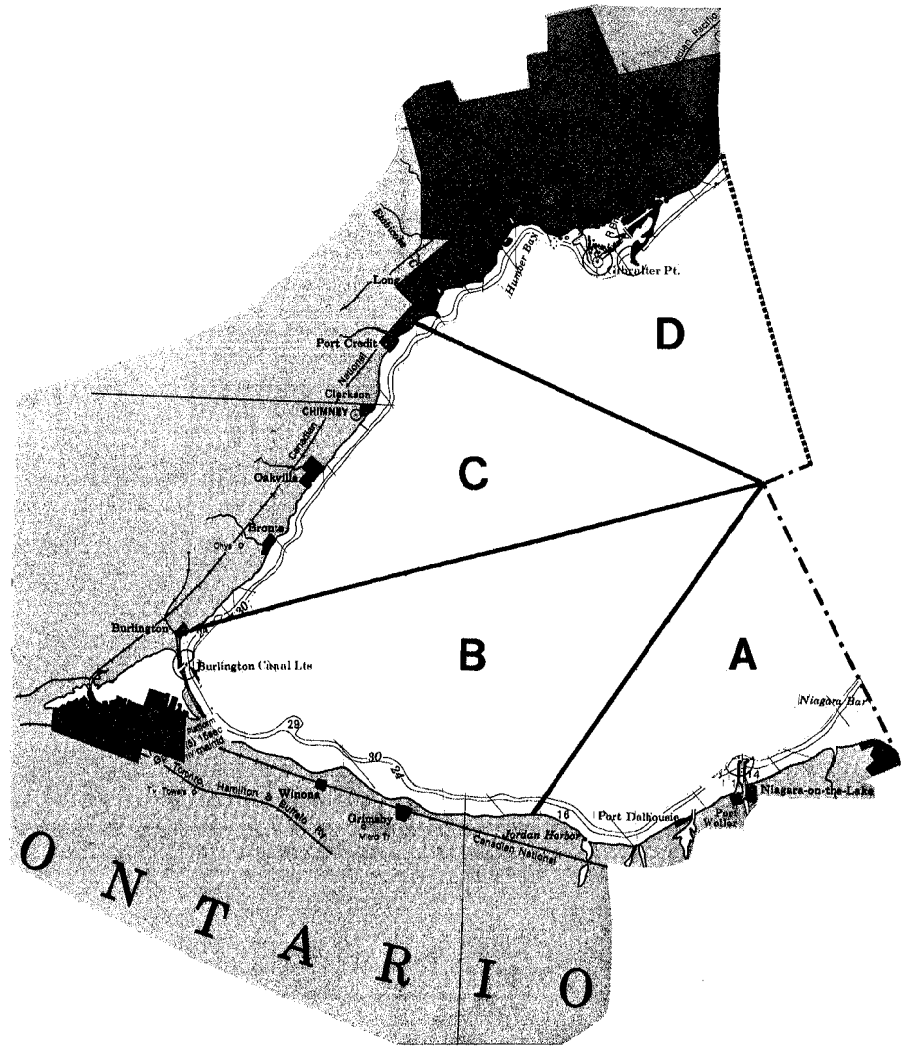
D

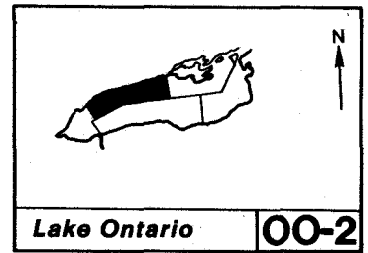
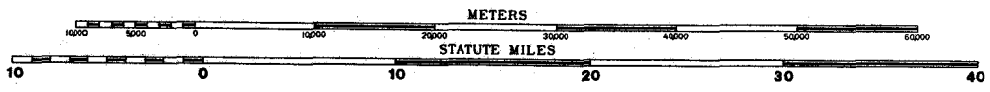
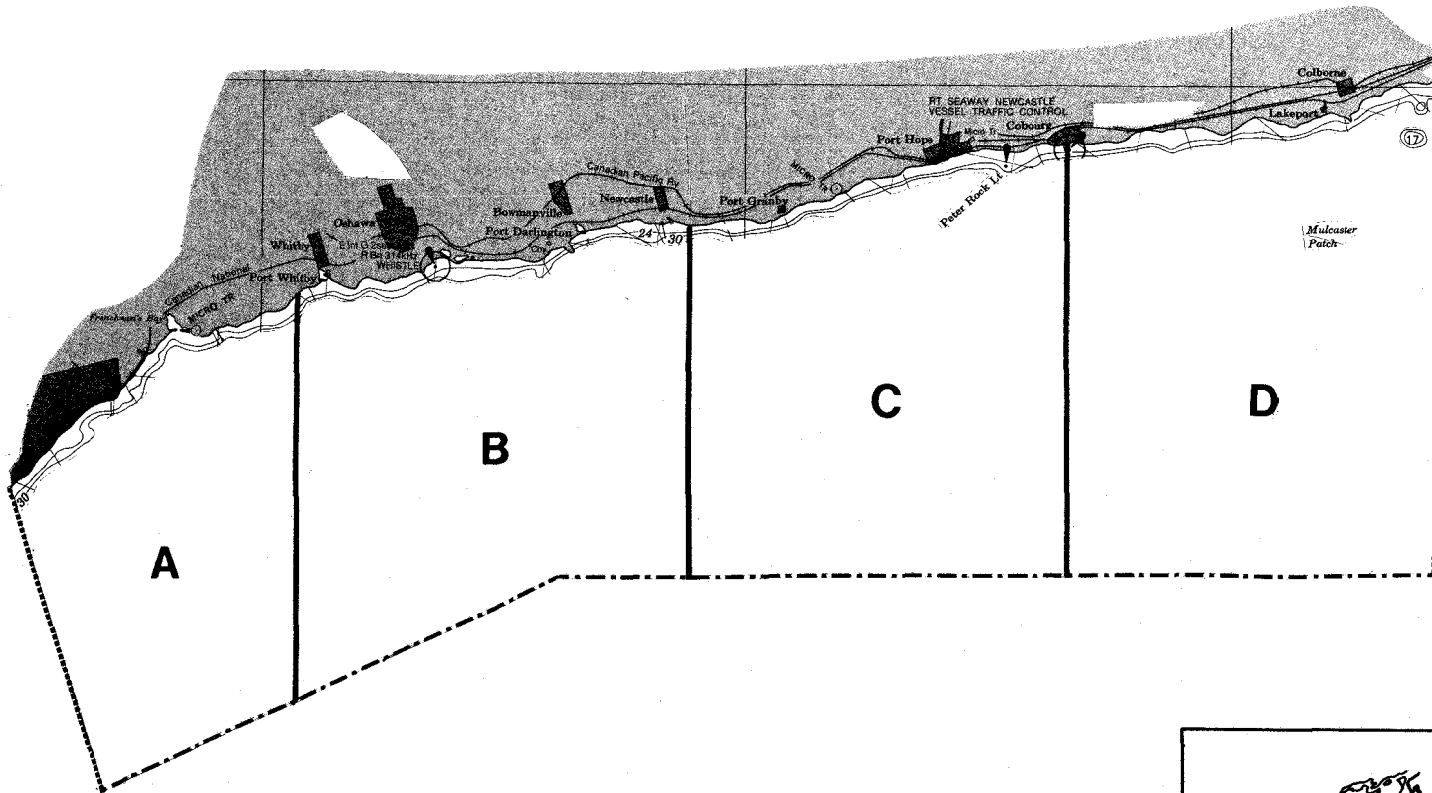
C

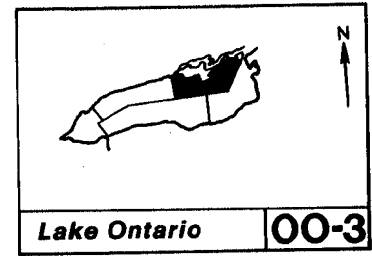
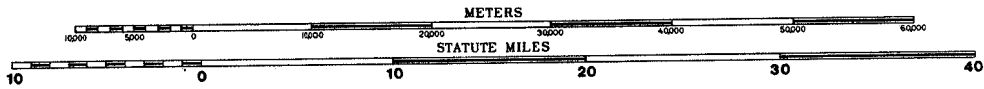
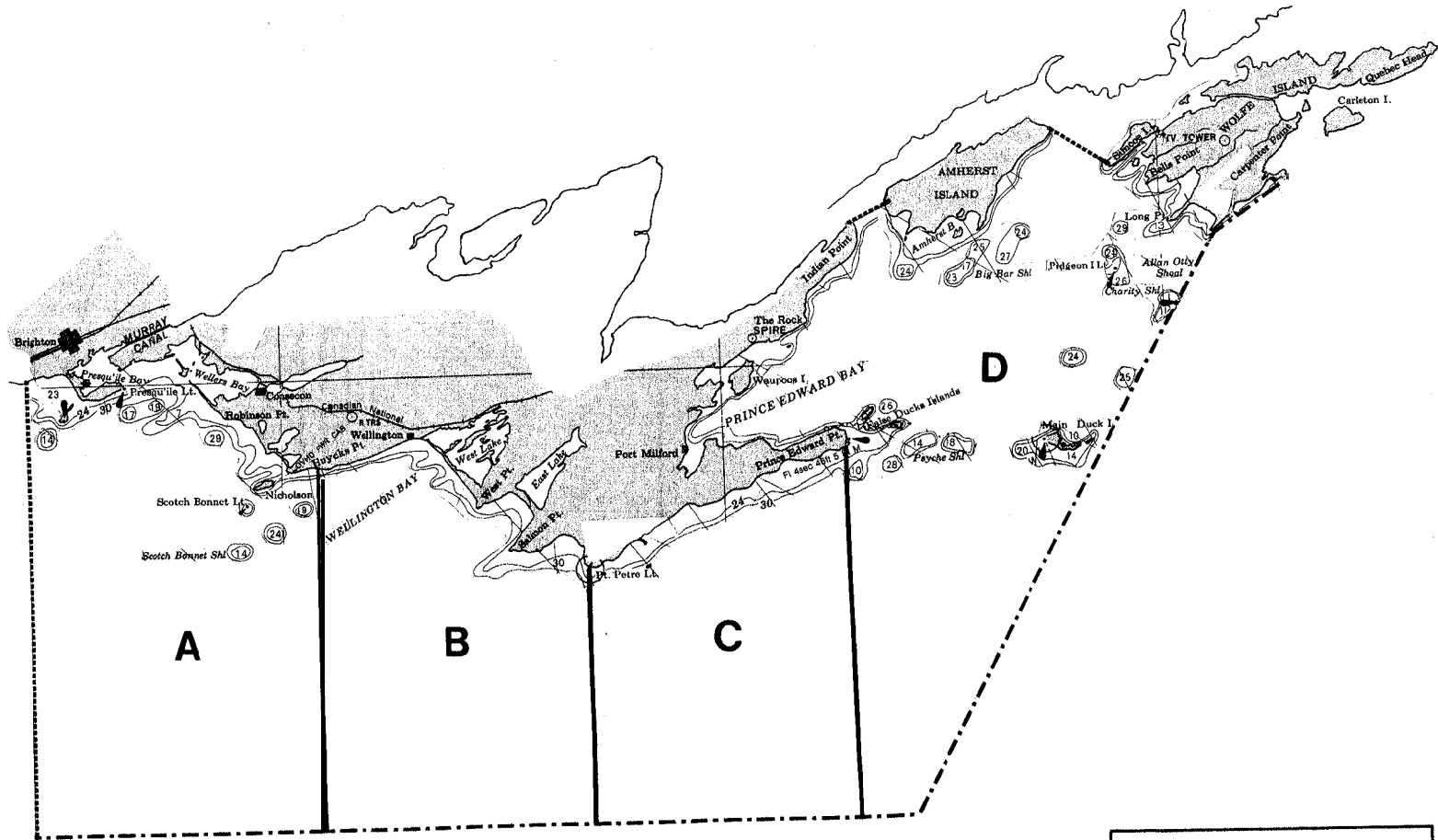
A

B









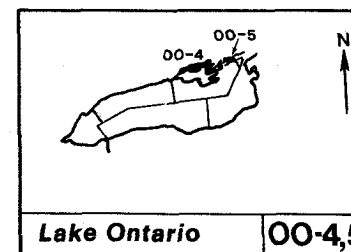
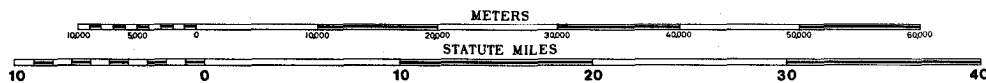
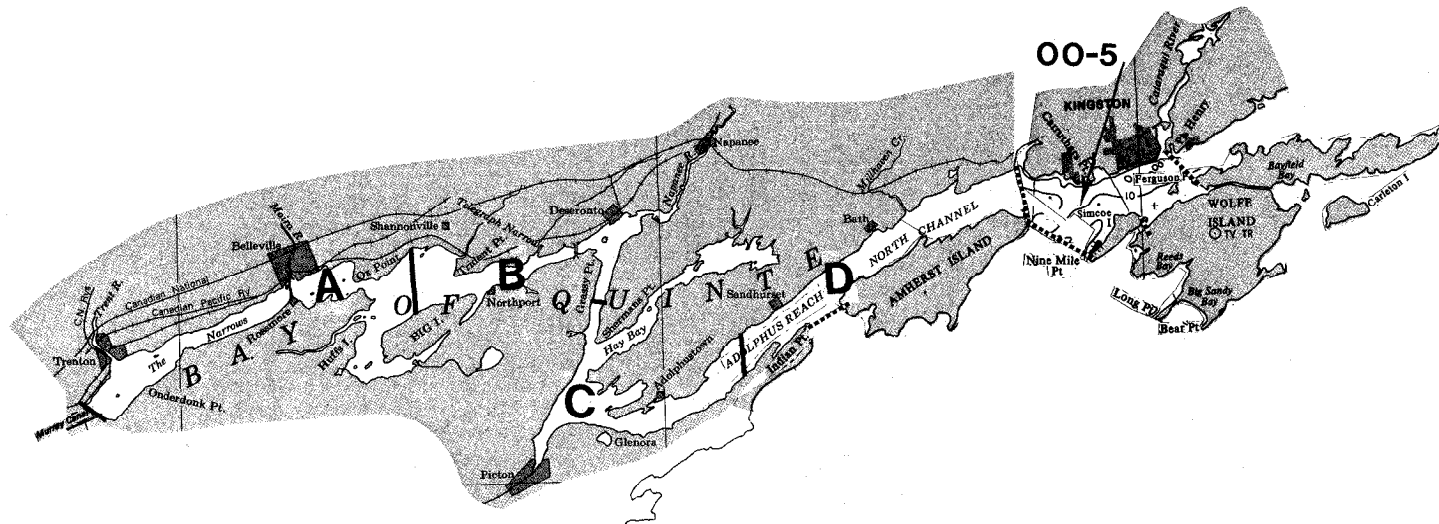


Table 10. **Fishes^{1/}** with spawning or nursery **areas^{2/}** in tributary, littoral mainland, offshore, or littoral offshore **waters^{3/}** of Lake Ontario.

Statistical fishing district	Geographic area	Spawning area	Nursery area
NO-1	A	T: 22 (C), 24 (C), 27 (C), 28 (C), 29 (C), 38 (C), 41 (C), 52 (C), 113 (C)	T: 45 (C)
		LM: 2 (C), 8 (C), 38 (C), 131^{4/}	LM: 8 (C), 38 (C)
		O: 13, 131^{4/}	
	B	T: 22 (C), 27 (C), 38 (C), 41 (C)	T: 45 (C)
		LM: 8 (C), 38 (C)	LM: 8 (C), 38 (C)
	C	T: 22 (C), 24 (C), 27 (C,P), 28 (C), 29 (C), 38 (C), 41 (C), 46 (C), 76 (C), 92, 106 (C), 108 (C), 110 (C), 112 (C), 113 (C), 126 (Po)	T: 45 (C), 52 (C), 108 (C), 110 (C), 112 (C), 113 (C)
		LM: 8 (C), 29 (C), 38 (C), 52 (C), 114 (P)	LM: 8 (C), 38 (C)
	D	T: 1 (C), 6 (P), 8 (C), 22 (C), 24 (C), 27 (C), 28 (C), 38 (C), 41 (C), 46 (C), 76 (C), 81 (P), 92 (C), 113 (C)	T: 1 (C), 27 (C), 113 (C)
		LM: 8 (C), 13 (C), 14 (C), 38 (C), 41 (C), 44 (p), 46 (C), 58 (C), 92 (C), 104 (C), 106 (C), 108 (C), 110 (C), 113 (C), 114 (C), 125 (C), 126 (C), 130 (C)	LM: 8 (C), 38 (C), 41 (C), 70 (C), 106 (C), 116 (C), 125 (C), 126 (C), 139 (C)
		O: 136 (C)	
	E	T: 27 (C), 29 (C), 38 (C), 45 (C), 60 (Po), 64 (Po), 113 (C)	T: 45 (C)

Table 10. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
NO-1	E (Cont'd.)	LM: 8 (C), 38 (C), 60 (Po), 64 (Po), 113 (C), 125 (C)	LM: 8 (C), 38 (C), 46 (C), 125 (C), 126 (C) O: 8 (C), 125 (C)
NO-2		LM: 42 (P)	
	A	T: 1 (C), 22 (C), 24 (C), 27 (C), 29 (C), 38 (C), 92 (C), 104 (Po), 113 (Po)	T: 1 (C)
		LM: 8 (C), 13 (C), 14 (C), 31 (C), 38 (C), 41 (C), 92 (C), 108 (C), 113 (C), 130 (C)	LM: 8 (C), 27 (P), 38 (C), 41 (C), 52 (C)
	B	T: 1 (C), 22 (C), 24 (C), 27 (C), 28 (C), 29 (C), 38 (C), 41 (C), 92 (C), 106 (C), 130 (C), 134 (C)	T: 1 (C), 41 (C), 45 (C), 113 (C), 114 (C)
		LM: 8 (C), 9 (C), 13 (P), 38 (C), 44 (C), 46 (C), 52 (C), 54 (C), 100 (C), 104 (C), 106 (P), 108 (C), 113 (C), 120 (C), 125 (C), 126 (C), 130 (C), 132 (C), 134 (C)	LM: 8 (C), 9 (C), 14, 38 (C), 46 (C), 52 (C), 54 (C), 58 (C), 71 (C), 100 (C), 106 (C), 107 (C), 125 (C), 126 (C), 133 (C), 135 (C), 139 (C)
			O: 8 (C), 38 (C), 46 (C), 71 (C), 106 (C), 125 (C), 126 (C), 133 (C), 135 (C)
	C	T: 1 (C), 22 (C), 24 (C), 27 (C), 28 (C), 29 (C), 38 (C), 41 (C), 58 (C), 76 (C,P), 92 (C), 104 (c), 108 (C), 113 (C), 130 (C)	T: 1 (C), 24 (C), 27 (C), 92 (C), 113 (C)
		LM: 8 (C), 9 (C), 13 (C), 14 (C), 35 (C), 31 (p), 38 (C), 41 (C), 46 (C), 54 (C), 87 (C), 91, 92 (C), 99 (C), 100 (C), 104 (C), 106 (C), 108 (C), 113 (P),	LM: 8 (C), 9 (C), 22 (C), 35 (C), 38 (C), 44 (C), 46 (C), 52 (C), 54 (C), 58 (C),

Table 10. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
NO-2	C (cont'd.)	LM: 118(C), 125(C), 126(C), 130(C)	LM: 76(C), 92(C), 99(C), 100(C), 104(C), 106(C), 107(C), 113, 125(C), 126(C), 135(C)
		O: 131⁴/	
	D	T: 1(C), 22(C), 24(C), 27(C), 28(C), 29(C), 38(C), 41(C), 76(C), 92(C), 110(C), 113(C), 114(C), 126(C)	T: 1(C), 41(C), 92(C), 113(C), 114(C)
		LM: 8(C), 31(C), 38(C), 41(C), 46(C), 76(C), 92(C), 110(C), 114(C), 116(C), 126(C)	LM: 8(C), 38(C), 41(C), 46(C), 58(C), 65(C), 76(C), 92(C), 106(C), 110(C), 112(C), 114(C)
		LO: 13(C), 14(C), 31(C), 113(C)	LO: 113(C)
NO-3		LM: 42(P)	
	A	T: 1(C), 2(C,PO), 4, 28(C), 38(C), 41(C), 76(C), 92(C,Po), 93(C), 106(C), 110(C), 113(C), 114(C), 116(C), 126(C), 130(C)	T: 1(C), 41(C), 46(C), 110(C), 114(C), 116(C)
		LM: 2(C), 4(C), 8(C), 13(C), 74(C), 31(C), 38(C), 41(C,Po), 50(C), 58(C), 76(C), 92(C), 108(C), 110(C), 113(C), 114(C), 116(C), 126(C), 130(C), 131⁴/ (C)	LM: 8(C), 38(C), 41(C), 46(C), 65(C), 92(C), 99(C), 106(C), 108(C), 110(C), 113(C), 114(C), 125(C), 126(C), 134(C)

Table 10. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area	
00-1	A	O: 13(C)		
		T: 13(C), 21(C), 22(C), 24(C), 27(C), 28(C), 38(C), 41(C), 87(C), 118(C), 130(C)		
		LM: 8(C), g(C), 13, 31(C), 38(C), 46(C), 76(C), 92(C), 108	LM: 38(C), 108	
		O: 36(C)		
	B	T: 1(C), 9(C), 13(C), 22(C), 24(C), 27(C), 28(C), 38(C), 41(C), 76(C), 87(C), 126(C), 129(C), 131(C), 130(C)	T: 1(C), 13(C), 115(C)	
		LM: 4(C), 6(C), 8(C), g(C), 13(C), 14(C), 29(C), 31(C), 38(C), 41(C), 44(C), 46(C), 92(C), 93(C), 106(C), 108(C), 110(C), 113(C), 114(C), 116(C)	LM: 4(C), 14(C), 38(C), 41(C), 46(C), 52(C), 58(C), 68(C), 76(C), 110(C), 112(C), 114(C)	
		O: 13(C), 15		
		T: 1(C), 22(C), 24(C), 27(C), 28(C), 29(C), 38(C), 76(C), 87(C), 113(C), 118(C), 130(C)	T: 1(C)	
	C	LM: 8(C), 13, 19, 31(C), 38(C)	LM: 38(C)	
		O: 36(C)		
		D	T: 1(C), 2(C), 22(C), 24(C), 27(C), 28(C), 29(C), 38(C), 41(C), 45(C), 46(C), 54(C), 64(C), 67(C), 76(C), 84(C), 87(C), 113(C), 118(C), 116, 129(C), 131(C), 130(C)	T: 1(C), 28(C), 41(C), 75(C)
			LM: 6(C), 8(C), 13(C), 14(C), 15, 19, 31(C), 38(C), 41(C), 44(C), 46(C), 54(C), 58(C), 64(C), 92(C), 99(C), 100(C), 104(C), 107(C), 110(C), 116(C), 125(C), 126(C)	LM: 8(C), 13(C), 38(C), 41(C), 44(C), 46(C), 92(C), 93(C), 114(C)

Table 10. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area	
00-1	D (Cont'd.)	O: 36(C), 45		
00-2	A	T: 1(C), 22(C), 24(C), 27(C), 28(C), 38(C), 41(C), 54(C), 66(C), 67(C), 76(C), 87(C), 118(C), 126(C), 130(C)	T: 1(C)	
		LM: 8(C), 14(C), 31(C), 38(C), 46(C), 52(C), 92(C), 104(P), 106, 126(C)	LM: 8(C), 38(C), 46(C), 92(Po), 106(C)	
		B	T: 1(C), 22(C), 24(C), 27(C), 28(C), 29(C), 38(C), 41(C), 54(C), 66(C), 76(C), 87(C), 107(C), 118(C), 130(C)	T: 1(C)
		LM: 8(C), 14(Po), 26(C,Po), 31(C), 38(C), 41(C), 104(P), 107(C), 126(C)	LM: 8(C), 38(C), 104(C)	
	C	O: 14(Po), 26(Po)		
		T: 1(C), 2, 22(C), 24(C), 27(C), 28(C), 29(C), 38(C), 87(C)	T: 1(C)	
		LM: 8(C), 14(C), 27(C), 38(C), 41(C), 46(C), 76(C), 104(P), 92(C), 110(C)	LM: 8(C), 38(C), 41(C), 76(C), 92(C), 110(C)	
		O: 14(C), 27(C)		
	D	T: 1(C), 8(C), 22(C), 23(C), 24(C), 27(C), 28(C), 38(C)	T: 1(C), 38(C)	
		IA: 8(C), 14(C), 38(C)	LM: 8(C), 38(C)	
		O: 14(C)		
	00-3	A	T: 1(C), 28(C), 38(C), 41(C), 130(C)	T: 1(C)

Table 10. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
00-3	A (Cont'd.)	LM: 8 (C), 13 (C), 22 (C), 34 (C), 27 (C), 31 (C), 38 (C), 41 (C), 113 (C), 114 (C), 126 (C), 130 (C)	LM: 8 (C), 38 (C)
		LO: 31 (C)	
	B	T: 41 (C), 38 (C), 113 (C), 114 (C), 130 (C)	
		LM: 8 (C), 14 (C), 34 (C), 38 (C), 41 (C), 114 (C), 126 (C), 130 (C)	LM: 8 (C), 38 (C)
	C	T: 38 (C)	
		LM: 8 (C), 14 (C), 38 (C)	LM: 38 (C)
	D	T: 38 (C), 114 (C), 126 (C)	T: 75
		LM: 8 (C), 13 (C), 14 (C), 38 (C), 41 (C), 113 (C), 114 (C), 126 (C)	LM: 38 (C), 75
			O: 136
		LO: 14 (C), 31 (C), 41 (C), 99 (C), 113 (C), 126 (C)	
00-4		T: 38 (C), 76 (P)	
		LM: 4 (C), 6 (C), 8 (C), 9 (C), 41 (C), 46 (C), 92 (C), 113 (C), 114 (C)	LM: 76 (C), 112 (C), 113 (C), 130 (C)
	A	T: 1 (C), 2 (p), 22 (C), 24 (C), 27 (C), 28 (C), 38 (C), 41 (C), 130 (C)	T: 1(C)
		LM: 8 (C), 9 (P), 13 (C), 14 (C), 38 (C), 41 (C), 106 (P), 126 (P), 130 (C)	LM: 8 (C), 9 (C), 14 (C), 38 (C), 106 (C), 126 (C)
	B	T: 1 (C), 22 (C), 24 (C), 27 (C), 28 (C), 130 (C)	T: 1 (C)
		LM: 8 (C), 9 (P), 13 (C), 14 (C), 38 (C), 106 (P), 126 (P), 130 (C)	LM: 8 (C), 9 (C), 14 (C), 38 (C), 106 (C), 126 (C)

Table 10. Cont'd.

Statistical fishing district	Geographic area	Spawning area	Nursery area
00-4	C	LM: 8 (C), 14 (C), 38 (C), 106 (C,P), 126 (P), 130 (C)	LM: 8 (C), 9 (C), 14 (C), 38 (C), 106 (C), 126 (C)
			O: 9 (C), 106 (C), 126 (C)
	D	T: 8 (C), 22 (C), 24 (C), 27 (C), 38 (C), 106 (C), 126 (C)	T: 8 (C), 41 (C), 106 (C)
		LM: 8 (C), 22 (C), 38 (C), 53 (C), 67 (C), 106 (C), 126 (C)	LM: 8 (C), 9 (C), 13 (C), 14 (C), 38 (C), 41 (C), 106 (C), 110 (C), 114 (C), 126 (C)
		O: 9 (C), 106 (C), 126 (C)	
		LO: 113 (C), 126 (C)	LO: 106 (C), 126 (C)
00-5	A	T: 38 (C), 41 (C), 113 (C), 114 (C)	
		LM: 8 (C), 38 (C), 41 (C), 113 (C), 114 (C), 126 (C)	LM: 38 (C)
		LO: 113 (C), 114 (C)	

1/ Numerical species code according to Table 12.

2/ Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (PO); see text for definitions. When information was not available to unequivocally support the assignment of one of the classifications, no classification was given.

3/ Waters within the geographic area are classified as tributary (T), littoral mainland (LM), offshore (O), or littoral offshore (LO); see text for definitions.

4/ Species listed by U.S. Department of Interior as "endangered" and by State of New York as "endangered and possibly extinct."

Table 11. **Fishes^{1/}** with spawning or nursery **areas^{2/}** in tributary, littoral or navigation channel water& of the St. Lawrence River.

Geographic area	Spawning area	Nursery area
A	T: 8 (C), 38 (C), 41 (C), 51, 76 (C), 92 (C), 93 (C), 108 (C), 110 (C), 113 (C), 114 (C), 116 (C)	T: 8 (C), 41 (C), 92 (C), 108 (C), 110 (C), 112 (C), 114 (C), 116 (C)
	L: 8 (C,P), 22 (C), 31 (C), 41 (C,P), 42 (C), 49 (p), 53 (P), 58 (C,P), 64 (P), 67, 92 (C), 94 (C), 101 (C), 108 (C), 110 (C), 113 (C), 114 (C), 125 (C), 126 (C)	L: 8 (C), 41 (C), 46 (C), 92 (C), 110 (C), 113 (C), 126 (C)
		N: 8 (C)
	T: 8 (C), 41 (C), 76 (C), 92 (C), 93 (C), 110 (C), 113 (C), 114 (C), 116 (C)	T: 8 (C), 41 (C), 76, 92, 110 (C), 114 (C), 116 (C)
	L: 8 (C), 41 (C,Po), 42 (P), 51 (C), 85 (C), 93 (C), 113 (C,Po), 114 (P), 116 (C),	L: 8 (C), 41 (C), 85 (C), 92 (C), 93 (C), 110 (C), 113 (C), 114 (C), 126 (C)
		N: 8 (C)
	T: 8 (C), 41 (C), 42 (C), 92 (C), 93 (C), 113 (C), 114 (C), 116 (C), 130	T: 8 (C), 41 (C), 113 (C), 114 (C), 130
	L: 2 (C), 8 (C), 41 (Po), 42 (C), 58, 92 (C), 93 (P), 108 (C), 112 (C), 113 (C), 116 (C), 126 (C,Po) 127 (Po)	L: 8 (C), 38 (C), 41 (C), 93 (C), 100 (C), 113 (C), 114 (C), 126 (C)
		N: 126 (C)
	T: 2 (C), 8 (C), 11 (C), 28 (C), 41 (C), 46 (C), 50 (C), 54 (C), 58 (C), 64 (C), 76 (C), 84 (C), 92 (C), 108 (C), 110 (C), 113 (C), 123 (C), 126 (C), 127 (C), 130 (C)	T: 8 (C), 41 (C), 42, 113 (C), 126 (C)
	L: 4 (C), 8 (C), 42 (P), 46 (C), 54 (C), 58 (C), 64 (C), 81, 100 (C), 110 (C), 113 (C,P), 123 (C), 126 (C)	L: 8 (C), 13 (C), 14, 42, 76 (C), 100 (C), 113 (C), 114 (C), 126 (C)
		N: 125 (C)

Table 11. Cont'd.

Geographic area	Spawning area	Nursery area
E	T: 8(C), 38(C), 41(C), 92(C), 113(c,P), 126(P), 130(C)	T: 4(C), 8(C), 41(C), 130(C)
	L: 8(C), 42(P), 46(C), 92(C), 123(C), 126(P)	L: 4(C), 8(C), 13(C), 46(C)
	N: 8, 38(C), 100	
F	T: 1, 2(C,Po), 8(C), 28(C), 41(C), 76(C), 81(C), 84(C), 85(P), 113(C,P)	T: 4(C), 8(C), 41(C), 76(C), 81(C), 113(C), 130(C)
	L: 2(C,P,Po), 8(C), 42(P), 46(C), 123(C), 130(C)	L: 6(C), 8(C), 13(C) 113(C)
	N: 113(P)	

1/ Numerical species code according to Table 12.

2/ Spawning or nursery grounds are classified as confirmed (C), probable (P), or potential (Po); see text for definitions. When information was not available to unequivocally support the assignment of one of the classifications, no classification was given.

3/ Waters within the geographic area are classified as tributary (T), littoral (L) or navigation channel (N); see text for definitions.

Table 12. Numerical codes for fish species and other taxonomic groups included in tables 1-11 of this volume.

1. Sea Lamprey (<u>Petromyzon marinus</u>)	71. Shiner spp.
2. Lake sturgeon (<u>Acipenser fulvescens</u>)	72. Minnow spp.
3. Spotted gar (<u>Lepisosteus oculatus</u>)	73. River carpsucker (<u>Carpiodes carpio</u>)
4. Longnose gar (<u>Lepisosteus osseus</u>)	74. Quillback (<u>Carpiodes cyprinus</u>)
5. Gar spp.	75. Longnose sucker (<u>Catostomus catostomus</u>)
6. Bowfin (<u>Amia calva</u>)	76. White sucker (<u>Catostomus commersoni</u>)
7. American eel (<u>Anguilla rostrata</u>)	77. Creek chubsucker (<u>Erimyzon oblongus</u>)
8. Alewife (<u>Alosa pseudoharengus</u>)	78. Lake chubsucker (<u>Erimyzon sucetta</u>)
9. Gizzard shad (<u>Dorosoma cepedianum</u>)	79. Northern hog sucker (<u>Hypentelium nigricans</u>)
10. Clupeid spp.	80. Bigmouth buffalo (<u>Ictiobus cyprinellus</u>)
11. Mooneye (<u>Hiodon tergisus</u>)	81. Silver redhorse (<u>Moxostoma anisurum</u>)
12. Longjaw cisco (<u>Coregonus alpenae</u>)	82. Black redhorse (<u>Moxostoma duquesnei</u>)
13. Lake herring (<u>Coregonus artedii</u>)	83. Golden redhorse (<u>Moxostoma erythrurum</u>)
14. Lake whitefish (<u>Coregonus clupeaformis</u>)	84. Shorthead redhorse (<u>Moxostoma macrolepidotum</u>)
15. Bloater (<u>Coregonus hoyi</u>)	85. Greater redhorse (<u>Moxostoma valenciennesi</u>)
16. Deepwater cisco (<u>Coregonus johannae</u>)	86. Catostomid spp.
17. Kiyi (<u>Coregonus kiyi</u>)	87. Sucker spp.
18. Blackfin cisco (<u>Coregonus nigripinnis</u>)	88. Redhorse spp.
19. Shortnose cisco (<u>Coregonus reighardi</u>)	89. Buffalo spp.
20. Shortjaw cisco (<u>Coregonus zenithicus</u>)	90. Black bullhead (<u>Ictalurus melas</u>)
21. Pink salmon (<u>Oncorhynchus gorbusha</u>)	91. Yellow bullhead (<u>Ictalurus natalis</u>)
22. Coho salmon (<u>Oncorhynchus kisutch</u>)	92. Brown bullhead (<u>Ictalurus nebulosus</u>)
23. Kokanee (<u>Oncorhynchus nerka</u>)	93. Channel catfish (<u>Ictalurus punctatus</u>)
24. Chinook salmon (<u>Oncorhynchus tshawytscha</u>)	94. Stonecat (<u>Noturus flavus</u>)
25. Pygmy whitefish (<u>Prosopium coulteri</u>)	95. Tadpole madtom (<u>Noturus gyrinus</u>)
26. Round whitefish (<u>Prosopium cylindraceum</u>)	96. Brindled madtom (<u>Noturus miurus</u>)
27. Rainbow trout (<u>Salmo gairdneri</u>)	97. Flathead catfish (<u>Pylodictus olivaris</u>)
28. Atlantic salmon (<u>Salmo salar</u>)	98. Bullhead spp.
29. Brown trout (<u>Salmo trutta</u>)	99. Trout-perch (<u>Percopsis omiscomaycus</u>)
30. Brook trout (<u>Salvelinus fontinalis</u>)	100. Burbot (<u>Lota lota</u>)
31. Lake trout (<u>Salvelinus namaycush</u>)	101. Banded killifish (<u>Fundulus diaphanus</u>)
32. Splake (<u>S. fontinalis</u> x <u>S. namaycush</u>)	102. Brook silverside (<u>Labidesthes sicculus</u>)
33. Salmonid spp.	103. Brook stickleback (<u>Culea inconstans</u>)
34. Salmon spp.	104. Threespine stickleback (<u>Gasterosteus aculeatus</u>)
35. Coregonid spp.	105. Ninespine stickleback (<u>Pungitius pungitius</u>)
36. Cisco spp.	106. White perch (<u>Morone americana</u>)
37. Coregonus spp.	107. White bass (<u>Morone chrysops</u>)
38. Rainbow smelt (<u>Osmerus mordax</u>)	108. Rock bass (<u>Ambloplites rupestris</u>)
39. Central mudminnow (<u>Umbra limi</u>)	109. Green sunfish (<u>Lepomis cyanellus</u>)
40. Grass pickerel (<u>Esox americanus vermiculatus</u>)	110. Pumpkinseed (<u>Lepomis gibbosus</u>)
41. Northern pike (<u>Esox lucius</u>)	111. Orangespotted (<u>Lepomis humilis</u>)
42. Muskellunge (<u>Esox masquinongy</u>)	112. Bluegill (<u>Lepomis macrochirus</u>)
43. Stoneroller (<u>Camptostoma anomalum</u>)	113. smallmouth bass (<u>Micropterus dolomieu</u>)
44. Goldfish (<u>Carassius auratus</u>)	114. Largemouth bass (<u>Micropterus salmoides</u>)
45. Lake chub (<u>Cuuesius plumbeus</u>)	115. White crappie (<u>Pomoxis annularis</u>)
46. Carp (<u>Cyprinus carpio</u>)	116. Black crappie (<u>Pomoxis nigromaculatus</u>)
47. Silverjaw minnow (<u>Ericymba buccata</u>)	117. Centrarchid spp.
48. Silver chub (<u>Hybopsis storeriana</u>)	118. Bass spp.
49. River chub (<u>Nocomis micropogon</u>)	119. Sunfish spp.
50. Golden shiner (<u>Notemigonus crysoleucas</u>)	120. Crappie spp.
51. Pugnose shiner (<u>Notropis anogenus</u>)	121. Greenside darter (<u>Etheostoma blennoides</u>)
52. Emerald shiner (<u>Notropis atherinoides</u>)	122. Rainbow darter (<u>Etheostoma caeruleum</u>)
53. Bridle shiner (<u>Notropis bifrenatus</u>)	123. Iowa darter (<u>Etheostoma exile</u>)
54. Common shiner (<u>Notropis cornutus</u>)	124. Fantail darter (<u>Etheostoma flabellare</u>)
55. Pugnose minnow (<u>Notropis emiliae</u>)	125. Johnny darter (<u>Etheostoma nigrum</u>)
56. Blackchin shiner (<u>Notropis heterodon</u>)	126. Yellow perch (<u>Perca flavescens</u>)
57. Blacknose shiner (<u>Notropis heterolepis</u>)	127. Logperch (<u>Perca caprodes</u>)
58. Spottail shiner (<u>Notropis hudsonius</u>)	128. Channel darter (<u>Percina copelandi</u>)
59. Rosyface shiner (<u>Notropis rubellus</u>)	129. Sauger (<u>Stizostedion canadense</u>)
60. Spottail shiner (<u>Notropis spilopterus</u>)	130. Walleye (<u>Stizostedion vitreum vitreum</u>)
61. Sand shiner (<u>Notropis stramineus</u>)	131. Blue pike (<u>Stizostedion vitreum glaucum</u>)
62. Mimic shiner (<u>Notropis volucellus</u>)	132. Percid spp.
63. Northern redbelly dace (<u>Phoxinus eos</u>)	133. Darter spp.
64. Bluntnose minnow (<u>Pimephales notatus</u>)	134. Freshwater drum (<u>Aplodinotus grunniens</u>)
65. Fathead minnow (<u>Pimephales promelas</u>)	135. Mottled sculpin (<u>Cottus bairdi</u>)
66. Blacknose dace (<u>Rhinichthys atratulus</u>)	136. Slimy sculpin (<u>Cottus cognatus</u>)
67. Longnose dace (<u>Rhinichthys cataractae</u>)	137. Spoonhead sculpin (<u>Cottus ricei</u>)
68. Creek chub (<u>Semotilus atromaculatus</u>)	138. Fourhorn sculpin (<u>Myxoxcephalus quadricornis</u>)
69. Fallfish (<u>Semotilus corporalis</u>)	139. Sculpin spp.
70. Cyprinid spp.	

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