

Introduction to Lake Huron, the GLFC structure and the State of the Lake Report

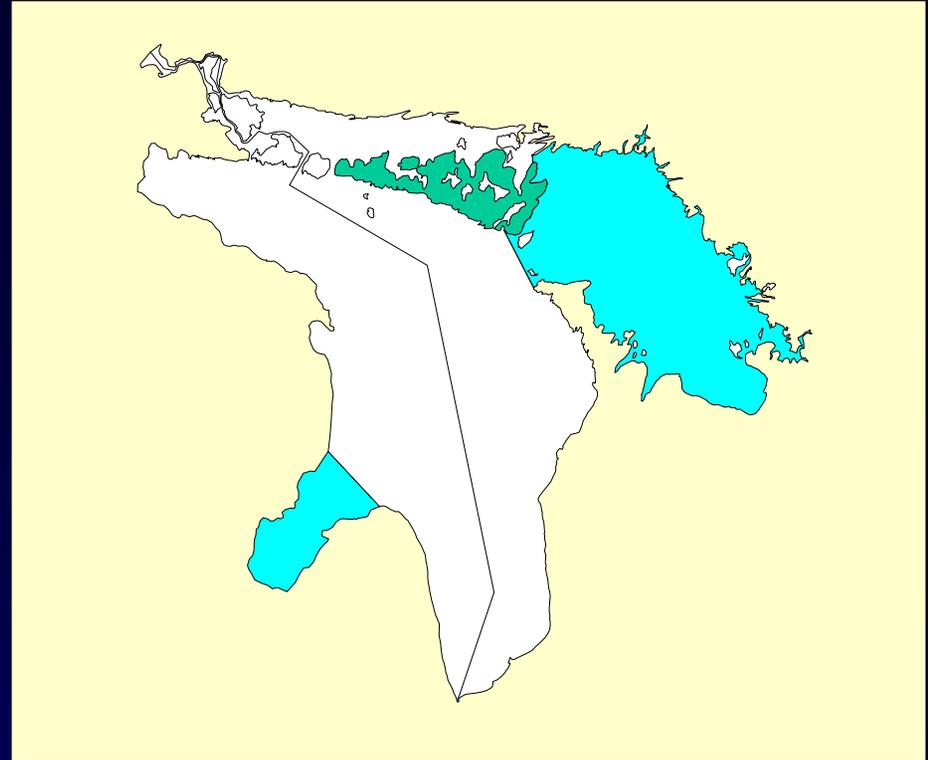


March 2001
Sault Ste. Marie
GLFC Lake Huron Symposium

David Reid
Ontario Ministry of Natural Resources

- Lake Huron 3rd largest Great Lake by volume, 2nd by area, 5th largest freshwater lake in the world.
- Large drainage area.
- It has the longest shoreline of the Great Lakes, counting the shorelines of its 30,000 islands.





- Manitoulin Island is the largest freshwater island in the world.
- Georgian Bay and Saginaw Bay are the two largest bays on the Great Lakes.
- Georgian Bay is large enough to be among the world's 20 largest lakes.

- First \Great Lakes discovered by European explorers.



- At time French discoverers knew nothing of other lakes, called it “La Mer Douce”, the sweet or fresh-water sea.

- The fisheries collapsed prior to the 1960s due to sea lamprey predation and over fishing



- Alewife also invaded and their population exploded



- With no natural control were nuisance die-offs of alewives
- Beaches were littered for miles during 1960s
- Fishing and tourism almost non-existent





- Turnaround came with sea lamprey control which allowed stocking and survival of Pacific salmon, lake trout and other predators.



- Restocking controlled alewife, prevented die-offs and provided exceptionally good fishing.

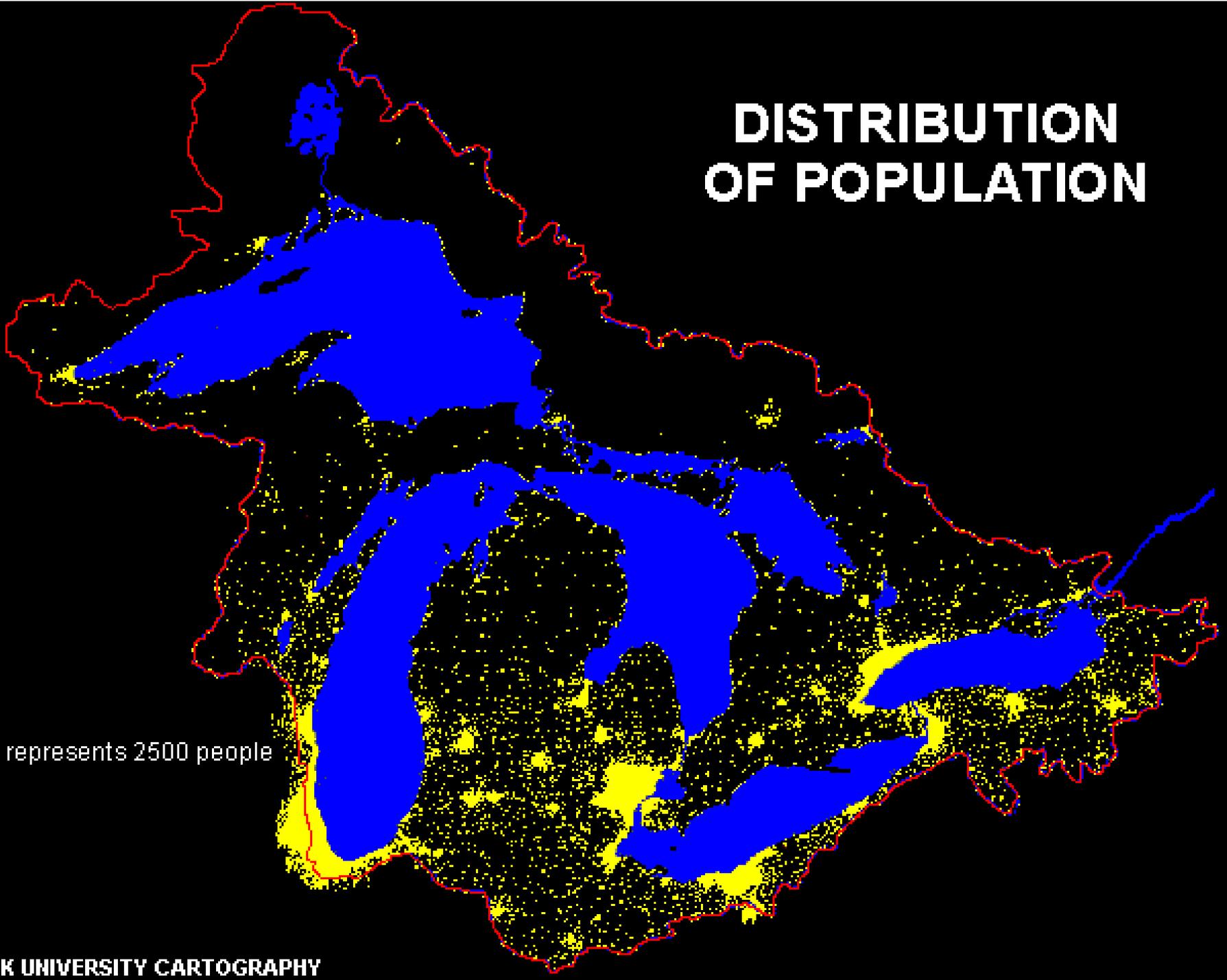


- Recovery of recreational & commercial fisheries in Great Lakes major success story in fisheries management



DISTRIBUTION OF POPULATION

1 dot represents 2500 people



Historic Lake Huron Ecosystem



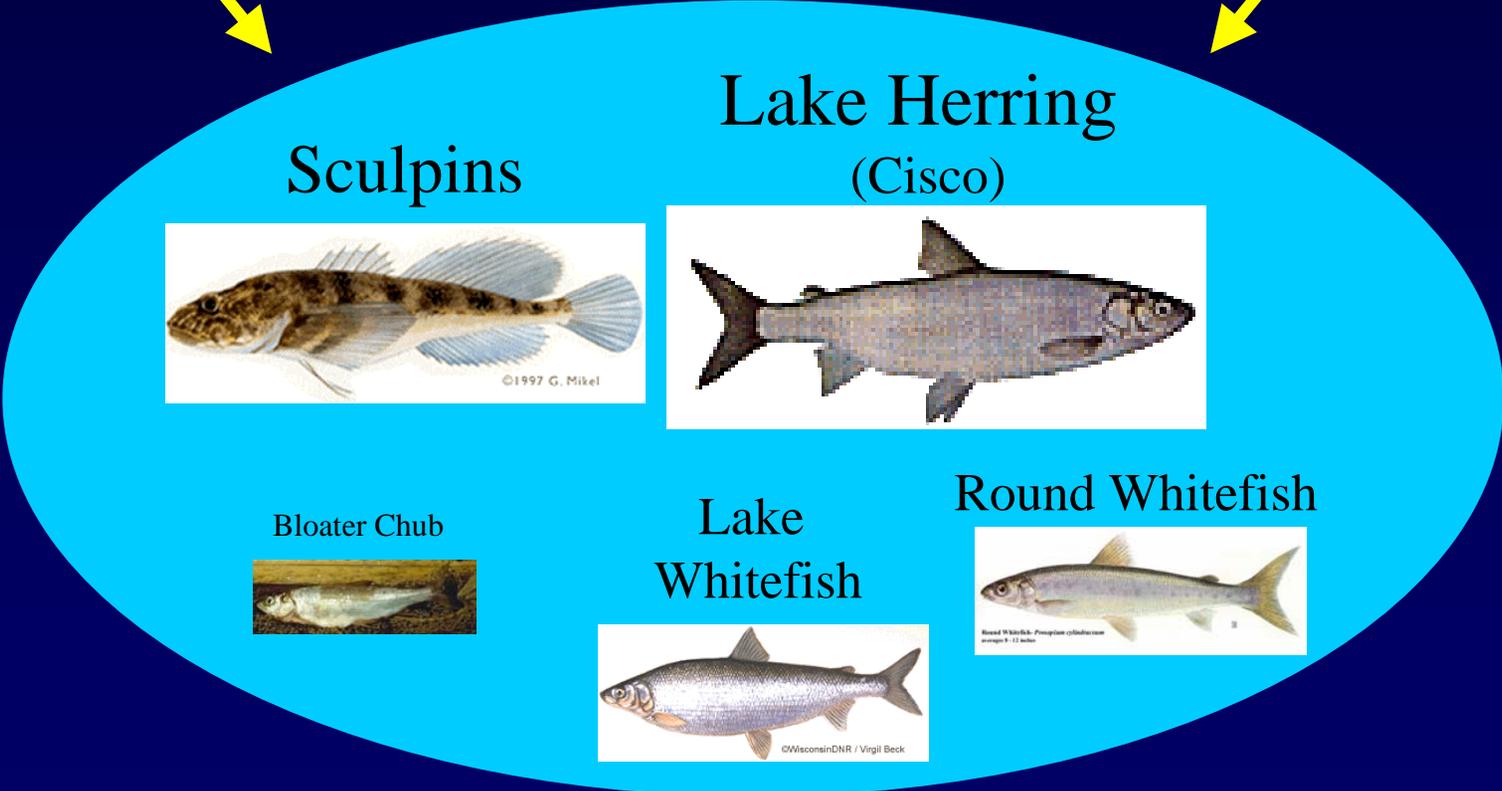
Lake Trout



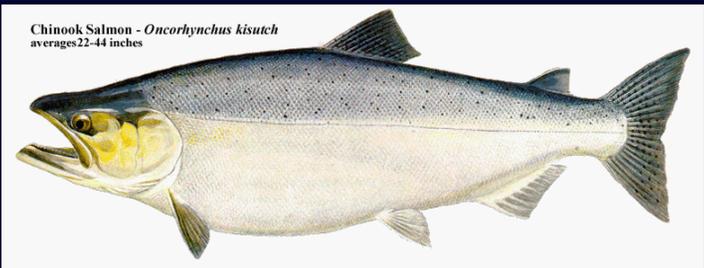
Walleye



Burbot



Current Lake Huron Ecosystem



Chinook Salmon



Rainbow Trout



Lake Trout



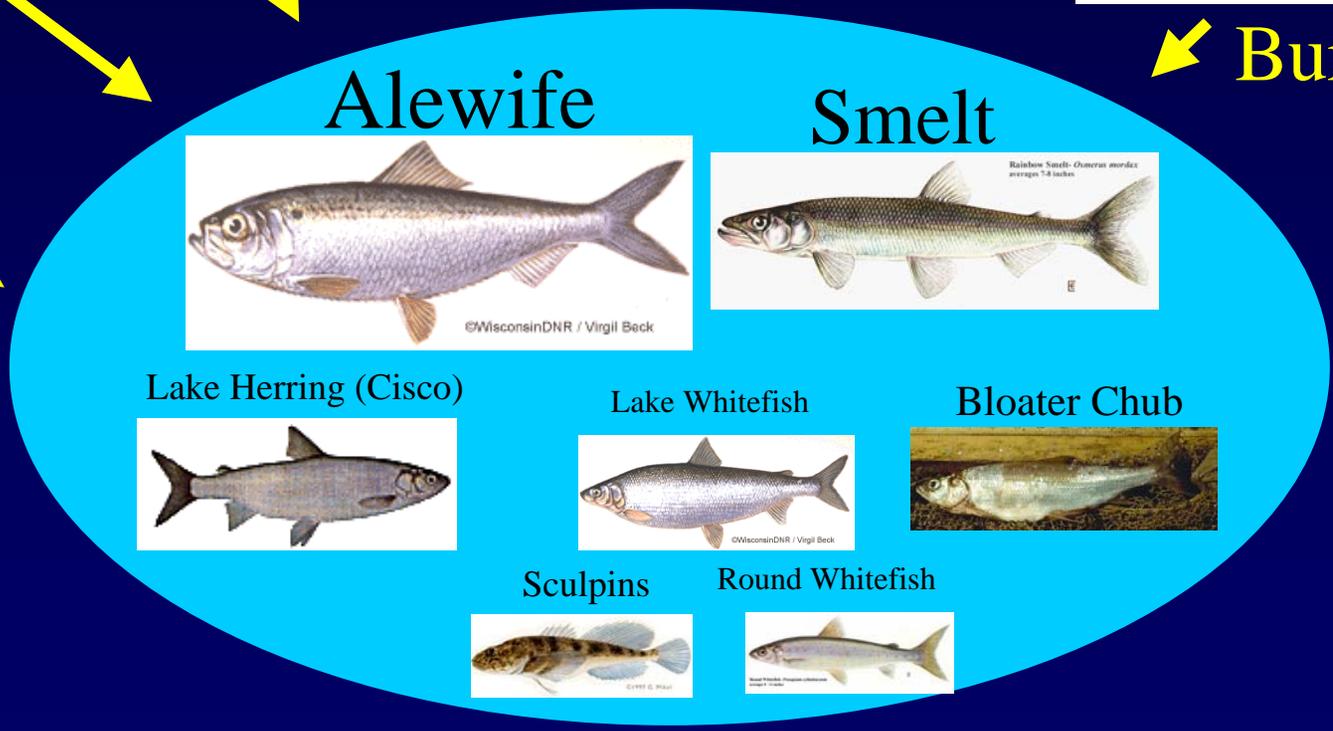
Burbot



Brown Trout



Walleye



Smelt

Lake Herring (Cisco)



Lake Whitefish



Bloater Chub



Sculpins



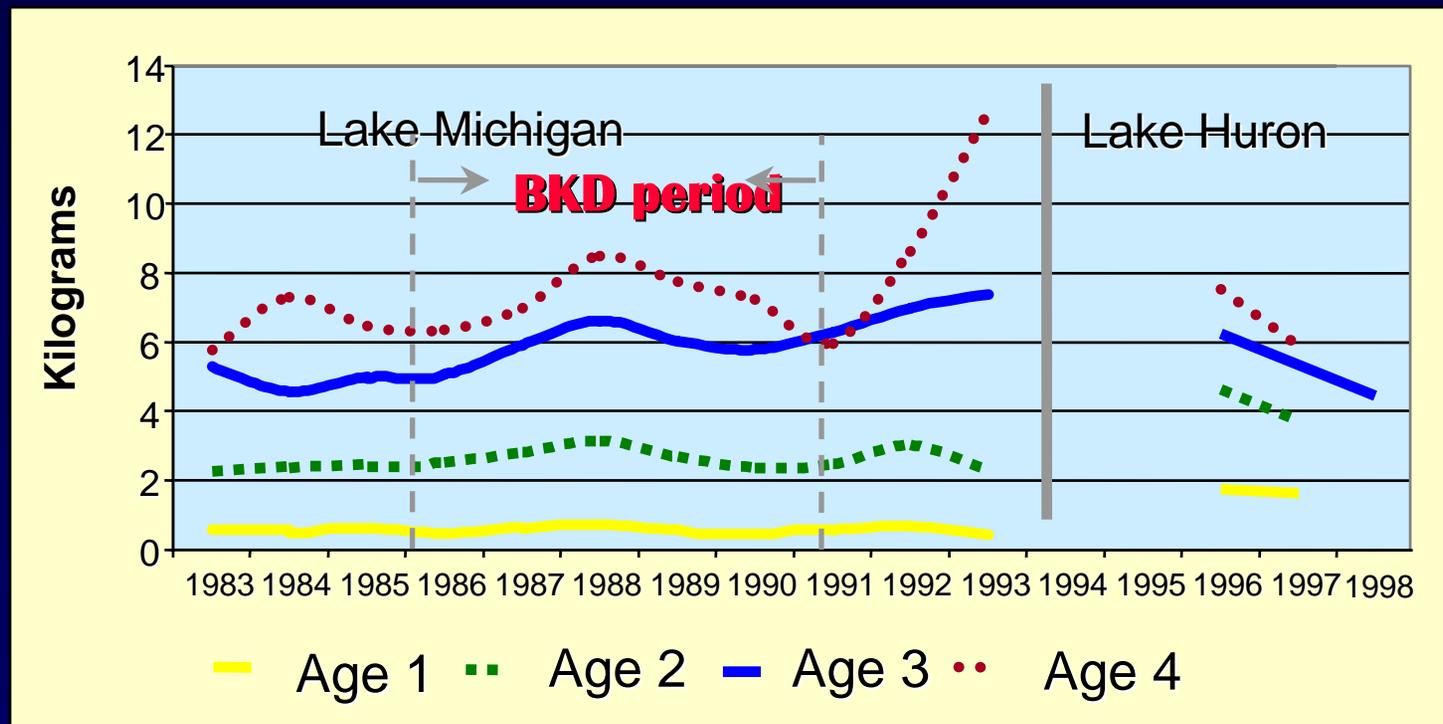
Round Whitefish



- During the 1980s the stocking program in Lake Michigan exceeded the capacity of the lake's forage base and a collapse of the chinook fishery occurred.
- With a lack of food the chinook were stressed and an outbreak of bacterial kidney disease occurred.

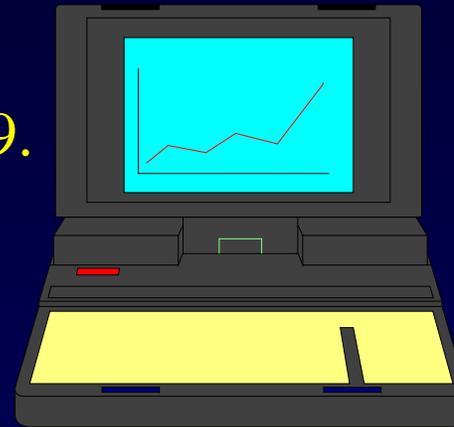


- Lake Huron much less productive than Lake Michigan and not as heavily stocked.
- In late 1990s indications of declining alewife abundance and reduced chinook salmon growth.
- Growth rates lower than in Lake Michigan prior to collapse
- Feared BKD outbreak in Lake Huron was imminent.

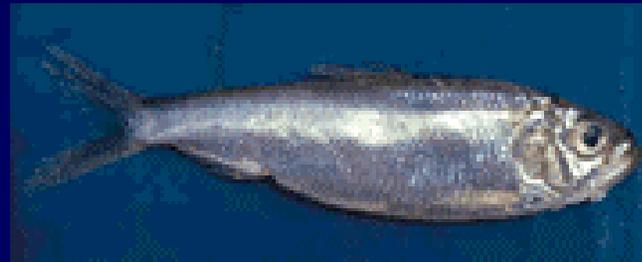


- Computer modeling of the Lake Huron predator/prey balance indicated that predators close to exceeding the available forage.

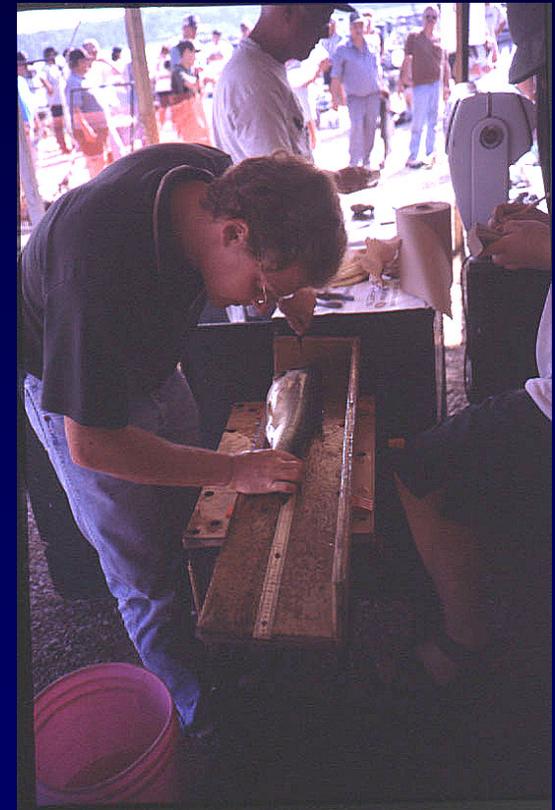
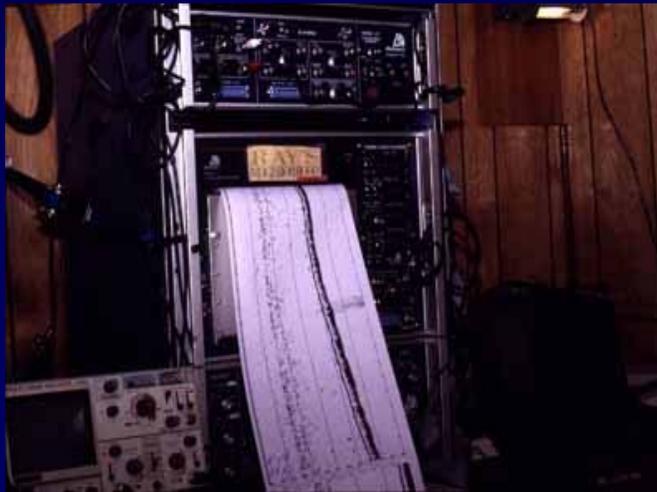
- Stocking was reduced in 1999.



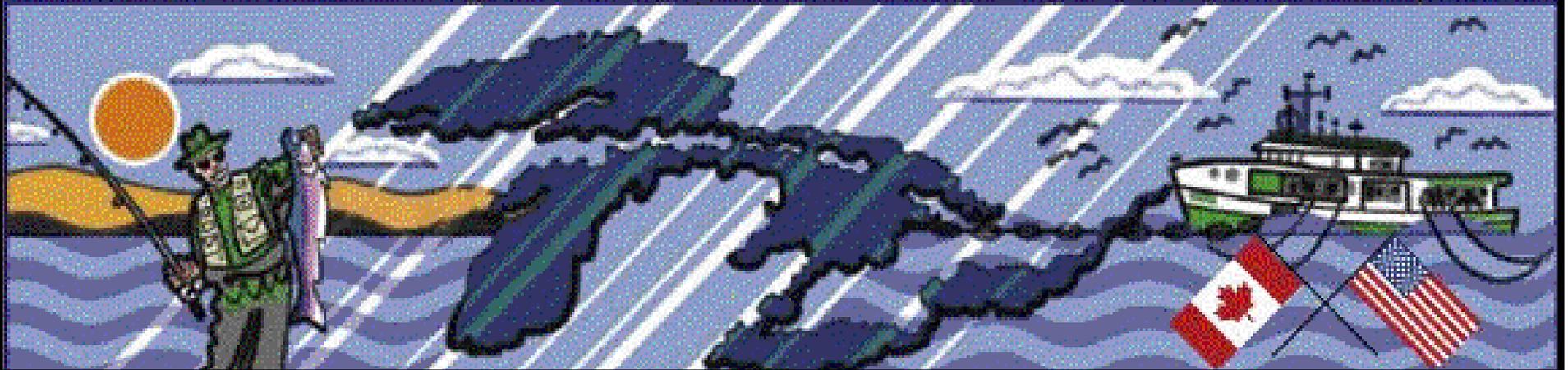
- Luckily a successful year-class of young alewife recruited to the lake and provided food for the predators and growth rates increased by 2000.

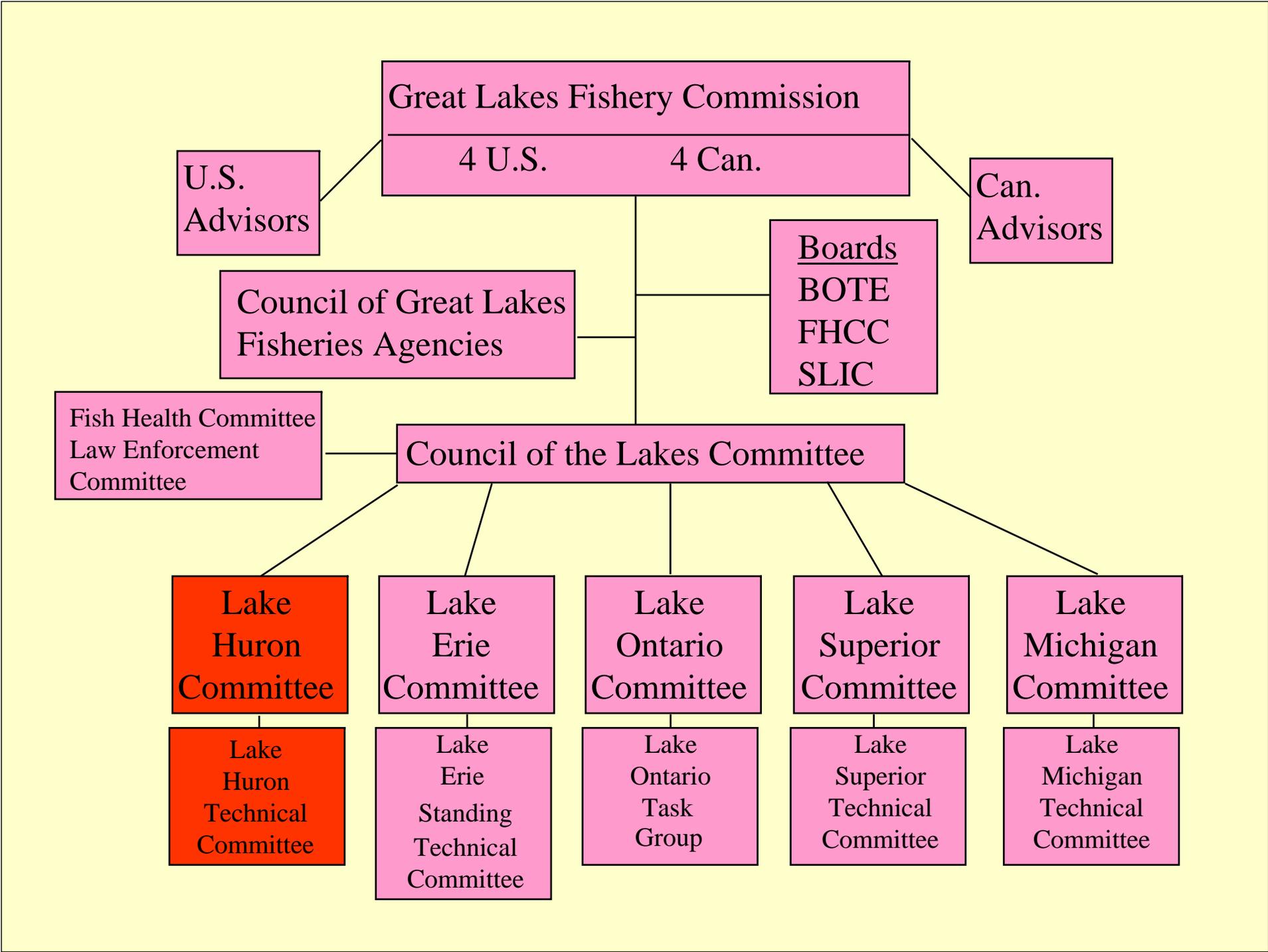


- Currently Lake Huron managers feel close to edge for stocking levels.
- Continued vigilance in monitoring/assessing and predator/prey balance is needed.
- If declines of alewife occur in future, additional stocking reductions of predators may be required.



Great Lakes Fishery Commission







Great Lakes Fishery Commission

2100 Commonwealth Blvd., Ste. 209, Ann Arbor, MI 48105 Tel: 313-662-3209



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Pennsylvania
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Minnesota Dept. of Natural Resources	Ontario Ministry of Natural Resources	Wisconsin Dept. of Natural Resources	Great Lakes Indian Fish and Wildlife Commission	Chippewa- Ottawa Resource Authority	Michigan Dept. of Natural Resources

Lake Superior
Committee



Lake Huron
Committee

		
Ontario Ministry of Natural Resources	Chippewa- Ottawa Resource Authority	Michigan Dept. of Natural Resources

Lake Michigan
Committee

		
Michigan Dept. of Natural Resources	Wisconsin Dept. of Natural Resources	Indiana Dept. of Natural Resources
		
Chippewa- Ottawa Resource Authority	Illinois Dept. of Natural Resources	

Lake Ontario
Committee

	
Ontario Ministry of Natural Resources	New York State Dept. of Environmental Conservation

Lake Erie/Lake St. Clair
Committee

				
Ontario Ministry of Natural Resources	New York State Dept. of Environmental Conservation	Pennsylvania Fish and Boat Commission	Ohio Dept. of Natural Resources	Michigan Dept. of Natural Resources

Lake Huron Technical Committee



Ontario
Ministry of
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Resources



Chippewa-
Ottawa
Resource
Authority



Michigan
Dept. of Natural
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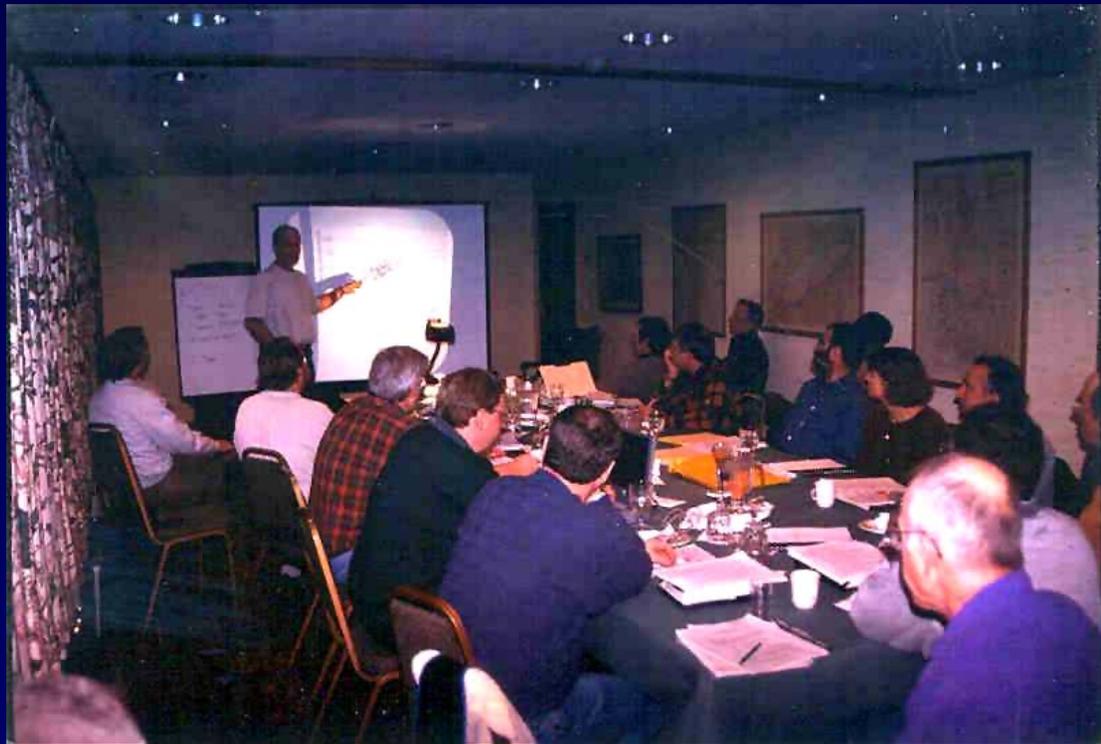
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MICHIGAN STATE
UNIVERSITY



Great Lakes Fishery Commission

Plans/Strategies/Guidelines

- SGLFMP

(Joint Strategic Great Lakes Fisheries Management Plan)

- Goal statement
- Management by consensus



Signers of the 1997 revised Joint Strategic Plan



Planning

- Fish Community Objectives
- GLFC Strategic Vision, etc.
- Integrated Management of Sea Lamprey
- Fish Disease Control Guidelines
- Research Strategy



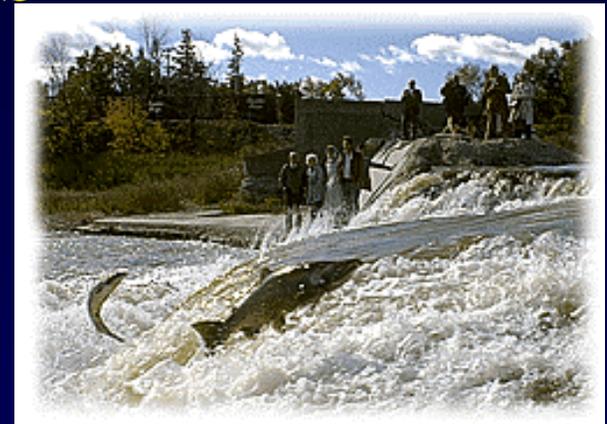
Management

- State of the Lake Report
- Lake Trout Rehabilitation Plan
- Rainbow Trout Management Plan
- Lake Sturgeon Meaningful Statement
- Exotic Species Control



Habitat

- Lakewide Management Plan (LaMP)
- Environmental Objectives
(complement FCO's)
- Remedial Action Plans
- Contaminants
- Great Lakes Water Quality Agreement



Research

- Lake Rehabilitation Research Plan
- Bioenergetics Modeling
- Lake Trout Task
- Biodiversity Task



Sea Lamprey

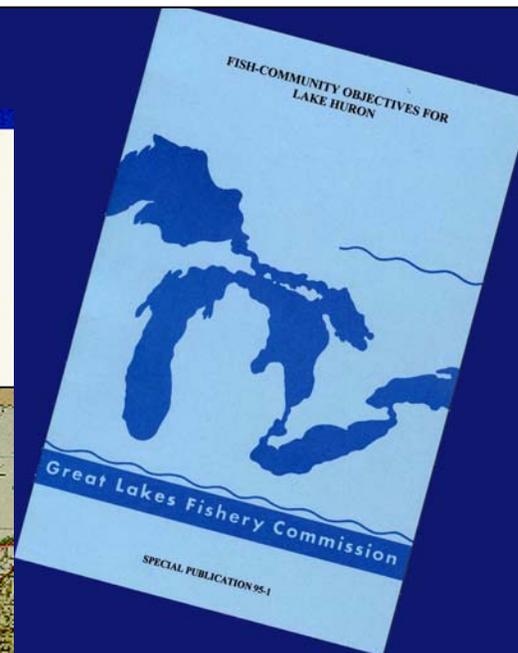
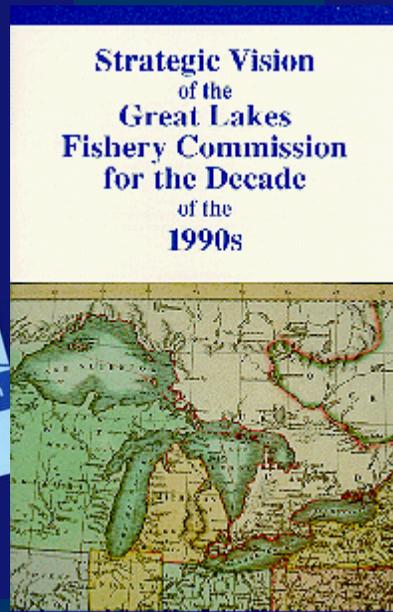
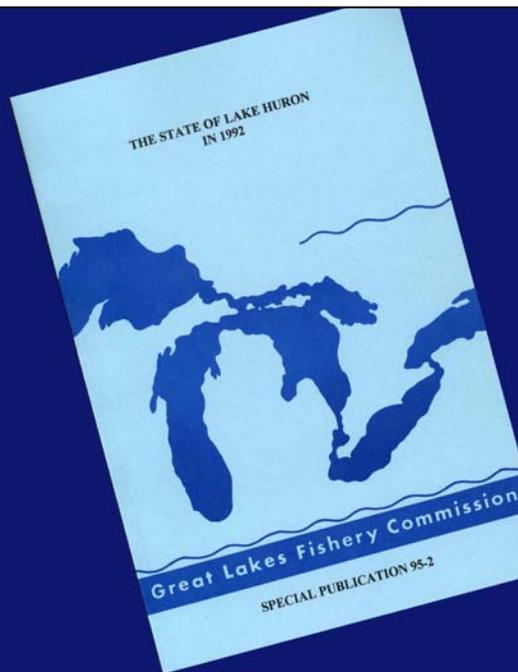
- IMSL (concept/model)
- Barrier Plan
- Research (alternative control)
- Budget
- TFM Re-registration
- St. Marys River Treatment
- Sterile Male Release Treatment

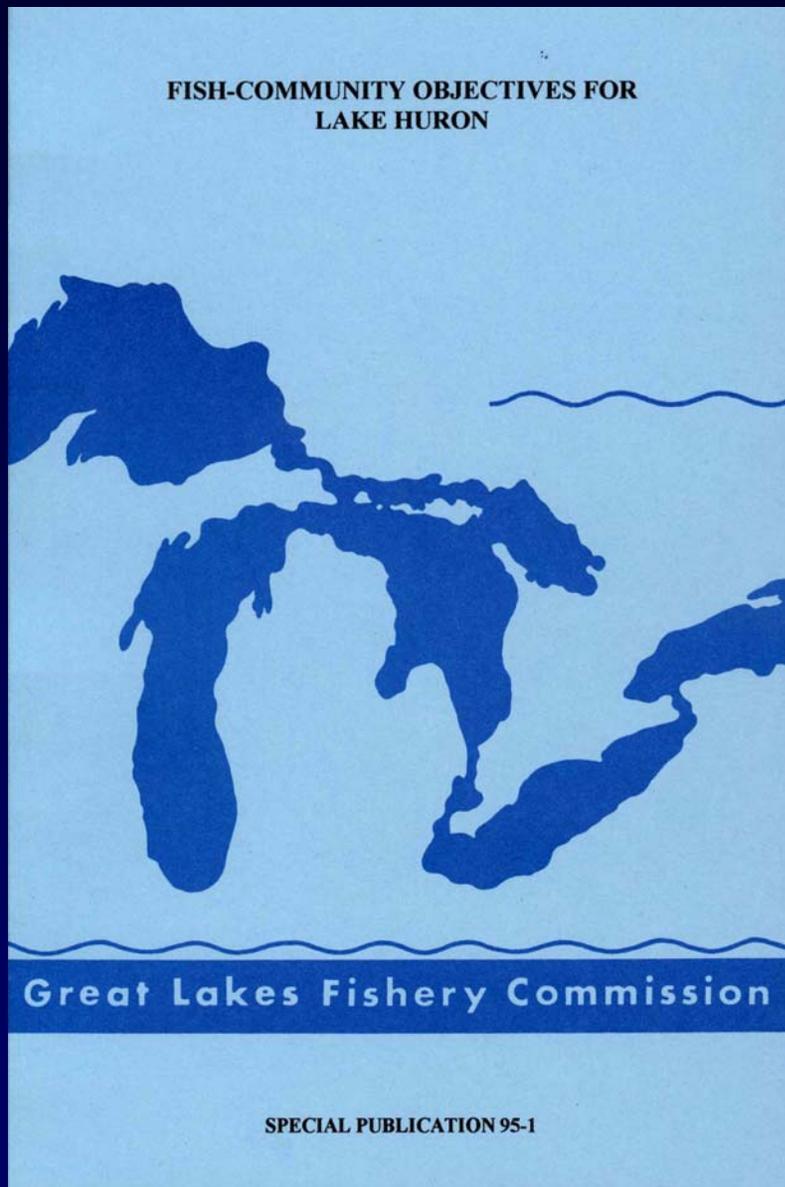




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Fish Community Objectives 1995

- Statements developed by Lake Committees that specify characteristics of fish populations in a Great Lake that are desired to be maintained or changed by the natural-resources agencies responsible for management.

State of the Lake Report

- states progress on the achievement of Fish Community Objectives and identifies new and emerging issues that will affect future management.

