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Lake Erie Management Unit

Topics
From a manager's perspective

- Creel Census 2002 – 2005
  - Angler Use
  - Fishery Value
- Fishery Shifts due to Habitat Changes
- The Human Element – The Great Unknown
- Research needed by Fish Managers

Lake St. Clair Boat Fishery - 2002

Top Ten Species in the Harvest		**1983-84**
Yellow Perch	455,621	435,379
Walleye	41,972	160,898
Smallmouth Bass	12,099 (148K caught)	22,130
Bluegill	10,074	
Rock Bass	8,507	51,173
Pumpkinseed	2,383	
Black Crappie	1,774	304
Northern Pike	1,483	271
Freshwater Drum	1,072	18,795
Channel Catfish	713	9,050
Others	2,191	64,505
TOTAL	537,889	778,659

Angler Effort - Lake St. Clair Boat Fishery - 2002

	2002	1983-85
Angler Hours	1,368,564	1,730,104
Angler Trips	260,880	
Angler Days (AD)	254,275	

- Value of Fishery(02) AD X $58 = **$14,747,950 US**

Detroit River Boat Fishery - 2002

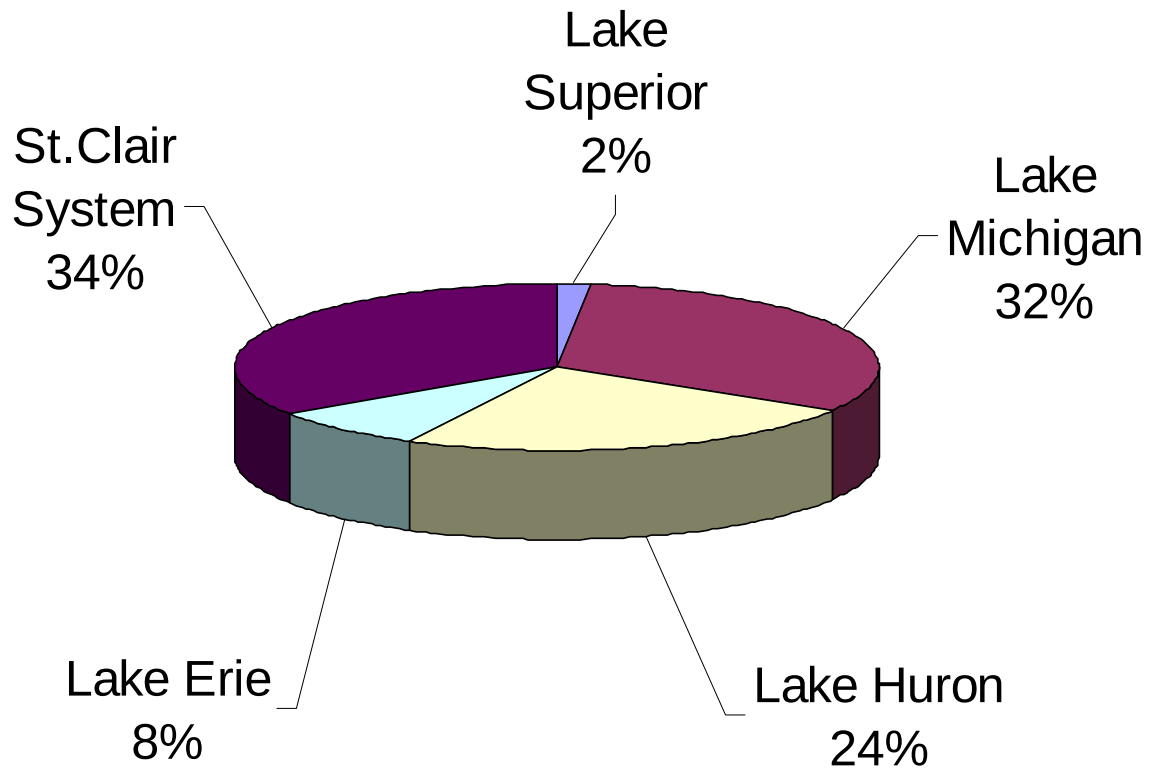
Top Ten Species in the Harvest		1983-85
White Bass	215,476	671,466
Walleye	159,235	142,246
Yellow Perch	38,353	34,829
Rock Bass	5,746	22,745
Bluegill	4,855	--
White Perch	4,031	10,331
Freshwater Drum	1,445	22,056
Smallmouth Bass	1,434	2,094
Others	3,738	9,383
TOTAL	434,313	915,149

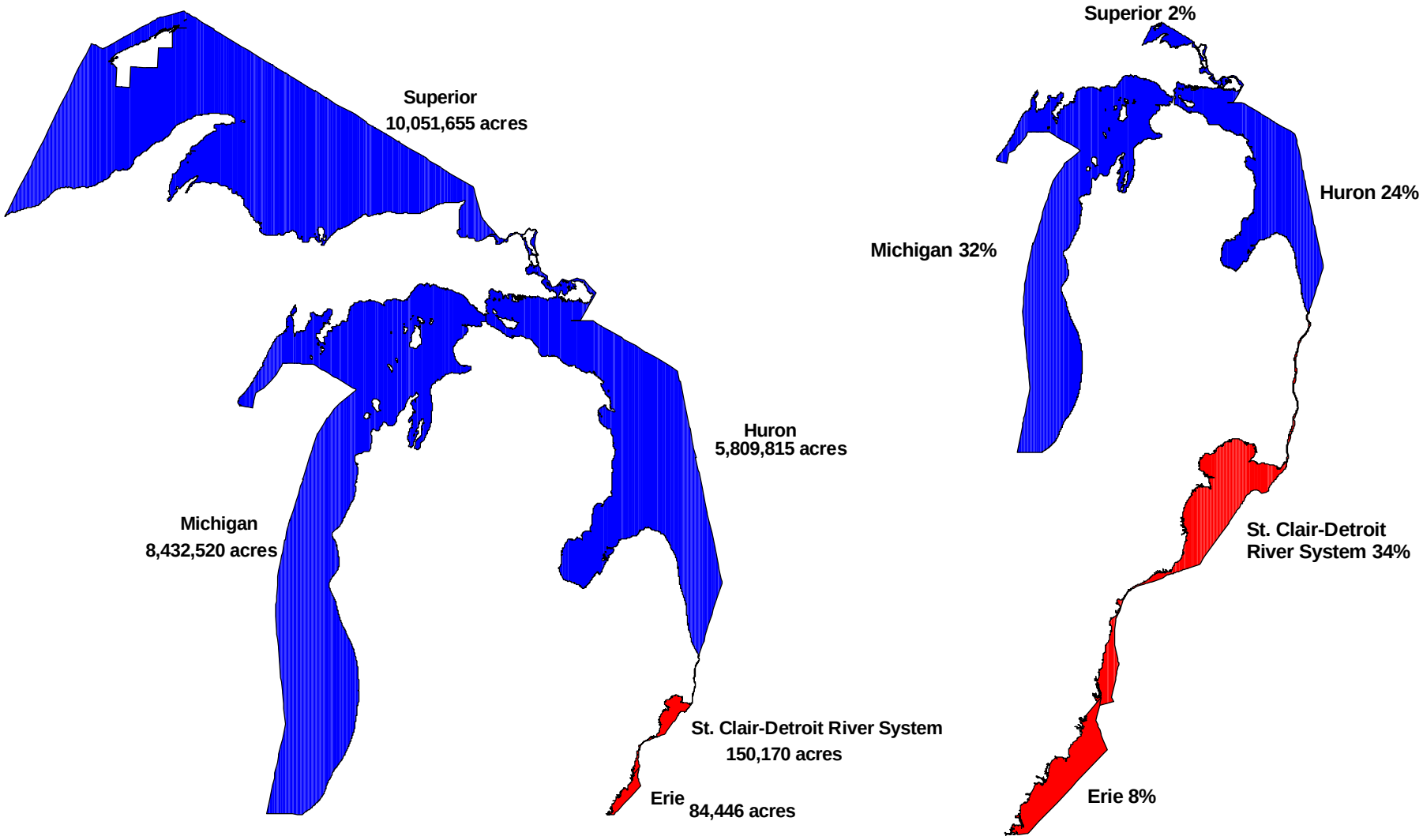
Angler Effort – Detroit River Boat Fishery 2002

	2002	1983-84
Angler Hours	**874,186**	682,819
Angler Trips	188,181	
Angler Days(AD)	181,782	

Value of Fishery AD X $58= **$10,543,356**

Fishing Effort (Angler Hours) on Michigan's Waters of the Great Lakes, 2001

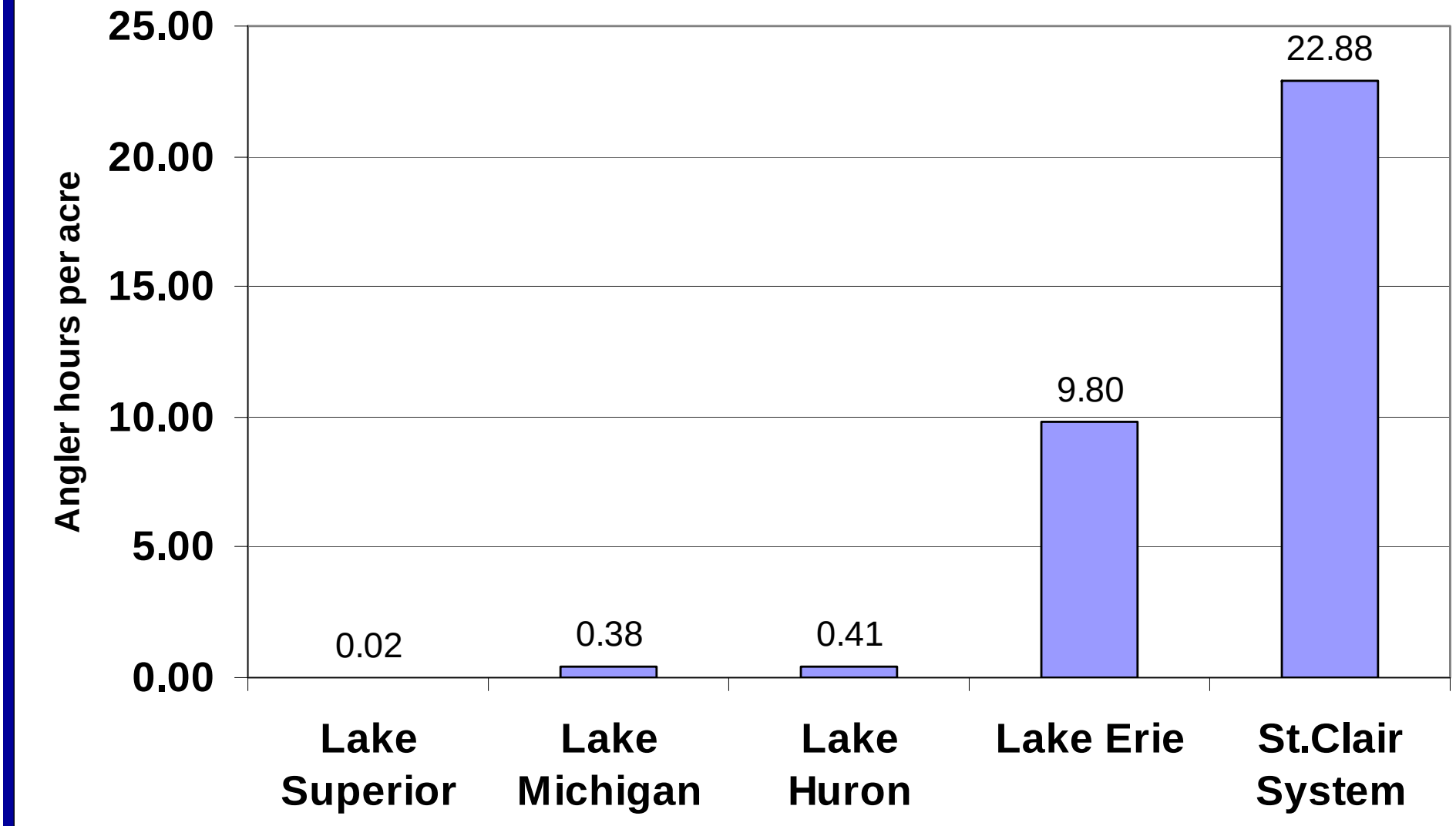




1% of Mich GL Waters = 46% of Mich GL Fishing Effort

And the red areas are not supported by stocking!

Angling Effort per Acre for Michigan Waters of the Great Lakes, 2002



Total Fishery Value for the St. Clair Corridor

- Boat Fishing – est. $33 Million
- Shore fishing - ?
- Ice Fishing - over 600,000 Mich angler hrs last year!
- Canadian waters – est. $8 Million

- Total Combined Value is about **$50 Million**

Boating in SE Michigan
It's **BIG Business!**

Michigan – more registered boats than any other state

Economic impact est: $3 Billion

Fishing comprises over 52% of Michigan's boat use

Three counties in SE Mich have 1/3 of all marinas in the state

There were 16,476 SE Michigan marina slips in use in 1999, and 83% of these were occupied by residents of the three counties

Active boats in 2002 in the three counties: 110,000

Changing habitat has changed fish populations and fishe

Vegetation

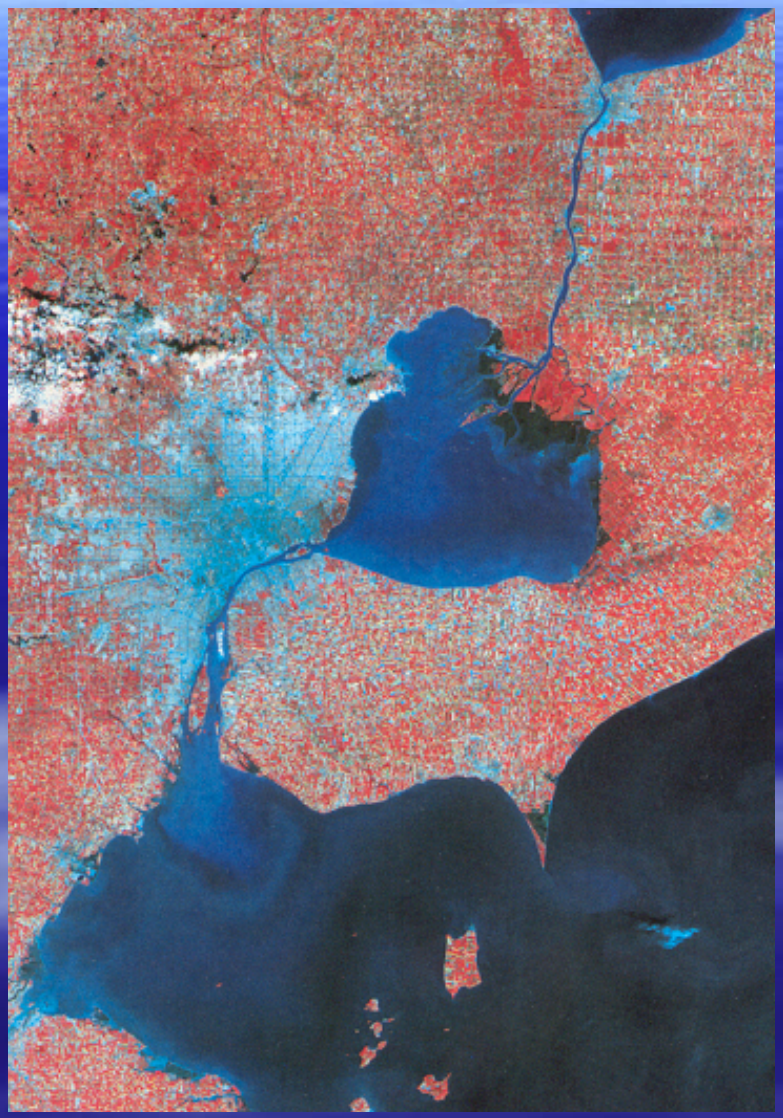
Walleye

Muskellunge

Smallmouth Bass

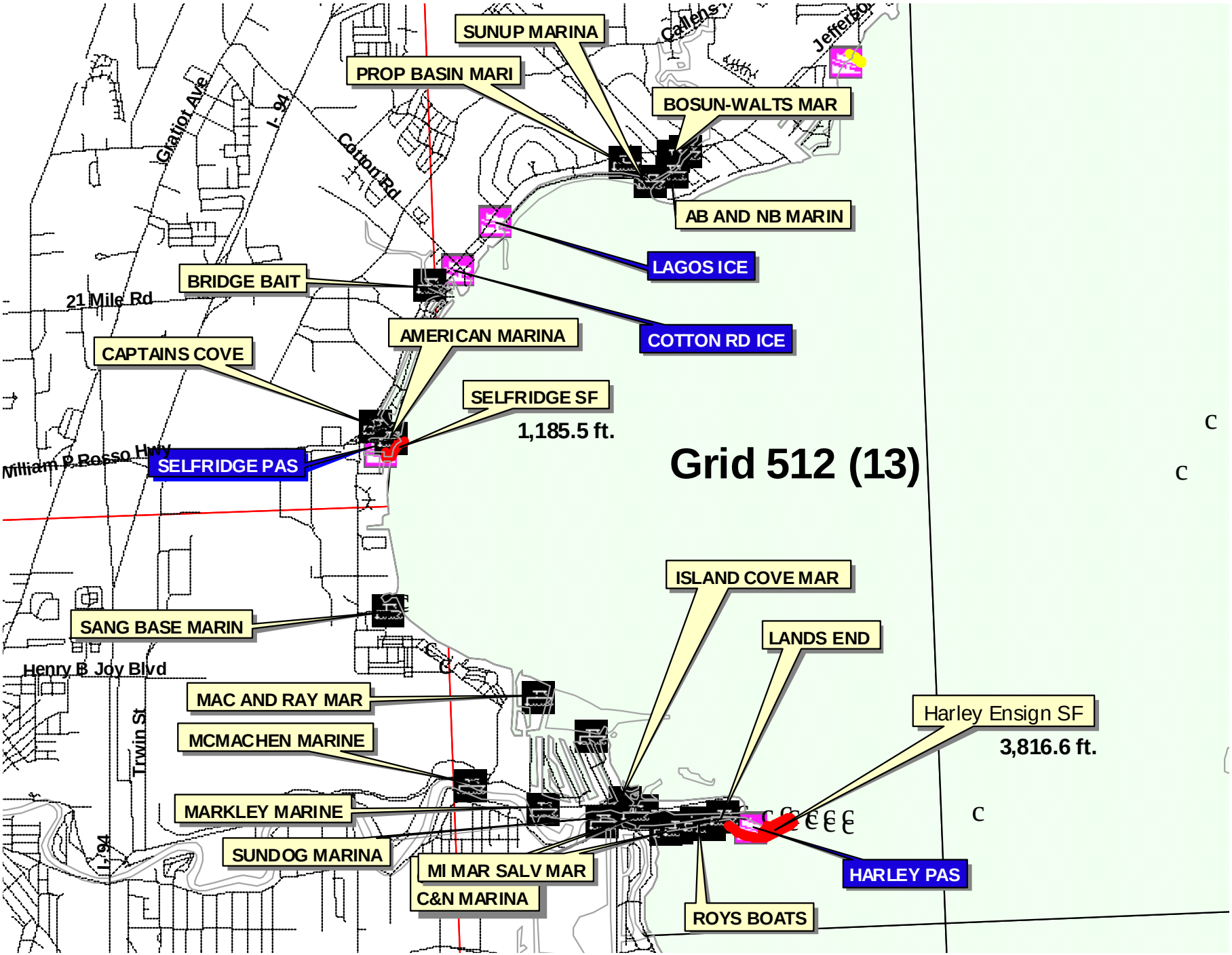
What will PEOPLE do when the habitat changes?

The Wildcard: Humanity



A manager's belief: People will attempt to harness nature to protect their investments and their way of life.


Saginaw Bay


SUNUP MARINA
PROP BASIN MARI
BOSUN-WALTS MAR
AB AND NB MARIN
LAGOS ICE
BRIDGE BAIT
COTTON RD ICE
AMERICAN MARINA
CAPTAINS COVE
SELFRIDGE SF
1,185.5 ft.
SELFRIDGE PAS
Grid 512 (13)
ISLAND COVE MAR
LANDS END
SANG BASE MARIN
MAC AND RAY MAR
MCMACHEN MARINE
Harley Ensign SF
3,816.6 ft.
MARKLEY MARINE
SUNDOG MARINA
MI MAR SALV MAR
C&N MARINA
HARLEY PAS
ROYS BOATS
Gratiot Ave
I-94
Cotton Rd
21 Mile Rd
William P Rosso Hwy
Henry B Joy Blvd
Trwin St
Callens
Jefferson

The Wildcard: Humanity

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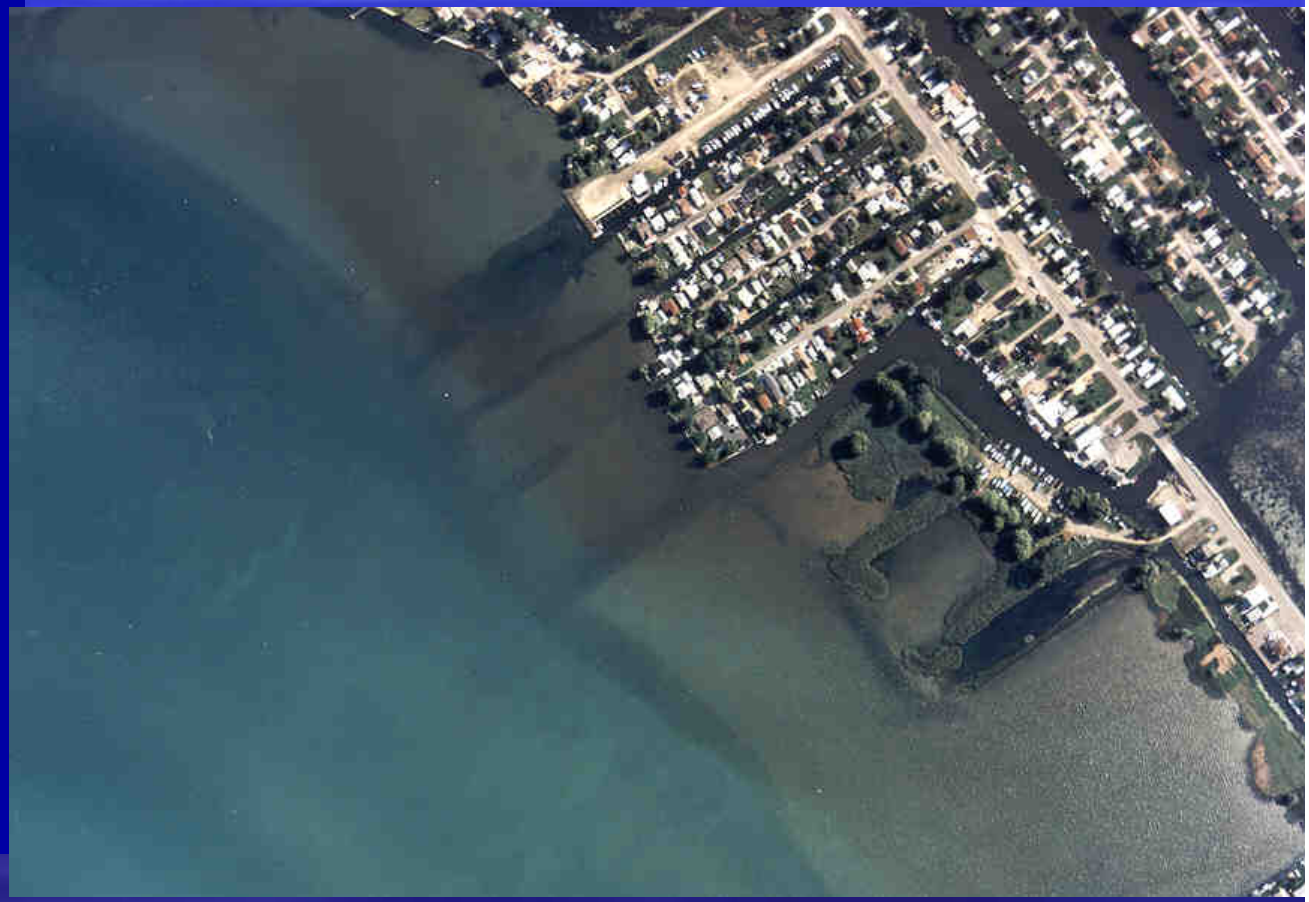
When water levels go down:

More Channels!

Chemical control of Vegetation?

Cut, Plow and build on exposed shallows?



The Wildcard: Humanity

The Wildcard: Humanity

But we need resource users!

Resource users:

- Have some "ownership" in the resource
- Are capitalized in the aquatic environment
- Are voters – and can sway policy

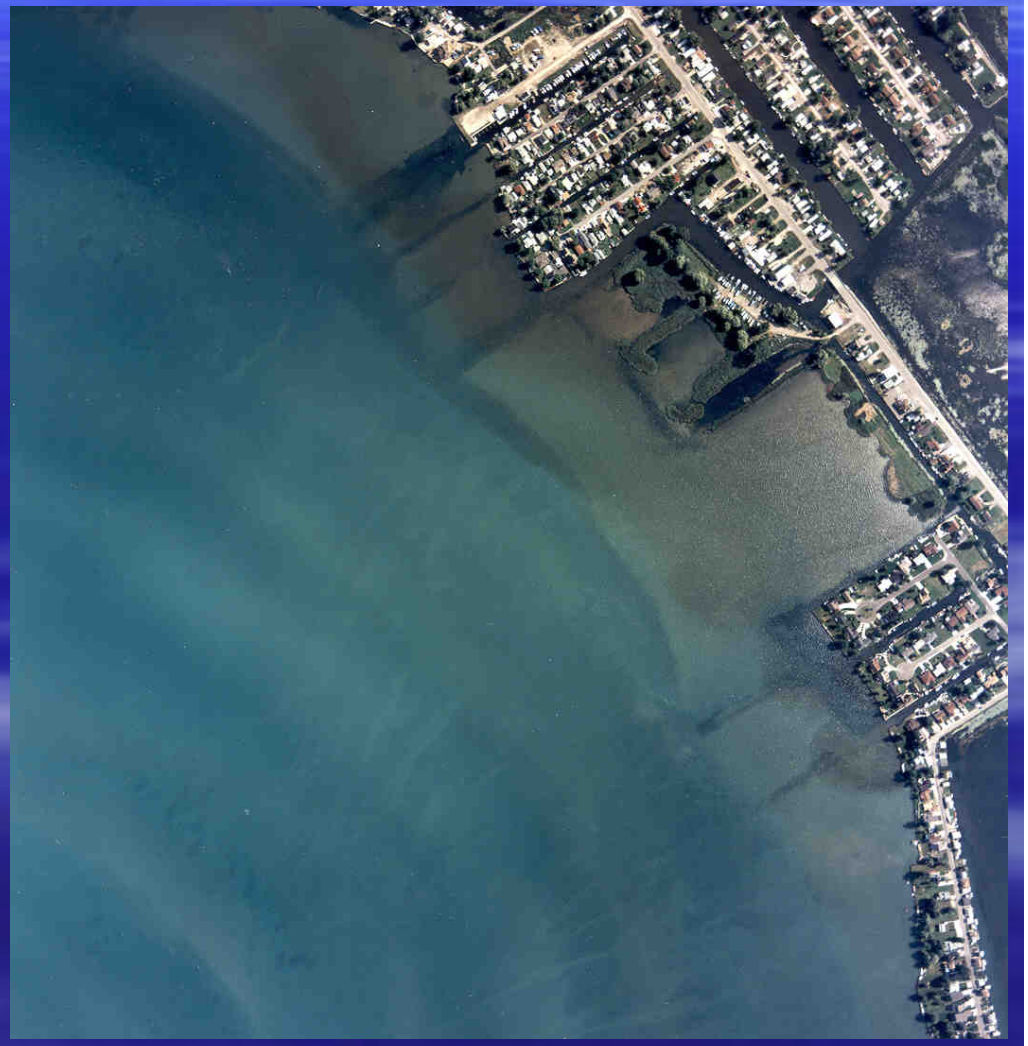
We need to educate them!

Habitat Research Needs for Fisheries Management

- How important are various habitats to the sustainability of fisheries?
- Do walleye spawn in the Detroit River?
  - Where, how deep, at what water velocities and over what type of habitat?
  - Can we artificially increase that type of habitat?
- Clearer water, more vegetation favors some species. What can we expect if this current trend continues? – especially in the St. John's Flats, Anchor Bay and shallow areas of LSC

Habitat Research Needs for Fisheries Management

- **Does fish production in inland channels offset what might be lost from construction of in-lake access channels?**
- **Exotics?**
- **Spawning substrate?**
- **Benthos?**



Habitat Research Needs for Fisheries Management

- If the water goes down –
  - How much of LSC will be so thickly vegetated that boating/fishing cannot occur?
  - How much resulting vegetation could be removed (OUCH!)?
  - How can we engage resource users into considering environmental effects of habitat alterations?
  - How much channelization is too much?

Habitat Research Needs for Fisheries Management

- What are the real water quality and habitat trade-offs with separating the sewers along the St. Clair System?
  - Less human pathogens/disease potential
  - Less nutrients/fertilizer
  - More untreated road runoff
  - Salination effects?
  - Oils, chemicals, particulates…

Habitat Research Needs for Fisheries Management

- If water levels fall 5 feet, how much resulting habitat can be dredged for boating channels without substantial negative effects on the fishery?
- With more and more jet-drive propulsion boats – traveling at high speeds in shallow habitats – what are effects on egg/fry production, benthos, fish movements, wetland wildlife, etc.

Habitat Research Needs for Fisheries Management

- What is the expected future of fish standing crop with current trends in zebra mussels, vegetation, nutrification and human interventions/ perturbations?
- What will happen to the standing crop of fish if water levels go down?

Habitat Research Needs for Fisheries Management

- Spatial data is needed on spawning habitats of several important species – in order to focus protection efforts. SMB, Muskies, N. Pike, sunfishes, others.

- How will changes in GL water levels translate to habitat changes in tributaries – IE: gradient changes will lead to velocity increases, erosion issues, re-suspension of contaminants, etc.

Behavioral Change with habitat change (adaptation??)

People

Nature

The End