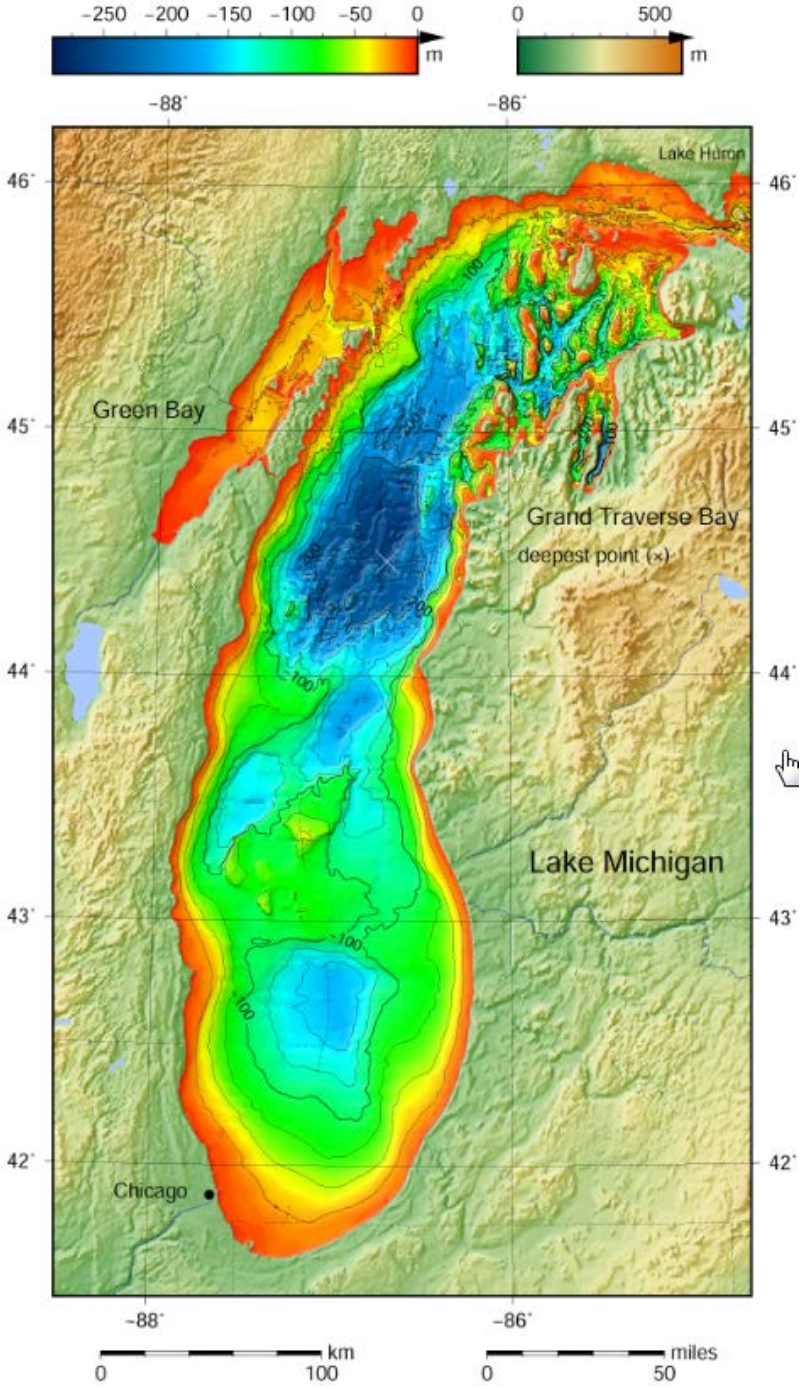
Lake Michigan Zonal Management

Zonal Management

- Lake-wide management through consensus of the Lake Michigan Committee is the primary level of fisheries management for Lake Michigan.
  - Fish Community Objectives
  - Ecosystem Principles
  - Lake-wide management plans, documents and policies.
- Zonal Management is a second level of fishery management that MDNR will use to explain habitat and other regional differences within the lake and how different management (i.e. stocking and regulations) could be used in Michigan waters of Lake Michigan.
  - A tool for public education, regional fishery promotion, and regional focus to match up with existing habitat, nutrient, and climate conditions.

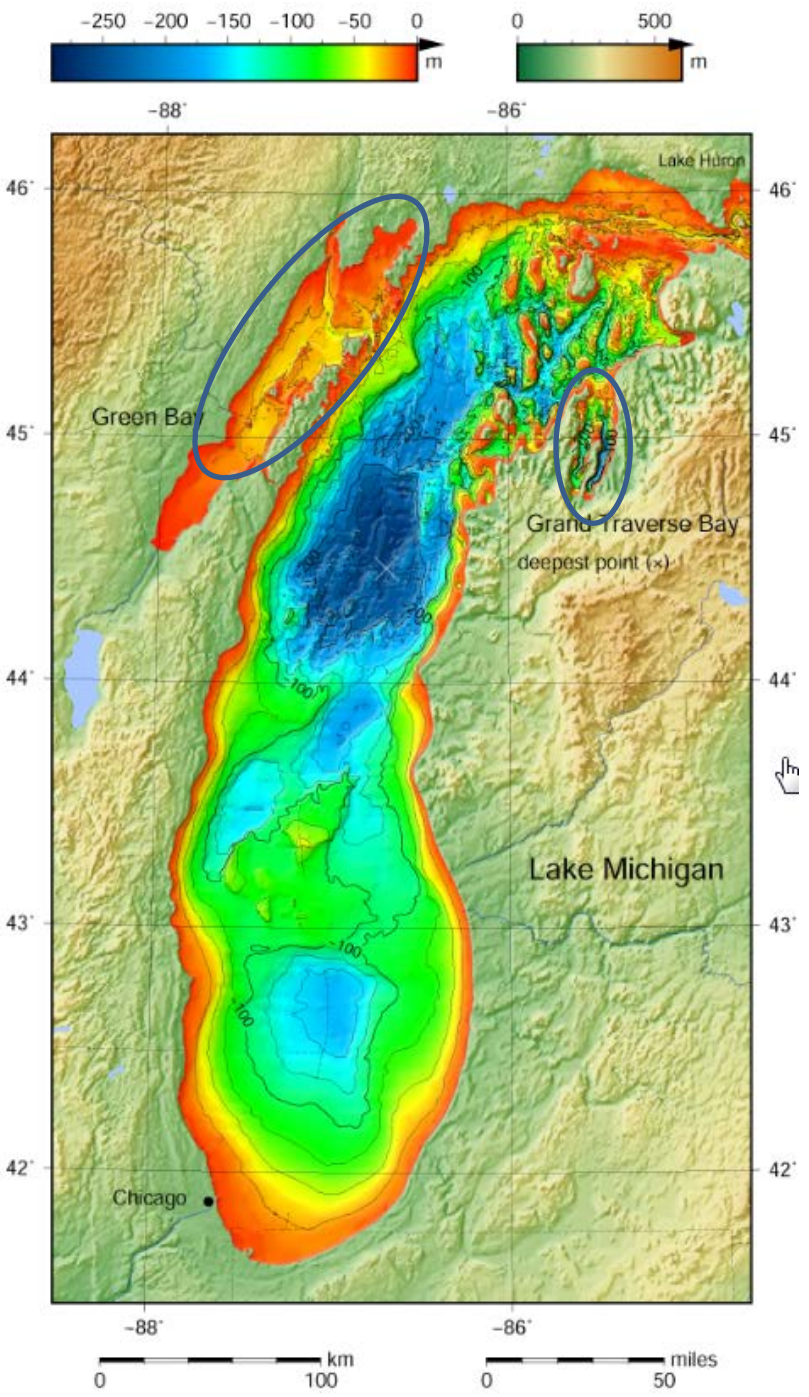
Lake Michigan Habitat

- Varies from north to south
- Lake temperatures exceed 70 degrees in south during summer.
- Northern half deeper than southern
- Cold tributaries to north and large warm water tributaries to south
- Bays offer unique shallow (Green Bay) and deep (Grand Traverse) habitats.
- More rocky reefs in north around island complexes.



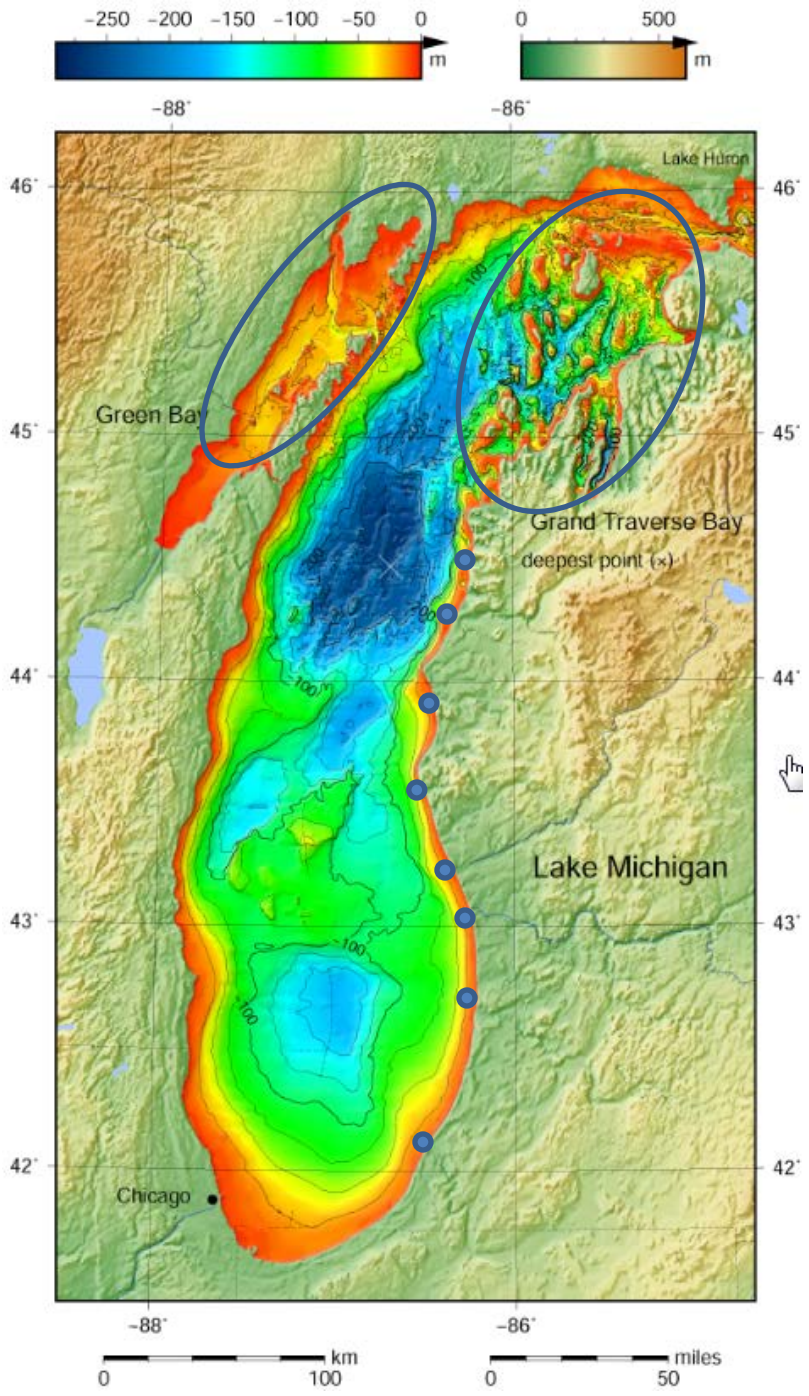
Bays

- Bays de Noc and Grand Traverse Bay are examples of unique habitats that should be managed differently than the rest of Lake Michigan.



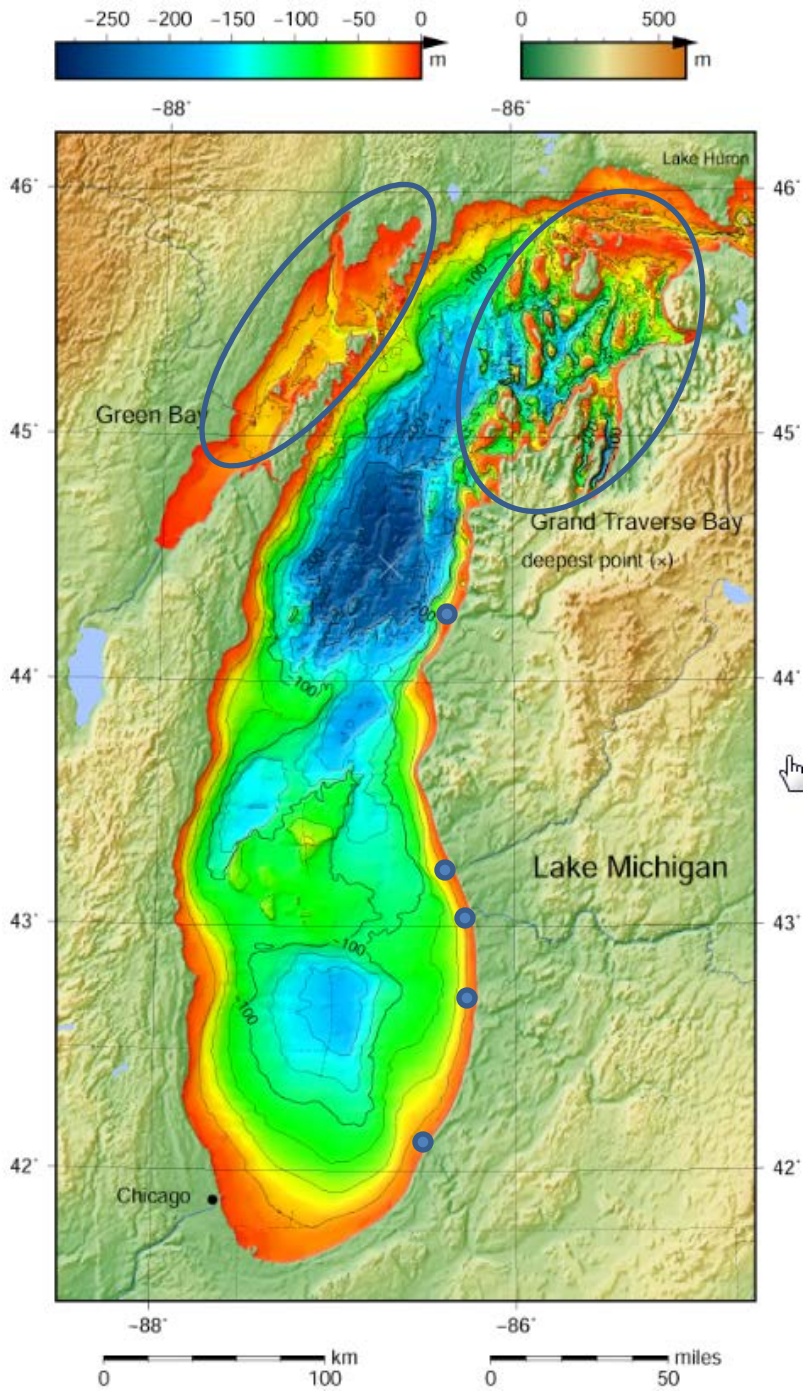
Smallmouth Bass

- Prefer relatively shallow water around structure.
- Coarse substrate required for spawning.
- Green Bay, Grand Traverse Bay, Beaver Island, Manitou Island, and Waugoshance Point are good examples of large areas that support smallmouth bass fisheries.
- Harbors and piers also provide good smallmouth bass fisheries.
- Management options include:
  - Regulations with some encouraging trophy fishing opportunities.
  - Protection and enhancement of spawning habitat.
  - Promoting local areas as good fishing opportunities.



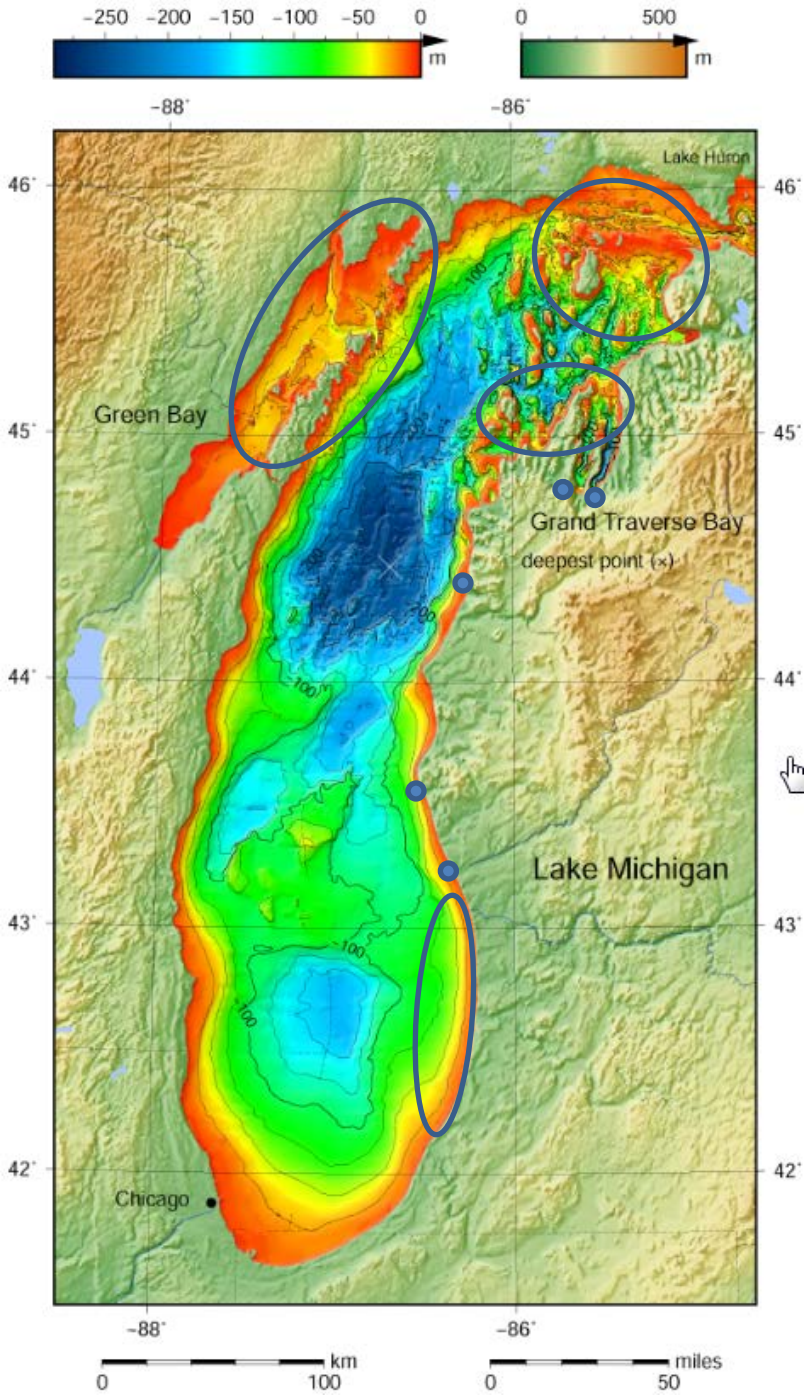
Walleye

- Prefer relatively shallow water around structure.
- Coarse substrate required for spawning and most populations use tributaries.
- Green Bay is the primary area managed for walleye along with some management in Grand Traverse Bay.
- Harbors and piers also provide good walleye fisheries.
- Major walleye tributaries include those in Green Bay and Manistee, Muskegon, Grand, Kalamazoo, and St. Joseph rivers.
- Management options include
  - Stocking, habitat improvement, and regulations.
  - Promote local fishing opportunities.



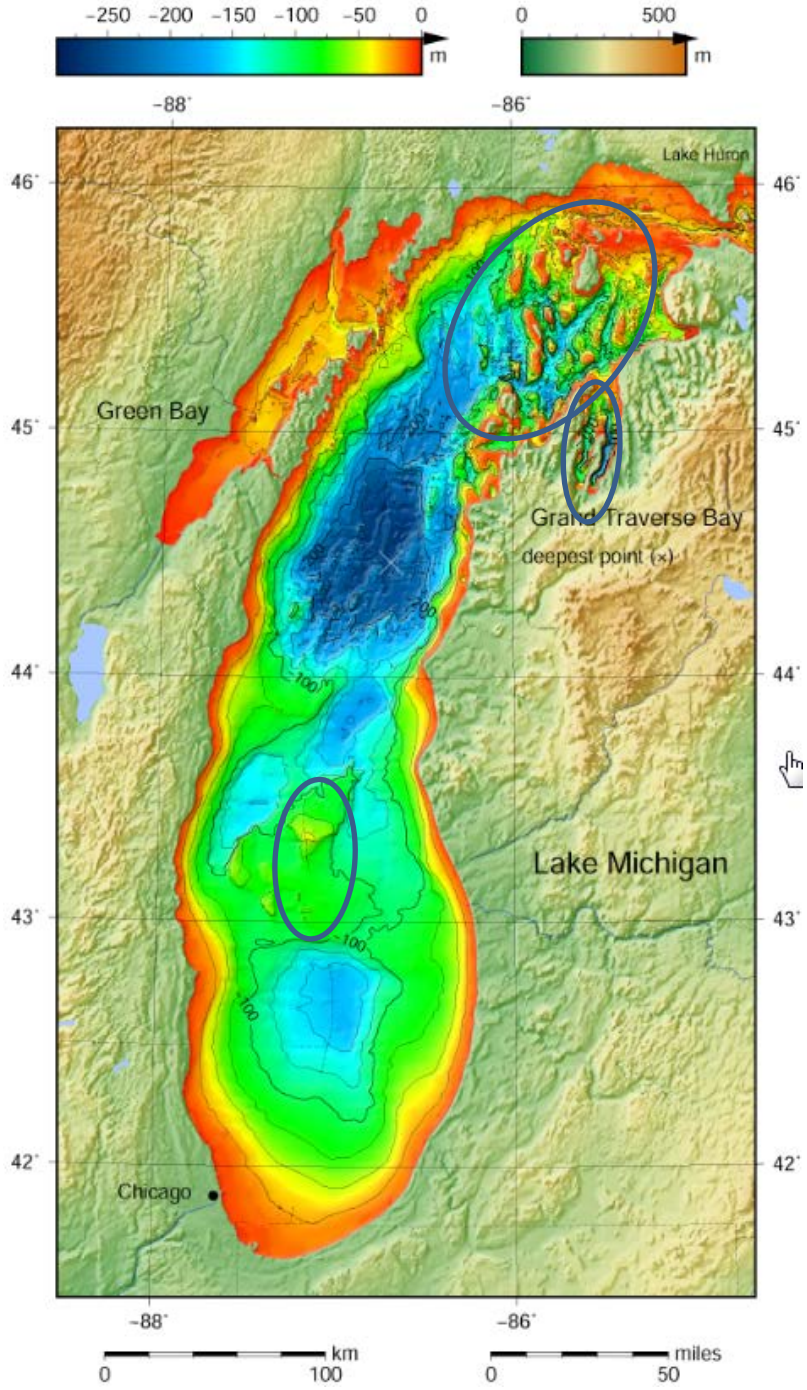
Yellow Perch

- Prefer nearshore and shallow water habitat often near structure.
- Spawning in Lake Michigan occurs in southern Wisconsin and northern Illinois waters and larvae and fry often drift on currents to southern Michigan nearshore areas from Grand Haven to St. Joseph.
- Green Bay offers a shallow habitat system that supports yellow perch as well as northern nearshore waters.
- Drowned river mouth lakes and shallow bays also provide yellow perch habitat and fisheries (i.e. southern Grand Traverse Bay, Portage Lake, Pentwater Lake, White Lake, and Muskegon Lake).
- Management options include:
  - Regulations and habitat protection
  - Promote local fishing opportunities.



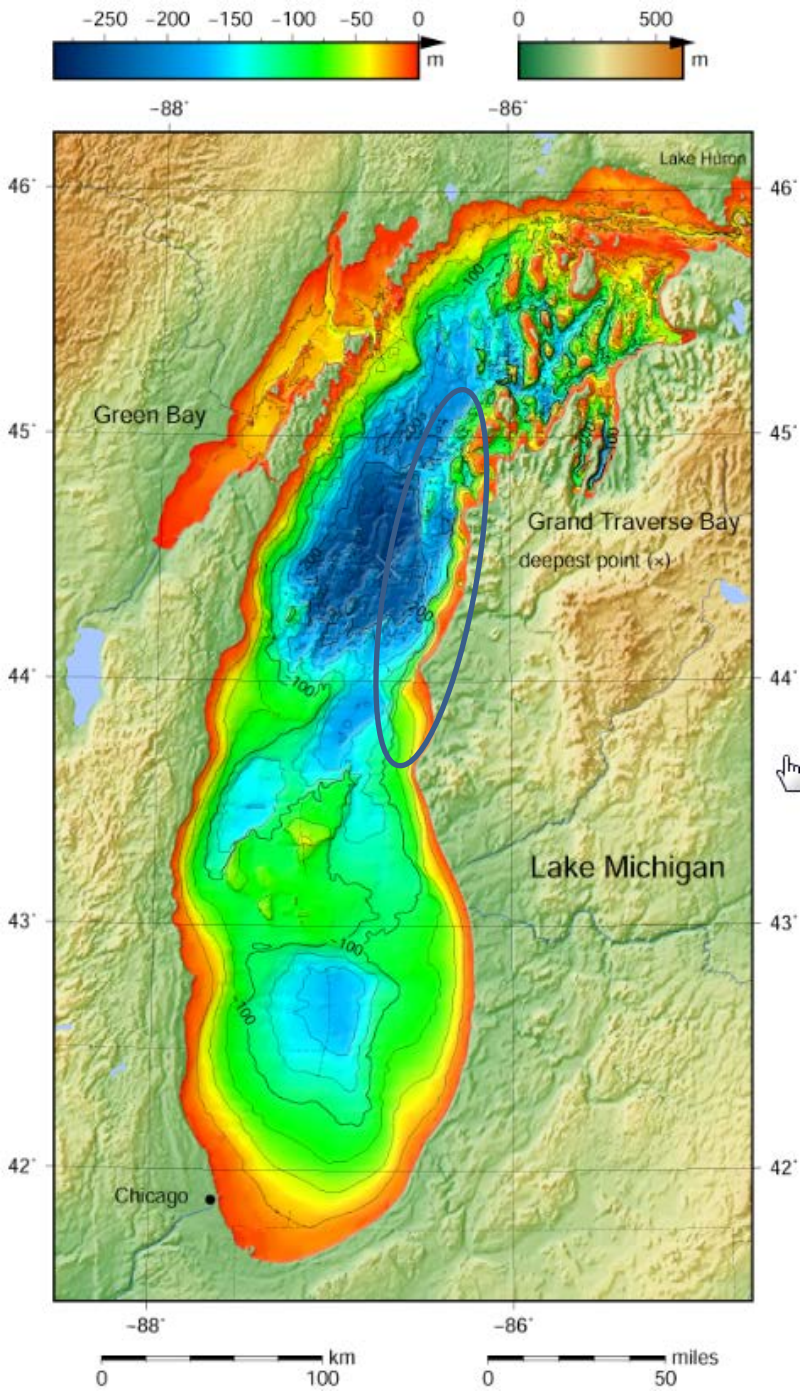
Lake Trout

- Lake trout require rock reefs and clay banks to spawn. These areas are concentrated in Northern Lake Michigan, Grand Traverse Bay, and the Mid-Lake Reef.
- Lake trout are typically nearshore in the spring and move offshore to deeper water as the water warms.
- Rehabilitation goals are to increase natural reproduction and increase the age structure.
- Management options include:
  - Allocating harvest between tribal nations and state fishers.
  - Concentrate stocking in northern Lake Michigan where spawning habitat exists and where mortality rates have been highest.
  - Regulations are more conservative in north to increase age structure and more liberal to south where rehabilitation goals are starting to be met.
  - Promote fishing opportunities.



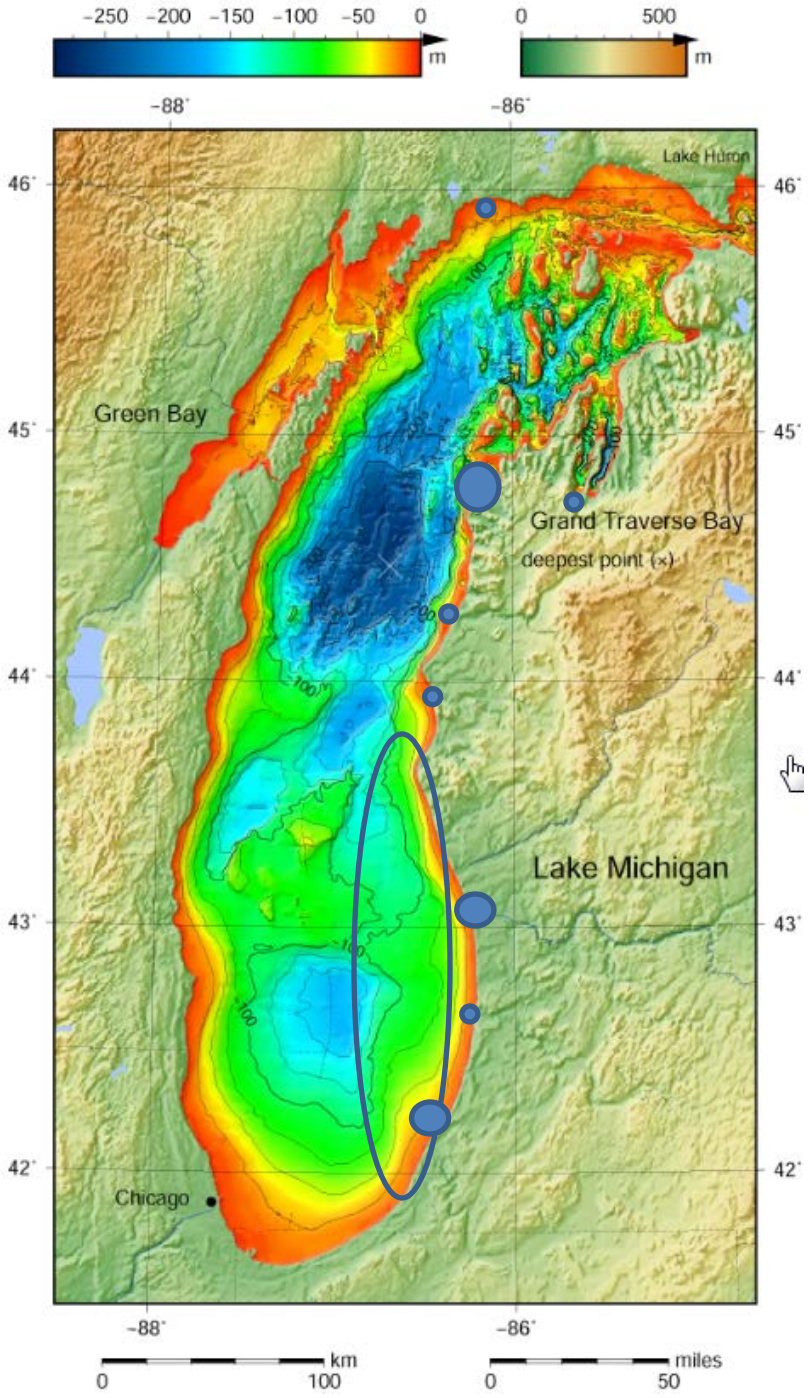
Brown Trout

- Prefer some structure and cooler water – especially in summer.
- Southern Lake Michigan waters are generally shallower and warmer in the summer months so trout need to go offshore to seek cooler temperatures.
- Generally provide better fisheries when stocked at high densities.
- Management options include:
  - Stocking areas with more structure and close to temperature refuge (i.e. deepwater or cold tributaries).
  - More concentrated stocking.
  - Promote fishing opportunities especially the early spring fishery.



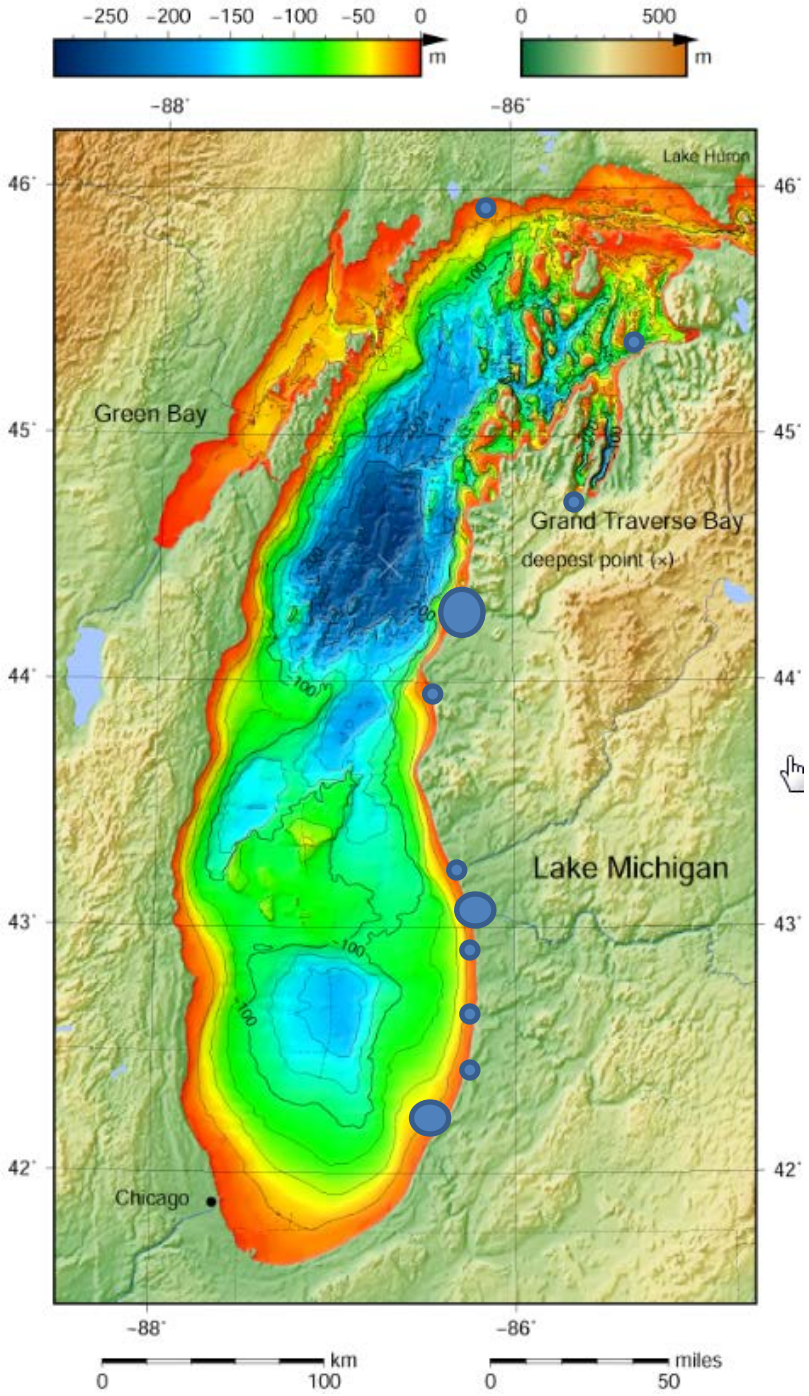
Coho Salmon

- Generally move to southern Lake Michigan in winter and begin to move north along Michigan shoreline during spring and then disperse to the western shore of Lake Michigan during summer before returning to Michigan nearshore areas in late summer and fall.
- Fall fisheries concentrated at stocking locations.
- Platte River stocked at high concentration to maintain broodstock.
- Some natural reproduction in cold river but probably limited to 20% or less of population.
- Management options include:
  - Stocking Platte River for broodstock.
  - Stocking high use ports and rivers for fall returns with emphasis on southern Lake Michigan.
  - Regulations mainly include bag limit.
  - Habitat improvement through river connectivity.
  - Promote fishing opportunities.



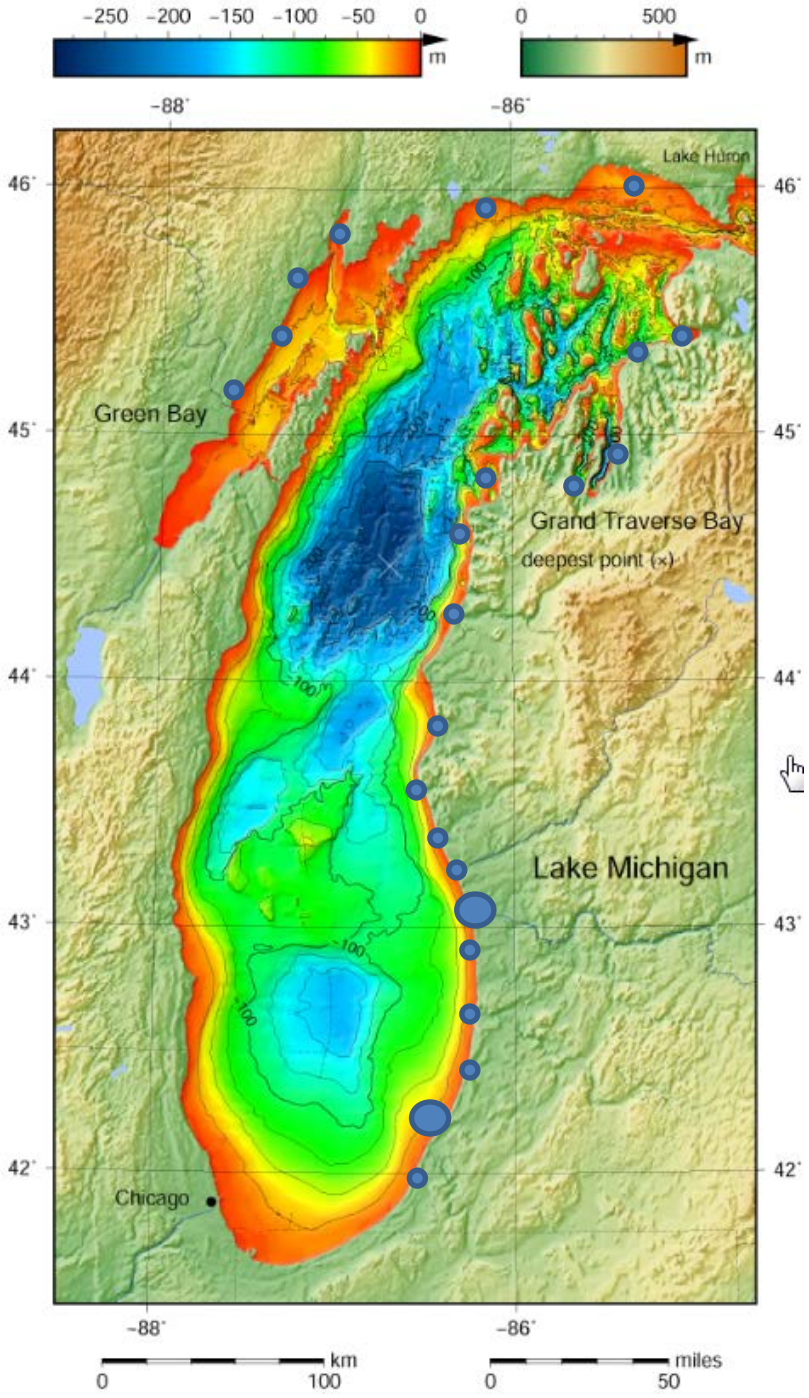
Chinook Salmon

- Chinook move throughout the lake from age 1 to maturity (i.e. age 2, 3, or 4).
- Spring and summer fisheries depend on lake temperature and bait availability.
- Fall fisheries concentrated at stocking locations and rivers that produce wild salmon. Wild rivers tend to be the Muskegon, PM, Manistee, Betsie, and small rivers and streams in northern lower Michigan and the Upper Peninsula.
- Medusa stocking traditionally provided to fisheries throughout the lake.
- Salmon moving to and from Lake Huron provide fisheries near Green Bay and across northern Lake Michigan.
- Management options include:
  - Stocking Little Manistee River for broodstock.
  - Stocking high use ports and rivers for fall returns with emphasis on southern Lake Michigan.
  - Regulations mainly include bag limit.
  - Habitat improvement through river connectivity.
  - Promote fishing opportunities.



Steelhead

- Steelhead move throughout the lake until majority when the return to spawn in rivers.
- Steelhead tend to stay over deep water unless cold water is nearshore and then provide good nearshore fisheries.
- Fall and spring fisheries concentrated at stocking locations and rivers that produce wild steelhead. Wild rivers tend to be the Muskegon, PM, Manistee, Betsie, and small rivers and streams in northern lower Michigan and the Upper Peninsula.
- Management options include:
  - Stocking rivers that produce good fall, winter and spring fisheries.
  - Stocking more oriented to river runs while supporting a diverse lake fishery.
  - Regulations mainly include bag limit.
  - Habitat improvement through river connectivity.
  - Promote fishing opportunities locally.



Cisco

- Cisco are expanding from Grand Traverse Bay north to Charlevoix and south as far as Ludington.
- Cisco prefer nearshore areas and typically spawn on rock reefs and coarse substrate.
- Traditionally cisco were abundant in Green Bay.
- Management options include:
  - Experimental stocking in Grand Traverse Bay.
  - Regulations for bag limit.
  - Reef habitat protection and enhancement.
  - Assess expansion throughout the lake.
  - Promote fishing opportunities locally.