The State of Lake Michigan

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US Fish and Wildlife Service
Outline

- Status based on LaMP 2002
- Two LaMP goals related to Biological Integrity
- Examples of pertinent issues in state, stressor and human response themes
- Celebrate successes
Are all habitats healthy, naturally diverse, and sufficient to sustain viable biological communities?
Are Non-native Species controlled and managed?

2000

2010

2020

POOR  DETERIORATING  MIXED  IMPROVING  GOOD
U.S. EPA Region 5 Critical Ecosystems Team Analysis Lake Michigan basin the for land use and cover

- Highest 10% scores for ecosystem quality
- Lowest 10% scores for sustainability
Wetland Loss
High Island looking Northeast (glacial or Bois Blanc Formation)
Dune and Lake
Lake Michigan Mass Balance

Green Bay Volatilization: 502
Green Bay Gas Absorption: 70
Export: 38
Green Bay Tributary Loading: 220
Main Lake Volatilization: 3000
Main Lake Gas Absorption: 2243
Resuspension: 1152
Bettling: 948
Sediment Burial: 348
Main Lake Tributary Loading: 126
Export to Lake Huron: <1

Lake Michigan PCB Inventory
Water Column = 690 kg
Active Sediment = 7071 kg
(0-3.3 cm interval)
Keystone Species in Lake Michigan Food Web Vanishing
Densities of Diporeia in southern Lake Michigan for selected years from 1980 to 2000
Pathogens Cause Beach Closings

Num. of closures

- 0 (115 beaches)
- 1-4 (19 beaches)
- 5-9 (13 beaches)
- >10 (23 beaches)
Causes of Closures/Advisories for the 97 Reported Beaches

- Boat discharge
- CSO
- Other
- POTW
- Septic systems
- SSO
- Storm water runoff
- Unknown
- Wildlife
- Wind and wave action
Harvest Trends – Lake Michigan:

- Steady downward trend – mostly commercial
- Sport harvest exceeded commercial
- L. Michigan FCOs (harvest expectations):
  - Below FCOs for; whitefish, lake trout, chubs, yellow perch, planktivores, round whitefish, sea lamprey)
  - Achieving FCOs for; salmonids (non-lake trout)
Harvest of Inshore Fishes
Lake Michigan

Pounds

1985 1987 1989 1991 1993 1995 1997 1999 2001

Walleye
Commercial Yellow Perch
Sport Yellow Perch
Bass, Pike & Panfish
Bighead Carp in the Illinois River Summer 2002
Accessibility of Michigan Tributaries from Great Lakes

Accessibility of MI Streams:
- Inaccessible
- Accessible
- Michigan
Four rare Species
improving

Critical areas like USFWS Plover critical habitat map
Preserving and enhancing biodiversity in Southern Lake Michigan.
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