6. Please rank the following threats to the Wildlife in Lake Michigan Habitat in Indiana.

	Critical threat	Serious threat	Somewhat of a threat	Slight threat	No threat	Unknown	Response Total
Invasive/non-native species	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	0% (0)	**2**
High sensitivity to pollution	0% (0)	50% (1)	0% (0)	0% (0)	0% (0)	50% (1)	**2**
Bioaccumulation of contaminants	50% (1)	0% (0)	0% (0)	0% (0)	0% (0)	50% (1)	**2**
Predators (native or domesticated)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	**2**
Dependence on other species (mutualism, pollinators)	0% (0)	0% (0)	0% (0)	0% (0)	50% (1)	50% (1)	**2**
Diseases/parasites (of the species itself)	0% (0)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	**2**
Regulated hunting/fishing pressure (too much)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	0% (0)	**2**
Species over population	0% (0)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Unintentional take/ direct mortality (e.g., vehicle collisions, power line collisions, by-catch, harvesting equipment, land preparation machinery)	0% (0)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	**2**
Unregulated collection pressure	0% (0)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Dependence on irregular resources (cyclical annual variations) (e.g., food, water, habitat limited due to annual variations in availability)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	**2**
					Total Respondents		**22**

7. Please also rank these threats to the Wildlife in Lake Michigan Habitat in Indiana.

	Critical threat	Serious threat	Somewhat of a threat	Slight threat	No threat	Unknown	Response Total
Habitat loss (breeding range)	0% (0)	0% (0)	50% (1)	5 0% (1)	0% (0)	0% (0)	**2**
Habitat loss (feeding/foraging areas)	0% (0)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	**2**
Small native range (high endemism)	0% (0)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	**2**
Near limits of natural geographic range	0% (0)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Large home range requirements	0% (0)	0% (0)	0% (0)	0% (0)	50% (1)	50% (1)	**2**
Viable reproductive population size or availability	50% (1)	0% (0)	50% (1)	0% (0)	0% (0)	0% (0)	**2**
Specialized reproductive behavior or low reproductive rates	50% (1)	0% (0)	50% (1)	0% (0)	0% (0)	0% (0)	**2**
Degradation of movement/migration routes (overwintering habitats, nesting and staging sites)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	0% (0)	**2**
Genetic pollution (hybridization)	0% (0)	0% (0)	0% (0)	50% (1)	0% (0)	50% (1)	**2**
Unknown	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	**1**
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	**1**
					Total Respondents		**20**

8. Other threats to the Wildlife in Lake Michigan Habitat in Indiana.

Commercial over exploitation resulting in low spawner stock abundance.

Egg predators predation, nutritional requirements, early mortality syndrome

Total Respondents **2**

9. Please briefly describe the top two threats to the Wildlife in Lake Michigan Habitat in Indiana identified above.

Year class failure related to low spawner stock abundance. Competition with non native wildlife species for limited available food resources.

Lack of successful spawning, possibly related to bioenergetics. Too much egg predation.

Total Respondents **2**

10. Please rank the following threats to the HABITAT of the Wildlife in Lake Michigan Habitat in Indiana.

	Critical threat	Serious threat	Somewhat of a threat	Slight threat	No threat	Unknown	Response Total
Commercial or residential development (sprawl)	0% (0)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Counterproductive financial incentives or regulations	0% (0)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Invasive/non-native species	100% (2)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**2**
Nonpoint source pollution (sedimentation and nutrients)	0% (0)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	**2**
Habitat fragmentation	0% (0)	50% (1)	0% (0)	0% (0)	0% (0)	50% (1)	**2**
Successional change	0% (0)	0% (0)	0% (0)	0% (0)	50% (1)	50% (1)	**2**
Diseases (of plants that create habitat)	0% (0)	0% (0)	0% (0)	50% (1)	0% (0)	50% (1)	**2**
Habitat degradation	0% (0)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	**2**
Climate change	0% (0)	0% (0)	50% (1)	0% (0)	0% (0)	50% (1)	**2**
Stream channelization	0% (0)	0% (0)	0% (0)	0% (0)	50% (1)	50% (1)	**2**
Impoundment of water/flow regulation	0% (0)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Agricultural/forestry practices	0% (0)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Residual contamination (persistent toxins)	0% (0)	50% (1)	0% (0)	50% (1)	0% (0)	0% (0)	**2**
Point source pollution (continuing)	0% (0)	50% (1)	0% (0)	0% (0)	0% (0)	50% (1)	**2**
Mining/acidification	0% (0)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Drainage practices (stormwater runoff)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	0% (0)	**2**
Unknown	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**0**
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**0**
					Total Respondents		**32**

11. Other HABITAT threats to the Wildlife in Lake Michigan Habitat in Indiana.

Competition with round goby for nearshore habitat.

Total Respondents **1**

12. Please briefly describe the top two HABITAT threats to the Wildlife in Lake Michigan Habitat in Indiana identified above.

Competition with non native species for habitat. Need a quality place to live that is not in competiton with round goby.

Identification of habitat along Indiana's nearshore area.

Appendix E-7: Lake Michigan

Total Respondents	**2**

13. What current monitoring efforts by state agencies are you aware of for the Wildlife in Lake Michigan Habitat in Indiana?

	Yes, these efforts occur	Not aware of these efforts occuring	Response Total
Statewide year-round monitoring conducted by state agencies	0% (0)	0% (0)	**0**
Statewide once a year monitoring conducted by state agencies	0% (0)	0% (0)	**0**
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	**0**
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	**0**
Regional or local year-round monitoring conducted by state agencies	100% (1)	0% (0)	**1**
Regional or local once a year monitoring conducted by state agencies	100% (1)	0% (0)	**1**
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by state agencies	100% (1)	0% (0)	**1**
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	**0**
		Total Respondents	**3**

14. What current monitoring efforts by other organizations are you aware of for the Wildlife in Lake Michigan Habitat in Indiana?

	Yes, these efforts occur	Not aware of these efforts occuring	Response Total
Statewide year-round monitoring conducted by other organizations	0% (0)	0% (0)	**0**
Statewide once a year monitoring conducted by other organizations	0% (0)	0% (0)	**0**
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	**0**
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	**0**
Regional or local year-round monitoring conducted by other organizations	100% (1)	0% (0)	**1**
Regional or local once a year monitoring conducted by other organizations	100% (1)	0% (0)	**1**
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by other organizations	100% (1)	0% (0)	**1**
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by other	0% (0)	0% (0)	**0**

organizations		
	Total Respondents	**3**

15. How crucial are these monitoring efforts by state agencies for the conservation of the Wildlife in Lake Michigan Habitat in Indiana?

	Very crucial	Somewhat crucial	Slightly crucial	Not crucial	Unknown	Response Total
Statewide year-round monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Statewide once a year monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Regional or local year-round monitoring conducted by state agencies	50% (1)	0% (0)	50% (1)	0% (0)	0% (0)	**2**
Regional or local once a year monitoring conducted by state agencies	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	**1**
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by state agencies	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	**1**
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
				Total Respondents		**9**

16. How crucial are these monitoring efforts by other organizations for the conservation of the Wildlife in Lake Michigan Habitat in Indiana?

	Very crucial	Somewhat crucial	Slightly crucial	Not crucial	Unknown	Response Total
Statewide year-round monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Statewide once a year monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Periodic statewide (less than once a year but still regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Occasional statewide (less than once a year and not regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Regional or local year-round monitoring conducted by other organizations	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	**1**
Regional or local once a year monitoring conducted by other organizations	50% (1)	0% (0)	50% (1)	0% (0)	0% (0)	**2**
Periodic regional or local (less than once a year but still regularly scheduled) monitoring conducted by other organizations	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	**1**
Occasional regional or local (less than once a year and not regularly scheduled) monitoring conducted by other organizations	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	**1**
				Total Respondents		**9**

17. Regional or local state agency monitoring for the Wildlife in Lake Michigan Habitat in Indiana.

Lake Michigan proper out of Michigan City.

Spring assessment out of Michigan City. Fall spawning assessment, Indiana waters of Lake Michigan. 9 month creel survey for harvest information. These efforts are conducted by the IDNR-Fish and Wildlife division.

Total Respondents **2**

18. Regional or local monitoring by other organizations for the Wildlife in Lake Michigan Habitat in Indiana.

Out of Michgian City and near Gary by Ball State University.

USFWS and Illinois natural history survey egg and fry assessments at the Port of Indiana. THis is part of a Fish and Wildlife Restoration Grant.

Total Respondents **2**

Appendix E-7: Lake Michigan

19. Please list organizations that are monitoring the Wildlife in Lake Michigan Habitat in Indiana.

IDNR-Fish and Wildlife, Ball State University, University of Michigan through a coastal program grant. USFWS

Indiana DNR, Division of Fish and Wildlife. Illinois Natural History Survey, USFWS>

Total Respondents **2**

20. What are the current monitoring techniques for the Wildlife in Lake Michigan Habitat in Indiana?

	Frequently used	Occasionally used	Not used but possible with existing technology and data	Not used and not possible with existing technology and data	Not economically feasible	Unknown	Response Total
Radio telemetry and tracking	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Modeling	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	**2**
Coverboard routes	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**0**
Spot mapping	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**0**
Driving a survey route	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	**1**
Reporting from harvest, depredation, or unintentional take (road kill, bycatch)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**1**
Mark and recapture	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	0% (0)	**2**
Professional survey/census	100% (2)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**2**
Volunteer survey/census	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	**1**
Trapping (by any technique)	100% (2)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**2**
Representative sites	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**1**
Probabilistic sites	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	100% (1)	**1**
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**0**
					Total Respondents		**14**

21. Other monitoring techniques for the Wildlife in Lake Michigan Habitat in Indiana.

Long term monitoring through gillnets, trawling has been conducted at 3 sites along the lake michigan lakefront since the mid 70's by Ball State University during the summer season. Creel census has been conducted by IDNR-Fish and Wildlife division for approximately 20 years. Commerical monitoring was conducted until the halt of the commercial fishing industry in 1996.

Total Respondents **1**

22. What one or two monitoring techniques would you recommend for effective conservation of the Wildlife in Lake Michigan Habitat in Indiana?

Fall trawl sampling for young of the year production. Possible incorporation of hydracoustic models for the near shore area.

I would like to see all the lake trout stocked in Lake Michigan to be coded wire tagged. That will allow for better understanding of survival after stocking and movement of the fish. It will also allow for better understanding of spawning site fidelity.

Total Respondents **2**

23. What current HABITAT inventory and assessment efforts or activities by state agencies are you aware of for the Wildlife in Lake Michigan Habitat in Indiana?

	Yes, these efforts occur	No effort that I'm aware of	Response Total
Statewide annual inventory and assessment conducted by state agencies	0% (0)	100% (1)	**1**
Statewide once a year inventory and assessment conducted by state agencies	0% (0)	100% (1)	**1**
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (1)	**1**
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	100% (1)	**1**
Regional or local year-round inventory and assessment conducted by state agencies	0% (0)	100% (1)	**1**
Regional or local once a year inventory and assessment conducted by state agencies	100% (1)	0% (0)	**1**
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	100% (2)	0% (0)	**2**
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	100% (1)	0% (0)	**1**
		Total Respondents	**9**

24. What current HABITAT inventory and assessment efforts or activities by other organizations are you aware of for the Wildlife in Lake Michigan Habitat in Indiana?

	Yes, these efforts occur	No effort that I'm aware of	Response Total
Statewide year-round inventory and assessment conducted by other organizations	0% (0)	100% (1)	**1**
Statewide once a year inventory and assessment conducted by other organizations	0% (0)	100% (1)	**1**
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (1)	**1**
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (1)	**1**
Regional or local year-round inventory and assessment conducted by other organizations	100% (1)	0% (0)	**1**
Regional or local once a year inventory and assessment conducted by other organizations	100% (1)	0% (0)	**1**
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	100% (1)	**1**
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	50% (1)	50% (1)	**2**
		Total Respondents	**9**

25. How crucial are these HABITAT efforts by state agencies for the conservation of the Wildlife in Lake Michigan Habitat in Indiana?

	These efforts are very crucial for this HABITAT	These efforts are somewhat crucial for this HABITAT	These efforts are slightly crucial for this HABITAT	These efforts are not crucial for this HABITAT	Unknown	Response Total
Statewide annual inventory and assessment conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Statewide once a year inventory and assessment conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Regional or local year-round inventory and assessment conducted by state agencies	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	**1**
Regional or local once a year inventory and assessment conducted by state agencies	0% (0)	50% (1)	0% (0)	50% (1)	0% (0)	**2**
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by state agencies	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
				Total Respondents		**9**

26. How crucial are these HABITAT efforts by other organizations for the conservation of the Wildlife in Lake Michigan Habitat in Indiana?

	These efforts are very crucial for this HABITAT	These efforts are somewhat crucial for this HABITAT	These efforts are slightly crucial for this HABITAT	These efforts are not crucial for this HABITAT	Unknown	Response Total
Statewide year-round inventory and assessment conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Statewide once a year inventory and assessment conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Periodic statewide (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Occasional statewide (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Regional or local year-round inventory and assessment conducted by other organizations	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	**1**
Regional or local once a year inventory and assessment conducted by other organizations	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	**1**
Periodic regional or local (less than once a year but still regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	**1**
Occasional regional or local (less than once a year and not regularly scheduled) inventory and assessment conducted by other organizations	0% (0)	50% (1)	0% (0)	50% (1)	0% (0)	**2**
				Total Respondents		**9**

27. Regional or local state agency HABITAT inventory and assessment for the Wildlife in Lake Michigan Habitat in Indiana.

Lake Michigan proper along the shoreline in nearshore area less than 30 feet in depth.

Habitat mapping and shoreline aerial imagery.

Total Respondents **2**

28. Regional or local HABITAT inventory and assessment by other organizations for the Wildlife in Lake Michigan Habitat in Indiana.

Lake Michigan proper along the shoreline in nearshore area less than 30 feet in depth.

Total Respondents 1

29. Please list organizations that are monitoring this HABITAT for the Wildlife in Lake Michigan Habitat in Indiana.

IDNR, USFSW, Ball State, University of Michigan

Indiana DNR- Fish and Wildlife division. USFWS/GLFC

Total Respondents 2

30. What are the current monitoring techniques for the Wildlife in Lake Michigan Habitat in Indiana?

If a technique is not applicable to the Wildlife in Lake Michigan Habitat do not select a response in that row.

	Frequently used	Occasionally used	Not used but possible with existing technology and data	Not used and not possible with existing technology and data	Not economically feasible	Unknown	Response Total
GIS mapping	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	0% (0)	**2**
Aerial photography and analysis	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	0% (0)	**2**
Systematic sampling	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	0% (0)	**2**
Property tax estimates	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	**1**
State revenue data	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	**1**
Regulatory information	0% (0)	100% (1)	0% (0)	0% (0)	0% (0)	0% (0)	**1**
Participation in landuse programs	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	**1**
Modeling	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	0% (0)	**2**
Voluntary landowner reporting	0% (0)	0% (0)	0% (0)	100% (1)	0% (0)	0% (0)	**1**
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**0**
					Total Respondents		**13**

31. Other HABITAT inventory and assessment techniques for the Wildlife in Lake Michigan Habitat in Indiana.

Bottom mapping of habitat.

Total Respondents 1

32. What one or two HABITAT inventory and assessment techniques would you recommend for effective conservation of the Wildlife in Lake Michigan Habitat in Indiana?

Lidar mapping would help identify spawning areas within the nearshore zone along Indiana's coastline.

Digital satellite imagery to conduct bottom contour mapping in nearshore spawning areas.

Total Respondents 2

33. What is the current body of science for the Wildlife in Lake Michigan Habitat in Indiana?

	Response Total	Response Percent
Complete, up to date and extensive	0	0%
Adequate	1	50%
Inadequate	1	50%
Nonexistent	0	0%
Other (please explain below)	0	0%

Total Respondents 2

34. Please provide a citation (title, author, date, publisher) that would give the best overview of the Wildlife in Lake Michigan Habitat in Indiana, if available. This resource may be used if further detail is needed.

Title = Preliminary Results of 2004 Ball State University Yellow Perch Research in Indiana Waters of Lake Michigan;
Author = Paul Allen and Thomas Lauer;
Date = Cctober 2004;
Publisher = Ball State University

Title = Yellow Perch Research and Management in Lake Michgian, Evaluating Progress in a Cooperative Effort, 1997-2001;
Author = David Clapp and John Dettmers;
Date = November 2004;
Publisher = American Fisheries Society, Fisheries

Title = Lake Trout Restoration Plan;
Date = In progress

Title = Lake Trout Impediments Docuement;
Author = Numerous,;
Date = 2003;
Publisher = Lake Trout Task group/LMTC

Appendix E-7: Lake Michigan

35. If possible, please provide a second citation (title, author, date, publisher) that would give another good overview of the Wildlife in Lake Michigan Habitat in Indiana. This resource may also be used if further detail is needed.

Title = Yellow Perch Research and Management in Lake Michgian, Evaluating Progress in a Cooperative Effort, 1997-2001
Author = David Clapp and John Dettmers
Date = November 2004
Publisher = American Fisheries Society, Fisheries

Title = Lake Trout Impediments Documents
Author = Numerous,
Date = 2003
Publisher = Lake Trout Task group/LMTC

36. What is the current HABITAT body of science for the Wildlife in Lake Michigan Habitat in Indiana?

	Response Total	Response Percent
Complete, up to date and extensive	0	0%
Adequate	0	0%
Inadequate	2	100%
Nonexistent	0	0%
Other (please explain below)	0	0%
Total Respondents		2

37. Please provide a citation (title, author, date, publisher) that would give the best HABITAT overview of the Wildlife in Lake Michigan Habitat in Indiana, if available. This resource may be used if further detail is needed.

	Response Total	Response Percent
Title	0	0%
Author	0	0%
Date	0	0%
Publisher	0	0%
Total Respondents	0	
(skipped this question)	1	

38. If possible, please provide a second citation (title, author, date, publisher) that would give another good HABITAT overview of the Wildlife in Lake Michigan Habitat in Indiana. This resource may also be used if further detail is needed.

	Response Total	Response Percent
Title	0	0%
Author	0	0%
Date	0	0%
Publisher	0	0%
Total Respondents		0
(skipped this question)		1

39. What are the research needs for the Wildlife in Lake Michigan Habitat in Indiana?

	Urgently needed	Greatly needed	Needed	Slightly needed	Not needed	Unknown	Response Total
Life cycle	0% (0)	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	2
Distribution and abundance	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	2
Limiting factors (food, shelter, water, breeding sites)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	2
Threats (predators/competition, contamination)	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	0% (0)	2
Relationship/dependence on specific habitats	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	2
Population health (genetic and physical)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	2
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0
Total Respondents							12

40. Other research needs for the Wildlife in Lake Michigan Habitat in Indiana.

No responses were entered for this question.

Total Respondents	0
(skipped this question)	1

41. What are the HABITAT research needs for the Wildlife in Lake Michigan Habitat in Indiana?

	Urgently needed	Greatly needed	Needed	Slightly needed	Not needed	Unknown	Response Total
Successional changes	0% (0)	0% (0)	0% (0)	0% (0)	50% (1)	50% (1)	**2**
Distribution and abundance (fragmentation)	0% (0)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	**2**
Threats (land use change/competition, contamination/global warming)	0% (0)	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	**2**
Relationship/dependence on specific site conditions	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	0% (0)	**2**
Growth and development of individual components of the habitat	0% (0)	0% (0)	50% (1)	0% (0)	0% (0)	50% (1)	**2**
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**0**
						Total Respondents	**10**

42. Other HABITAT research needs for the Wildlife in Lake Michigan Habitat in Indiana.

No responses were entered for this question.

Total Respondents **0**

43. How well do the following conservation efforts address the threats to the Wildlife in Lake Michigan Habitat in Indiana?

	Very well	Somewhat	Not at all	Not used	Unknown	Response Total
Habitat protection (use below for details)	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	**2**
Population management (hunting, trapping)	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	**2**
Population enhancement (captive breeding and release)	0% (0)	50% (1)	0% (0)	50% (1)	0% (0)	**2**
Reintroduction (restoration)	0% (0)	0% (0)	50% (1)	50% (1)	0% (0)	**2**
Food plots	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Threats reduction	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	**2**
Native predator control	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Exotic/invasive species control	0% (0)	0% (0)	50% (1)	50% (1)	0% (0)	**2**
Regulation of collecting	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	**2**
Disease/parasite management	0% (0)	50% (1)	0% (0)	50% (1)	0% (0)	**2**
Translocation to new geographic range	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Protection of migration routes	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Limiting contact with pollutants/contaminants	0% (0)	50% (1)	50% (0)	0% (0)	0% (0)	**2**
Public education to reduce human disturbance	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	**2**
Culling/selective removal	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Stocking	0% (0)	50% (1)	0% (0)	50% (1)	0% (0)	**2**
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**0**
				Total Respondents		32

44. Other current conservation practices for the Wildlife in Lake Michigan Habitat in Indiana.

Regulation of sport harvest. Closure of commercial fishery to allow spawning stock biomass to increase, thus allowing for the production of offspring that can eventually add to the spawning stock biomass.

Total Respondents 1

45. What one or two specific practices would you recommend for more effective conservation of the Wildlife in Lake Michigan Habitat in Indiana?

Completely eliminate commercial fishing. This appears to have reduced the spawning stock to a level that could not maintain a fishery.

Total Respondents 1

46. How well do the following conservation efforts address the HABITAT threats to the Wildlife in Lake Michigan Habitat in Indiana?

	Very well	Somewhat	Not at all	Not used	Unknown	Response Total
Habitat protection through regulation	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	**2**
Habitat protection on public lands	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Habitat protection incentives (financial)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Habitat restoration through regulation	0% (0)	50% (1)	0% (0)	50% (1)	0% (0)	**2**
Habitat restoration on public lands	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Habitat restoration incentives (financial)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Artificial habitat creation (artificial reefs, nesting platforms)	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	**2**
Selective use of functionally equivalent exotic species in place of extirpated natives	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Succession control (fire, mowing)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Corridor development/protection	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Managing water regimes	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Pollution reduction	0% (0)	50% (1)	50% (1)	0% (0)	0% (0)	**2**
Protection of adjacent buffer zone	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Restrict public access and disturbance	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Land use planning	0% (0)	50% (1)	0% (0)	50% (1)	0% (0)	**2**
Technical assistance	0% (0)	100% (2)	0% (0)	0% (0)	0% (0)	**2**
Cooperative land management agreements (conservation easements)	0% (0)	0% (0)	0% (0)	100% (2)	0% (0)	**2**
Other (please specify below)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	**0**
				Total Respondents		**33**

47. Other current HABITAT conservation practices for the Wildlife in Lake Michigan Habitat in Indiana.

Limiting disturbance through the construction(DOW) permit process.

Total Respondents **1**

48. What one or two specific HABITAT practices would you recommend for more effective conservation of the Wildlife in Lake Michigan Habitat in Indiana?

Habitat creation, ie. artificial structures during lake construction projects

Total Respondents **1**

49. Do you have any additional comments or information on the Wildlife in Lake Michigan Habitat that you feel would be useful in the development of the Indiana Comprehensive Wildlife Strategy?

Much research work has been done on the the yellow perch by Ball State University since the mid 1970's. This works serves as the framework for the management of the population in Indiana's waters of Lake Michigan. It is critical that funding for this project continue to maintain the dataset. It is the largest and longest dataset for yellow perch on all of Lake Michigan and has served as the foundation for many management decisions on sport and commerical harvest decisions.

Total Respondents **1**