

GREAT RIVERS OF GREAT LAKES DRAINAGE HABITAT NARRATIVE

Habitat description

The Great Lakes drainage of Indiana includes waters that flow into Lake Michigan and Lake Erie and are located in extreme northern Indiana and northeast Indiana. Great rivers are those having a drainage area of > 1,999 mi². This includes all of the St. Joseph River in St. Joseph and Elkhart counties (Lake Michigan drainage), and the lower section of the Maumee River in Allen County (Lake Erie drainage). Great Rivers of the Great Lakes drainage of Indiana are of low to medium gradient and characterized by sandy/rocky bottoms.

Problems affecting species and habitats

Species threats

The respondent ranked the following as "critical threat" to wildlife in great rivers of Great Lakes drainage habitat in Indiana:

- High sensitivity to pollution

The respondent ranked the following as "serious threat:"

- Degradation of movement/migration routes (overwintering habitats, nesting and staging sites)

The respondent ranked the following as "somewhat of a threat" (not ranked):

- Habitat loss (breeding range, feeding/foraging areas)
- Viable reproductive population size or availability
- Bioaccumulation of contaminants

The respondent ranked the following as "slight threat" to wildlife in great rivers of Great Lakes drainage habitat in Indiana (not ranked):

- Regulated hunting/fishing pressure (too much)
- Small native range (high endemism)
- Specialized reproductive behavior or low reproductive rates

The respondent offered no additional threats to wildlife in great rivers of Great Lakes drainage habitat in Indiana.

The respondent listed top threats to wildlife in great rivers of Great Lakes drainage habitat in Indiana (not ranked):

- Past pollution problems
- Dams on rivers block migration

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to wildlife in great rivers of Great Lakes drainage habitat. There were no responses.

Habitat threats

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The respondent ranked the following as “serious threat” to great rivers of Great Lakes drainage habitat in Indiana (not ranked):

- Nonpoint source pollution (sedimentation and nutrients)
- Impoundment of water/flow regulations

The respondent ranked the following as “somewhat of a threat” (not ranked):

- Commercial or residential development (sprawl)
- Habitat fragmentation
- Stream channelization

The respondent ranked the following as “slight threat” to great rivers of Great Lakes drainage habitat in Indiana (not ranked):

- Habitat degradation
- Agricultural/forestry practices
- Point source pollution (continuing)

The respondent noted no additional threats to great rivers of Great Lakes drainage habitat in Indiana.

The respondent listed top threats to great rivers of Great Lakes drainage habitat in Indiana (not ranked):

- Sedimentation
- Dams fragmenting habitat

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to great rivers of Great Lakes drainage habitat. There were no responses.

Additional research and survey efforts

Current body of research

Species research

The respondent stated that the current body of science is nonexistent for wildlife in great rivers of Great Lakes drainage habitat in Indiana.

Respondents did not identify citations (title, author, date, publisher) that would give the best overview of wildlife in great rivers of Great Lakes drainage habitat in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the current body of science for wildlife in great rivers of Great Lakes drainage habitat. There were no responses.

Habitat research

The respondent stated that the current body of science is nonexistent for great rivers of Great Lakes drainage habitat in Indiana.

Respondents did not identify citations (title, author, date, publisher) that would give the best overview of great rivers of Great Lakes drainage habitat in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the current body of science in great rivers of Great Lakes drainage habitat. There were no responses.

Research needs

Species research

The respondent ranked research as “greatly needed” for wildlife in great rivers of Great Lakes drainage habitat in Indiana:

- Distribution and abundance

The respondent ranked research as “needed” (not ranked):

- Life cycle
- Limiting factors (food, shelter, water, breeding sites)
- Relationship/dependence on specific habitats

The respondent ranked research as “slightly needed” (not ranked):

- Threats (predators/competition, contamination)
- Population health

The respondent noted no additional research needs for wildlife in great rivers of Great Lakes drainage habitat in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the research needs for wildlife in great rivers of Great Lakes drainage habitat. There were no responses.

Habitat research

The respondent listed the following research as “greatly needed” for great rivers of Great Lakes drainage habitat in Indiana (not ranked):

- Distribution and abundance (fragmentation)
- Threats (land use change/competition, contamination/global warming)

The respondent listed the following research as “slightly needed” (not ranked):

- Relationship/dependence on specific site conditions
- Growth and development of individual components of the habitat

The respondent noted no additional research needs for great rivers of Great Lakes drainage habitat in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the research needs for great rivers of Great Lakes drainage habitat. There were no responses.

Conservation actions necessary

Species actions

The respondent listed the following conservation efforts as working “somewhat” to address threats to wildlife in great rivers of Great Lakes drainage habitat in Indiana (not ranked):

- Regulation of collecting
- Protection of migration routes

The respondent noted no other current conservation practices for wildlife in great rivers of Great Lakes drainage habitat in Indiana.

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The respondent recommended these practices for more effective conservation of wildlife in great rivers of Great Lakes drainage habitat in Indiana:

- Protection of migration routes

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the practices for more effective conservation of wildlife in great rivers of Great Lakes drainage habitat. There were no responses.

Habitat actions

The respondent listed the following conservation efforts as working “somewhat” to address threats to great rivers of Great Lakes drainage habitat in Indiana (not ranked):

- Protection of adjacent buffer zone
- Land use planning

The respondent listed or recommended no other current conservation practices for great rivers of Great Lakes drainage habitat in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the conservation efforts for great rivers of Great Lakes drainage habitat. There were no responses.

Proposed plans for monitoring

Current monitoring

Species monitoring

The respondent was aware of the following monitoring efforts by state agencies for wildlife in great rivers of Great Lakes drainage habitat in Indiana:

- Periodic regional or local (less than once a year but still regularly scheduled) monitoring

The respondent was aware of the following monitoring efforts by other organizations for wildlife in great rivers of Great Lakes drainage habitat in Indiana:

- Regional or local once-a-year monitoring

The respondent ranked the following monitoring efforts by state agencies and other organizations as “slightly crucial” for conservation of wildlife in great rivers of Great Lakes drainage habitat in Indiana:

- Regional or local once-a-year monitoring

The respondent listed regional or local monitoring by state agencies for wildlife in great rivers of Great Lakes drainage habitat in Indiana:

- IDEM annual ecoregion sampling

The respondent listed no regional or local monitoring by other organizations for wildlife in great rivers of Great Lakes drainage habitat in Indiana.

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The respondent listed organizations that monitor wildlife in great rivers of Great Lakes drainage habitat in Indiana:

- City of Elkhart (Elkhart and St. Joseph counties)

The respondent considered monitoring techniques for wildlife in great rivers of Great Lakes drainage habitat in Indiana:

Monitoring techniques for wildlife in great rivers of Great Lakes drainage habitat	Used	Not used but possible with existing technology and data	Not economically feasible
Radio telemetry and tracking	--	X	--
Modeling	--	X	--
Mark and recapture	--	X	--
Professional survey/census	--	X	--
Trapping (by any technique)	--	X	--
Representative sites	--	X	--
Probabilistic sites	--	X	--

The respondent noted no other monitoring techniques for wildlife in great rivers of Great Lakes drainage habitat in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the monitoring techniques for wildlife in great rivers of Great Lakes drainage habitat. There were no responses.

Habitat inventory and assessment

The respondent was aware of no inventory and assessment efforts by state agencies or other organizations for great rivers of Great Lakes drainage habitat in Indiana.

The respondent listed the following inventory and assessment efforts by state agencies as "slightly crucial" for conservation great rivers of Great Lakes drainage habitat in Indiana:

- Regional or local once-a-year inventory and assessment

The respondent listed no inventory and assessment efforts by other organizations as crucial for conservation of great rivers of Great Lakes drainage habitat in Indiana.

The respondent listed no regional or local inventory and assessment by state agencies or other organizations for great rivers of Great Lakes drainage habitat in Indiana. The respondent listed no organizations involved with inventory and assessment efforts.

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The respondent considered inventory and assessment techniques for great rivers of Great Lakes drainage habitat in Indiana:

Inventory and assessment techniques for great rivers of Great Lakes drainage habitat	Used	Not used but possible with existing technology and data	Not economically feasible
GIS mapping	--	X	--
Aerial photography and analysis	--	X	--
Property tax estimates	--	--	X
State revenue data	--	--	X
Regulatory information	--	--	X
Participation in land use programs	--	--	X
Modeling	--	X	--
Voluntary landowner reporting	--	--	X

The respondent listed no additional inventory and assessment techniques for great rivers of Great Lakes drainage habitat in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the inventory and assessment techniques for great rivers of Great Lakes drainage habitat. There were no responses.

Recommended monitoring

Species monitoring

The respondent recommended the following monitoring techniques for effective conservation of wildlife in great rivers of Great Lakes drainage habitat in Indiana (not ranked):

- Radio telemetry
- Mark and recapture

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the monitoring techniques for effective conservation of wildlife in great rivers of Great Lakes drainage habitat. There were no responses.

Habitat inventory and assessment

The respondent recommended the following inventory and assessment techniques for effective conservation of great rivers of Great Lakes drainage habitat in Indiana:

- GIS mapping and aerial photography

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Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the inventory and assessment techniques for effective conservation of great rivers of Great Lakes drainage habitat. There were no responses.