

FLOODPLAIN FORESTS HABITAT NARRATIVE

Habitat description

Floodplain forests are a transitional habitat between the river or stream and upland and serve as a wildlife corridor between habitats.

Problems affecting species and habitats

Species threats

The respondent did not indicate any "critical" or "serious threat" to floodplain forest wildlife in Indiana. The respondent noted the following as "somewhat of a threat" (not ranked):

- Invasive/non-native species
- Predators (native or domesticated)
- Habitat loss (breeding range)
- Habitat loss (feeding/foraging areas)
- Degradation of movement/migration routes (overwintering habitats, nesting and staging sites)

The respondent noted the following as a "slight threat" to wildlife in floodplain forest habitats in Indiana (not ranked):

- High sensitivity to pollution
- Dependence on other species (mutualism, pollinators)
- Species overpopulation
- Near limits of natural geographic range
- Viable reproductive population size or availability

The respondent noted no additional threats to wildlife in floodplain forest habitats in Indiana.

The respondent noted that "adequate habitat (primarily American sycamores along riparian areas) in breeding areas" is the top threat to wildlife in floodplain forest habitats in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to wildlife in floodplain forest habitats. Their responses included:

- Channelization of rivers is also a threat to wildlife.
Loss of habitat for nesting wood ducks. Habitat is used by migrating waterfowl.
- No! Uncontrolled timber cutting and no effort given to reforestation of tree species after repeated high grading of the timber resource for the past 100 plus years. Continued high threat preventing reestablishment of any floodplain forest resembling natural species composition of past conditions.

Habitat threats

The respondent did not indicate any "critical" or "serious threat" to floodplain forest habitats in Indiana. The respondent noted the following as "somewhat of a threat" (not ranked):

- Commercial or residential development (sprawl)

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- Counterproductive financial incentives or regulations
- Habitat fragmentation
- Successional change
- Stream channelization
- Impoundment of water/flow regulation
- Agricultural/forestry practices

The respondent listed the following as a “slight threat” to floodplain forest habitats in Indiana (not ranked):

- Invasive/non-native species
- Nonpoint source pollution (sedimentation and nutrients)
- Diseases (of plants that create habitat)
- Habitat degradation
- Point source pollution (continuing)
- Mining/acidification
- Drainage practices (stormwater runoff)

The respondent noted no additional threats to floodplain forest habitats in Indiana.

The respondent noted that the top threat to floodplain forest habitats in Indiana is “loss of floodplain sycamores and “upland pine forests.”

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to floodplain forest habitats. Their responses included:

- No. Threats to this habitat are continuing unabated based on uncontrolled market conditions dictating timber practices. No forethought or management of this habitat type.

Additional research and survey efforts

Current body of research

Species research

The respondent indicated that the current body of science for wildlife in floodplain forest habitats in Indiana is adequate.

Respondents identified the following citations (title, author, date, publisher) that would give the best overview of wildlife in floodplain forest habitats in Indiana.

Title = Breeding Bird Atlas of Indiana;
Author = Castrale, J.S., E. Hopkins, C. Keller;
Date = 1988;
Publisher = IDNR

Title = BNA Account - Yellow-throated Warbler;
Author = G.A. Hall;
Date = 1996;
Publisher = American Ornithologists' Union

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Title = Atlas of Breeding Birds in Indiana;
Author = Castrale, Hopkins, and Keller;
Date = 1998;
Publisher = Indiana Department of Natural Resources

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 floodplain forest habitats. Their responses included:

- No. There have to be more studies such as Hurley's, "Factors Influencing Habitat Selection by Breeding Birds of Floodplain Communities in Southern Indiana." completed for IU in 2001. Has anyone simply taken the time to compile a list of Research Studies completed by universities in Indiana?

Habitat research

The respondent indicated that the current body of science for floodplain forest habitats in Indiana is adequate.

Respondents identified the following citations (title, author, date, publisher) that would give the best overview of floodplain forest habitats in Indiana.

Title = see previous citations

Title = Indiana Natural Heritage Data Center Community Classifications;
Publisher = Unpublished Data

Title = The Natural Regions of Indiana;
Author = Homoyo, Abrell, Aldrich, and Post;
Date = 1985;
Publisher = Indiana Academy of Science

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 floodplain forest habitats. Their responses included:

- Yes.

Research needs

Species research

The respondent indicated that no research is "urgently needed" or "greatly needed" for wildlife in floodplain forest habitats in Indiana. The respondent indicated that the following research is "needed" (not ranked):

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

The respondent indicated that the following research is "slightly needed" for wildlife in floodplain forest habitats in Indiana (not ranked):

- Distribution and abundance
- Population health (genetic and physical)

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The respondent listed no other research needs for wildlife in floodplain forest habitats 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 floodplain forest habitats. Their responses included:

- No. Research is always needed. Who knows right now the impact of cowbird parasitism on cerulean warblers? Who can identify the best floodplain forest with the largest or most productive cerulean warbler population? What is the composition of the best production floodplain forest in Indiana? Can we manage to make long term improvements to floodplain forests for cerulean production? What long term studies are being done to monitor the population dynamics of a particular cerulean population? Much more needs to be known about what is happening in regards to indicator species populations in relation to habitat changes.

Habitat research

The respondent listed no research as “urgently needed” or “greatly needed” for floodplain forest habitats in Indiana. The respondent listed the following as “needed” research (not ranked):

- Distribution and abundance (fragmentation)
- Threats (landuse change/competition, contamination/global warming)
- Relationship/dependence on specific site conditions
- Growth and development of individual components of habitat

The respondent listed research about “successional changes” as “slightly needed” for floodplain forest habitats in Indiana.

The respondent listed no other research needs for floodplain forest habitats 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 floodplain forest habitats. Their responses included:

- Yes, this is a good start. We need to establish long-term studies of a representative sample of this habitat type to know how it is changing and what is changing it.

Conservation actions necessary

Species actions

The respondent indicated that none of the listed conservation efforts address threats to floodplain forest wildlife in Indiana “very well.” The respondent indicated that the following efforts address threats “somewhat” (not ranked):

- Habitat protection
- Threats reduction
- Regulation of collecting
- Protection of migration routes

The respondent noted no other conservation practices for wildlife in floodplain forest habitats in Indiana.

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The respondent recommended “conservation of habitats” for more effective conservation of wildlife in floodplain forest habitats in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the conservation practices for wildlife in floodplain forest habitats. Their responses included:

- No, more emphasis needs to be placed on restoration and purposeful management of this habitat.

Habitat actions

The respondent indicated that none of the listed conservation efforts address threats to floodplain forest habitats in Indiana “very well.” The respondent noted that the following efforts address threats “somewhat” (not ranked):

- Habitat protection through regulation
- Habitat protection on public lands
- Habitat protection incentives (financial)
- Habitat restoration through regulation
- Habitat restoration on public lands
- Habitat restoration incentives (financial)
- Succession control (fire, mowing)
- Corridor development/protection
- Managing water regimes
- Pollution reduction
- Protection of adjacent buffer zone
- Restrict public access and disturbance
- Landuse planning
- Technical assistance
- Cooperative land management agreements (conservation easements)

The respondent noted no other current conservation practices for floodplain forest habitats in Indiana.

The respondent recommended “incentives to conserve floodplain forests” for more effective conservation of floodplain forest habitats in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the conservation practices for floodplain forest habitats. Their responses included:

- Work can also be done on Private Lands.
- No, need more education efforts with real world examples of best management practices to provide convincing evidence that management pays dividends in the long run. Publicity of these long term study sites is needed to invoke interest by those willing to learn good stewardship.

Proposed plans for monitoring

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Current monitoring

Species monitoring

The respondent was aware of the following monitoring efforts by state agencies for wildlife in floodplain forest habitats in Indiana:

- Occasional statewide (less than once a year and not regularly scheduled) monitoring

The respondent indicated that this effort was “somewhat crucial” for conservation of wildlife in floodplain forest habitats in Indiana.

The respondent was aware of the following efforts by other organizations for wildlife in floodplain forest habitats in Indiana:

- Statewide once-a-year monitoring

The respondent listed this monitoring effort as “very crucial” for conservation of wildlife in floodplain forest habitats in Indiana.

The respondent indicated that the following regional or local monitoring efforts by state agencies are conducted for wildlife in floodplain forest habitats in Indiana:

- Periodic statewide Breeding Bird Atlas

The respondent indicated that the following regional or local monitoring efforts by other organizations are conducted for wildlife in floodplain forest habitats in Indiana (not ranked):

- Federal Breeding Bird Survey statewide
- Statewide May Day Bird Counts
- Summer Bird Counts

The respondent indicated that the following participate in monitoring floodplain forest wildlife in Indiana (not ranked):

- Bird watchers
- U.S. Geological Survey
- Volunteers

The respondent indicated that the following monitoring techniques are “frequently used” for wildlife in floodplain forest habitats in Indiana (not ranked):

- Driving a survey route
- Volunteer survey/census

The respondent noted that the following monitoring techniques are “occasionally used” for wildlife in floodplain forest habitats in Indiana (not ranked):

- Spot mapping
- Mark and recapture
- Professional survey/census
- Representative sites
- Probabilistic sites

The respondent indicated that the following monitoring techniques are “not used but possible with existing technology and data” for wildlife in floodplain forest habitats in Indiana (not ranked):

- Radio telemetry and tracking
- Trapping (by any technique)

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The respondent noted no other monitoring techniques for wildlife in floodplain forest habitats 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 floodplain forest habitats. Their responses included:

- Yes.

Habitat inventory and assessment

The respondent was aware of no inventory and assessment efforts by state agencies for floodplain forest habitats in Indiana.

The respondent indicated, "periodic statewide (less than once a year but still regularly scheduled) inventory and assessment by state agencies is "somewhat crucial" for conservation of floodplain forest habitats in Indiana.

The respondent was aware of "periodic statewide (less than once a year but still regularly scheduled) inventory and assessment" conducted by other organizations for floodplain forest habitats in Indiana; the respondent listed this as "somewhat crucial" for conservation of these habitats in Indiana. No monitoring efforts were considered "very crucial."

The respondent listed no regional or local inventory and assessment by state agencies for floodplain forest habitats in Indiana.

The respondent listed the following regional or local inventory and assessment by other organizations for floodplain forest habitats in Indiana:

- Statewide aerial imagery of habitats in Indiana

The respondent listed no organizations that conduct inventory and assessments for floodplain forest habitats in Indiana.

The respondent listed no inventory and assessment techniques that are "frequently used" for floodplain forest habitats in Indiana. The respondent listed as "occasionally used" (not ranked):

- GIS mapping
- Aerial photography and analysis
- Modeling

The respondent listed the following as "not used but possible with existing technology or data:"

- Systematic sampling

The respondent listed no other inventory and assessment techniques for floodplain forest habitats in Indiana.

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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 floodplain forest habitats. Their responses included:

- No, systematic sampling of model sites is needed as a reference for other similar areas in the state. The Division of Forestry could manage this sampling over a long term study period of 50 years with wildlife habitat monitoring needs identified by the Division of F&W.

Recommended monitoring

Species monitoring

The respondent recommended “roadside surveys, canoe surveys, local and more intensive studies” for more effective conservation of wildlife in floodplain forests habitats in Indiana.

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the effective conservation of wildlife in floodplain forest habitats. Their responses included:

- Yes, purposeful and planned monitoring efforts are needed. Model sampling guidelines with workshops to birding groups to assist in the conduct of these surveys would increase buying and recruit necessary volunteer manpower to get results.

Habitat inventory and assessment

The respondent recommended “aerial imagery of riparian and pine habitats coupled with habitat modeling” for more effective conservation of floodplain forest habitats 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 in floodplain forest habitats. Their responses included:

- No, this is just a big view of what is down there. We need on-site inspections and plant inventories, abundance ratings etc. so we have some idea of what is there for the wildlife species present or desired.