

INDUSTRIAL LANDS HABITAT NARRATIVE

Habitat description

Industrial lands habitats are characterized by a high percentage (30 percent or greater) of constructed materials such as asphalt, concrete, buildings, etc. Industrial lands habitat includes infrastructure such as roads, railroads and all highly developed areas not classified as High Intensity Residential, that comprises areas where people reside in large numbers.

Problems affecting species and habitats

Species threats

The respondent listed no "critical threat" or "serious threat" for wildlife in industrial lands habitat in Indiana. Listed as "somewhat of a threat" are (not ranked):

- High sensitivity to pollution
- Bioaccumulation on contaminants
- Diseases/parasites (of the species itself)
- Unintentional take/direct mortality (e.g., vehicle collisions, power line collisions, by-catch, harvesting equipment, land preparation machinery)
- Dependence on irregular resources (cyclical annual variations) (e.g., food, water, habitat limited due to annual variations in availability)

The respondent listed the following as "slight threat" for wildlife in industrial land habitat in Indiana (not ranked):

- Predators (native or domesticated)
- Habitat loss (breeding range)
- Habitat loss (feeding/foraging areas)
- Viable reproductive population size or availability
- Degradation of movement/migration routes (overwintering habitats, nesting and staging sites)

The respondent listed "[lack of] tolerance by building managers of nesting sites" as an additional threat to wildlife in industrial lands habitat in Indiana.

The respondent listed top threats to wildlife in industrial lands habitat in Indiana as (not ranked):

- Availability of undisturbed nesting sites
- Collisions with buildings, power lines and other structures

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to wildlife in industrial lands habitats. There were no responses.

Habitat threats

The respondent listed no "critical threat" or "serious threat" for industrial lands habitat in Indiana. The respondent listed "residual contamination (persistent toxins)" as "somewhat of a threat." The respondent listed as "slight threat" (not ranked):

- Commercial or residential development (sprawl)
- Habitat degradation

Appendix F-30: Industrial Lands

- Stream channelization
- Agricultural/forestry practices
- Point source pollution (continuing)

The respondent listed no additional threats for industrial lands habitat in Indiana.

The respondent listed top threats for industrial lands habitat in Indiana (not ranked):

- Reduction in quality and quantity of prey populations
- Design of buildings that do not provide nesting ledges

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to industrial lands habitats. There were no responses.

Additional research and survey efforts

Current body of research

Species research

The respondent said that the body of science for wildlife in industrial lands habitat in Indiana is complete, up-to-date and extensive.

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

Title = Peregrine Falcon nesting and management in Indiana;
Author = Castrale, J.S., and A. Parker;
Date = 1999;
Publisher = Indiana Audubon Quaterly 77:65-74.

Title = Midwest Peregrine Falcon Restoration - 2004 Annual Report;
Author = Tordoff, H.B., J.A. Goggin, J.S. Castrale;
Date = 2004;
Publisher = The Raptor Center at the Univ. of Minnesota

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 industrial lands habitats. There were no responses.

Habitat research

The respondent said that the body of science for industrial lands habitat in Indiana is complete, up-to-date and extensive.

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

Title = see previous citations

Appendix F-30: Industrial Lands

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 industrial lands habitats. There were no responses.

Research needs

Species research

The respondent indicated no “urgently needed” or “greatly needed” research for wildlife in industrial lands habitat in Indiana. The respondent listed the following “needed” research:

- Threats (predators/competition, contamination)

The respondent listed the following as “slightly needed” research for wildlife in industrial land habitat in Indiana (not ranked):

- Life cycle
- Distribution and abundance
- Limiting factors (food, shelter, water, breeding sites)
- Relationship/dependence on specific habitats
- Population health (physical and genetic)

The respondent indicated no other research needs for wildlife in industrial lands 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 industrial lands habitats. There were no responses.

Habitat research

The respondent indicated no “urgently needed” or “greatly needed” research for industrial lands habitat in Indiana. The respondent listed the following “needed” research (not ranked):

- Threats (land use change/competition, contamination/global warming)
- Relationship/dependence on specific site conditions

The respondent listed the following as “slightly needed” research for industrial lands habitat in Indiana:

- Distribution and abundance (fragmentation)

The respondent indicated no other research needs for industrial lands 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 industrial lands habitats. There were no responses.

Conservation actions necessary

Species actions

From a list of options, the respondent indicated that the following conservation efforts address threats to wildlife in industrial lands habitats in Indiana “very well” (not ranked):

- Regulation of collecting
- Limiting contact with pollution/contaminants
- Public education to reduce human disturbance

Appendix F-30: Industrial Lands

According to the respondent, the following conservation efforts address threats to wildlife in industrial lands habitats “somewhat” (not ranked):

- Habitat protection
- Population enhancement (captive breeding and release)
- Reintroduction (restoration)
- Threats reduction
- Disease/parasite management
- Translocation to new geographic range
- Protection of migration routes

The respondent cited no other current conservation practices for wildlife in industrial lands habitat in Indiana.

The respondent listed “education/awareness needs for feeding and nesting” as a specific, recommended practice for more effective conservation of wildlife in industrial lands habitat 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 industrial lands habitats. There were no responses.

Habitat actions

The respondent indicated that the following conservation efforts address threats to industrial lands habitat in Indiana “very well” (not ranked):

- Artificial habitat creation
- Pollution reduction
- Technical assistance

According to the respondent, the following conservation efforts address threats to industrial lands habitat in Indiana “somewhat” (not ranked):

- Habitat protection through regulation
- Corridor development/protection
- Protection of adjacent buffer zone
- Restrict public access and disturbance
- Cooperative land management agreements (conservation easements)

The respondent listed no other current conservation practices for industrial lands habitat in Indiana.

The respondent listed “education/awareness programs for building managers” as a specific, recommended practice for more effective conservation of industrial lands habitat 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 industrial lands habitats. There were no responses.

Proposed plans for monitoring

Current monitoring

Species monitoring

The respondent indicated that the following monitoring efforts for wildlife in industrial lands habitat in Indiana are conducted by state agencies (not ranked):

- Statewide year-round monitoring
- Statewide once-a-year monitoring

The respondent indicated that the following monitoring efforts are conducted by other organizations for wildlife in industrial lands habitat in Indiana (not ranked):

- Statewide year-round monitoring
- Statewide once-a-year monitoring

The respondent listed no “very crucial” monitoring efforts by state agencies for conservation of wildlife in industrial lands habitat in Indiana. The respondent listed as “somewhat crucial” (not ranked):

- Statewide year-round monitoring
- Statewide once-a-year monitoring

The respondent listed no “very crucial” monitoring efforts by other organizations for conservation of wildlife in industrial lands habitat in Indiana. The respondent listed as “somewhat crucial” (not ranked):

- Statewide year-round monitoring
- Statewide once-a-year monitoring

The respondent listed the following regional or local monitoring efforts by state agencies for wildlife in industrial lands habitat in Indiana:

- DNR monitors most nest sites in the state and obtains information about others

The respondent listed the following regional or local monitoring efforts by other organizations for wildlife in industrial land habitat in Indiana:

- Building managers and volunteers report nesting activity at many nests

The respondent listed the following organizations that monitor wildlife in industrial lands habitat in Indiana (not ranked):

- NIPSCO
- Ispat Island
- Building managers

The following table reflects the opinions of multiple respondents, thus multiple check marks are possible. Additionally, some of these differences may reflect different taxonomic group bias.

The respondent cited the following monitoring techniques for wildlife in industrial lands habitat in Indiana:

Appendix F-30: Industrial Lands

Rank	Monitoring techniques for wildlife in industrial lands habitat	Used	Not used but possible with existing technology or data
	Radio tracking and telemetry		X
	Modeling	X	
	Reporting from harvest, depredation or unintentional take (road kill, by-catch)	X	
	Mark and recapture	X	
	Professional survey/census	X	
	Volunteer survey/census	X	
	Trapping (by any technique)	X	
	Representative sites	X	
	Probabilistic sites	X	

The respondent cited no other monitoring techniques for wildlife in industrial lands 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 industrial lands habitats. There were no responses.

Habitat inventory and assessment

The respondent listed the following inventory and assessment efforts by state agencies for industrial lands habitat in Indiana:

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

The respondent noted no inventory and assessment efforts by other organizations for industrial lands habitat in Indiana.

The respondent listed no crucial efforts by state agencies or other organizations for conservation of industrial lands habitat in Indiana.

Appendix F-30: Industrial Lands

The respondent cited the following methods for regional or local inventory and assessment by state agencies for industrial lands habitat in Indiana:

- Opportunistic statewide determination of potential nest sites in Indiana with the idea of erecting a nest box

The respondent noted no regional or local inventory or assessment by other organizations for industrial lands habitat in Indiana.

The respondent listed no organizations involved with inventory or assessment for industrial lands habitat in Indiana.

From a list of possible inventory and assessment techniques for industrial lands habitat in Indiana, the respondent listed "GIS mapping", "aerial photography and analysis" and "voluntary landowner reporting" as "occasionally used." Nothing was noted as "frequently used." The respondent listed "systematic sampling" and "modeling" as methods that are "not used but possible with existing technology and data."

The respondent listed no other inventory and assessment techniques for industrial lands 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 industrial lands habitats. There were no responses.

Recommended monitoring Species monitoring

The respondent recommended the following monitoring technique for effective conservation of wildlife in industrial lands habitat in Indiana:

- Nest monitoring of all known nests (or representative sample) with two to three visits according to USFWS protocol

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 industrial lands habitats. There were no responses.

Habitat inventory and assessment

The respondent recommended that "casual assessment" is the recommended inventory and assessment technique for effective conservation of industrial lands 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 effective conservation of industrial lands habitats. There were no responses.