

ROADS/RAILS/BRIDGES HABITAT NARRATIVE

Habitat description

Roads/bridges/trails habitats are characterized by a high percentage (30 percent or greater) of constructed materials such as asphalt, concrete, buildings, etc. It 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 roads/rails/bridges habitat in Indiana. The respondent listed "invasive/non-native species" as "somewhat of a threat."

The respondent listed as "slight threat" (not ranked):

- Predators (native or domesticated)
- Dependence on irregular resources (cyclical annual variations) (e.g., food, water, habitat limited due to annual variations in availability)
- Habitat loss (breeding range)
- Near limits of natural geographic range

The respondent listed no additional threats to wildlife in road/rails/bridges habitat in Indiana.

The respondent listed top threats to wildlife in roads/rails/bridges habitat in Indiana (not ranked):

- House sparrow preemption of nests
- Vandalism potential at nesting colonies

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to wildlife in road/rails/bridges habitat. There were no responses.

Habitat threats

The respondent listed no "critical" or "serious threats" for roads/rails/bridges habitat in Indiana.

The respondent listed as "slight threat" (not ranked):

- Habitat degradation
- Agricultural/forestry practices
- Residual contamination (persistent toxins)
- Point source pollution (continuing)
- Drainage practices (stormwater runoff)

The respondent listed the following threat to roads/rails/bridges habitat in Indiana:

- Potential for pollution reducing productivity of aquatic habitats over which Cliff Swallows feed

The respondent listed a top threat for roads/rails/bridges habitat in Indiana as:

Appendix F-31: Roads/Rails/Bridges

- Changes in design of bridges and causeways to make them less suitable for nest placement

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the threats to road/rails/bridges habitat. 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 roads/rails/bridges habitat in Indiana is inadequate.

Respondents did not identify citations (title, author, date, publisher) that would give the best overview of wildlife in roads/rails/bridges habitats 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 road/rails/bridges habitat. There were no responses.

Habitat research

The respondent said that body of science for roads/bridges/trails habitat in Indiana is inadequate.

Respondents did not identify citations (title, author, date, publisher) that would give the best overview of roads/rails/bridges habitats 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 road/rails/bridges habitat. There were no responses.

Research needs

Species research

The respondent indicated no “urgently needed” or “greatly needed” research for wildlife in roads/rails/bridges habitat in Indiana. The respondent did indicate the following research was “needed” (not ranked):

- Distribution and abundance
- Limiting factors (food, shelter, water, breeding sites)

The respondent listed the following as “slightly needed” for wildlife in roads/rails/bridges habitat in Indiana (not ranked):

- Threats (predators/competition, contamination)
- Relationship/dependence on specific habitats
- Population health (genetic and physical)

The respondent cited no other research needs for wildlife in roads/rails/bridges habitat in Indiana.

Appendix F-31: Roads/Rails/Bridges

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 road/rails/bridges habitat. There were no responses.

Habitat research

The respondent indicated no urgent or greatly needed research for roads/rails/bridges habitat in Indiana. The respondent did indicate the following research was “needed” (not ranked):

- Distribution and abundance (fragmentation)
- Relationship/dependence on specific site conditions

The respondent listed the following research as “slightly needed” for roads/rails/bridges habitat in Indiana:

- Threats (land use change/competition, contamination/global warming)

The respondent cited no other research needs for roads/rails/bridges 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 road/rails/bridges habitat. There were no responses.

Conservation actions necessary

Species actions

From a list of potential conservation efforts, the respondent indicated that “habitat protection” addresses threats to wildlife in roads/rails/bridges habitat in Indiana “very well.” The following efforts address threats “somewhat” (not ranked):

- Exotic/invasive species control
- Disease/parasite management

The respondent noted no other conservation practices for wildlife in roads/rails/bridges habitat in Indiana.

The respondent recommended “continued use of bridge architecture that favors nest placement” as a practice that would provide more effective conservation of wildlife in roads/rails/bridges 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 road/rails/bridges habitat. There were no responses.

Habitat actions

From a list of potential efforts, the respondent indicated that the following conservation efforts address threats to roads/rails/bridges habitat in Indiana “very well” (not ranked):

- Habitat restoration on public lands
- Artificial habitat creation
- Restrict public access and disturbance

Appendix F-31: Roads/Rails/Bridges

According to the respondent, the following address threats "somewhat" (not ranked):

- Habitat protection through regulation
- Habitat restoration through regulation
- Pollution reduction

The respondent noted no other conservation practices for roads/rails bridges habitat in Indiana.

The respondent listed the following as a specific, recommended practice for more effective conservation of roads/bridges/rails habitat in Indiana:

- Critical habitat for Cliff Swallows is nesting sites, most are on public (DOT) structures (bridges). Much less important is water quality, etc., for feeding areas

Technical experts and conservation organizations reviewed the above results and were asked if these were a reasonable representation of the conservation practices for road/rails/bridges habitat. There were no responses.

Proposed plans for monitoring

Current monitoring

Species monitoring

The respondent indicated that the following monitoring efforts are conducted by state agencies for wildlife in roads/bridges/rails habitat in Indiana:

- Periodic statewide (less than once a year but still regularly scheduled) monitoring

The respondent indicated that the following monitoring efforts are conducted by other organizations for wildlife in roads/bridges/rails habitat in Indiana:

- Statewide once-a-year monitoring

The respondent indicated that there are no crucial monitoring efforts by state agencies or other organizations for conservation of wildlife in roads/bridges/rails habitat in Indiana. The respondent was not aware of any monitoring efforts by any state or organizational entity for wildlife in roads/bridges/rails habitat in Indiana.

The respondent listed the following organizations that monitor wildlife in roads/rails/bridges habitat in Indiana:

- Federal Breeding Bird Survey serves this function, but does not focus on suitable habitat. Yet, occurrence on these surveys would be tied to nearby presence of this breeding habitat

The respondent cited the following monitoring techniques for wildlife in roads/rails/bridges habitats in Indiana are "not used by possible with existing technology or data" (not ranked):

- Driving a survey route
- Professional survey/census
- Volunteer survey/census
- Representative sites

Appendix F-31: Roads/Rails/Bridges

The respondent listed no techniques as “frequently used,” “occasionally used” or “not economically feasible.”

The respondent recommended the following techniques for wildlife in roads/rails/bridges habitat:

- Surveys for colonies and periodic censuses of nests/populations

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 road/rails/bridges habitat. There were no responses.

Habitat inventory and assessment

The respondent is not aware of current inventory and assessment efforts by state agencies or other organizations for roads/bridges/rails habitat in Indiana. The respondent listed no crucial efforts by state agencies or other organizations for conservation of roads/bridges/rails habitat in Indiana. The respondent is not aware of state agencies or other organizations that perform inventory and assessment for roads/bridges/rails habitat in Indiana.

The respondent listed “GIS mapping” and “systematic sampling” as inventory and assessment techniques that are “not used but possible with existing technology and data” for roads/bridges/rails habitat in Indiana. The respondent listed “aerial photography and analysis” as “not economically feasible.” The respondent listed no techniques that are “frequently used” or “occasionally used.”

The respondent listed the following inventory and assessment technique for roads/rails/bridges habitat in Indiana:

- Primarily suitable nesting sites near water define habitat for some wildlife species. Volunteer participation in building a database of known breeding colonies and volunteer periodic censusing of colony sizes

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 road/rails/bridges habitat. There were no responses.

Recommended monitoring

Species monitoring

The respondent recommended the following monitoring technique for effective conservation of wildlife in roads/rails/bridges habitats in Indiana:

- Surveys for colonies and periodic censuses of nests/populations

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 road/rails/bridges habitat. There were no responses.

Habitat inventory and assessment

The respondent recommended the following inventory and assessment technique for roads/rails/bridges habitat in Indiana:

Appendix F-31: Roads/Rails/Bridges

- Primarily suitable nesting sites near water define habitat for some wildlife species. Volunteer participation in building a database of known breeding colonies and volunteer periodic censusing of colony sizes

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 road/rails/bridges habitat. There were no responses.