Categorical Exclusion

Appendix C

Early Coordination

January 30, 2024

Sample Early Coordination Letter

Re: Des. No. 2100571
Bridge Project
State Project
SR 43 over Richland Creek, approximately 6.72 Miles North of SR 54
Greene County, Indiana

Dear early coordination stakeholder:

The Indiana Department of Transportation (INDOT) Vincennes District, with funding from the Federal Highway Administration (FHWA), intends to proceed with a bridge project on SR 43 over Richland Creek, approximately 6.72 miles north of SR 54 in Greene County (Des. No. 2100571).

This letter is part of the early coordination phase of the environmental review. At this time, we are requesting comments from your area of expertise regarding any possible environmental effects (social and natural) associated with this project. **Please use the above Des. No. and project description in your reply.** Your comments will be incorporated into the formal environmental study. Your cooperation in this endeavor is appreciated.

Project Location and Existing Conditions
The proposed project is located on SR 43 over Richland Creek, approximately 6.72 miles north of SR 54 in Greene County. Specifically, the project is located in Sections 21 and 22, Township 8 North, Range 3 West in Beech Creek Township as depicted on the Stanford U.S. Geological Survey 1:24,000 scale quadrangle. Adjacent land is rural and consists of agricultural fields, forested riparian, and forested areas.

Within the project area, SR 43 is functionally classified as a major collector. The typical cross section consists of two 11-foot-wide travel lanes (one in each direction) with 2-foot-wide gravel shoulders (3-foot usable). No median is present within the project area. Guardrails are present on both sides of SR 43 leading up to the bridge. The existing structure (043-28-05887 A) is a 104-foot long by 33-foot out to out width deck prestressed concrete adjacent box beam bridge. Please see the attachments for maps and photographs of the project area and see the preliminary design plans for more details.

Draft Purpose and Need
The need for this project stems from the deteriorated condition of the existing bridge (Structure No. 043-28-05887 A; NBI No. 015910). According to the June 27, 2022, INDOT Bridge Inspection report, the deck topside wearing surface is exhibiting intermittent minor to moderate width longitudinal cracks. Chaining in 2018 detected approximately five square feet of delamination. A few of the box beams are exhibiting short longitudinal cracks over the intermediate piers with some of the cracks showing rust staining with efflorescence and minor impending spall. An isolated large spall with exposed prestressing strands is present at the end of Beam 6 in Span B over Pier 3. The intermediate pier caps are exhibiting

extensive concrete deterioration and widespread heavy corrosion is occurring on the steel encasement of piles due to a failed epoxy coating. These deficiencies are likely due to the ineffective topside joints that allow extensive leaking. The current INDOT Bridge Inspection Application System (BIAS) rating for the bridge deck is 6 (satisfactory). The BIAS rating for the wearing surface is 6 (satisfactory). The BIAS rating for the superstructure is 5 (fair condition). The BIAS rating for the substructure is 4 (poor condition). BIAS ratings range from 0 to 9, with a rating of 0 applied to structures in failed condition and a rating of 9 applied to structures in excellent condition. The purpose of the project is to mitigate the existing deterioration of the bridge, provide a bridge with a structure rating of 7 (good) or better, and extend the useful life of the bridge.

Proposed Project

The project will replace the existing three-span prestressed concrete adjacent box beam bridge. The existing horizontal alignment will be improved by realigning the roadway a maximum of 50 feet to the southeast. The proposed bridge will be a three-span (34-foot 6-inch, 46-foot, 34-foot 6 inch) reinforced concrete slab bridge with a clear roadway width of 30 feet and out to out width of 33 feet on a 25-degree skew. The total length is 675 feet with 50 feet of incidental asphalt mill and overlay at each end. Three field entrances/drives will be installed at existing field entrance/drive locations. Approximately 1.0 acres of trees will be removed on the southeast side of the roadway. All tree removal will occur within 100 feet of the SR 43 roadway. The maintenance of traffic (MOT) will include a six-month road closure of SR 43 from CR 550 N to CR 700 N and a detour using SR 48, I-69/SR 37, SR 45, SR 445, and SR 54. The MOT will be implemented per the Indiana Design Manual guidelines and access for local traffic will be maintained. Construction is anticipated to begin in November 2025 and will be completed in November 2026.

Right-of-Way (ROW)

This project will require acquisition of approximately 1.35 acres of new permanent ROW and 0.25 acre of temporary ROW.

Environmental Resources

A Red Flag Investigation (RFI) was performed for a 0.5-mile radius of the project area on June 2, 2023. A few “Red Flags” were identified within the 0.5-mile search radius; however, not all will impact the proposed project. One NWI-line segment and one stream segment, both associated with Richland Creek, are located within the project area. The Richland Creek stream segment is 303d listed for E. coli. One floodplain polygon is within the project area. The project is within the Indiana Karst Region as defined in the *Protection of Karst Features during Project Development and Construction* document (July 15, 2021).

Section 106

This project is anticipated to fall under the Minor Projects Programmatic Agreement (MPPA) Types A-3, B-4, B-6, and B-12.

Range-Wide Informal Programmatic Consultation

Greene County is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*). The U.S. Fish and Wildlife Service (USFWS) Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB) will be completed for this project. Completion of the appropriate determination key through the USFWS Information for Planning and Consultation (IPaC) portal will occur. If a determination of “Not Likely to Adversely Affect” or “Likely to Adversely Affect” is reached, then additional consultation with the USFWS will occur through INDOT.

Early Coordination

This letter is part of the early coordination review process. You are asked to review this information and provide any comments you may have relative to anticipated impacts of the project on areas in which you have jurisdiction or special expertise. We will incorporate your comments into a study of the project's environmental impacts. To facilitate the development of this project, you are asked to reply within **30 calendar days** of receipt of this letter. However, should you find that an extension to the response time is needed, a reasonable amount of time may be granted upon request.

If you have any questions regarding this project, please feel free to contact me at (812) 759-4113 or at pputzier@lochgroup.com. Additionally, should you want to contact the sponsor for this project, INDOT Vincennes District, please contact the Project Manager, Michael Thomas, at (812) 582-2729 or mthomas1@indot.in.gov.

Thank you in advance for your input.

Sincerely,

Peter Putzier
Environmental Specialist
Lochmueller Group, Inc.
6200 Vogel Road
Evansville, IN 47715

Attachments:

- ~~General Location Map~~ } .....Removed, please refer to Appendix Bx B
- ~~USGS Topographic Map~~
- ~~Red Flag Investigation Map~~ .....Removed, please refer to Appendix E
- ~~Photographs~~ } .....Removed, please refer to Appendix BB
- ~~Preliminary Design Plans~~

Distribution List:

- FHWA – Indiana Division (electronic submission)
- IDEM Groundwater (online submission)
- Indiana Geological and Water Survey (online submission)
- IDNR, Division of Fish and Wildlife (electronic submission)
- U.S. Housing and Urban Development (electronic submission)
- INDOT, Vincennes District Environmental (electronic submission)
- INDOT, Project Manager
- IDEM, Wetlands and Stormwater Programs (electronic submission)
- U.S. Forest Service (electronic submission)
- Natural Resources Conservation Service (electronic submission)
- U.S. Army Corps of Engineers, Louisville District (electronic submission)
- Greene County Highway Department
- Greene County Council
- Greene County Board of Commissioners
- Eastern Greene Schools
- Greene County Surveyor; Floodplain Administrator
- Greene County Emergency Management Agency
- Greene County Sheriff's Department
- Beech Creek Township; Eastern Volunteer Fire Department

Organization and Project Information

Organization Name: Lochgroup

Last Name: Putzier

Email: pputzier@lochgroup.com

City: Evansville

Zip: 47715

Destination Id: 2100571

First Name: Peter

Phone: (952) 564-8977

Address Line 1: 6200 Vogel Road

State: IN

Customer Id: INDOT

Project Title: SR 43 over Richland Creek Bridge Project

Project Description: The project will replace the existing box beam bridge and improve the horizontal alignment by realigning the roadway a maximum of 50 feet to the southeast. Three field entrances will be reinstalled.

Environmental Assessment Report

Geological Hazards:

1. 1% Annual Chance Flood Hazard
2. High liquefaction potential

Mineral Resources:

1. Bedrock Resource: Low Potential
2. Sand and Gravel Resource: Low Potential

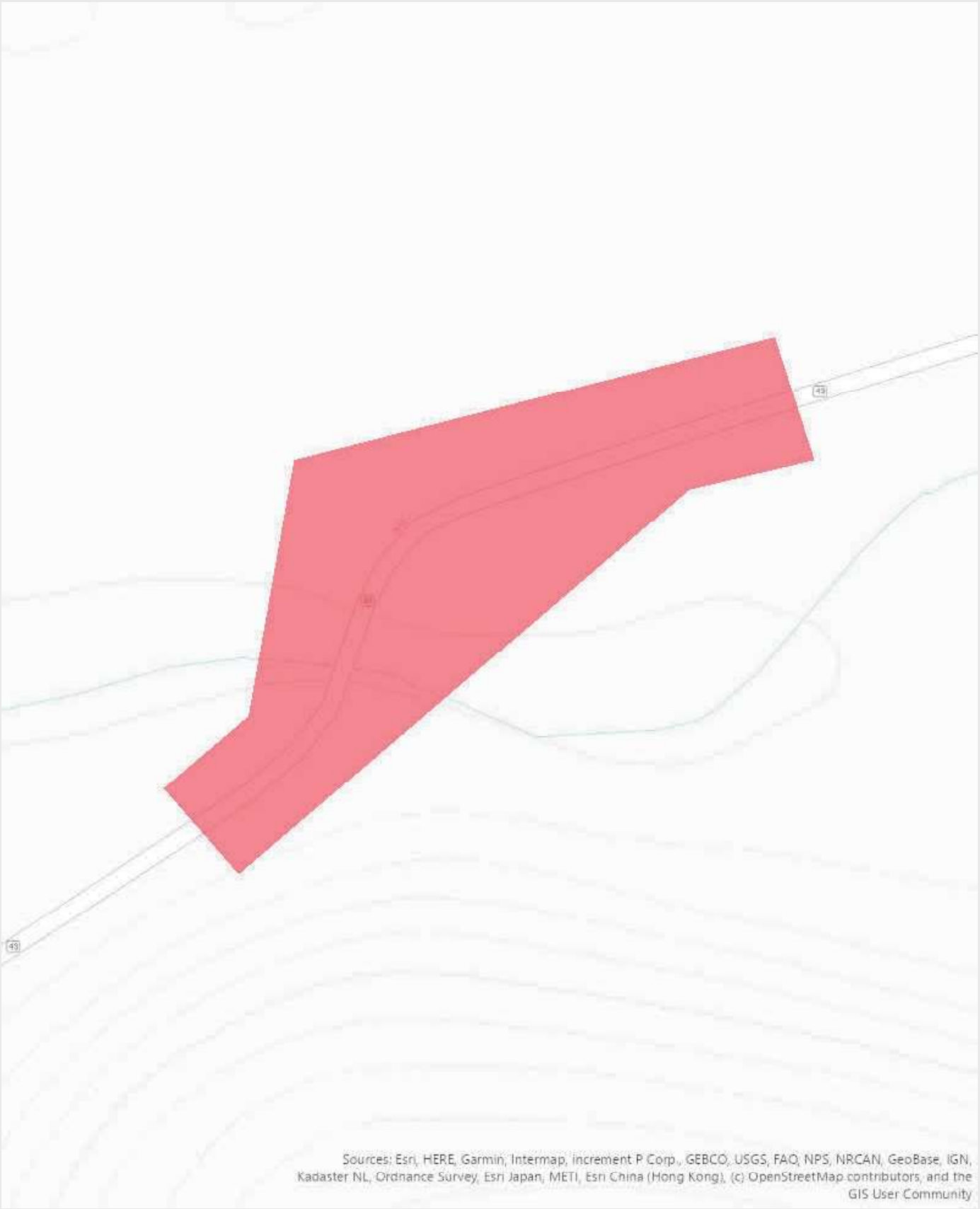
Disclaimer:

This information was furnished by Indiana Geological Survey

Address: 1001 E. 10th St., Bloomington, IN 47405

Email: IGSEnvir@indiana.edu

Phone: (812) 855-7428



Metadata:

https://gisdata.in.gov/server/rest/services/Hosted/FIRM_Flood_Hazard_Zones_2023/FeatureServer/info/metadata

https://portal.igs.indiana.edu/arcgis/rest/services/Seismic_Earthquake_Liquefaction_Potential/MapServer/info/metadata/

https://portal.igs.indiana.edu/arcgis/rest/services/Bedrock_Geology/MapServer/info/metadata/

https://portal.igs.indiana.edu/arcgis/rest/services/Industrial_Minerals_SandAndGravel_Resources/MapServer/info/metadata/

From: Falls, Ryan G
To: Peter Putzier
Cc: Brooke Vorbeck; Daniel Townsend
Subject: RE: Early Coordination - Des 2100571 - SR 43 over Richland Creek Bridge Project - Greene County
Date: Tuesday, January 30, 2024 12:49:15 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image006.png
image007.png
image008.png
image009.png

EXTERNAL

Peter Putzier,

At this time, our office has no comment on this project. Thank you for the opportunity to respond to early coordination.

Ryan Falls
Senior Environmental Manager Supervisor
Indiana Department of Transportation
Vincennes District
Cell: 812-582-1387
Email: rfalls@indot.in.gov
Find us on social media!

From: Peter Putzier <PPutzier@lochgroup.com>
Sent: Tuesday, January 30, 2024 1:20 PM
To: Falls, Ryan G <RFalls@indot.IN.gov>
Cc: Brooke Vorbeck <Brooke.Vorbeck@lochgroup.com>; Daniel Townsend <DTownsend@lochgroup.com>
Subject: Early Coordination - Des 2100571 - SR 43 over Richland Creek Bridge Project - Greene County

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Dear Mr. Falls,

We are working on the environmental document for a bridge replacement project located in Greene County, IN (Des. No. 2100571). The early coordination package is attached for your review and comment.

From:	Thomas, Michael J
To:	Peter Putzier
Cc:	Brooke Vorbeck; Daniel Townsend
Subject:	RE: Early Coordination - Des 2100571 - SR 43 over Richland Creek Bridge Project - Greene County
Date:	Tuesday, January 30, 2024 12:38:02 PM
Attachments:	image001.png image002.png image003.png image004.png image005.png image006.png image007.png image008.png image009.png image010.png image011.png image012.png image013.png image014.png

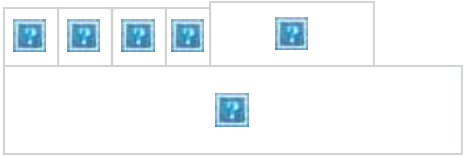
EXTERNAL

Peter,

This looks good to me, and I do not have any comments to add.

Thanks,

Michael J. Thomas
Project Manager
3650 South U.S. Highway 41
Vincennes, IN 47591
Phone: (812) 582-2729
Email: mthomas1@indot.in.gov



From: Peter Putzier <PPutzier@lochgroup.com>
Sent: Tuesday, January 30, 2024 1:22 PM
To: Thomas, Michael J <MThomas1@indot.IN.gov>
Cc: Brooke Vorbeck <Brooke.Vorbeck@lochgroup.com>; Daniel Townsend <DTownsend@lochgroup.com>
Subject: Early Coordination - Des 2100571 - SR 43 over Richland Creek Bridge Project - Greene County

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Dear Mr. Thomas,

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

In Reply Refer To: January 31, 2024
Project Code: 2024-0042080
Project Name: DES 2100571; SR 43 Small Structure Replacement Project; Greene County, Indiana

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/

s7process/index.html. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process. For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both

migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

PROJECT SUMMARY

Project Code: 2024-0042080

Project Name: DES 2100571; SR 43 Small Structure Replacement Project; Greene County, Indiana

Project Type: Bridge - Replacement

Project Description: DES 2100571 is a bridge project located on State Road (SR) 43 over Richland Creek, 6.72 miles north of SR 54 in Greene County, Indiana. The proposed project will replace the existing 104 ft long pre-stressed concrete adjacent box beam bridge (043-28-05887 A; NBI #015910) that carries SR 43 over Richland Creek. The existing horizontal alignment will be improved by realigning the roadway a maximum of 50 ft to the southeast. The proposed bridge will be a three-span (34’-6”, 46’-0”, 34’-6”) reinforced concrete slab bridge with a clear roadway width of 30 ft and out to out width of 33 ft on a 25-degree skew. The total project length is 675 ft with 50 ft of incidental asphalt mill and overlay at each end. Three field entrances/drives will be installed at existing field entrance/drive locations. The existing drive culvert (Str. No. 11) will be removed and replaced with an 18” culvert with end sections. The existing pipe (Str. No. 10) under SR 43 may be removed and not replaced. Land types adjacent to the project include agricultural fields, pastures, mature forests, and forested riparian habitat. This would be considered suitable summer habitat for the Indiana bat and Northern long-eared bat. Approximately 1.0 acre of tree clearing is anticipated. All tree clearing will take place within 100 ft of the existing roadway and will occur during the inactive season. Dominant species within the tree clearing areas include black elder (Sambucus nigra), black walnut (Juglans nigra), silver maple (Acer saccharinum), sycamore (Platanus occidentalis), American hornbeam (Carpinus caroliniana). A review of the USFWS database by INDOT Vincennes District environmental staff on March 23, 2023 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. However, the project is located within the 10-mile MYSO hibernacula buffer and within the Indiana Bat Critical Habitat. Tree removal will occur between November 15 and March 31 (instead of the standard October 1 to March 31) to allow for the conclusion of fall swarming around the hibernacula. Pipe inspections completed on August 23, 2023 did not indicate signs of bats within Str. No. 11 or Str. No. 10.. The June 27, 2022 INDOT Bridge Inspection report indicated that no evidence of bats was seen or heard under the bridge. The bridge/structure bat assessment conducted on June 13, 2023 identified evidence of bat (guano) and staining. Guano was sent to Northern Arizona University for analysis and determined to be 100% big brown bats (Eptesicus fuscus). The anticipated timing of construction is November 2025 to November 2026. No temporary or permanent lighting is anticipated. No mitigation will be required.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.111924450000004,-86.73854130018879,14z

Counties: Greene County, Indiana

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

CLAMS

NAME	STATUS
Round Hickorynut *Obovaria subrotunda*	Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/9879

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Indiana Bat *Myotis sodalis*	Final

https://ecos.fws.gov/ecp/species/5949#crithab

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO BALD AND GOLDEN EAGLES WITHIN THE VICINITY OF YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider

implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Cerulean Warbler *Dendroica cerulea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 23 to Jul 20
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Field Sparrow *Spizella pusilla* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9446	Breeds Mar 1 to Aug 15
Kentucky Warbler *Oporornis formosus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9443	Breeds Apr 20 to Aug 20
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

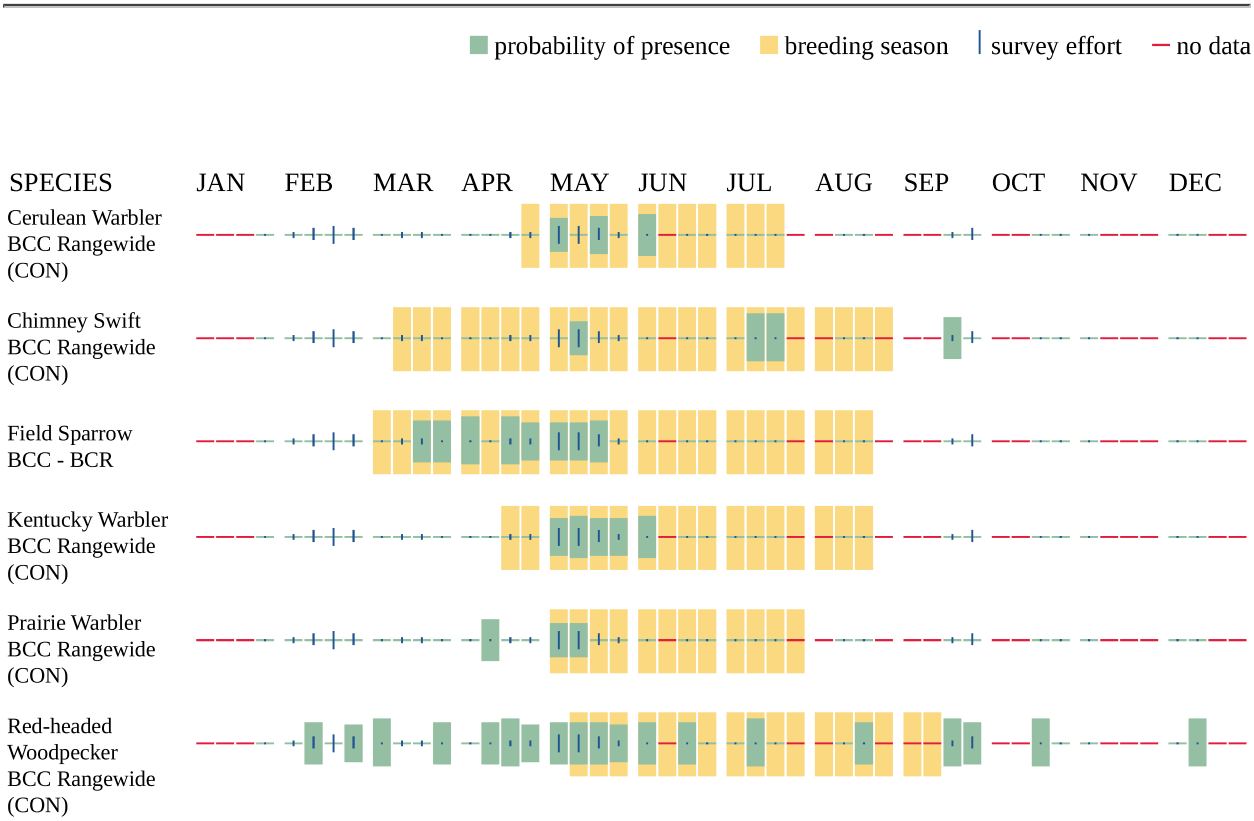
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Wood Thrush
BCC Rangewide
(CON)

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R2UBH

IPAC USER CONTACT INFORMATION

Agency: Indiana Department of Transportation
Name: Peter Putzier
Address: 6200 Vogel Road
City: Evansville
State: IN
Zip: 47715
Email pputzier@lochgroup.com
Phone: 8127594113

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
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In Reply Refer To: February 06, 2024
Project code: 2024-0042080
Project Name: DES 2100571; SR 43 Bridge Replacement Project; Greene County, Indiana

Subject: Concurrence verification letter for the 'DES 2100571; SR 43 Bridge Replacement Project; Greene County, Indiana' project under the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (NLEB).

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated February 06, 2024 to verify that the **DES 2100571; SR 43 Bridge Replacement Project; Greene County, Indiana** (Proposed Action) may rely on the concurrence provided in the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures. **At least one of the qualification interview questions indicated an activity or portion of your project is consistent with a not likely to adversely affect determination therefore, the overall determination for your project is, may affect, and is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the endangered northern long-eared bat (*Myotis septentrionalis*)**. Consultation with the Service pursuant to section 7(a)(2) of ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*.) is required.

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period

allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessment documented signs of bat use or occupancy, or an assessment failed to detect Indiana bats and/or NLEBs, yet are later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of any potential take. In these instances, potential incidental take of Indiana bats and/or NLEBs is covered under the Incidental Take Statement in the 2018 FHWA, FRA, FTA PBO (provided that the take is reported to the Service).

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities:
If your initial bridge/culvert or structure assessments failed to detect Indiana bats and/or NLEB use or occupancy, yet bats are later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of the incident. In these instances, potential incidental take of Indiana bats and/or NLEBs may be exempted provided that the take is reported to the Service.

If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate
- Round Hickorynut *Obovaria subrotunda* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Whooping Crane *Grus americana* Experimental Population, Non-Essential

PROJECT DESCRIPTION

The following project name and description was collected in IPaC as part of the endangered species review process.

NAME

DES 2100571; SR 43 Bridge Replacement Project; Greene County, Indiana

DESCRIPTION

DES 2100571 is a bridge project located on State Road (SR) 43 over Richland Creek, 6.72 miles north of SR 54 in Greene County, Indiana. The proposed project will replace the existing 104 ft long pre-stressed concrete adjacent box beam bridge (043-28-05887 A; NBI #015910) that carries SR 43 over Richland Creek. The existing horizontal alignment will be improved by realigning the roadway a maximum of 50 ft to the southeast. The proposed bridge will be a three-span (34’-6”, 46’-0”, 34’-6”) reinforced concrete slab bridge with a clear roadway width of 30 ft and out to out width of 33 ft on a 25-degree skew. The total project length is 675 ft with 50 ft of incidental asphalt mill and overlay at each end. Three field entrances/drives will be installed at existing field entrance/drive locations. The existing drive culvert (Str. No. 11) will be removed and replaced with an 18” culvert with end sections. The existing pipe (Str. No. 10) under SR 43 may be removed and not replaced. Land types adjacent to the project include agricultural fields, pastures, mature forests, and forested riparian habitat. This would be considered suitable summer habitat for the Indiana bat and Northern long-eared bat. Approximately 1.0 acre of tree clearing is anticipated. All tree clearing will take place within 100 ft of the existing roadway and will occur during the inactive season. Dominant species within the tree clearing areas include black elder (Sambucus nigra), black walnut (Juglans nigra), silver maple (Acer saccharinum), sycamore (Platanus occidentalis), American hornbeam (Carpinus caroliniana). A review of the USFWS database by INDOT Vincennes District environmental staff on March 23, 2023 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. However, the project is located within the 10-mile MYSO hibernacula buffer and within the Indiana Bat Critical Habitat. Tree removal will occur between November 15 and March 31 (instead of the standard October 1 to March 31) to allow for the conclusion of fall swarming around the hibernacula. Pipe inspections completed on August 23, 2023 did not indicate signs of bats within Str. No. 11 or Str. No. 10.. The June 27, 2022 INDOT Bridge Inspection report indicated that no evidence of bats was seen or heard under the bridge. The bridge/structure bat assessment conducted on June 13, 2023 identified evidence of bat (guano) and staining. Guano was sent to Northern Arizona University for analysis and determined to be 100% big brown bats (Eptesicus fuscus). The anticipated timing of construction is November 2025 to November 2026. No temporary or permanent lighting is anticipated. No mitigation will be required.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.111924450000004,-86.73854130018879,14z

DETERMINATION KEY RESULT

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the endangered northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

QUALIFICATION INTERVIEW

1. Is the project within the range of the Indiana bat[1]?

   [1] See Indiana bat species profile

   Automatically answered
   Yes

2. Is the project within the range of the northern long-eared bat[1]?

   [1] See northern long-eared bat species profile

   Automatically answered
   Yes

3. Which Federal Agency is the lead for the action?

   A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

   [1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

   No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces[1]?

   [1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

   No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum[1]?

   [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

   No

7. Is the project located **within** a karst area?

   Yes

8. Will the project include *any* type of activity that could impact a **known** hibernaculum[1], or impact a karst feature (e.g., sinkhole, losing stream, or spring) that could result in effects to a **known** hibernaculum?

   [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

   No

9. Is there *any* suitable[1] summer habitat for Indiana Bat or NLEB **within** the project action area[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat.

   Yes

10. Will the project remove *any* suitable summer habitat[1] and/or remove/trim any existing trees **within** suitable summer habitat?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    Yes

11. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

    No

12. Have presence/probable absence (P/A) summer surveys[1][2] been conducted[3][4] **within** the suitable habitat located within your project action area?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    [2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    [3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

    [4] Negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    No

13. Does the project include activities **within documented Indiana bat habitat**[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

14. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

    Yes

15. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    B) During the inactive season

16. Does the project include activities **within documented NLEB habitat**[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

17. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

    Yes

18. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

    B) During the inactive season

19. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

    Yes

20. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

    No

21. Are *all* trees that are being removed clearly demarcated?

    Yes

22. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

    No

23. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

    No

24. Does the project include slash pile burning?

    No

25. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    Yes

26. Is there *any* suitable habitat[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

    [1] See the Service's current summer survey guidance for our current definitions of suitable habitat.

    Yes

27. Has a bridge assessment[1] been conducted **within** the last 24 months[2] to determine if the bridge is being used by bats?

    [1] See User Guide Appendix D for bridge/structure assessment guidance

    [2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

    Yes

    SUBMITTED DOCUMENTS

    - *2100571_Bridge Bat Inspections.pdf https://ipac.ecosphere.fws.gov/project/W5GN6H4OAVGO3LZEB76OCRTAUI/projectDocuments/137927671*

28. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)[1]?

    [1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

    Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

    No

29. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

    No

30. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

31. Will the project involve the use of **temporary** lighting *during* the active season?

    No

32. Will the project install new or replace existing **permanent** lighting?

    No

33. Does the project include percussives or other activities (**not including tree removal/ trimming or bridge/structure work**) that will increase noise levels above existing traffic/ background levels?

    Yes

34. Will the activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    Yes

35. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    Yes

36. Are *all* project activities that are **not associated with** habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

    Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

    Yes

37. Will the project raise the road profile **above the tree canopy**?

    No

38. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the active season within undocumented habitat.

39. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the inactive season

40. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the tree removal/trimming that occurs outside of the Indiana bat's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

41. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the tree removal/trimming that occurs outside of the NLEB's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

42. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

43. **General AMM 1**
    Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

44. **Hibernacula AMM 1**
    Will the project ensure that on-site personnel will use best management practices[1], secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula?

    [1] Coordinate with the appropriate Service Field Office on recommended best management practices for karst in your state.

    Yes

45. **Hibernacula AMM 1**
    Will the project ensure that, where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography?

    Yes

46. **Tree Removal AMM 1**
    Can *all* phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal[1] in excess of what is required to implement the project safely?

    Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

    [1] The word “trees” as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS’ current summer survey guidance for our latest definitions of suitable habitat.

    Yes

47. **Tree Removal AMM 3**
    Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

    Yes

48. **Tree Removal AMM 4**
    Can the project avoid cutting down/removal of *all* (1) **documented**[1] Indiana bat or NLEB roosts[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

    [1] The word documented means habitat where bats have actually been captured and/or tracked.

    [2] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    Yes

PROJECT QUESTIONNAIRE

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

   No

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

   No

3. How many acres[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

   [1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

   1.0

4. Please describe the proposed bridge work:

   The project will replace the existing three-span prestressed concrete adjacent box beam bridge. The existing horizontal alignment will be improved by realigning the roadway a maximum of 50 feet to the southeast. The proposed bridge will be a three-span (34-foot 6-inch, 46-foot, 34-foot 6 inch) reinforced concrete slab bridge with a clear roadway width of 30 feet and out to out width of 33 feet on a 25-degree skew. The total length is 675 feet with 50 feet of incidental asphalt mill and overlay at each end. Three field entrances/drives will be installed at existing field entrance/drive locations.

5. Please state the timing of all proposed bridge work:

   November 2025 to November 2026

6. Please enter the date of the bridge assessment:

   June 27, 2022, June 13, 2023, August 23, 2023

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

This determination key result includes the committment to implement the following Avoidance and Minimization Measures (AMMs):

HIBERNACULA AMM 1

For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography.

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/ rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

TREE REMOVAL AMM 4

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or
documented foraging habitat any time of year.

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

DETERMINATION KEY DESCRIPTION: FHWA, FRA, FTA PROGRAMMATIC CONSULTATION FOR TRANSPORTATION PROJECTS AFFECTING NLEB OR INDIANA BAT

This key was last updated in IPaC on October 30, 2023. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the endangered **northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects. The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

IPAC USER CONTACT INFORMATION

Agency: Indiana Department of Transportation
Name: Ryan Falls
Address: 3650 South U.S. Highway 41
City: Vincennes
State: IN
Zip: 47591
Email rfalls@indot.in.gov
Phone: 8125821387

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

Bridge Inspection Report

043-28-05887 A

SR 43
over
RICHLAND CREEK

Inspection Date: 06/27/2022

Inspected By: Tony Hoover

Inspection Type(s): Routine

Approach Slabs: ** Indicate if present & condition rating.*

1 - Approach Slabs 6 - Satisfactory condition, mild crack, wide spacing

Comments:

South Concrete Approach exhibits approximately 2 SFT spall along deck joint near center line. North Concrete Approach exhibits a few minor width cracks on Approach.

Paint: ** Indicate if paint present , year painted & condition rating.*

4 - Epoxy Coated Piles	1 - Failed Paint System - large areas of section loss, greater than 75% loss of paint	1995

Comments:

Epoxy coating placed during 1995 rehabilitation on the steel encased concrete piles has effectively failed and not providing any protection, allowing heavy widespread corrosion.

Endangered Species: ** If yes, add one photo to the dropdown field*

Bats: seen or heard under structure? * N

Birds/swallows/nests seen? Empty nests present? * N

BRIDGE Culvert Geometry:

Barrel Length:

Height:

Width:

APPENDIX D: Bridge/Structure Bat Assessment Form

Bridge/Structure Bat Assessment Form Instructions

- This form will be completed to document bat occupancy or bat use of bridges, culverts, and other structures. This form shall be submitted to the appropriate personnel within the DOT and USFWS for recordkeeping (or uploaded into the Information, Planning, and Consultation (IPaC) Determination Key for use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat) prior to conducting: any activities below the deck surface either from the underside or from above the deck surface that bore down to the underside; any activities that could impact expansion joints; any activities involving deck removal on bridges; or any activities involving structure demolition for bridges, culverts, and/or other structures.
- Assessments must be completed within two (2) years of conducting any work (see the above bullet), regardless of whether assessments have been conducted in the past. Assessments must be completed in appropriate weather conditions, suitable for the assessor to observe common signs of bat use.
- Evidence of bat use may include visual observation (live and/or dead), presence of guano, presence of staining, audible observation, and/or odor observation. Presence of one or more indicators is sufficient evidence that bats may be using the bridge, culvert, and/or other structure.
- If bat use of a bridge, culvert, and/or other structure is noted, additional studies may be undertaken during bat active season to identify the specific bat species utilizing the structure, or protected bat species presence can be assumed, in order to comply with threatened and endangered species regulations. Bat active season dates, typically between April and November, vary regionally and by species, so assessors should consult with their local USFWS Field Office for more specific active season dates.
- For use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat – If the bridge/structure is 1,000 feet or more from suitable bat habitat[1] (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check the appropriate box and fill out the table below. **No further assessment is required.**

Date & Time of Assessment	**DOT Project #**	**Route/Facility Carried**	**County**
Federal Structure ID	**Structure Coordinates** (latitude and longitude)	☐ This bridge/structure is 1,000 feet or more from suitable bat habitat[2] Name:_____ Signature: _____	

- Any questions pertaining to assessments or this form should be directed to the local USFWS Field Office.

[1] Refer to the USFWS's summer survey guidance for the definition of suitable habitat (http://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html).

[2] This condition is only for use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat

Bridge/Structure Bat Assessment Form

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
6/13/2023 2:17 EST	DES 2100571	SR 43 over Richland Creek	Greene
Federal Structure ID	**Structure Coordinates (latitude and longitude)**	**Structure Height (approximate)**	**Structure Length**
015910	39.11181, -86.73886	40 feet	104 feet

Structure Type (check one)

Bridge Construction Style

- ○ Cast-in-place
- ○ Flat Slab/Box
- ○ Truss (Side View)
- ◉ Parallel Box Beam
- ○ Pre-stressed Girder
- ○ Steel I-beam
- ○ Covered
- ○ Other:

Culvert Type

- ○ Box
- ○ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☐ None	☒ Concrete
☒ Concrete	☒ Concrete	☐ Timber
☐ Timber	☐ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☐ Other:	☐ Other:	

Creosote Evidence

- ○ Yes ○ No ○ Unknown

Culvert Material

- ☐ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Notes:

Crossings Traversed (check all that apply)

☒ Bare ground	☐ Open vegetation
☒ Rip-rap	☐ Closed vegetation
☒ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☐ Seasonal water	☐ Other:

Surrounding Habitat (check all that apply)

☒ Agricultural	☐ Grassland
☐ Commercial	☐ Ranching
☐ Residential-urban	☒ Riparian/wetland
☐ Residential-rural	☐ Mixed use
☒ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	**Assessment Notes**	**Evidence of Bats** (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Concrete surfaces (open roosting on concrete)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Spaces between concrete end walls and the bridge deck	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Crack between concrete railings on top of the bridge deck (Gap / Railing)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Vertical surfaces on concrete I-beams	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Spaces between walls, ceiling joists	☐ Not present	☐ Visual - live # dead # ☒ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Weep holes, scupper drains, and inlets/pipes	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ All guiderails	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ All expansion joints	☐ Not present	☐ Visual - live # dead # ☐ Guano ☒ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Kenan Lochmueller

Signature: *Kenan Lochmueller*

APPENDIX D: Bridge/Structure Bat Assessment Form

Bridge/Structure Bat Assessment Form Instructions

- This form will be completed to document bat occupancy or bat use of bridges, culverts, and other structures. This form shall be submitted to the appropriate personnel within the DOT and USFWS for recordkeeping (or uploaded into the Information, Planning, and Consultation (IPaC) Determination Key for use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat) prior to conducting: any activities below the deck surface either from the underside or from above the deck surface that bore down to the underside; any activities that could impact expansion joints; any activities involving deck removal on bridges; or any activities involving structure demolition for bridges, culverts, and/or other structures.
- Assessments must be completed within two (2) years of conducting any work (see the above bullet), regardless of whether assessments have been conducted in the past. Assessments must be completed in appropriate weather conditions, suitable for the assessor to observe common signs of bat use.
- Evidence of bat use may include visual observation (live and/or dead), presence of guano, presence of staining, audible observation, and/or odor observation. Presence of one or more indicators is sufficient evidence that bats may be using the bridge, culvert, and/or other structure.
- If bat use of a bridge, culvert, and/or other structure is noted, additional studies may be undertaken during bat active season to identify the specific bat species utilizing the structure, or protected bat species presence can be assumed, in order to comply with threatened and endangered species regulations. Bat active season dates, typically between April and November, vary regionally and by species, so assessors should consult with their local USFWS Field Office for more specific active season dates.
- For use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat – If the bridge/structure is 1,000 feet or more from suitable bat habitat[1] (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check the appropriate box and fill out the table below. **No further assessment is required.**

Date & Time of Assessment	**DOT Project #**	**Route/Facility Carried**	**County**
Federal Structure ID	**Structure Coordinates** (latitude and longitude)	☐ This bridge/structure is 1,000 feet or more from suitable bat habitat[2] Name:_____ Signature: _____	

- Any questions pertaining to assessments or this form should be directed to the local USFWS Field Office.

[1] Refer to the USFWS's summer survey guidance for the definition of suitable habitat (http://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html).

[2] This condition is only for use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat

Bridge/Structure Bat Assessment Form

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
8/23/2023 2:17 EST	Des. No. 2100571	SR 43 over Richland Creek	Greene
Federal Structure ID	**Structure Coordinates (latitude and longitude)**	**Structure Height (approximate)**	**Structure Length**
NA / Str. No. 10	39.1113526, -86.7394714	12 inches	50 feet

Structure Type (check one)

Bridge Construction Style

- ○ Cast-in-place
- ○ Flat Slab/Box
- ○ Truss (Side View)
- ○ Parallel Box Beam
- ○ Pre-stressed Girder
- ○ Steel I-beam
- ○ Covered
- ○ Other:

Culvert Type

- ◉ Box
- ◉ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☐ None	☐ Concrete
☐ Concrete	☐ Concrete	☐ Timber
☐ Timber	☐ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☐ Other:	☐ Other:	

Creosote Evidence

- ○ Yes ○ No
- ○ Unknown

Culvert Material

- ☒ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Notes:

Crossings Traversed (check all that apply)

☐ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☐ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☒ Seasonal water	☐ Other:

Surrounding Habitat (check all that apply)

☒ Agricultural	☐ Grassland
☐ Commercial	☐ Ranching
☐ Residential-urban	☒ Riparian/wetland
☐ Residential-rural	☐ Mixed use
☒ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Concrete surfaces (open roosting on concrete)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between concrete end walls and the bridge deck	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Crack between concrete railings on top of the bridge deck (Gap / Railing)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Vertical surfaces on concrete I-beams	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between walls, ceiling joists	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Weep holes, scupper drains, and inlets/pipes	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All guiderails	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All expansion joints	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Kenan Lochmueller

Signature: Kenan Lochmueller

APPENDIX D: Bridge/Structure Bat Assessment Form

Bridge/Structure Bat Assessment Form Instructions

- This form will be completed to document bat occupancy or bat use of bridges, culverts, and other structures. This form shall be submitted to the appropriate personnel within the DOT and USFWS for recordkeeping (or uploaded into the Information, Planning, and Consultation (IPaC) Determination Key for use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat) prior to conducting: any activities below the deck surface either from the underside or from above the deck surface that bore down to the underside; any activities that could impact expansion joints; any activities involving deck removal on bridges; or any activities involving structure demolition for bridges, culverts, and/or other structures.
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- Evidence of bat use may include visual observation (live and/or dead), presence of guano, presence of staining, audible observation, and/or odor observation. Presence of one or more indicators is sufficient evidence that bats may be using the bridge, culvert, and/or other structure.
- If bat use of a bridge, culvert, and/or other structure is noted, additional studies may be undertaken during bat active season to identify the specific bat species utilizing the structure, or protected bat species presence can be assumed, in order to comply with threatened and endangered species regulations. Bat active season dates, typically between April and November, vary regionally and by species, so assessors should consult with their local USFWS Field Office for more specific active season dates.
- For use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat – If the bridge/structure is 1,000 feet or more from suitable bat habitat[1] (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check the appropriate box and fill out the table below. **No further assessment is required.**

Date & Time of Assessment	**DOT Project #**	**Route/Facility Carried**	**County**
Federal Structure ID NA	**Structure Coordinates** (latitude and longitude)	☐ This bridge/structure is 1,000 feet or more from suitable bat habitat[2] Name:_____ Signature: _____	

- Any questions pertaining to assessments or this form should be directed to the local USFWS Field Office.

[1] Refer to the USFWS's summer survey guidance for the definition of suitable habitat (http://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html).

[2] This condition is only for use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: 8/23/2023 2:17 EST	DOT Project Number: Des. No. 2100571	Route/Facility Carried: SR 43 over Richland Creek	County: Greene
Federal Structure ID: NA / INDOT Str. No. 11	Structure Coordinates (latitude and longitude): 39.1114442 -86.7391800	Structure Height (approximate): 15 inches	Structure Length: 80 feet

Structure Type (check one)

Bridge Construction Style

- ○ Cast-in-place
- ○ Flat Slab/Box
- ○ Truss (Side View)
- ○ Parallel Box Beam
- ○ Pre-stressed Girder
- ○ Steel I-beam
- ○ Covered
- ○ Other:

Culvert Type

- ○ Box
- ◉ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☐ None	☐ Concrete
☐ Concrete	☐ Concrete	☐ Timber
☐ Timber	☐ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☐ Other:	☐ Other:	

Creosote Evidence

- ○ Yes ○ No
- ○ Unknown

Culvert Material

- ☒ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Notes:

Crossings Traversed (check all that apply)

☐ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☐ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☒ Seasonal water	☐ Other:

Surrounding Habitat (check all that apply)

☒ Agricultural	☐ Grassland
☐ Commercial	☐ Ranching
☐ Residential-urban	☒ Riparian/wetland
☐ Residential-rural	☐ Mixed use
☒ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	**Assessment Notes**	**Evidence of Bats** (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Concrete surfaces (open roosting on concrete)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between concrete end walls and the bridge deck	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Crack between concrete railings on top of the bridge deck (Gap / Railing)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Vertical surfaces on concrete I-beams	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between walls, ceiling joists	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Weep holes, scupper drains, and inlets/pipes	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All guiderails	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All expansion joints	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Kenan Lochmueller

Signature: Kenan Lochmueller

Species Identification Report

Brock Ervin

Rusty Yeager

INDOT DES 1593274 & 2100571

Invoice number	20230908_2
Project ID	LOCH
Email address	RYeager@lochgroup.com
Sequencing date	Nov 2023
Report date	Nov 2023
Technician	Daniel Sanchez;Savannah Marriott
Bioinformatician	Daniel Sanchez

Bat Ecology & Genetics Lab, School of Forestry, NAU, P.O. Box 15018, Flagstaff, AZ 86011
nau.edu/sff
https://linktr.ee/speciesfromfeces
Questions? Faith.Walker@nau.edu; Carol.Chambers@nau.edu

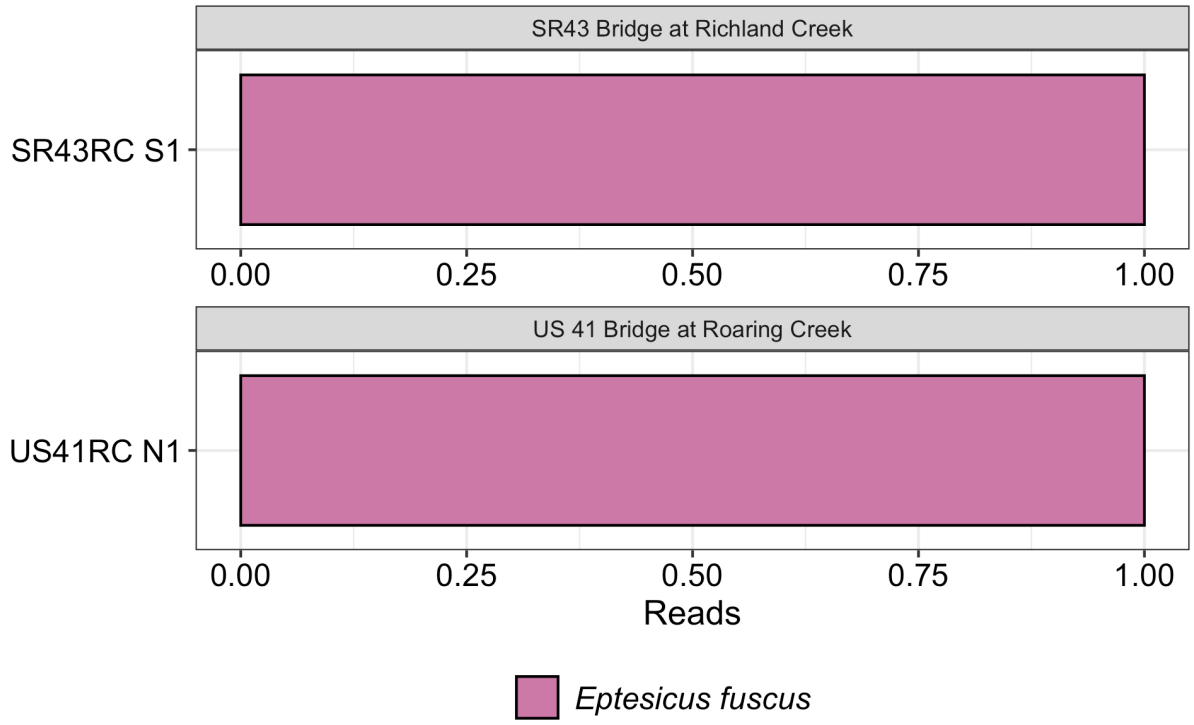
Sample processing:

We received two 15 mL vials of bat guano. The goal was to identify one or more bat species in a mixture for each sample. We noted no issues with the preservation of the vials. We decontaminated all vials with 10% bleach prior to handling and processing.

We extracted genomic DNA and amplified a short-section of cytochrome oxidase subunit I (COI) from the samples using our standard methodology (Walker et al. 2016; Walker et al. 2022). Amplified product was sequenced on an Illumina MiSeq V3 600 cycle kit to obtain DNA sequences (reads) of one or more taxa per sample. Sequencing reads were computationally processed using QIIME2 v2022.2 (Bolyen et al. 2019). Priming regions were removed using cutadapt (Martin 2011) to isolate the 202 base pair fragment of interest. We removed low quality reads, and filtered out PCR artifacts (chimeric reads) using DADA2 (Callahan et al. 2016). To avoid low abundance variants with sequencing errors, the unique sequences were post-clustered using LULU curation (Frøslev et al. 2017). Sequences were then classified using a naïve-Bayes machine learning classifier (Bokulich et al. 2018) that we trained against our custom reference database. References were derived from all available chiropteran COI references in the Barcode of Life Database (Ratnasingham and Hebert 2007). We retained species classifications only if they were classified with at least 90% bootstrap support. Any variants not classified using the machine learning algorithm to species were cross-referenced against the National Center for Biotechnology Information's (NCBI) GenBank database (Benson et al. 2009) using BLAST (Altschul et al. 1990). Taxa were classified using Least Common Ancestor (LCA) analysis in MEGAN v6 (Huson et al. 2007). This cross-referencing step helps to alleviate any false negative bat classifications in the naïve-Baye's model or identify non-bat taxa that may have co-amplified.

Results:

None of the DNA extraction blanks or PCR negative template controls prepared with your samples yielded taxonomic information. Our positive control consisting of eastern hemisphere bat species yielded all five expected sequences and no unexpected sequences. All samples were successfully sequenced. **We detected *Eptesicus fuscus* among both samples.**



Note:

Taxonomic nomenclature that we use for classification is derived verbatim from the Barcode of Life Database or NCBI GenBank. Each database may exhibit different taxonomic provinence and may use outdated species epiphets. During your analysis, we encourage you to consider updated or synonymous taxonomic nomenclature for the taxa detected in your samples.

Accompanying files:

Along with a PDF of the detection barplots, we included an Excel (xlsx) spreadsheet that includes all figures, all taxonomic data, and sequencing pass and read summaries.

LOCH_20230908_2_INDOT_DES_1593274_2100571_BEGLresults.xlsx
Batdetection_plot.pdf

References:

Altschul SF, Gish W, Miller W, Myers EW, Lipman DJ. 1990. Basic local alignment search tool. J Mol Biol. 215(3):403–410.

Benson DA, Karsch-Mizrachi I, Lipman DJ, Ostell J, Sayers EW. 2009. GenBank. Nucleic Acids Res. 37(suppl_1):D26–D31. doi:10.1093/nar/gkn723.

Bokulich NA, Kaehler BD, Rideout JR, Dillon M, Bolyen E, Knight R, Huttley GA, Gregory Caporaso J. 2018. Optimizing taxonomic classification of marker-gene amplicon sequences with QIIME 2's q2-feature-classifier plugin. Microbiome. 6(1):1–17. doi:10.1186/s40168-018-0470-z.

Bolyen E, Rideout JR, Dillon MR, Bokulich NA, Abnet C, Al-Ghalith GA, Alexander H, Alm EJ, Arumugam M, Asnicar F, et al. 2019. Reproducible, interactive, scalable and extensible microbiome data science using QIIME 2. Nat Biotechnol. 37(8):852–857.

Callahan BJ, McMurdie PJ, Rosen MJ, Han AW, Johnson AJA, Holmes SP. 2016. DADA2: high-resolution sample inference from Illumina amplicon data. Nat Methods. 13(7):581–583. doi:10.1038/nmeth.3869.

Frøslev TG, Kjøller R, Bruun HH, Ejrnæs R, Brunbjerg AK, Pietroni C, Hansen AJ. 2017. Algorithm for post-clustering curation of DNA amplicon data yields reliable biodiversity estimates. Nat Commun. 8(1):1188. doi:10.1038/s41467-017-01312-x.

Huson DH, Auch AF, Qi J, Schuster SC. 2007. MEGAN analysis of metagenomic data. Genome Res. 17(3):377–386. doi:10.1101/gr.5969107.

Martin M. 2011. Cutadapt removes adapter sequences from high-throughput sequencing reads. EMBnet.journal. 17(1):10–12. doi:10.14806/ej.17.1.200.

Ratnasingham S, Hebert PDN. 2007. BOLD: The Barcode of Life Data System (http://www.barcodinglife.org). Mol Ecol Notes. 7(3):355–364. doi:10.1111/j.1471-8286.2007.01678.x.

Walker FM, Sanchez DE, Froehlich EM, Federman EL, Lyman JA, Owens M, Lear K. 2022. Endangered Nectar-Feeding Bat Detected by Environmental DNA on Flowers. Animals. 12(22):3075. doi:10.3390/ani12223075.

Walker FM, Williamson CHD, Sanchez DE, Sobek CJ, Chambers CL. 2016. Species From Feces: Order-Wide Identification of Chiroptera From Guano and Other Non-Invasive Genetic Samples. Russo D, editor. PLOS ONE. 11(9):e0162342. doi:10.1371/journal.pone.0162342.

From:	Falls, Ryan G
To:	Peter Putzier; Wright, Kristy
Cc:	Brooke Vorbeck
Subject:	NLAA: Request for IPaC Finding Review - Des 2100571; SR 43 Small Structure Replacement Project, 6.72 miles north of SR 54 Jct.
Date:	Tuesday, February 6, 2024 7:01:18 AM
Attachments:	image001.png image002.png image003.png image004.png image005.png image006.png image007.png image008.png image009.png

EXTERNAL

The document's finding of May Effect, NLAA-With AMMs for DES 2100571 has been deemed sufficient. It has been verified and submitted to USFWS. The Service has 14 days after the "Not Likely to Adversely Affect" determination letter is generated. They will review that information once it is received; if you do not receive a response within 14 days, they have no additional comments for the two bats covered under the programmatic. The NEPA document submittal may not occur until this review period has ended. The Official Species List and Concurrence Verification Letter are now immediately available for your use. It is suggested that these documents be downloaded at this time. This concludes the IPaC phase of coordination with the Vincennes environmental office.

Ryan Falls
Senior Environmental Manager Supervisor
Indiana Department of Transportation
Vincennes District
Cell: 812-582-1387
Email: rfalls@indot.in.gov
Find us on social media!

From: Peter Putzier <PPutzier@lochgroup.com>
Sent: Monday, February 5, 2024 4:36 PM
To: Falls, Ryan G <RFalls@indot.IN.gov>; Wright, Kristy <KWright@indot.IN.gov>
Cc: Brooke Vorbeck <Brooke.Vorbeck@lochgroup.com>
Subject: RE: 1st Review: Request for IPaC Finding Review - Des 2100571; SR 43 Small Structure Replacement Project, 6.72 miles north of SR 54 Jct.

Mr. Falls,

From:	McWilliams, Robin
To:	Falls, Ryan G
Cc:	Daniel Townsend; Brooke Vorbeck; Peter Putzier
Subject:	Re: [EXTERNAL] FW: SR 43 over Richland Creek, INDOT Des 2100571 - USFWS Other Species Coordination
Date:	Wednesday, April 10, 2024 2:17:52 PM
Attachments:	image256770.png image607240.png image191504.png image581562.png image229782.png image062383.png image695317.png image664865.png image307898.png image001.png

EXTERNAL

Dear Mr. Falls,

This letter is in response to your request below for a concurrence on a may affect, not likely to adversely affect, determination for the round hickorynut (*Obovaria subrotunda*) and Indiana bat critical habitat. We prepared these comments under the authority of the Fish and Wildlife Coordination Act (l6 U.S.C. 661 et. seq.), the Endangered Species Act of l973 (Act), and the U.S. Fish and Wildlife Service's Mitigation Policy.

The proposed project will be to replaced the existing 104 ft long pre-stressed concrete adjacent box beam bridge that carries SR 43 over Richland Creek. The existing horizontal alignment will be improved by shifting the roadway a maximum of 50 ft to the southeast. As you mentioned, the project is within the range of the round hickorynut, the Indiana bat (*Myotis sodalis*), the northern long-eared bat (*Myotis septentrionalis;* NLEB), and Indiana bat critical habitat. The Indiana bat and NLEB will be covered under the Federal Highway Administration, Federal Rail Administration, and Federal Transit Administration's programmatic consultation for transportation projects.

The project area appears to be outside of the portion of Richland Creek where round hickorynut is thought to occur and therefore, no impacts are expected for this species. Furthermore, based on the information we have reviewed, including the proposed avoidance and minimization measures such as seasonal tree-clearing activities, minimal tree clearing amounts, and implementation of best management practices for sediment and erosion control, we concur that the proposed project is not likely to adversely affect the Indiana bat critical habitat.

Other species

Tricolored Bat

On September 14, 2022, the Service published a proposal in the Federal Register to list the tricolored bat (Perimyotis subflavus; TCB) as endangered under the ESA. The Service has up to 12 months from the date the proposal was published to make a final determination, either to list the tricolored bat under the ESA or to withdraw the proposal. The Service determined the bat faces extinction primarily due to the range-wide impacts of White Nose Syndrome (WNS). Because TCB populations have been greatly reduced due to WNS, surviving bat populations are now more vulnerable to other stressors such as human disturbance and habitat loss. Species proposed for listing are not afforded protection under the ESA; however, as soon as a listing becomes effective (typically 30 days after publication of the final rule in the Federal Register), the prohibitions against jeopardizing its continued existence and "take" will apply. Therefore, if this project or other future or existing projects have the potential to adversely affect the TCB after the potential new listing goes into effect, we recommend that the effects of the project on TCBs and their habitat be analyzed to determine whether authorization under ESA section 7 or 10 is necessary. Projects or programs with an existing section 7 biological opinion may require reinitiation of consultation, and projects with an existing section 10 incidental take permit may require an amendment to provide uninterrupted authorization for covered activities.

The TCB is a small insectivorous bat that typically overwinters in caves, abandoned mines and tunnels, and road-associated culverts (southern portion of the range) and spends the rest of the year in forested habitats, typically roosting among live and dead leaf clusters in tree branches. For more information on TCB and the proposed rule, please see: https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus and for more information on WNS, please see: https://www.whitenosesyndrome.org/.

We do not expect impacts to the tri-colored bat as a result of project activities.

This precludes the need for further consultation on this project as required under section 7 of the ESA. If, however, new information on endangered species or the extent of impacts at the site becomes available, or if project plans are changed significantly, please contact our office for further consultation.

We appreciate the opportunity to comment at this stage of project planning.

Sincerely,
Robin

Robin McWilliams Munson
Fish and Wildlife Biologist/Transportation Liaison

U.S. Fish and Wildlife Service
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403
Robin_McWilliams@fws.gov
***NEW* 812-902-1752**

Mon-Tues 8:30-4:30p
Wed-Thurs 8:30-4:30p Telework

From: Falls, Ryan G <RFalls@indot.IN.gov>
Sent: Thursday, April 4, 2024 12:31 PM
To: McWilliams, Robin <robin_mcwilliams@fws.gov>
Cc: Townsend, Daniel <DTownsend@lochgroup.com>; Brooke Vorbeck <Brooke.Vorbeck@lochgroup.com>; Putzier, Peter <PPutzier@lochgroup.com>
Subject: [EXTERNAL] FW: SR 43 over Richland Creek, INDOT Des 2100571 - USFWS Other Species Coordination

Robin,

Please see the consultant's determination below along with the attachments. INDOT concurs with Lochmueller's determinations for the Indiana Bat Critical Habitat and the Round Hickorynut. We are seeking your concurrence with these findings. If you have any questions, please contact me or Peter Putzier.

Thank you,

Ryan Falls
Senior Environmental Manager Supervisor
Indiana Department of Transportation
Vincennes District
Cell: 812-582-1387
Email: rfalls@indot.in.gov
Find us on social media!

From: Peter Putzier <PPutzier@lochgroup.com>
Sent: Wednesday, April 3, 2024 4:00 PM
To: Falls, Ryan G <RFalls@indot.IN.gov>
Cc: Daniel Townsend <DTownsend@lochgroup.com>; Brooke Vorbeck

<Brooke.Vorbeck@lochgroup.com>
Subject: SR 43 over Richland Creek, Des 2100571 - Other Species Coordination

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Mr. Falls,

We are working on the environmental document for a bridge project located on SR 43 over Richland Creek (Structure No. 043-28-05887 A; NBI #014910), approximately 6.72 miles north of SR 54 in Greene County, IN (Des 2100571). The project was evaluated using the IPaC system on February 6, 2024. The project received a finding of May Affect – Not Likely to Adversely Affect. INDOT early coordination states that additional coordination is needed if the project does not fall under the USFWS Interim Policy (2013) for listed species other than the Indiana bat and/or the northern long-eared bat. Indiana Bat (*Myotis sodalis*) Critical Habitat and the threatened Round Hickorynut (*Obovaria subrotunda*) were identified on the official species list generated from IPaC. The project does not qualify for the Interim Policy due to impacts to forested right-of-way beyond 75 feet from the edge of the existing roadway or pavement. The preferred alternative will be to replaced the existing 104 ft long pre-stressed concrete adjacent box beam bridge that carries SR 43 over Richland Creek. The existing horizontal alignment will be improved by shifting the roadway a maximum of 50 ft to the southeast. The proposed bridge will be a three-span (34'-6", 46'-0", 34'-6") reinforced concrete slab bridge with a clear roadway width of 30 ft and out to out width of 33 ft on a 25-degree skew. The total project length is 675 ft with 50 ft of incidental asphalt mill and overlay at each end. Three field entrances/drives will be installed at existing field entrance/drive locations. The existing drive culvert (Str. No. 11) will be removed and replaced with an 18" culvert with end sections. The existing pipe (St. No. 10) under SR 43 may be removed and not replaced. New end bents and piers on piles will be constructed.

Approximately 0.44 acre of tree clearing is anticipated. All tree clearing will be within 100 ft of the existing roadway and will occur during the inactive season (November 15 and March 31). The mature woods and adjacent edges of agricultural fields would be considered suitable summer habitat for the Indiana bat (*Myotis* sodalis) and northern long-eared bat (*Myotis septentrionalis*). Dominant species within the tree clearing areas include black elder (*Sambucus nigra*), black walnut (*Juglans nigra*), silver maple (*Acer saccharinum*), sycamore (*Platanus occidentalis*), and American hornbeam (*Carpinus caroliniana*). A review of the USFWS database by INDOT Vincennes District environmental staff on March 23, 2023 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. **However, the project is located within the Indiana Bat Critical Habitat.** The June 27, 2022 INDOT Bridge Inspection report indicated that no evidence of bats was seen or heard under the bridge. The bridge/structure bat assessment conducted on June 13, 2023 identified evidence of bat (guano) and staining. Guano was sent to Northern Arizona University for analysis and determined to be 100% big brown bats (*Eptesicus fuscus*). The anticipated timing of construction is November 2025 to November 2026. No temporary or permanent lighting is anticipated.

Indiana Natural Heritage Data Center (INHDC) data was checked by the DNR and did not identify the Round Hickorynut (*Obovaria subrotunda*). The DNR DFW's letter recommended best management practices for sediment and erosion control and that heavy equipment be kept out of the stream channel.

The following avoidance and minimization (AMMs)/commitments will be implemented.

- General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (transportation Agencies) environmental commitments, including all applicable AMMs.
- Hibernacula AMM 1: For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography.
- Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.
- Tree Removal AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.
- Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).
- Tree Removal AMM 4: Do not removed documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year.
- Tree removal dates for project located within the hibernacula buffer are from November 15 to March 31 (instead of the standard October 1 to March 31) to allow for the conclusion of fall swarming around the hibernacula.

Lochmueller Group, on behalf of INDOT, on behalf of FHWA, has determined that this project may affect, but is not likely to adversely affect (MA, NLAA) Indiana Bat Critical Habitat. This determination is based on the presence of suitable habitat within the surrounding area, the AMMs that will be implemented to reduce the likelihood of impact to Critical Habitat.
Lochmueller Group, in behalf of INDOT, on behalf of FHWA, has determined that this project may affect, but is not likely to adversely affect (MA, NLAA) the Round Hickorynut (*Obovaria subrotunda*). This determination is based on anticipated impacts to Richland Creek from construction, the lack of ideal existing stream conditions (clear water, and appropriate cobble, gravel, sand substrate) for the Round Hickorynut (Obovaria subrotunda) in the project area, and implementation of best management practices for sediment and erosion control.

The OSL (1), IN/NLEB concurrence letter (2), bridge/structure inspections (3), project map (4), DNR DFW early coordination response (5), and the Northern Arizona University (NAU) guano analysis results (6) have been attached for your reference.

Sincerely,

Peter

LOCHMUELLER GROUP

Web: http://lochgroup.com

Peter Putzier, LPG
Environmental Specialist II

Lochmueller Group
6200 Vogel Road, Evansville, IN 47715

Email: PPutzier@lochgroup.com

Direct: 812.759.4113
Mobile: 952.564.8977

From: Amick, Kevin - FS, IN
To: Peter Putzier
Subject: RE: [External Email]Early Coordination - Des 2100571 - SR 43 over Richland Creek Bridge Project - Greene County
Date: Wednesday, January 31, 2024 8:19:42 AM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image006.png
image007.png
image008.png
image009.png
image010.png
image011.png
image012.png

EXTERNAL

Mr. Putzier,

Because this project is not on or adjacent to National Forest System land, the Hoosier National Forest has no concerns or comments regarding this project. Thank you for the opportunity to review this project.

Kevin Amick
Environmental Coordinator
Forest Service
Shawnee & Hoosier National Forests
p: 812-276-4746
kevin.amick@usda.gov
811 Constitution Ave.
Bedford, IN 47421
www.fs.usda.gov/shawnee
www.fs.usda.gov/hoosier

Caring for the land and serving people

From: Peter Putzier <PPutzier@lochgroup.com>
Sent: Tuesday, January 30, 2024 1:35 PM
To: Amick, Kevin - FS, IN <kevin.amick@usda.gov>
Cc: Brooke Vorbeck <Brooke.Vorbeck@lochgroup.com>; Daniel Townsend <DTownsend@lochgroup.com>
Subject: [External Email]Early Coordination - Des 2100571 - SR 43 over Richland Creek Bridge Project - Greene County

Peter Putzier

From: Peter Putzier
Sent: Monday, February 19, 2024 11:20 AM
To: Trevor Yoho
Subject: RE: State road 43 richland creek bridge

Good morning Trevor,

Thanks for reaching out. We will minimize the closure length as much as possible. The six month window is a conservative number and I would expect the bridge to be closed a month or so less than that. We'll make sure to contact you a few weeks prior to closure.

Please let me know if you have any other questions.

Sincerely,

LOCHMUELLER GROUP

Web: http://lochgroup.com

Peter Putzier, LPG
Environmental Specialist II
Lochmueller Group
6200 Vogel Road, Evansville, IN 47715
Email: PPutzier@lochgroup.com
Direct: 812.759.4113
Mobile: 952.564.8977

From: Trevor Yoho <tyoho@easternft.org>
Sent: Monday, February 19, 2024 9:40 AM
To: Peter Putzier <pputzier@lochgroup.com>
Subject: State road 43 richland creek bridge

EXTERNAL

Good morning this package is just now making its way to my desk.
I am Trevor Yoho, one of the District Chiefs for Eastern Greene Fire Territory and we cover the area affected by this bridge replacement. The only question we have at this time is will the current bridge remain open for as long as possible and or during the beginning of construction? With this bridge being shut down it increases our response time drastically.

please feel free to contact me back over email or my number 812-361-5043

Thanks,
Trevor Yoho
EGFT Station 32 District Chief
4098 N State Road 43 Solsberry, Indiana 47759

United States Department of Agriculture

Farm Production and Conservation

Natural Resources Conservation Service

Indiana State Office
6013 Lakeside Boulevard
Indianapolis, Indiana 46278
317-295-5800

February 12, 2024

Peter Putzier
6200 Vogel Road
Evansville, Indiana 47715

Dear Mr. Putzier:

The proposed SR 43 over Richland Creek Bridge Project in Greene County, Indiana (Des. No. 2100571), as referred to in your letter received January 30, 2024, will cause a conversion of prime farmland.

The attached packet of information is for your use competing Parts VI and VII of the AD-1006. After completion, the federal funding agency needs to forward one copy to NRCS for our records.

If you need additional information, please contact John Allen at 317-295-5859 or john.allen@usda.gov.

Sincerely,

JOHN ALLEN

Digitally signed by JOHN ALLEN
Date: 2024.02.13 12:41:18 -05'00'

JOHN ALLEN
State Soil Scientist

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request **1/30/24**	4. Sheet 1 of **1**
1. Name of Project **Des 2100571 Bridge Proj SR43**	5. Federal Agency Involved **FHWA**	
2. Type of Project **Bridge Project**	6. County and State **Greene County, IN**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS	2. Person Completing Form **JRA**	
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☑ NO ☐		4. Acres Irrigated | Average Farm Size **204 ac**	
5. Major Crop(s) **Corn**	6. Farmable Land in Government Jurisdiction Acres: **261419** % **75**	7. Amount of Farmland As Defined in FPPA Acres: **175065** % **50**	
8. Name Of Land Evaluation System Used **LESA**	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS **2/12/24**	

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment ____ Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	**1.35**			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	**0**			
C. Total Acres In Corridor	**5.38**			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	**1.35**			
B. Total Acres Statewide And Local Important Farmland	**0.00**			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	**<0.001**			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	**75**			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	69			
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — Maximum Points				
1. Area in Nonurban Use — 15	**15**			
2. Perimeter in Nonurban Use — 10	**10**			
3. Percent Of Corridor Being Farmed — 20	**10**			
4. Protection Provided By State And Local Government — 20	**20**			
5. Size of Present Farm Unit Compared To Average — 10	**1**			
6. Creation Of Nonfarmable Farmland — 25	**0**			
7. Availability Of Farm Support Services — 5	**5**			
8. On-Farm Investments — 20	**0**			
9. Effects Of Conversion On Farm Support Services — 25	**0**			
10. Compatibility With Existing Agricultural Use — 10	**0**			
TOTAL CORRIDOR ASSESSMENT POINTS — 160	**61**	**0**	**0**	**0**
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — 100	**69**	**0**	**0**	**0**
Total Corridor Assessment (From Part VI above or a local site assessment) — 160	**61**	**0**	**0**	**0**
TOTAL POINTS *(Total of above 2 lines)* — 260	**130**	**0**	**0**	**0**

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
Corridor A	**1.35**	**2/20/24**	YES ☐ NO ☑

5. Reason For Selection:

This alternative has an impact rating score of less than 160 and will have minimal impact to prime farmland.

Signature of Person Completing this Part: **Peter Putzier** *Peter Putzier* DATE **2/20/24**

NOTE: Complete a form for each segment with more than one Alternate Corridor

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR#: ER-26260

Request Received: January 30, 2024

Requestor:
Peter Putzier
Lochmueller Group, Inc.
6200 Vogel Road
Evansville, IN 47715

Project:
Vincennes District: SR 43 bridge (#043-28-05887 A) replacement over Richland Creek, 6.72 miles north of SR 54; Des #2100571

County/Site Info: Greene County

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment:
This proposal will require the formal approval of our agency for construction in a floodway pursuant to the Flood Control Act (IC 14-28-1), unless it qualifies for a bridge exemption (see enclosure). Please include a copy of this letter with the permit application if the project does not meet the bridge exemption criteria.

Natural Heritage Database:
The Natural Heritage Program's data have been checked. The State special concern Little Spectaclecase (*Villosa lienosa*) has been documented within .5 mile of the project area.

Fish and Wildlife Comments:
Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

A) Heritage Species
The Division of Fish and Wildlife does not anticipate any significant effects to the Little Spectaclecase due to this project. Best management practices for sedimentation and erosion control should be implemented to minimize impacts to other special concern species found further downstream of the project site. Additionally, keep heavy equipment out of the stream channel as much as possible and avoid using heavy equipment to cross the stream.

B) Riparian Habitat
We recommend a mitigation plan be developed (and submitted with the permit application, if required) for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation Guidelines (and plant lists) can be found online at: https://www.in.gov/nrc/files/IB-17.pdf.

Impacts to non-wetland forest of one (1) acre or more in a rural or urban area should be mitigated at a minimum 2:1 ratio based on area of impact. Impacts to non-wetland forest under one (1) acre but at least 0.10 acre in a rural or urban area should be mitigated at a minimum 1:1 ratio based on area of impact. Impacts under 0.10 acre in a rural area typically do not require mitigation or additional plantings beyond seeding and stabilizing disturbed areas, though there are exceptions for high quality habitat sites. Seeding and stabilizing disturbed areas is required regardless of the impact amount and location. If floodway impacts to forested wetland and non-wetland habitat areas combine to be 0.10 acres or more, mitigation should be done and coordinated with the biologist, as needed.

The mitigation site should be located in the floodway, downstream of the one (1) square mile drainage area of that stream (or another stream within the 8-digit HUC, preferably as close to the impact site as possible) and adjacent to existing forested riparian habitat.

C) Bird Nesting

Monitor the bridges for bird nesting activity prior to construction. If any bird nests with eggs or young are found on the existing structures, do not work on the bridges from April 1 through September 7. If construction is planned during this time and active nests are present, prior approval from the USDA must be secured by contacting: Wildlife Services State Director, USDA Wildlife Services, 901 W. State Street, W. Lafayette, IN 47907; (765) 494-6229; request Form 37 and any other required documentation and follow the USDA's instructions.

D) Bank Stabilization

Some form of bank stabilization is almost always needed with the construction, repair, replacement, or modification of a stream channel or crossing structure. For streambank stabilization and erosion control, regrading to a stable slope (2:1 or shallower) and establishing native vegetation along the banks are typically the most effective techniques and allow a vegetated stream bank to develop. A variety of methods to accomplish this include planting plugs, whips, container stock, seeding, and live stakes. In addition to vegetation establishment, some additional level of bioengineered bank stabilization may be needed under certain circumstances (inability to regrade to a stable slope, flow velocities that exceed the limits of vegetation alone, etc.). Combining vegetation with any of the following bank stabilization methods can provide additional bank protection while not compromising benefits to fish, wildlife, and botanical resources:

- Geotextiles (erosion control blankets and/or turf reinforcement mats that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles)
- Vegetated geogrids or soil lifts, fiber rolls, glacial stone, or riprap.

Riprap or other hard bank stabilization materials should be used only at the toe of the sideslopes up to the ordinary high-water mark (OHWM) with the exception of areas directly under bridges for instance. The banks above the OHWM should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Southern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. Information about bioengineering techniques can be found at the following link to a USDA/NRCS document that outlines many different bioengineering techniques for streambank stabilization: https://directives.sc.egov.usda.gov/17553.wba.

E) Wildlife Passage

Facilitating wildlife movement under roads is a priority concern for the Division of Fish and Wildlife both for the ecological health of wildlife populations in terms of movement and dispersal, habitat connectivity, and to avoid unnecessary wildlife mortality on roads. Maintaining or improving wildlife passage ability under roads means less wildlife crossing traffic lanes and consequently reduced driving hazards.

While the channel clearing area is an ideal area for a riprap-free wildlife passage path, on the south bank (SW corner), the flat zone between the toe of the abutment riprap and top of bank narrows due to the bridge skew. The extent of riprap should be modified to leave at least a 2-3ft wide path that will be riprap-free and level (on both banks). This wildlife path should be documented on construction plans so it remains a riprap-free, smooth-surfaced area suitable for wildlife passage.

There are several techniques and materials for incorporating wildlife passage into the design of a crossing structure. Coordination with a Regional Environmental Biologist to address wildlife passage issues before submitting a permit application (if required) is encouraged to avoid delays in the permitting process. The following links are good resources to consider in the design of stream crossing structures to maintain fish and wildlife passage:

https://www.fs.usda.gov/ccrc/tool/fishxing-fish-passage-learning-systems
https://www.fs.usda.gov/wildlifecrossings/library/index.php
https://www.fhwa.dot.gov/clas/ctip/wildlife_crossing_structures/
https://www.fhwa.dot.gov/engineering/hydraulics/pubs/11008/hif11008.pdf

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Southern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only. A native herbaceous seed mixture must include at least 5 species of grasses and sedges and 5 species of wildflowers.
2. Minimize and contain within the project limits in-channel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not cut any trees suitable for Indiana Bat or Northern Long-eared Bat roosting (3 inches or greater diameter-at-breast height, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
6. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
7. Use minimum average 6-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
8. Do not deposit or allow construction/demolition materials or debris to fall or otherwise enter the waterway. Any incidental fallen material or debris in the waterway must be removed within 24 hours using best management practices, particularly lifting material out of the waterway and not dragging it across the streambed whenever possible.
9. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the waterbody or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
10. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Contact Staff:
Our agency appreciates this opportunity to be of service. Please contact me at RVanVoorhis@dnr.IN.gov or (317) 232-8163 if we can be of further assistance.

Rachel Van Voorhis **Date:** February 29, 2024
Rachel Van Voorhis
Environmental Coordinator
Division of Fish and Wildlife