

Categorical Exclusion
Appendix C
Early Coordination



October 8, 2019

Sample Early
Coordination Letter

Re: Des. No.: 1700148
Bridge #159-77-05955 B, SR 159 over Branch Spencer Creek
6.76 miles south of SR 54
Sullivan County, Indiana

Dear :

The Indiana Department of Transportation - Vincennes District and the Federal Highway Administration (FHWA), propose to proceed with a project involving the aforementioned bridge in Sullivan County. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above Des. No. and project description in your reply.** We will incorporate your comments into the formal environmental study. Your cooperation in this endeavor is appreciated.

Project Location and Existing Conditions

The proposed project is located along SR 159 in Sullivan County, Indiana, approximately 6.76 miles south of SR 54. Specifically, the project is located in Sections 11 and 12, Township 6 North, Range 8 West within Jefferson Township as depicted on the Bucktown U. S. Geological Survey 7.5 minute quadrangle. The area around the structure is primarily rural with adjacent land use consisting of forested areas. Please see attachments for maps and photographs of the proposed project area.

SR 159 is classified as a rural major collector within the project area and consists of two, 12-foot asphalt travel lanes (one in each direction) with a 1-foot paved shoulder on both sides. The posted speed limit is 40 miles per hour. The existing bridge #159-77-05955 B is a 30-foot long, single span concrete box beam bridge supported by timber abutments. The span of the bridge is 28 feet and the total width is 30.3 feet.

Purpose and Need

The need for the project stems from the deteriorated state of the structure. During field inspections completed by representatives of Lochmueller Group in September 2018 and the routine inspection completed by INDOT in June 2019, heavy map cracking was exhibited at the south end joint and spalling was exhibited at the north end joint on the deck. Additionally, the wearing surface shows evidence of delamination. The channel also shows signs of significant

3502 Woodview Trace, Suite 150
Indianapolis, Indiana 46268
PHONE: 317.222.3878 • TOLL FREE: 800.423.7422

erosion. The purpose of the project is to extend the lifespan of this crossing for motorists on this stretch of roadway.

Proposed Project

The proposed project intends to replace the existing bridge that carries SR 159 over Branch Spencer Creek. The preferred alternative for the new structure is a 3-sided flat top concrete structure with a 30-foot span and a 10-foot rise. Another alternative still under consideration is a 3-sided arch top concrete structure with a 32-foot span and a 10-foot rise.

Under both alternatives, new guardrails will be installed along both sides of the structure. The new typical cross-section of SR 159 will be two, 11-foot wide travel lanes (one in each direction) with 4.75-foot wide shoulders on each side. Additionally, this project will involve the realignment of Branch Spencer Creek at the SW quadrant and the installation of riprap along the limits of the wing walls of the proposed structure.

The maintenance of traffic (MOT) plan would require the closure of SR 159 within the project area. A detour will be established that will include SR 54 and SR 59. The length of the detour will be approximately 23 miles. Signs, barricades, and flashing signals will be placed along SR 159 to inform motorists of the road closure. The MOT will be implemented per the *Indiana Design Manual* guidelines.

Construction is anticipated to begin in Fiscal Year (FY) 2022.

Right-of-Way (ROW)

This project will require the acquisition of approximately 1.67 acres of permanent right-of-way. Approximately 0.61 acre of tree clearing will be required.

Environmental Resources

A Red Flag Investigation (RFI) was performed for a 0.5-mile radius for the project area. Several “Red Flags” were identified within the 0.5-mile search radius; however, not all will impact the proposed project. The proposed project is located within Greene-Sullivan State Forest, a Section 4(f) resource managed by the Indiana Department of Natural Resources (IDNR), Division of Forestry. The proposed project area is also within the property of a former coal mine. This project is outside the Karst Memorandum of Understanding Potential Karst Features Region.

Representatives of Lochmueller Group conducted a field investigation of the project area on June 28, 2019. The field investigation identified Branch Spencer Creek and a wetland within the project area. A *Waters of the U.S. Determination Report* will be prepared for this project.

Section 106

The National Register of Historic Places (National Register) and the Indiana Register of Historic Sites and Structures (State Register) were reviewed using the State Historic Architectural and Archaeological Research Database (SHAARD) and SHAARD Geographic Information System (GIS)

data published online. No above-ground historical resources on either list are within the project area. The 2002 *Sullivan County Interim Report: Indiana Historic Sites and Structures Inventory* (IHSSI) data was also examined; no surveyed resources from this inventory were located within or adjacent to the project area. The *Indiana Historic Bridge Inventory Volume 2: Listing of Historic and Non-Historic Bridges* by Mead & Hunt (2009) was reviewed. No bridges eligible for listing in the National Register are within the project area. No cemeteries were noted within the vicinity of the project area. The additional areas of right-of-way will be further evaluated for archaeological and historic resources for Section 106 compliance. However, at this time it is anticipated this project will qualify for the Minor Projects Programmatic Agreement (MPPA).

Range-wide Informal Programmatic Consultation

Sullivan County is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened 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 likely 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

Should we not receive your response within **30 calendar days** from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request.

If you have any questions regarding this project, please feel free to contact me at (317) 222-3880 or at ckunkel@lochgroup.com. Additionally, should you want to contact the sponsor of this project, INDOT-Vincennes District please contact the Project Manager, Kent Davis at (812) 895-7385 or at aldavis@indot.in.gov.

Thank you in advance for your input.

Sincerely,



Chris Kunkel
Environmental Biologist
Lochmueller Group, Inc.

Attachments:

- General Location Map
- USGS Topographic Map
- Red Flag Investigation Maps
- Aerial Map (2013)
- Photographs

Removed to avoid duplication; see Appendix B & Appendix E

Distribution List:

- USFWS, Bloomington Field Office (electronic submission)
- FHWA – Indiana Division (electronic submission)
- Natural Resources Conservation Service, Indianapolis Office (electronic submission)
- U.S. Housing and Urban Development
- National Park Service
- U.S. Army Corps of Engineers, Louisville District (electronic submission)
- INDOT, Office of Public Involvement (electronic submission)
- INDOT, Vincennes District (electronic submission)
- IDNR, Division of Fish and Wildlife (electronic submission)
- IDNR, Division of Forestry (electronic submission)
- IDNR, Division of Reclamation (electronic submission)
- INDOT, Environmental Services (electronic submission)
- IDEM (electronic submission)
- Indiana Geological Survey (electronic submission)
- Sullivan County Board of Commissioners (electronic submission)
- Sullivan County Council
- Sullivan County Highway Department
- Sullivan County Drainage Board
- Sullivan County Surveyor's Office (electronic submission)
- Sullivan County Emergency Management Agency (electronic submission)
- Sullivan County 911 Center (electronic submission)
- Sullivan County Ambulance Service (electronic submission)
- Sullivan County Sheriff's Department (electronic submission)
- Jefferson Township Trustee
- Northeast School Corporation
- Jefferson Township Fire Department

Organization and Project Information

Project ID:
Des. ID: 1700148
Project Title: SR 159 Bridge Project
Name of Organization: Lochmueller Group
Requested by: Chris Kunkel

Environmental Assessment Report

1. Geological Hazards:
 - Moderate liquefaction potential
2. Mineral Resources:
 - Bedrock Resource: High Potential
 - Sand and Gravel Resource: None documented in the area
3. Active or abandoned mineral resources extraction sites:
 - Surface Coal Mines

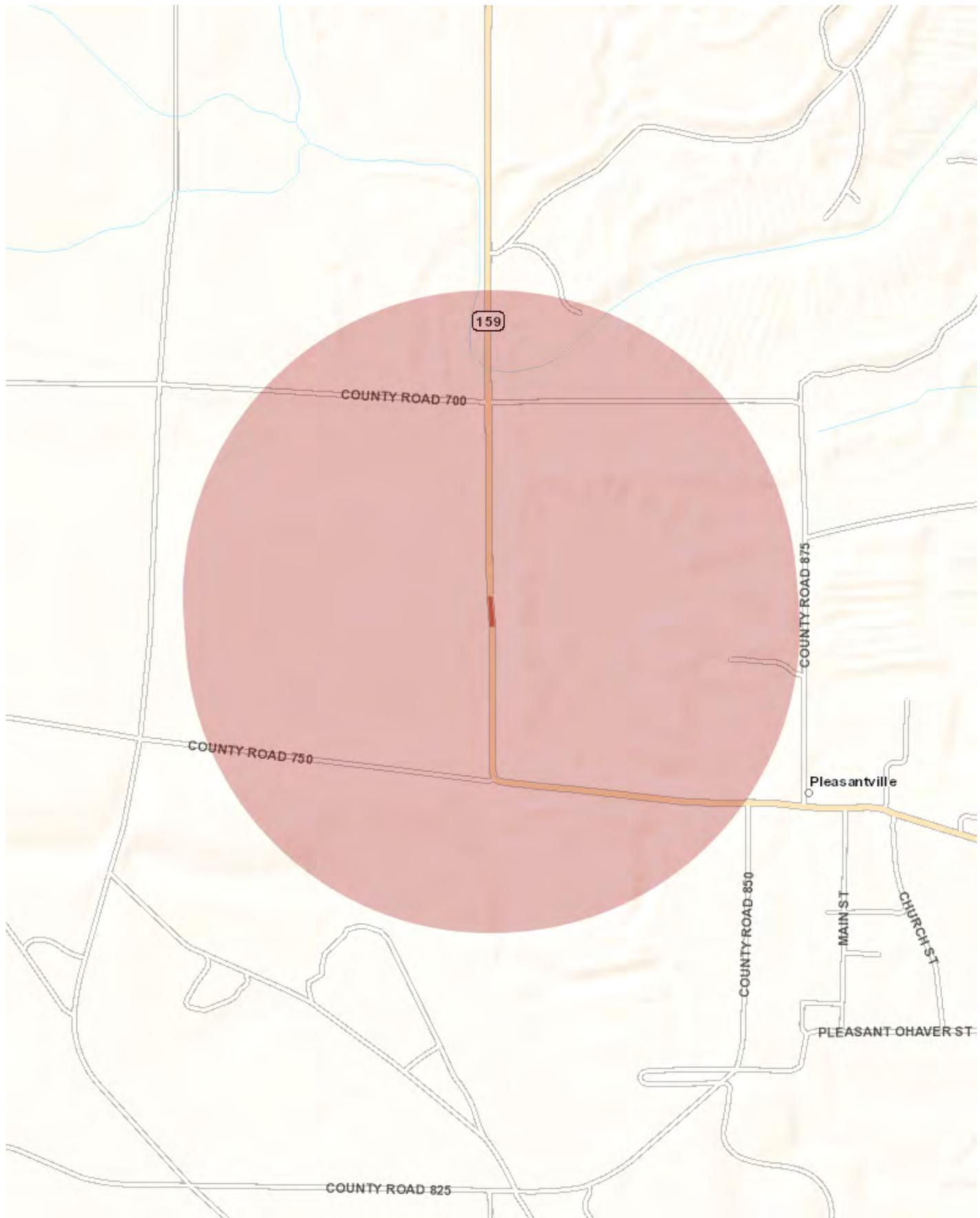
*All map layers from Indiana Map (maps.indiana.edu)

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This information was furnished by Indiana Geological Survey
Address: 420 N. Walnut St., Bloomington, IN 47404
Email: IGSEnvir@indiana.edu
Phone: 812 855-7428

Date: October 08, 2019



Metadata:

- https://maps.indiana.edu/metadata/Geology/Coal_Mines_Surface.html
- https://maps.indiana.edu/metadata/Geology/Seismic_Earthquake_Liquefaction_Potential.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

Kunkel, Chris

From: Siscoe, Steve <SSiscoe@dnr.IN.gov>
Sent: Wednesday, October 9, 2019 10:55 AM
To: Kunkel, Chris; Friedrich, John
Cc: Schneck, Bradley D.; Costa, Chad
Subject: RE: SR 159 Bridge Project (Des. No. 1700148) Early Coordination

I called Chris and I had misread maps. There is not a horse trail in the project area as it lies to the north. (Graveyard lake) (Project is west of Benefiel lake)
Spencer creek runs into Graveyard. A branch of Spencer creek runs through project area.

Sorry for th mix up.

Steve
Steve Siscoe, CF
Property Manager
Greene-Sullivan State Forest
Covered Bridge State Forest
2551 S St Rd 159
Dugger, IN 47848
812-648-2810
812-648-3049 fax

www.dnr.IN.gov

** Please let us know about the quality of our service by taking this brief [customer survey](#).*

From: Kunkel, Chris [mailto:CKunkel@lochgroup.com]
Sent: Wednesday, October 09, 2019 9:40 AM
To: Friedrich, John <jfriedrich@dnr.IN.gov>
Cc: Siscoe, Steve <SSiscoe@dnr.IN.gov>; Schneck, Bradley D. <BSchneck@dnr.IN.gov>; Costa, Chad <CCosta@lochgroup.com>
Subject: RE: SR 159 Bridge Project (Des. No. 1700148) Early Coordination

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Thank you, John, for your response.

I've forwarded your comments to our design team and hope to hear back from them soon.

In the meantime, I'm looking at the horsetrail map for Greene-Sullivan State Forest on the website (https://www.in.gov/dnr/forestry/files/gs_horsemap.pdf) and it doesn't appear that any of the trails approach the project area. The project area is outside the extent of this map to the south. If there is a more current trail map, please forward that and we will be sure to address any potential impacts there may be.

Thanks again!

Chris Kunkel
Environmental Biologist
Lochmueller Group

317.334.6818 (direct) | 317.677.5132 (mobile)

CKunkel@lochgroup.com

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From: Friedrich, John <jfriedrich@dnr.IN.gov>
Sent: Wednesday, October 9, 2019 8:43 AM
To: Kunkel, Chris <CKunkel@lochgroup.com>
Cc: Siscoe, Steve <SSiscoe@dnr.IN.gov>; Schneck, Bradley D. <BSchneck@dnr.IN.gov>
Subject: RE: SR 159 Bridge Project (Des. No. 1700148) Early Coordination

Chris,

Please see the comments provided below.

My biggest concern is the re-route of creek that will cross our horsetrail. Several years ago we built a concrete slab across so that horses could cross the stream. I don't see any provisions that allow for this in the re-route.

Will they acquire state forest land for INDOT right of way?

Need to treat invasives in project area. There was a patch of Japanese knotweed in that vicinity. I had asked them to treat when they were spraying roadsides a couple years ago.

Thank you
John Friedrich

From: Kunkel, Chris [<mailto:CKunkel@lochgroup.com>]
Sent: Tuesday, October 08, 2019 4:04 PM
To: Friedrich, John <jfriedrich@dnr.IN.gov>
Subject: SR 159 Bridge Project (Des. No. 1700148) Early Coordination

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Good afternoon,

Please see the attached early coordination letter and associated attachments for the bridge project in Sullivan County, Indiana.

Please contact myself should you have any questions or comments regarding this project.

Thank you for your time and have a great day

Chris Kunkel

Kunkel, Chris

From: Siscoe, Steve <SSiscoe@dnr.IN.gov>
Sent: Friday, January 31, 2020 9:25 AM
To: Kunkel, Chris
Cc: Friedrich, John; Schneck, Bradley D.; Costa, Chad
Subject: RE: SR 159 Bridge Replacement

Chris,

There are not any developed facilities in this project area.

Steve

Steve Siscoe, CF
Property Manager
Greene-Sullivan State Forest
Covered Bridge State Forest
2551 S St Rd 159
Dugger, IN 47848
812-648-2810
812-648-3049 fax

www.dnr.IN.gov

** Please let us know about the quality of our service by taking this brief [customer survey](#).*

From: Kunkel, Chris [mailto:CKunkel@lochgroup.com]
Sent: Thursday, January 30, 2020 3:32 PM
To: Siscoe, Steve <SSiscoe@dnr.IN.gov>
Cc: Friedrich, John <jfriedrich@dnr.IN.gov>; Schneck, Bradley D. <BSchneck@dnr.IN.gov>; Costa, Chad <CCosta@lochgroup.com>
Subject: SR 159 Bridge Replacement

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Good afternoon,

I'm emailing you to confirm the location of any recreational features of the Greene-Sullivan State Forest with relation to the location of this project along SR 159, approximately 6.76 miles south of SR 54. Our understanding is that although the project is within the boundary of the Greene-Sullivan State Forest, there are no recreational features (trails, boat landings, picnic areas, campsites, etc.) of the state forest within or adjacent to the project area of this bridge replacement. I've attached a few maps for reference. Please advise at your earliest convenience and let us know if you have any questions.

Thank you,

Kunkel, Chris

From: Wright, Mary <MWRIGHT@indot.IN.gov>
Sent: Wednesday, October 9, 2019 8:18 AM
To: Kunkel, Chris
Subject: RE: SR 159 Bridge Project (Des. No. 1700148) Early Coordination

Early Coordination and Creating a Public Involvement Plan (PIP)

We have received your early coordination notification packet for the above referenced project(s). Our office prefers to be notified at the early coordination stage in order to encourage early and ongoing public involvement aside from the specific legal requirements as outlined in our Public Involvement Manual <http://www.in.gov/indot/2366.htm>. Seeking the public's understanding of transportation improvement projects early in the project development stage can allow the opportunity for the public to express their concerns, comments, and to seek buy-in. Early coordination is the perfect opportunity to examine the proposed project and its impacts to the community along with the many ways and or tools to inform the public of the improvements and seek engagement. A good public involvement plan, or PIP, should consider the type, scope, impacts, and the level of public awareness that should, or could, be implemented. In other words, although there are cases where no public involvement is legally required, sometimes it is simply the right thing to do in order to keep the public informed.

The public involvement office is always available to provide support and resources to bolster any public involvement activities you may wish to implement or discuss. Please feel free to contact our office anytime should you have any questions or concerns. Thank you for notifying our office about your proposed project. We trust you will not only analyze the appropriate public involvement required, but also consider the opportunity to do go above and beyond those requirements in creating a good PIP.

Rickie Clark, Manager
100 North Senate Avenue, Room N642
Indianapolis, IN 46204
Phone: 317-232-6601
Email: rclark@indot.in.gov

From: Kunkel, Chris [mailto:CKunkel@lochgroup.com]
Sent: Tuesday, October 08, 2019 4:01 PM
To: Clark, Rickie <RCLARK@indot.IN.gov>; Wright, Mary <MWRIGHT@indot.IN.gov>
Subject: SR 159 Bridge Project (Des. No. 1700148) Early Coordination

Good afternoon,

Please see the attached early coordination letter and associated attachments for the bridge project in Sullivan County, Indiana.

Please contact myself should you have any questions or comments regarding this project.

Thank you for your time and have a great day,

Chris Kunkel
Environmental Biologist
Lochmueller Group

3502 Woodview Trace
Suite 150, Indianapolis, IN 46268



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 North Senate Avenue - Indianapolis, IN 46204
(800) 451-6027 - (317) 232-8603 - www.idem.IN.gov

INDOT - Vincennes District
Alan Davis
3650 US 41 S
Vincennes, IN 47591

Mr.
Chris Kunkel
3502 Woodview Trace
Suite 150
Noblesville, IN 46060

Date

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The Indiana Department of Transportation - Vincennes District and the Federal Highway Administration (FHWA), propose to proceed with a project involving the aforementioned bridge in Sullivan County. The proposed project is located along SR 159 in Sullivan County, Indiana, approximately 6.75 miles south of SR 54. Specifically, the project is located in Sections 11 and 12, Township 6 North, Range 8 West within Jefferson Township as depicted on the Bucktown U. S. Geological Survey 7.5 minute quadrangle. The area around the structure is primarily rural with adjacent land use consisting of forested areas. SR 159 is classified as a rural major collector within the project area and consists of two, 12-foot asphalt travel lanes (one in each direction) with a 1-foot paved shoulder on both sides. The posted speed limit is 40 miles per hour. The existing bridge #159-77-05955 B is a 30-foot long, single span concrete box beam bridge supported by timber abutments. The span of the bridge is 28 feet and the total width is 30.3 feet. The proposed project intends to replace the existing bridge that carries SR 159 over Branch Spencer Creek. The preferred alternative for the new structure is a 3-sided flat top concrete structure with a 30-foot span and a 10-foot rise. Another alternative still under consideration is a 3-sided arch top concrete structure with a 32-foot span and a 10-foot rise. Under both alternatives, new guardrails will be installed along both sides of the structure. The new typical cross-section of SR 159 will be two, 11-foot wide travel lanes (one in each direction) with 4.75-foot wide shoulders on each side. Additionally, this project will involve the realignment of Branch Spencer Creek at the SW quadrant and the installation of riprap along the limits of the wing walls of the proposed structure. The maintenance of traffic (MOT) plan would require the closure of SR 159 within the project area. A detour will be established that will include SR 54 and SR 59. The length of the detour will be approximately 23 miles. Signs, barricades, and flashing signals will be placed along SR 159 to inform motorists of the road closure. The MOT will be implemented per the Indiana Design Manual guidelines. Construction is anticipated to begin in Fiscal Year (FY) 2022. This project will require the acquisition of approximately 1.67 acres of permanent right-of-way. Approximately 0.61 acre of tree clearing will be required. A Red Flag Investigation (RFI) was performed for a 0.5-mile radius for the project area. Several "Red Flags" were identified within the 0.5-mile search radius; however, not all will impact the proposed project. The proposed project is located within Greene-Sullivan State Forest, a Section 4(f) resource managed by the Indiana Department of Natural Resources (IDNR), Division of Forestry. The proposed project area is also within the property of a former coal mine. This project is outside the Karst Memorandum of Understanding Potential Karst Features Region. Representatives of Lochmueller Group conducted a field investigation of the project area on June 28, 2019. The field investigation identified Branch Spencer Creek and a wetland within the project area. A Waters of the U.S. Determination Report will be prepared for this project.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: <http://www.in.gov/idem/5283.htm> (<http://www.in.gov/idem/5283.htm>).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices

(<http://www.lrl.usace.army.mil/orf/default.asp>) (<http://www.lrl.usace.army.mil/orf/default.asp>) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciusko, and Wells counties; smaller portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at <http://www.in.gov/idem/4396.htm> (<http://www.in.gov/idem/4396.htm>). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>).
3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana. A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.
4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>) for the appropriate staff contact to further discuss your project.
5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the following statutes:
 - o IC 14-26-2 Lakes Preservation Act 312 IAC 11
 - o IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
 - o IC 14-28-1 Flood Control Act 310 IAC 6-1
 - o IC 14-29-1 Navigable Waterways Act 312 IAC 6
 - o IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
 - o IC 14-29-4 Construction of Channels Act No related code

For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: <http://www.in.gov/dnr/water/9451.htm> (<http://www.in.gov/dnr/water/9451.htm>). Contact the DNR Division of Water at 317-232-4160 for further information.

The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for a Rule 5 Storm Water Runoff Permit. Visit the following Web page
 - o <http://www.in.gov/idem/4902.htm> (<http://www.in.gov/idem/4902.htm>)

To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (<http://www.in.gov/idem/4917.htm#constreq>), and as described in 327 IAC 15-5-6.5 (<http://www.in.gov/legislative/iac/T03270/A00150> [PDF] (<http://www.in.gov/legislative/iac/T03270/A00150.PDF>), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (<http://www.in.gov/isda/soil/contacts/map.html>) (<http://www.in.gov/isda/soil/contacts/map.html>).

Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: <http://www.in.gov/idem/4900.htm> (<http://www.in.gov/idem/4900.htm>).

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.
8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.
9. For projects involving effluent discharges to waters of the State of Indiana, contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (<http://www.in.gov/idem/4148.htm> (<http://www.in.gov/idem/4148.htm>)) under specific conditions. You also can seek an open burning variance from IDEM.

However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>).

The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit: http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf (http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf)). It also is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

To learn more about radon, radon risks, and ways to reduce exposure visit: <http://www.in.gov/isdh/regsvcs/radhealth/radon.htm> (<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>), <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>), or <http://www.epa.gov/radon/index.html> (<http://www.epa.gov/radon/index.html>).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at <http://www.in.gov/icpr/webfile/formsdiv/44593.pdf> (<http://www.in.gov/icpr/webfile/formsdiv/44593.pdf>).

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of \$150 per project; projects below these amounts will be billed a fee of \$50 per project. All notification remitters will be billed on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit: <http://www.in.gov/idem/4983.htm> (<http://www.in.gov/idem/4983.htm>).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978, or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: <http://www.in.gov/isdh/19131.htm> (<http://www.in.gov/isdh/19131.htm>).
5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2, Asphalt Paving Rule (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>) (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>).
6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf) (<http://www.ai.org/legislative/iac/t03260/a00020.pdf>.) New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.
7. For more information on air permits visit: <http://www.in.gov/idem/4223.htm> (<http://www.in.gov/idem/4223.htm>), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/4998.htm> (<http://www.in.gov/idem/4998.htm>).
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: <http://www.in.gov/idem/4999.htm> (<http://www.in.gov/idem/4999.htm>).

FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that it is the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at <http://www.in.gov/idem/5284.htm> (<http://www.in.gov/idem/5284.htm>), is used.

Signature(s) of the Applicant

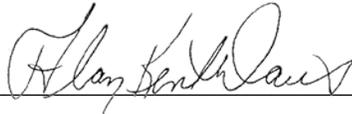
I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

Project Description

The Indiana Department of Transportation - Vincennes District and the Federal Highway Administration (FHWA), propose to proceed with a project involving the aforementioned bridge in Sullivan County. The proposed project is located along SR 159 in Sullivan County, Indiana, approximately 6.75 miles south of SR 54. Specifically, the project is located in Sections 11 and 12, Township 6 North, Range 8 West within Jefferson Township as depicted on the Bucktown U. S. Geological Survey 7.5 minute quadrangle. The area around the structure is primarily rural with adjacent land use consisting of forested areas. SR 159 is classified as a rural major collector within the project area and consists of two, 12-foot asphalt travel lanes (one in each direction) with a 1-foot paved shoulder on both sides. The posted speed limit is 40 miles per hour. The existing bridge #159-77-05955 B is a 30-foot long, single span concrete box beam bridge supported by timber abutments. The span of the bridge is 28 feet and the total width is 30.3 feet. The proposed project intends to replace the existing bridge that carries SR 159 over Branch Spencer Creek. The preferred alternative for the new structure is a 3-sided flat top concrete structure with a 30-foot span and a 10-foot rise. Another alternative still under consideration is a 3-sided arch top concrete structure with a 32-foot span and a 10-foot rise. Under both alternatives, new guardrails will be installed along both sides of the structure. The new typical cross-section of SR 159 will be two, 11-foot wide travel lanes (one in each direction) with 4.75-foot wide shoulders on each side. Additionally, this project will involve the realignment of Branch Spencer Creek at the SW quadrant and the installation of riprap along the limits of the wing walls of the proposed structure. The maintenance of traffic (MOT) plan would require the closure of SR 159 within the project area. A detour will be established that will include SR 54 and SR 59. The length of the detour will be approximately 23 miles. Signs, barricades, and flashing signals will be placed along SR 159 to inform motorists of the road closure. The MOT will be implemented per the Indiana Design Manual guidelines. Construction is anticipated to begin in Fiscal Year (FY) 2022. This project will require the acquisition of approximately 1.67 acres of permanent right-of-way. Approximately 0.61 acre of tree clearing will be required. A Red Flag Investigation (RFI) was performed for a 0.5-mile radius for the project area. Several "Red Flags" were identified within the 0.5-mile search radius; however, not all will impact the proposed project. The proposed project is located within Greene-Sullivan State Forest, a Section 4(f) resource managed by the Indiana Department of Natural Resources (IDNR), Division of Forestry. The proposed project area is also within the property of a former coal mine. This project is outside the Karst Memorandum of Understanding Potential Karst Features Region. Representatives of Lochmueller Group conducted a field investigation of the project area on June 28, 2019. The field investigation identified Branch Spencer Creek and a wetland within the project area. A Waters of the U.S. Determination Report will be prepared for this project.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: 10/10/19

Signature of the INDOT
Project Engineer or Other Responsible Agent 

Alan Davis

Date: 10/8/2019

Signature of the
For Hire Consultant 

Chris Kunkel

Kunkel, Chris

From: McWilliams, Robin <robin_mcwilliams@fws.gov>
Sent: Thursday, October 10, 2019 2:53 PM
To: Kunkel, Chris
Subject: Re: [EXTERNAL] SR 159 Bridge Project (Des. No. 1700148)

Dear Chris,

This responds to your recent letter, requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The project is within the range of the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) and should follow the new Indiana bat/northern long-eared bat programmatic consultation process, if applicable (*i.e.* a federal transportation nexus is established). We will review that information once it is received.

Based on a review of the information you provided, the U.S. Fish and Wildlife Service has no objections to the project as currently proposed. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinstate consultation. Standard recommendations are provided below.

We appreciate the opportunity to comment at this early stage of project planning. If project plans change such that fish and wildlife habitat may be affected, please re-coordinate with our office as soon as possible. If you have any questions about our recommendations, please call (812) 334-4261 x. 207.

Sincerely,
Robin McWilliams Munson

Standard Recommendations:

1. Do not clear trees or understory vegetation outside the construction zone boundaries. **(This restriction is not related to the "tree clearing" restriction for potential Indiana Bat habitat.)**
2. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap.

Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottomed culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community.

3. Restrict channel work and vegetation clearing to the minimum necessary for installation of the stream crossing structure.

4. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If rip rap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.
5. Implement temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT's standard specifications.
6. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams.
7. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing.

Robin McWilliams Munson

U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, Indiana 46403
812-334-4261 x. 207 Fax: 812-334-4273

Monday, Tuesday - 7:30a-3:00p
Wednesday, Thursday - telework 8:30a-3:00p

On Tue, Oct 8, 2019 at 4:01 PM Kunkel, Chris <CKunkel@lochgroup.com> wrote:

Good afternoon,

Please see the attached early coordination letter and associated attachments for the bridge project in Sullivan County, Indiana.

Please contact myself should you have any questions or comments regarding this project.

Thank you for your time and have a great day,

Chris Kunkel

Environmental Biologist

Lochmueller Group

3502 Woodview Trace



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

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

March 17, 2020

Consultation Code: 03E12000-2020-SLI-0188

Event Code: 03E12000-2020-E-04882

Project Name: SR 159 over Branch Spencer Creek, Bridge Replacement Project (Des. No. 1700148)

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project “may affect” listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <http://ecos.fws.gov/ipac/> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

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.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html> to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number 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

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

Consultation Code: 03E12000-2020-SLI-0188

Event Code: 03E12000-2020-E-04882

Project Name: SR 159 over Branch Spencer Creek, Bridge Replacement Project (Des. No. 1700148)

Project Type: TRANSPORTATION

Project Description: The Indiana Department of Transportation - Vincennes District and the Federal Highway Administration (FHWA), propose to proceed with a project involving the replacement of bridge #159-77-05955 B (NBI: 028060) in Sullivan County. The proposed project is located along SR 159 in Sullivan County, Indiana, approximately 6.76 miles south of SR 54. Specifically, the project is located in Sections 11 and 12, Township 6 North, Range 8 West within Jefferson Township as depicted on the Bucktown U. S. Geological Survey 7.5 minute quadrangle. The area around the structure is primarily rural with adjacent land use consisting of forested areas. SR 159 is classified as a rural major collector within the project area and consists of two, 12-foot asphalt travel lanes (one in each direction) with a 1-foot paved shoulder on both sides. The posted speed limit is 40 miles per hour. The existing bridge #159-77-05955 B is a 30-foot long, single span concrete box beam bridge supported by timber abutments. The span of the bridge is 28 feet and the total width is 30.3 feet. The proposed project intends to replace the existing bridge that carries SR 159 over Branch Spencer Creek. The preferred alternative for the new structure is a 3-sided flat top concrete structure with a 30-foot span and a 10-foot rise. New guardrails will be installed along both sides of the structure. The new typical cross-section of SR 159 will be two, 11-foot wide travel lanes (one in each direction) with 4.75-foot wide shoulders on each side. Additionally, this project will involve the realignment of Branch Spencer Creek at the SW quadrant and the installation of riprap along the limits of the wing walls of the proposed structure. No permanent lighting will be included as part of this project. Temporary lighting may be required if night work occurs. This project will require the acquisition of approximately 1.79 acres of permanent right-of-way. All project work will take place no more than 75 feet from the existing roadway. The total project length will be 825 feet along SR 159.

Suitable summer bat habitat is located within and adjacent to the project action area and approximately 0.61 acre of that habitat will be removed for the project. The dominant species to be cleared are burr oak, black

walnut, and red maple. The tree clearing will occur outside of the bat active season in early 2022.

Bridge construction is anticipated to begin in Spring 2022.

A Red Flag Investigation (RFI) was performed for a 0.5-mile radius of the project area on August 29, 2019 and it was approved on October 1, 2019. As part of the RFI, the INDOT Vincennes District performed a check of the USFWS database for the presence of documented endangered or threatened bat species habitat or their hibernacula within 0.5 mile of the project area. No documented habitat or hibernacula were found.

An inspection of the bridge by Lochmueller Group on June 28, 2019 found no evidence or presence of bats under the bridge structure.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.971332632178374N87.25995549058958W>



Counties: Sullivan, IN

Endangered Species Act Species

There is a total of 2 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. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, 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.

-
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 <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



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

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

November 06, 2019

Consultation Code: 03E12000-2020-I-0188

Event Code: 03E12000-2020-E-00928

Project Name: SR 159 over Branch Spencer Creek, Bridge Replacement Project (Des. No. 1700148)

Subject: Concurrence verification letter for the 'SR 159 over Branch Spencer Creek, Bridge Replacement Project (Des. No. 1700148)' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated to verify that the **SR 159 over Branch Spencer Creek, Bridge Replacement Project (Des. No. 1700148)** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion 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, may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

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/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted 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. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation 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.

Project Description

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

Name

SR 159 over Branch Spencer Creek, Bridge Replacement Project (Des. No. 1700148)

Description

The Indiana Department of Transportation - Vincennes District and the Federal Highway Administration (FHWA), propose to proceed with a project involving the replacement of bridge #159-77-05955 B (NBI: 028060) in Sullivan County. The proposed project is located along SR 159 in Sullivan County, Indiana, approximately 6.76 miles south of SR 54. Specifically, the project is located in Sections 11 and 12, Township 6 North, Range 8 West within Jefferson Township as depicted on the Bucktown U. S. Geological Survey 7.5 minute quadrangle. The area around the structure is primarily rural with adjacent land use consisting of forested areas. SR 159 is classified as a rural major collector within the project area and consists of two, 12-foot asphalt travel lanes (one in each direction) with a 1-foot paved shoulder on both sides. The posted speed limit is 40 miles per hour. The existing bridge #159-77-05955 B is a 30-foot long, single span concrete box beam bridge supported by timber abutments. The span of the bridge is 28 feet and the total width is 30.3 feet. The proposed project intends to replace the existing bridge that carries SR 159 over Branch Spencer Creek. The preferred alternative for the new structure is a 3-sided flat top concrete structure with a 30-foot span and a 10-foot rise. New guardrails will be installed along both sides of the structure. The new typical cross-section of SR 159 will be two, 11-foot wide travel lanes (one in each direction) with 4.75-foot wide shoulders on each side. Additionally, this project will involve the realignment of Branch Spencer Creek at the SW quadrant and the installation of riprap along the limits of the wing walls of the proposed structure. No permanent lighting will be included as part of this project. Temporary lighting may be required if night work occurs. This project will require the acquisition of approximately 1.79 acres of permanent right-of-way. All project work will take place no more than 75 feet from the existing roadway. The total project length will be 825 feet along SR 159.

Suitable summer bat habitat is located within and adjacent to the project action area and approximately 0.61 acre of that habitat will be removed for the project. The dominant species to be cleared are burr oak, black walnut, and red maple. The tree clearing will occur outside of the bat active season in early 2022.

Bridge construction is anticipated to begin in Spring 2022.

A Red Flag Investigation (RFI) was performed for a 0.5-mile radius of the project area on August 29, 2019 and it was approved on October 1, 2019. As part of the RFI, the INDOT Vincennes District performed a check of the USFWS database for the presence of documented endangered or threatened bat species habitat or their hibernacula within 0.5 mile of the project area. No documented habitat or hibernacula were found.

An inspection of the bridge by Lochmueller Group on June 28, 2019 found no evidence or presence of bats under the bridge structure.

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 threatened 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 revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion 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?

No

8. 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 [national consultation FAQs](#).

Yes

9. 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

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

No

11. 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

12. 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 triangulation/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

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

Yes

14. 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

15. 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

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

Yes

17. 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

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

Yes

19. Will the tree removal alter *any* **documented** Indiana bat or NLEB roosts and/or alter any surrounding summer habitat **within** 0.25 mile of a documented roost?

No

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

- *BridgeAssessmentForm_2019-06-28.pdf* <https://ecos.fws.gov/ipac/project/IPQ7QLJE2ZEK3OLPFDFJNWW3DM/projectDocuments/18931823>

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?

Yes

32. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

Yes

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

No

34. 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

35. 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.

No

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) 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

39. 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 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

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 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 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

42. **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

43. **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

44. **Tree Removal AMM 2**

Can *all* tree removal activities be restricted to when Indiana bats are not likely to be present (e.g., the inactive season)^[1]?

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

Automatically answered

Yes

45. **Tree Removal AMM 2**

Can *all* tree removal activities be restricted to when Northern long-eared bats are not likely to be present (e.g., the inactive season)^[1]?

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

Automatically answered

Yes

46. 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

47. 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

48. Lighting AMM 1

Will *all* **temporary** lighting used during the removal of suitable habitat and/or the removal/trimming of trees within suitable habitat be directed away from suitable habitat during the active season?

Yes

49. Lighting AMM 1

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

Project Questionnaire

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

Yes

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.

0.61

4. Please describe the proposed bridge work:

The project involves a complete replacement of the bridge with a new 3-sided flat top concrete structure. The project will also include the realignment of Branch Spencer Creek in the southwest quadrant and installation of riprap along the limits of the wingwalls of the new proposed structure

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

Bridge work will begin in Spring 2022

6. Please enter the date of the bridge assessment:

June 28, 2019

Avoidance And Minimization Measures (AMMs)

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

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.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

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.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on March 16, 2018. 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 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 threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion 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.

APPENDIX D: Bridge/Structure Assessment Form

This form will be completed and submitted to the District Environmental Manager by the Contractor prior to conducting any work below the deck surface either from the underside; from activities above that bore down to the underside; from activities that could impact expansion joints; from deck removal on bridges; or from structure demolition for bridges/structures within 1000 feet of suitable bat habitat.

DOT Project # 1700148	Water Body Branch Spencer Creek	Date/Time of Inspection June 28, 2019/10:00 AM	Within 1,000ft of suitable bat habitat (circle one) Yes No
---------------------------------	---	--	---

Route	County	Federal Structure ID
SR 159	Sullivan County	BIAS: 159-77-05955 B NBI: 028060

If the bridge/structure is 1,000 feet or more from suitable bat habitat (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check box and STOP HERE. No assessment required.

Please submit to the U.S. Fish and Wildlife Service.

Areas Inspected (Check all that apply)

Bridges		Culverts/Other Structures		Summary Info (circle all that apply)			
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	X	Crevices, rough surfaces or imperfections in concrete		Human disturbance or traffic under bridge/in culvert or at the structure	High	Low	None
All crevices >12" deep & not sealed	X	Spaces between walls, ceiling joists		Possible corridors for netting	None/poor	Marginal	Excellent
All guardrails	X						
All expansion joints	X						
Spaces between concrete end walls and the bridge deck	X						

Last Revised May 31, 2017

Vertical surfaces on concrete I-beams	X						
---------------------------------------	---	--	--	--	--	--	--

Evidence of Bats (Circle all that apply) Presence of one or more indicators is sufficient evidence that bats may be using the structure.

None

Visual (e.g. survey, thermal, emergent etc.)

- Live __ number seen
- Dead __ number seen

Photo documentation Y/N

Guano

Odor Y/N

Photo documentation Y/N

Staining definitively from bats

Photo documentation Y/N

Audible

Assessment Conducted By: <u>Brenten Reust</u> Signature(s): <u><i>Brenten Reust</i></u>
District Environmental Use Only: Date Received by District Environmental Manager: _____

DOT Bat Assessment Form Instructions

1. Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges, regardless of whether assessments have been conducted in the past.
2. Any bridge/structure suspected of providing habitat for any species of bat will be removed from work schedules until such time that the DOT has coordinated with the USFWS. Additional studies may be undertaken by the DOT to determine what species may be utilizing each structure identified as supporting bats prior to allowing any work to proceed.
3. Any questions should be directed to the District Environmental Manager.

Last Revised June 2017

Kunkel, Chris

From: Wright, Kristy <KWright@indot.IN.gov>
Sent: Monday, August 19, 2019 7:38 AM
To: Kunkel, Chris
Cc: Falls, Ryan G; Ridgley, Brad
Subject: FW: SR 159 Bridge Project - Des. No. 1700148 - USFWS GIS Check

August 19, 2019

RE: DES 1700148
Consultant: Lochmueller Group – Kunkel

“A review of the USFWS database did not indicate the presence of endangered bat species in or within the 0.5 mile search radius of the project area. The range-wide programmatic consultation for the Indiana bat and the Northern Long-eared bat will be completed according to “Using the USFWS IPaC System for Listed Bat Consultation, for INDOT Projects, dated May 10, 2018”.

Kristy Wright

Capital Program Management- Environmental Manager II

3650 South U.S. Highway 41

Vincennes, IN 47591

Office: (812) 895-7335

Email: kwright@indot.IN.gov

The content of this email is confidential and intended for the recipient specified in message only. It is strictly forbidden to share any part of this message with any third party, without a written consent of the sender. If you received this message by mistake, please reply to this message and follow with its deletion, so that we can ensure such a mistake does not occur in the future.



From: Falls, Ryan G
Sent: Friday, August 16, 2019 7:57 AM
To: Wright, Kristy <KWright@indot.IN.gov>
Subject: SR 159 Bridge Project - Des. No. 1700148 - USFWS GIS Check

Kristy,

Please do the GIS check and return to the consultant.

Thank you,

Ryan Falls

Capital Program Management-Senior Environmental Manager Supervisor

October 22, 2019

Chris Kunkel
Lochmueller Group, Inc.
3502 Woodview Trace, Suite 150
Indianapolis, Indiana 46268

Dear Mr. Kunkel:

The proposed project to address the deteriorating conditions of bridge number 159-77-05955 B along State Road 159 over Branch Spencer Creek in Sullivan County, Indiana, (Des No 1700148), as referred to in your letter received October 8, 2019, will not cause a conversion of prime farmland.

If you need additional information, please contact Daniel Phillips at 317-295-5871.

Sincerely,

JERRY RAYNOR Digitally signed by JERRY RAYNOR
Date: 2019.10.23 09:43:09 -04'00'

JERRY RAYNOR
State Conservationist

Helping People Help the Land.



USDA is an equal opportunity provider, employer and lender.



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (855) 463-6848

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Chris Kunkel
Lochmueller Group, Inc.
(317) 222-3880
ckunkel@lochgroup.com

November 4, 2019

Re: Early Coordination Review, Des. 1700148

Bridge #159-77-05955 B, SR 159 over Branch Spencer Creek

Dear Mr. Kunkel:

The Indiana Department of Transportation (INDOT) Environmental Services Division (ESD) appreciates the opportunity to assist you on the project referenced above. Pursuant to your early coordination request for an environmental review, we have performed a preliminary search of the project area.

There appears to be at least two active project you should be aware of that are within close proximity to 1700148's project area. A summary of this project is provided below. Contact information for the project manager is listed below if you would like to request additional information.

Contract: B-41132; DES: 1800731 - Bridge Thin Deck Overlay on Route SR 159; Over Spencer Creek, 06.37 mi S SR-54

Contract: R-37839; DES: 1400121 - Small Structure Replacement on Route SR 159; 0.53 miles N Greene/Sullivan County Line & IR 85 (Co RD 900 E)

The INDOT project manager (PM) for both projects is Alan Davis, who is also the INDOT PM for your project, 1700148.

INDOT Project Manager
Alan Davis
aldavis@indot.in.gov
812-895-7385 x14661

Appropriate hazardous materials investigations should be conducted in areas of excavation. If during the Hazardous Material investigation sites are identified that have a reasonable potential to impact the project area(s), ESD recommends that the Indiana Department of Environmental Management's (IDEM) Virtual File Cabinet (VFC) be consulted. The VFC will provide information that is useful in assessing the risk of impacts. Additionally, your project is within a state forest and requires appropriate agency coordination and discussion within the environmental document.

If your project will require the use of state right-of-way please contact the In-House Services Manager at the INDOT Vincennes District Office.

As always, be sure to follow all applicable processes as well as federal and state laws and local requirements. Thank you for the opportunity to assist you with your project. If you have any questions, please contact a member of my staff, Tomas Beauchamp: 317-234-5071, TBeauchamp@indot.IN.gov

Sincerely,

A handwritten signature in blue ink, appearing to read "Ron Bales".

for Ron Bales
Environmental Policy Manager,
Environmental Services Division

THIS IS NOT A PERMIT

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

DNR #: ER-21902

Request Received: October 8, 2019

Requestor: Lochmueller Group Inc
Chris Kunkel
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268

Project: SR 159 bridge (#159-77-05955 B) replacement over UNT Spencer Creek, about 6.75 miles south of SR 54; Des #1700148

County/Site info: Sullivan

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). However, stream realignments do not qualify under the bridge exemption. 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. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity. However, Greene-Sullivan State Forest is located adjacent to the project area.

Fish & 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:

1) Crossing Structure:

For purposes of maintaining fish and wildlife passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the OHWM width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width / length) of 0.25; and have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel.

The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. If riprap is placed to protect the footings within a structure with no floor (i.e. 3-sided or single span), it should not extend inwards from the edge of the structure more than 3 feet on each side. Where a crossing structure does not have any dry land suitable for wildlife passage along the structure's

Attachments: A - Bridge Exemption Criteria

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

edges (i.e. water extending to both side-wall edges of a box or 3-sided culvert), place riprap at the structure's edges and cover with #53 stone (gravel mixed with crushed limestone), or a raised concrete or metal ledge to provide a suitable surface for wildlife use.

2) Bank Stabilization:

Minimize the use of riprap and use alternative erosion protection materials whenever possible. Riprap must not be placed in the active thalweg channel or placed in the streambed in a manner that precludes fish or aquatic organism passage (riprap must not be placed above the existing streambed elevation). Where riprap must be used, we recommend placing only enough riprap to provide stream bank toe protection, such as from the toe of the bank up to the ordinary high water mark (OHWM). The banks above the OHWM must be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to the area and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion.

While hard armoring alone (e.g. riprap or glacial stone) may be needed in certain instances, soft armoring and bioengineering techniques should be considered first. In many instances, one or more methods are necessary to increase the likelihood of vegetation establishment. Combining vegetation with most bank stabilization methods can provide additional bank protection and help reduce impacts upon fish and wildlife. If hard armoring is needed, wildlife passage can be facilitated by using a smooth-surfaced armoring material instead of riprap, such as articulated concrete block mats, fabric-formed concrete mats, or other similar smooth-surfaced material.

Information about bioengineering techniques can be found at <http://www.in.gov/legislative/iac/20120404-IR-312120154NRA.xml.pdf>. Also, the following is a USDA/NRCS document that outlines many different bioengineering techniques for streambank stabilization: <http://directives.sc.egov.usda.gov/17553.wba>.

3) Channel Relocation:

Channel relocations are not recommended, are difficult to design, and have a high likelihood of failure or permanent loss of habitat and function. Stabilization of the outside bend upstream of the bridge with bioengineered methods and materials including rock toe protection and incorporating live vegetation into the stabilization above the toe is strongly recommended instead of channel relocation.

If relocation remains the best option after a complete examination of the possible alternatives and avoidance of impacts, mitigation plans should be developed. Mitigation for channel relocations should include replacement of an equal or greater length of channel with equivalent or higher quality habitat, enhancing habitat along an additional length of stream equal to the length of impact, and protection of the relocated channel. Habitat improvements should include enhancing (invasive species removal) or replanting a minimum 35 foot wide woody or herbaceous riparian buffer strip using a mixture of grasses, sedges, wildflowers, vines, shrubs, and trees native to the area and specifically for stream bank/floodway stabilization purposes.

The new channel should be constructed and stabilized in the dry, and should be completed before disturbing the existing channel. Vegetation should be established in the new channel before the stream flow is released into it. Once the stream is diverted to the new channel and the old channel is blocked off, then filling of the old channel can begin.

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4) 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 Floodway Habitat Mitigation guidelines (and plant lists) can be found online at: <http://www.in.gov/legislative/iac/20190130-IR-312190041NRA.xml.pdf>.

Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees).

5) Stream/Wetland Habitat:

For any stream and/or wetland impacts, you may need to contact the Indiana Department of Environmental Management (IDEM) 401 program and the US Army Corps of Engineers (USACE) 404 program.

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

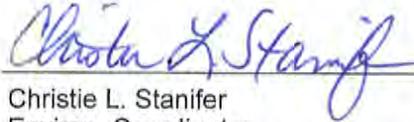
1. Revegetate all bare and disturbed areas with a mixture of native grasses, sedges, wildflowers, and also native hardwood trees and shrubs if any woody plants are disturbed during construction as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants, including prohibited invasive species (see 312 IAC 18-3-25).
2. Minimize and contain within the project limits inchannel 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 (greater than 5 inches dbh, 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. Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction.
9. Post "Do Not Mow or Spray" signs along the right-of-way.
10. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
11. 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.

THIS IS NOT A PERMIT

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

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.



Date: November 8, 2019

Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

Categorical Exclusion

Appendix D

**Section 106 of the National Historic
Preservation Act (NHPA)**

Minor Projects PA Project Assessment Form

Date: 10/29/19

Project Designation Number: 1700148

Route Number: SR 159

Project Description: Bridge Replacement Project, 6.76 miles S of SR 54

The proposed project will replace the existing bridge that carries SR 159 over Branch Spencer Creek. Existing Bridge #159-77-05955 B is a 30-foot long, single span concrete box beam bridge supported by timber abutments. According to the latest bridge inspection report dated June 12, 2019, Bridge #159-77-05955 B was originally constructed in 1968, and reconstructed in 1980. The span of the bridge is 28-feet and the total out-to-out deck width is 30.3-feet. The preferred alternative for the new structure is a 3-sided flat top concrete structure with a 30-foot span and a 10-foot rise. Another alternative still under consideration is a 3-sided arch top concrete structure with a 32-foot span and a 10-foot rise.

Under both alternatives, new guardrail will be installed along both sides of the structure. The new typical cross-section of SR 159 will be two (2), 11-foot wide travel lanes (one in each direction) with 4.75-foot wide shoulders on each side. Additionally, this project will involve the realignment of Branch Spencer Creek at the SW quadrant and the installation of riprap along the limits of the wing walls of the proposed structure.

This project will require the acquisition of approximately 1.79 acres of permanent right-of-way. The entire project area is within previously strip-mined land.

Feature crossed (if applicable): Branch Spencer Creek

Township: Jefferson Township

City/County: Sullivan County

Information reviewed (please check all that apply):

- General project location map USGS map Aerial photograph Interim Report
- Written description of project area General project area photos Soil survey data
- Previously completed historic property reports Previously completed archaeology reports
- Bridge Inspection Information

Other (please specify): SHAARD GIS; SHAARD; online street-view imagery; Indiana Historic Building, Bridges, and Cemeteries Map (IHBBCM); Bridge Inspection Application System (BIAS); County GIS data (accessed via <https://sullivanin.wthgis.com/>); 2010 INDOT-sponsored *Historic Bridge Inventory* (HBI); project information provided by Lochmueller Group, Inc., dated 9/16/2019.

Does the project appear to fall under the Minor Projects PA? yes no

If yes, please specify category and number (**applicable conditions are highlighted**):

A-9. Installation, repair, or replacement of erosion control measures along roadways, waterways and bridge piers within previously disturbed soils.

B-4. Installation of new safety appurtenances, including but not limited to, guardrails, barriers, glare screens, and crash attenuators, under the following conditions [**BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied**]:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. **Work occurs in previously disturbed soils;** OR
- ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

Condition B (Above-Ground Resources)

Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

B-12. Replacement, widening, or raising the elevation of the superstructure on existing bridges, and bridge replacement projects (when both the superstructure and substructure are removed), under the following conditions [**BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied**]:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. **Work occurs in previously disturbed soils;** OR
- ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

Condition B (Above-Ground Resources)

The conditions listed below must be met (*BOTH Condition i and Condition ii must be satisfied*)

- i. **Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource;** AND
- ii. With regard to the subject bridge, at least one of the conditions listed below is satisfied (*AT LEAST one of the conditions a, b or c, must be fulfilled*):

- a. The latest Historic Bridge Inventory identified the bridge as non-historic (see <https://www.in.gov/indot/2531.htm>);
- b. The bridge was built after 1945, and is a common type as defined in Section V. of the *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* issued by the Advisory Council on Historic Preservation on November 2, 2012 for so long as that Program Comment remains in effect AND the considerations listed in Section IV of the Program Comment do not apply;
- c. The bridge is part of the Interstate system and was determined not eligible for the National Register under the Section 106 Exemption Regarding Effects to the Interstate Highway System adopted by the Advisory Council on Historic Preservation on March 10, 2005, for so long as that Exemption remains in effect.

If no, please explain:

Additional comments:

With regard to above-ground resources, an INDOT-Cultural Resources Office (CRO) historian, who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, first performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Sullivan County. No listed resources are present within 0.25 mile of the project area, a distance that would serve as an adequate area of potential effects (APE) given the scope of the project and the surrounding terrain.

The *Sullivan County Interim Report* (2002; Jefferson Township) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. The National Register & IHSSI information is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The SHAARD information was checked against the Interim Report hard copy maps. No IHSSI sites are recorded within 0.25 mile of the project.

Land surrounding the project area is rural consisting of wooded areas and small bodies of water. No above-ground structures are within 0.25 mile of the project.

The subject bridge (Bridge #159-77-05955 B; NBI #28060) is a prestressed concrete box bridge built in 1968 and reconstructed 1980. The bridge length is 30 feet and the deck width, out-to-out, is 30.3 feet. The bridge was not included in the INDOT-sponsored *Historic Bridge Inventory* due to its construction after 1965, which was the cutoff year for inclusion in the inventory. On November 2, 2012, the Advisory Council on Historic Preservation (ACHP) issued the *Program Comment for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* (Program Comment). The Program Comment relieves federal agencies from the Section 106 requirement to consider the effects of undertakings on most concrete and steel bridges built after 1945. On March 19, 2013, federal agencies were approved to use the Program Comment for Indiana projects.

The Program Comment applies for this bridge because it has not been previously listed in or determined eligible for listing in the National Register of Historic Places and it is not located in or adjacent to a historic district (Section IV.A of the Program Comment). As an example of a concrete box bridge, this bridge is also not one of the types to which the Program Comment does not apply (arch bridges, truss bridges, bridges with movable spans, suspension bridges, cable-stayed bridges, or covered bridges [Section IV.B]). Additionally, this bridge has not been identified as having exceptional significance for association with a person or event, being a very early or particularly important example of its type in the state or the nation, having distinctive engineering or architectural features that depart from standard designs, or displaying other elements that were engineered to respond to a unique environmental context (Section IV.C). This bridge also has not been identified as having some exceptional quality. Because the

above criteria from the Program Comment have been met, no individual consideration under Section 106 is required for Bridge #159-77-05955 B.

Based on the available information, as summarized above, no above-ground concerns exist as long as the project scope does not change.

With regard to archaeological resources, the proposed bridge replacement will occur in soils previously disturbed by strip mining. All soils in the project area are classified as Strip Mines and the surrounding land has been reclaimed. The stripping and later reclamation of the project area has destroyed any archaeological site potentially located in or adjacent to the project area. According to SHAARD GIS, there are no archaeological sites recorded in or adjacent to the bridge project. Therefore, there are no archaeological concerns.

If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, construction in the immediate area of the find will be stopped and the INDOT Cultural Resources office and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Kelyn Alexander and Shaun Miller

****Be sure to attach this form to the National Environmental Policy Act documentation for this project. Also, the NEPA documentation shall reference and include the description of the specific stipulation in the PA that qualifies the project as exempt from further Section 106 review.*

Kunkel, Chris

From: Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Sent: Friday, January 3, 2020 2:23 PM
To: Blad, Hannah; Alexander, Kelyn
Cc: Quigg, Gary; Branigin, Susan; Kunkel, Chris
Subject: RE: SR 159 Bridge Replacement Project - Des. No. 1700148 - MPPA Submission Form
Attachments: Minor Projects PA determination form_B-12_B-4_1700148.pdf

Hi Hannah,

This minor increase in r/w did not change our assessments so I simply changed the r/w amount in the project description to reflect the current number.

Thank you,

Shaun Miller
INDOT, Cultural Resources Office
Archaeology Team Lead
(317)233-6795

From: Blad, Hannah [mailto:HBlad@lochgroup.com]
Sent: Thursday, December 19, 2019 3:04 PM
To: Miller, Shaun (INDOT) <smiller@indot.IN.gov>; Alexander, Kelyn <KAlexander3@indot.IN.gov>
Cc: Quigg, Gary <GQuigg@lochgroup.com>; Branigin, Susan <SBranigin@indot.IN.gov>; Kunkel, Chris <CKunkel@lochgroup.com>
Subject: RE: SR 159 Bridge Replacement Project - Des. No. 1700148 - MPPA Submission Form

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Hi Shaun and Kelyn,

Since this MPPA was approved the permanent ROW amount has increased slightly from 1.67 acres to 1.79 acres (0.12 acre difference). Let me know if this change would require a MPPA/determination form or if we need to provide any more information.

Thanks,

Hannah Blad
Historian/Section 106 Specialist
Lochmueller Group
317.334.6826 (direct) | 574.248.2121 (mobile)
HBlad@lochgroup.com

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From: Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Sent: Tuesday, October 29, 2019 8:27 AM
To: Blad, Hannah <HBlad@lochgroup.com>
Cc: Costa, Chad <CCosta@lochgroup.com>; Quigg, Gary <GQuigg@lochgroup.com>; Steury, Adam <ASteury@lochgroup.com>; Davis, Alan <AlDavis@indot.IN.gov>; Alexander, Kelyn <KAlexander3@indot.IN.gov>; Falls, Ryan G <RFalls@indot.IN.gov>
Subject: RE: SR 159 Bridge Replacement Project - Des. No. 1700148 - MPPA Submission Form

Good morning Hannah,

Thank you for you providing the submission form and supporting materials for our review of this project under the MPPA. We have completed our review and have determined that categories A-9, B-4, and B-12 are applicable, thus concluding the Section 106 process. The determination form is attached for inclusion in the CE.

Please let us know if any design changes occur so we can make certain the MPPA still applies.

Thanks again,

Shaun Miller
INDOT, Cultural Resources Office
Archaeology Team Lead
(317)233-6795

From: Blad, Hannah [<mailto:HBlad@lochgroup.com>]
Sent: Monday, September 16, 2019 2:51 PM
To: INDOT Cultural Resources <Culturalresources@indot.IN.gov>
Cc: Miller, Shaun (INDOT) <smiller@indot.IN.gov>; Branigin, Susan <SBranigin@indot.IN.gov>; Kumar, Anuradha <akumar@indot.IN.gov>; Costa, Chad <CCosta@lochgroup.com>; Quigg, Gary <GQuigg@lochgroup.com>; Steury, Adam <ASteury@lochgroup.com>; Davis, Alan <AlDavis@indot.IN.gov>
Subject: SR 159 Bridge Replacement Project - Des. No. 1700148 - MPPA Submission Form

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

Dear Cultural Resource Staff,

Lochmueller Group has completed the MPPA submission form for a bridge replacement project in Sullivan County. Attached is the submission form and project area shapefile.

Let me know if you have any questions.

Thanks,

Hannah Blad
Historian/Section 106 Specialist
Lochmueller Group

3502 Woodview Trace
Suite 150, Indianapolis, IN 46268
317.334.6826 (direct) | 574.248.2121 (mobile)
HBlad@lochgroup.com
<http://lochgroup.com>

Categorical Exclusion

Appendix E

**Red Flag Investigation
& Hazardous Materials**



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 232-5113
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness,
Commissioner

Date: August 29, 2019

To: Site Assessment & Management
Environmental Policy Office - Environmental Services Division
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: Chris Kunkel
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
ckunkel@lochgroup.com

Re: RED FLAG INVESTIGATION
DES 1700148, State Project
Bridge Replacement
State Road (SR) 159
Sullivan County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The INDOT – Vincennes District and the Federal Highway Administration (FHWA) propose to proceed with a bridge replacement along SR 159 in Sullivan County, Indiana. The project involves replacing Bridge #159-77-05955 B, which is located approximately 6.75 miles south of SR 54 and carries SR 159 over Branch Spencer Creek. The existing structure is a 30-foot long, 28-foot span prestressed concrete box beam structure. The new structure will be a 30-foot span concrete flat-top three-sided structure. Riprap will be placed along the banks of Branch Spencer Creek for scour protection. The project also involves the realignment of Branch Spencer Creek to better accommodate the hydrologic flow through the proposed structure.

Bridge and/or Culvert Project: Yes No Structure # 159-77-05955 B

If this is a bridge project, is the bridge Historical? Yes No , Select Non-Select

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary # Acres _____ Permanent # Acres 1.67, Not Applicable

Type of excavation: Excavation will be required for the removal of the existing structure, the placement of riprap, and the realignment of Branch Spencer Creek. Excavation will not exceed 15 feet below ground surface for structure removal at the footings. Excavation will not exceed 5.3 feet below ground surface for riprap placement. The depth for stream excavation will not exceed 7 feet below ground surface.

Maintenance of traffic: The maintenance of traffic will likely require the full closure of SR 159 within the project area. An official detour will be established. Signs and barricades will be placed to notify motorists of the road closure. The maintenance of traffic will follow the current *Indiana Design Manual* guidelines.

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Work in waterway: Yes No Below ordinary high water mark: Yes No

State Project: LPA:

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	N/A	Recreational Facilities	1
Airports ¹	N/A	Pipelines	N/A
Cemeteries	1*	Railroads	N/A
Hospitals	N/A	Trails	3
Schools	N/A	Managed Lands	1

¹In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required.

Explanation:

**Cemeteries*: One (1) cemetery, represented by two (2) icons, is located within the 0.5 mile search radius. The cemetery, McDade Cemetery, is located 0.42 mile northwest of the project area. No impact is expected.

Recreational Facilities: One (1) recreational facility is located within the 0.5 mile search radius. The facility, South Lake Access Site, is located 0.19 mile south of the project area. No impact is expected.

Trails: Three (3) trails are located within the 0.5 mile search radius. The nearest trail, Orange Loop/Yellow Loop Trail, is located 0.23 mile north of the project area. No impact is expected.

Managed Lands: One (1) managed land is located within the 0.5 mile search radius. The managed land, Greene-Sullivan State Forest, is located within the entirety of the project area. Coordination with the Indiana Department of Natural Resources (IDNR) Forestry will occur.

WATER RESOURCES TABLE AND SUMMARY

Water Resources			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	N/A	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	25
Canal Structures – Historic	N/A	Lakes	15
NPS NRI Listed	N/A	Floodplain - DFIRM	N/A
NWI-Lines	2	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	1	Sinkhole Areas	N/A
Rivers and Streams	2*	Sinking-Stream Basins	N/A

Explanation:

NWI-Lines: Two (2) NWI lines are located within the 0.5 mile search radius. The nearest NWI line is located 0.28 mile north of the project area. No impact is expected.

Impaired Streams: One (1) impaired stream is located within the 0.5 mile search radius. The nearest impaired stream, an unnamed stream, is located 0.28 mile north of the project area. No impact is expected.

**Rivers and Streams:* Two (2) stream segments are located within the 0.5 mile search radius. The nearest stream segment, an unnamed stream, is located 0.28 mile north of the project area. Although not mapped on the available GIS layer, Branch Spencer Creek is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT Ecology and Waterway Permitting will occur.

NWI-Wetlands: Twenty five (25) wetlands are located within the 0.5 mile search radius. The nearest wetland is located 0.04 mile southwest of the project area. No impact is expected.

Lakes: Fifteen (15) lakes are located within the 0.5 mile search radius. The nearest lake is located 0.05 mile east of the project area. No impact is expected.

URBANIZED AREA BOUNDARY SUMMARY

Explanation: This project is not within an urbanized area boundary.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	N/A	Mineral Resources	N/A
Mines – Surface	13	Mines – Underground	1

Explanation:

Mines – Surface: Thirteen (13) surface mines are located within the 0.5 mile search radius. Two (2) of the surface mines are located within the project area. Coordination with IDNR Reclamation Division will occur.

Mines – Underground: One (1) underground mine is located within the 0.5 mile search radius. The mine is located 0.35 northwest of the project area. No impact is expected.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	N/A	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A

Underground Storage Tank (UST) Sites	N/A	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	N/A	Brownfields	N/A
Construction Demolition Waste	N/A	Institutional Controls	N/A
Solid Waste Landfill	N/A	NPDES Facilities	N/A
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	2
Leaking Underground Storage (LUST) Sites	N/A	Notice of Contamination Sites	N/A

Explanation:

NPDES Pipe Locations: Two (2) NPDES pipe locations area within the 0.5 mile search radius. The nearest pipe, owned by Peabody Midwest Mining, LLC (Permit #ING040239), is located 0.25 mile northwest of the project area. According to documents found on the Indiana Department of Management (IDEM) Virtual File Cabinet (VFC), the pipe is an outfall pipe associated with the Bear Run Coal Mine. The pipe is used to monitor alkaline discharge from the mine. This pipe is located downstream of the project area. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Sullivan County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did not indicate the presence of ETR species within the 0.5 mile search radius. Coordination with U.S. Fish and Wildlife (USFWS) and the IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a natural area surrounded by forest. The June 12, 2019, inspection report for Bridge #159-77-05955 B states that no evidence of bats was seen or heard under the bridge. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent “Using the USFWS’s IPaC System for Listed Bat Consultation for INDOT Projects”.

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumble Bee, in or within 0.5 mile of the project area. No impact is expected.

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

INFRASTRUCTURE: One (1) managed land is located within the 0.5 mile search radius. The managed land, Greene-Sullivan State Forest, is located within the entirety of the project area. Coordination with the IDNR Forestry will occur.

WATER RESOURCES: Although not mapped on the available GIS layer, Branch Spencer Creek is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT Ecology and Waterway Permitting will occur.

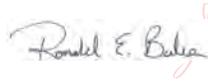
URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: Thirteen (13) surface mines are located within the 0.5 mile search radius. Two (2) of the surface mines are located within the project area. Coordination with IDNR Reclamation Division will occur.

HAZMAT CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects."

INDOT Environmental Services concurrence:

 Digitally signed by Ronald Bales
Date: 2019.10.01 23:34:09 -04'00'

(Signature)

Prepared by:



Chris Kunkel
Environmental Biologist
Lochmueller Group

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION: YES

INFRASTRUCTURE: YES

WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: N/A

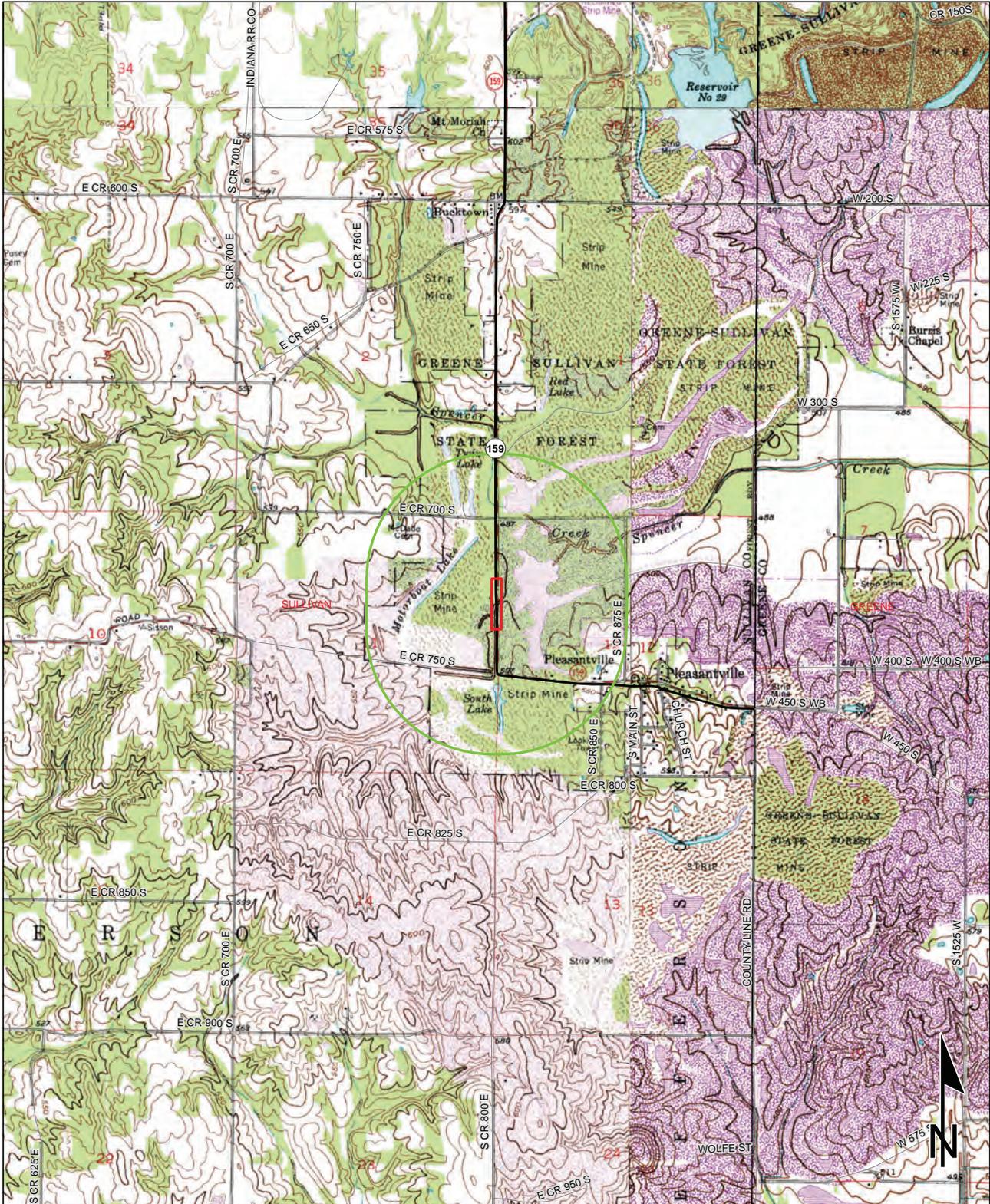
MINING/MINERAL EXPLORATION: YES

HAZMAT CONCERNS: YES

Additional Attachments:

Sullivan County ETR List

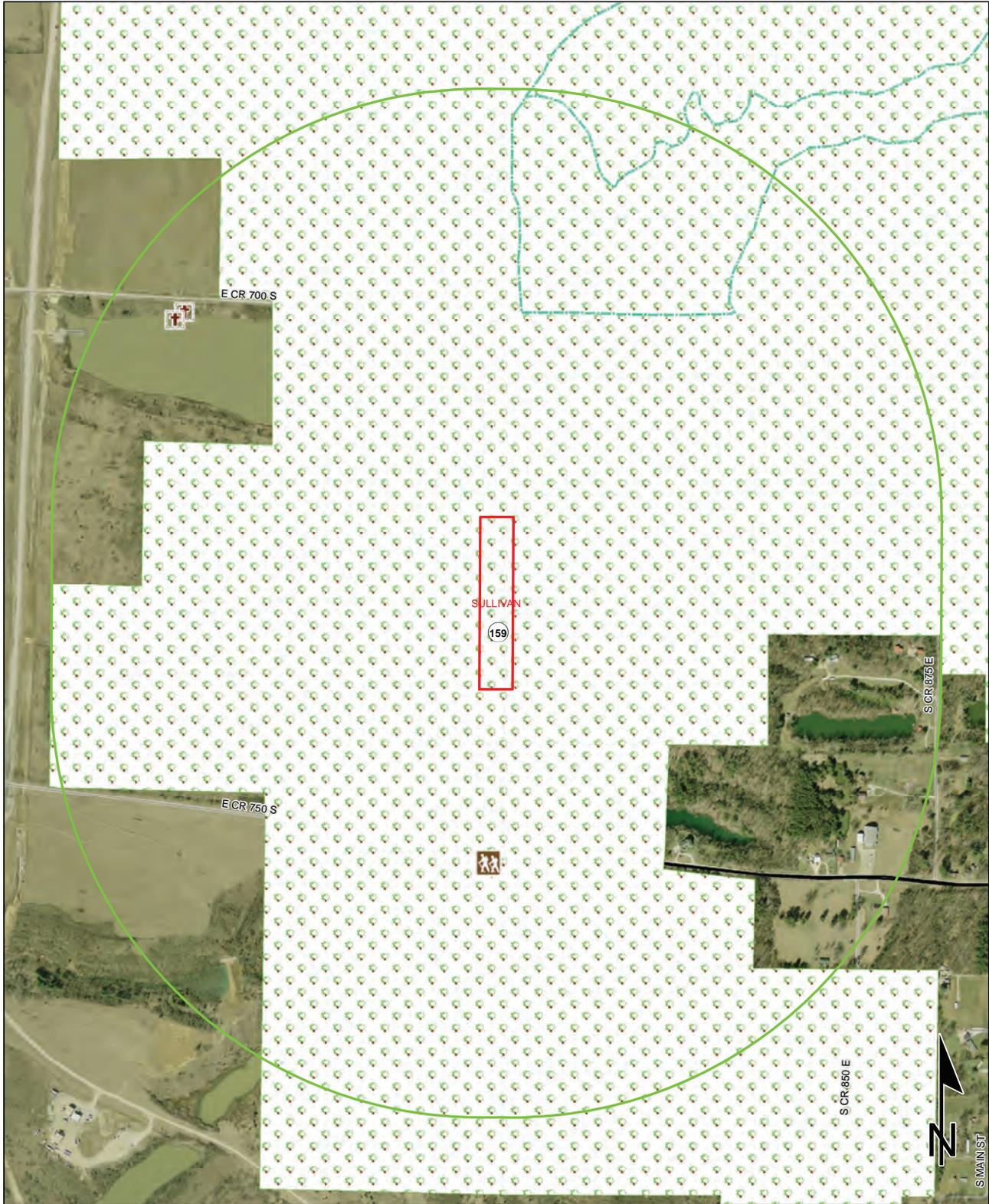
Red Flag Investigation - Site Location
 SR 159, 6.76 miles south of SR 54 Des.
 No. 1700148, Bridge Replacement
 Sullivan County, Indiana



Sources: 0.5 0.25 0 0.5 Miles
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

BUCKTOWN QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Infrastructure
 SR 159, 6.76 miles south of SR 54
 Des. No. 1700148, Bridge Replacement
 Sullivan County, Indiana



Sources: 0.1 0.05 0 0.1 Miles
Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N Map Datum: NAD83
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Water Resources
 SR 159, 6.76 miles south of SR 54
 Des. No. 1700148, Bridge Replacement
 Sullivan County, Indiana



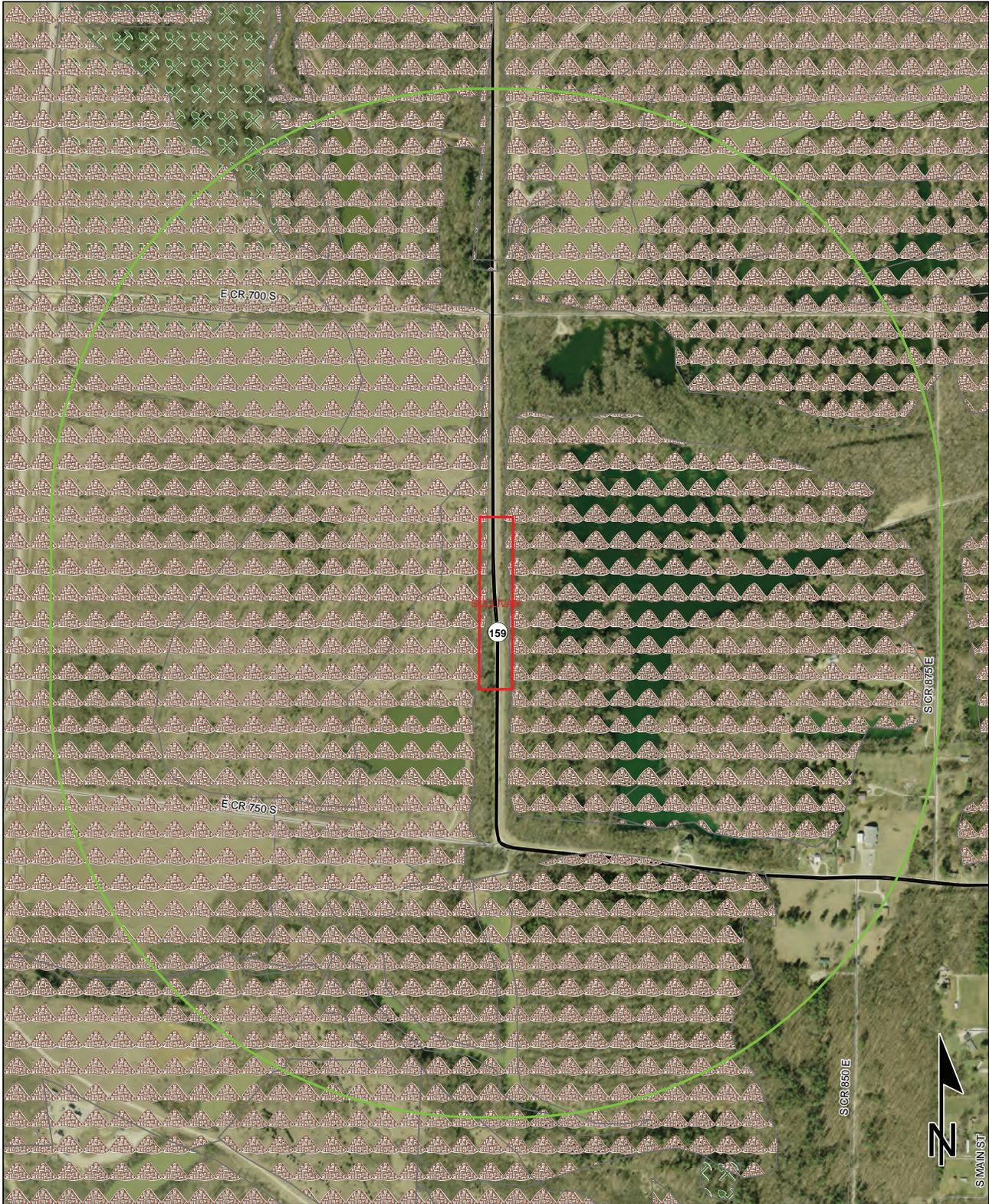
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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	NWI - Point		Wetlands		Project Area
	Karst Spring		Lake		Half Mile Radius
	NWI - Line		Floodplain - DFIRM		Toll
	Impaired_Stream_Lake		Cave Entrance Density		Interstate
	NPS NRI listed		Sinkhole Area		State Route
	River		Sinking-Stream Basin		US Route
	Canal Structure - Historic		County Boundary		Local Road
	Canal Route - Historic				

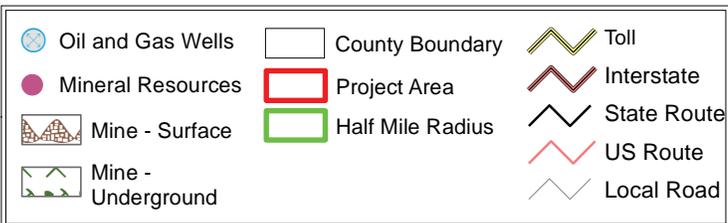
Red Flag Investigation - Mining/Mineral Exploration
 SR 159, 6.76 miles south of SR 54
 Des. No. 1700148, Bridge Replacement
 Sullivan County, Indiana



Sources: 0.15 0.075 0 0.15 Miles

Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N Map Datum: NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



Red Flag Investigation - Hazardous Material Concerns
 SR 159, 6.76 miles south of SR 54
 Des. No. 1700148, Bridge Replacement
 Sullivan County, Indiana



	Brownfield		RCRA Generator/TSD		Institutional Controls
	RCRA Corrective Action Sites		Restricted Waste Site		County Boundary
	Confined Feeding Operation		Septage Waste Site		Project Area
	Notice_of_Contamination		Solid Waste Landfill		Half Mile Radius
	Construction/Demolition Site		State Cleanup Site		Toll
	Infectious/Medical Waste Site		Superfund		Interstate
	Leaking Underground Storage Tank		Tire Waste Site		State Route
	Manufactured Gas Plant		Underground Storage Tank		US Route
	NPDES Facilities		Voluntary Remediation Program		Local Road
	NPDES Pipe Locations		Waste Transfer Station		
	Open Dump Waste Site				

0.15 0.075 0 0.15
 Miles

This map is intended to serve as an aid in graphic representation only. This information is not warranted

Des. No. 1700148 by or other purposes.

Appendix E: Red Flag Investigation & Hazardous Material

Sources:
Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N
 Map Datum: NAD83

Indiana County Endangered, Threatened and Rare Species List

County: Sullivan

Federal Species
State Species

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
AA!" #\$\$%&'()*\$#!&	Eastern Fanshell Pearlymussel	LE	SE	G1Q	S1
+ &" ,-' .(' !" &%/0'	Tennessee Riffleshell		SX	GX	SX
+ &" ,-' .(' *!"0-")	Tubercled Blossom	LE	SX	GX	SX
+ &" ,-' .(' *!&/0\$*!'	Snuffbox	LE	SE	G3	S1
10)2"%"&'()0,!""0%3'	Longsolid	C	SX	G3	SX
4' .)&-&("5**	Pocketbook			G5	S2
6 , "5!&'(!\$*0)'	Ring Pink	LE	SX	G1	SX
7-\$0!". \$. ' (2- 5'	Clubshell	LE	SE	G1G2	S1
7-\$0!". \$. '(2"13*0.	Ohio Pigtoe		SSC	G4	S2
7-\$0!". \$. '(- \$%0.	Rough Pigtoe	LE	SE	G1	S1
7-\$0!". \$. '(!0, !0.	Pyramid Pigtoe		SX	G2G3	SX
7*Ä28", !%"280)(9)2&"-!&	Kidneyshell		SSC	G4G5	S2
: 0'3!0-'(2 A-&%3!&2!&2%3!&22'	Rabbitsfoot	LT	SE	G3G4T3	S1
Insect: Odonata (Dragonflies & Damselflies)					
+%"-' #.(3&5' #'%)	Turquoise Bluet		SR	G5	S3
Fish					
+*8\$")** . '(/0' . &2\$)	Spottail Darter			G4G5	S2S3
:" <') ** . ' (5 -\$%2&%)&é	Greater Redhorse		SE	G4	S2
Amphibian					
=2!&)(, -%"28!3&	Blanchard's Cricket Frog		SSC	G5	S4
4&*8' *\$) (' !\$" -' *0)(2&20"0)	Northern Crawfish Frog		SE	G4T4	S2
Reptile					
+ . A3"&3\$'(-%"3&#&&	Blanding's Turtle	C	SE	G4	S2
>&)*!0!0)(2)*\$%*(0)	Eastern Massasauga	LT	SE	G3	S2
?\$!!' \$%\$(2!"-&%'(2!"-&%'	Eastern Box Turtle		SSC	G5T5	S3
?\$!!' \$%\$(!"!%"!"!%"!'	Ornate Box Turtle		SE	G5T5	S1
Bird					
=.. "3! . 0)(8\$%- @&	Henslow's Sparrow		SE	G4	S3B
=) &(9' .. \$0)	Short-eared Owl		SE	G5	S2
A""0!0)(-\$%*#&%")0)	American Bittern		SE	G5	S2B
A&!20)(803)"%&0)	Northern Harrier		SE	G5	S2
B'-&'\$\$*0)(-\$02\$ 8'-0)	Bald Eagle		SSC	G5	S2
C<" ,!A280)(\$&-&)	Least Bittern		SE	G5	S3B
4' %&)(-03" 5&&%0) 0)	Loggerhead Shrike		SE	G4	S3B
DA2*%)') (5&"-'2\$'	Yellow-crowned Night-heron		SE	G5	S2B
7' %&&% (8 -& *0)	Osprey		SSC	G5	S1B
E'--0)(\$-\$#%)	King Rail		SE	G4	S1B
E' -0) (-&. &" -'	Virginia Rail		SE	G5	S3B
?A*"(' ,'	Barn Owl		SE	G5	S2

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Sullivan

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mammal					
Indiana Bat	Indiana Bat	LE	SE	G2	S1
Evening Bat	Evening Bat		SE	G5	S1
American Badger	American Badger		SSC	G5	S2
Vascular Plant					
Thinleaf Sedge	Thinleaf Sedge		ST	G5	S2
Heavy Sedge	Heavy Sedge		SE	G5	S1
Rose Turtlehead	Rose Turtlehead		WL	G4T3	S3
Green Flatsedge	Green Flatsedge		SR	G5	S2
Hairy Golden-aster	Hairy Golden-aster		ST	G5TNR	S3
Secund Rush	Secund Rush		SE	G5?	S1
Least Duckweed	Least Duckweed		SE	G4	S1
Bottomland Broomrape	Bottomland Broomrape		SE	G4?	S1
American Ginseng	American Ginseng		WL	G3G4	S3
Spotted Pondweed	Spotted Pondweed		ST	G5	S2
Lake Cress	Lake Cress		SE	G4?	S1
Royal Catchfly	Royal Catchfly		SE	G3	S1
Branching Bur-reed	Branching Bur-reed		ST	G4G5	S2
Slick-seed Wild-bean	Slick-seed Wild-bean		WL	G5	S3
High Quality Natural Community					
Sand Barrens	Sand Barrens		SG	G3	S2
Wet-mesic Floodplain Forest	Wet-mesic Floodplain Forest		SG	G3?	S3
Mesic Prairie	Mesic Prairie		SG	G2	S2

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SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked