

Effective: November 2021

INDOT Bat Guano Collection Form

According to the *Programmatic Biological Opinion (BO) for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat* prepared by U.S. Fish and Wildlife Service (USFWS, 2018), if bat activity or signs of bat activity (e.g., guano stains) are observed, Transportation Agencies and State DOTs will conduct maintenance activity or similar bridge/structure alteration in a manner that will not disturb bats using the bridge/structure.

If bat activity or signs of bats are found on a bridge/structure, the project sponsor must determine what species are using the bridge/structure. Species specific genetic material is present in bat guano. The goal of guano collection is to obtain a representative and sufficient set of guano samples for a bridge/structure, which will allow defensible conclusions to be drawn about whether listed species of bats are present. This will minimize the amount of follow-up work that will be required to complete coordination with USFWS.

Completion of this form will document how guano collection occurred on the bridge/structure and consistently document the guano collection plan for agency review. For additional information about collecting guano and how long guano results are valid for, refer to the most current Protected Species guidance on the INDOT Environmental Policy [website](#). Guano collection must be completed by an individual that has received a natural resources degree or has the equivalent work experience.

This form with attachments will document the location(s) where the bats and/or guano was found, the location(s) guano was sampled, and how many samples were collected. Once collected, guano is sent to Northern Arizona University (NAU) (or other qualified research facility) to complete the guano analysis.

Once completed, this form (instruction pages removed), project plan sheet (marked up), applicable project photos, and the guano analysis results will be uploaded into the Information for Planning and Consultation (IPaC) files (as one PDF file) for INDOT and USFWS review with the IPaC determination key. For additional information about processing guano results, refer to the most current Protected Species guidance on the INDOT Environmental Policy [website](#).

In addition, the most current Protected Species guidance on the INDOT Environmental Policy [website](#) includes additional information on how to collect guano. If the guano collection plan is not documented and/or completed to include a full representation of the bats using the bridge/structure, additional guano collection might be required to complete coordination with INDOT and USFWS. Additional guano collection will likely delay Section 7 coordination with INDOT and USFWS and will add additional project costs.

How to Complete the INDOT Guano Collection Form

General Information: Include the name of the person and organization collecting the guano. Include the qualifications and/or degree held by person collecting the guano. Include the project DES number. Include the date of the most recent site visit and/or bridge/structure inspection that indicated bats and/or signs of bats. Include the date guano collection is occurring. Include the county where the project is located and a short description of the project scope. The description included here should be no more than a few sentences. Do not include instruction pages when uploading into IPaC or submitting this form to INDOT for review.

Bridge/Structure Information: Include the bridge/structure number, if applicable. Include the latitude and longitude location of the bridge/structure. Include the type of bridge/structure it is, and the feature it crosses (e.g. "UNT 1 to White River," "I-465," or "CSX rail line"). Include a short discussion about the bridge/structure location. This discussion should include any applicable notes about the feature crossed and a brief discussion of the surrounding habitat. The discussion should be no more than a few sentences. If there are multiple bridges/structures in the project area requiring guano sampling, include bridge/structure on their own form.

Favorable Conditions on Bridge/Structure: Mark any of the conditions that are present on or adjacent to the bridge/structure. If a condition is not listed include it in the "other" box. In addition, if there are any special notes about a condition marked, include a short discussion in the "other" box. The discussion should be no more than a few sentences.

Indicators of Bats and Guano Collection: Mark the applicable checkboxes of bat and/or signs of bat indicators found on the bridge/structure. Indicate the type of sample(s) collected (pooled or individual) and the number of samples collected. Make sure to review chapter 2 in the most current INDOT Protected Species document located on the INDOT Environmental Policy [website](#) prior to collecting guano. Discuss how the number of samples were determined and any additional notes about the samples collected, as applicable. If any checkbox is marked regarding bats or bat indicators, a short discussion in the "additional notes" box will need included. The discussion should be no more than a few sentences.

Sample Table:

- Collected guano samples must be indicated with a number or letter. Include the sample number or letter in the first column of the table. Attach one project plan sheet to this guano collection form and mark the location(s) where the bats and/or guano was found, and the location where guano samples were collected. Sample locations should be clearly indicated on the attached plan sheet and match what is included in this form.
 - If pooled samples are collected appropriate columns in this table might need to include a range of numbers. For example, the first column may need to include sample numbers 1-4 if all four locations are included in the pooled vial.
- In the second and third columns of the table below, include the latitude and longitude location(s) where the guano sample(s) was collected.
- In the fourth column on the table include a short description of the sample area/location. This description should include a general overview of where the guano was found. For example, was the guano found under every expansion joint, just one pile on the ground in the middle of the bridge, a long linear line of guano, etc.?
- If needed, additional rows can be added to this table based on the number of sample locations collected for the project.

Attachments:

Bridge/structure Plan Sheet

- Use one project plan sheet of the bridge/structure and attach it to this guano collection form.
- Refer to sample table discussion above in these instructions for what to include on the attached plan sheet. See examples in the most current INDOT Protected Species guidance document on the INDOT Environmental Policy [website](#).

Photos of Bridge/structure

- Attach any pertinent photos of bats found, guano found, samples collected, etc.
- Make sure to include 4-6 photos per page to reduce page numbers and only include relevant photos. Do not attach a large amount of photo pages to this document.

Guano Analysis Results

- Attach the guano analysis results received from a qualified research facility.

General Information

Name and company collecting guano:		
Qualifications or degree held:		
DES Number:		Project Description:
Date of Inspection:		
Date of Collection:		
County:		

Bridge/Structure Information

Bridge/Structure Number:		Bridge/Structure Location:
Bridge/Structure Lat/Long:		
Type of Bridge/Structure:		
Feature Crossed:		

Favorable Conditions on Bridge/Structure

Cracks in concrete: Expansion joints: Cave-like areas:

Large river or floodplain: Other:

Forested and/or riparian:

Indicators of Bats and Guano Collection

**If any checkbox is marked in this section a note(s) will need added regarding the box indicated.*

Visual Signs:	<input type="checkbox"/>	Sound:	<input type="checkbox"/>
Live Bats:	<input type="checkbox"/>	Dead Bats:	<input type="checkbox"/>
Droppings (guano):	<input type="checkbox"/>	Staining:	<input type="checkbox"/>

Type and number of samples collected:

Additional notes:

Sample Collection Table

Sample Number or Name (indicated on plan sheet attached)	Latitude Location	Longitude Location	Sample Area Description and Photo Number

Attachments:

- Bridge/structure plan(s) with bats/guano indicated and sample locations
- Applicable photos of bridge/structure and location of bats and/or guano
- Guano analysis results from qualified research facility