

Gray Bat

Effects Determination Guidance for Endangered & Threatened Species (EDGES)

Bartow, Carroll, Catoosa, Chattooga, Cherokee, Clayton, Dade, Gilmer, Floyd, Gordon, Haralson, Murray, Paulding, Pickens, Polk, Rabun, Walker, Whitfield Counties

Species Covered by This EDGES:

- Endangered: Gray Bat

The gray bat (*Myotis grisescens*) is federally listed as endangered (USFWS 1976). Its range includes the central and eastern United States, including northwest Georgia. Habitat destruction and modification are the primary causes of the decline of the species. Gray bats typically live in caves year-round. In winter, gray bats hibernate in caves that often have multiple entrances and good air flow (USFWS 2009). In the summer, gray bats roost in karst features, often along rivers. Gray bats have also been documented living in bridges and culverts in the summer and winter (Keeley and Tuttle 1999, K. Morris, pers. comm.). Gray bats emerge at night to forage in forested areas along banks of streams and lakes and may travel over 20 miles in a given night to feed. This species is highly dependent on aquatic insects, especially mayflies, caddisflies, stoneflies beetles, and moths (USFWS 2009). Breeding begins in the fall when the male gray bats arrive at hibernacula. Females do not become pregnant until emergence from hibernation in late March or early April. In late May or early June pregnant females give birth to a single pup that is capable of flight within 20 to 25 days (USFWS 2009). Newly volant gray bats travel up to 4 miles between roost caves and foraging areas. Gray bats generally return to the same summering and wintering sites; however, males and yearling females seem less restricted to specific cave and roost locations (USFWS 1982, 2009). The USFWS Species Profile for the gray bat can be found at: <https://ecos.fws.gov/ecp/species/6329>.



Gray bats clustered in Sitton's Cave. Photo by Pete Pattavina.

Females do not become pregnant until emergence from hibernation in late March or early April. In late May or early June pregnant females give birth to a single pup that is capable of flight within 20 to 25 days (USFWS 2009). Newly volant gray bats travel up to 4 miles between roost caves and foraging areas. Gray bats generally return to the same summering and wintering sites; however, males and yearling females seem less restricted to specific cave and roost locations (USFWS 1982, 2009). The USFWS Species Profile for the gray bat can be found at: <https://ecos.fws.gov/ecp/species/6329>.

Endangered Species Act Consultation Checklist:

Applicant:

1. IPAC indicates gray bat may occur in the project area.
 - a. No.....No effect. Provide IPaC information to the Savannah District with application/PCN.
 - b. Yes.....Go to #2.
2. The Fish and Wildlife Service's Georgia Ecological Services Field Office (GA ES) already reviewed and provided comments on the project.
 - a. No.....Go to #3.
 - b. Yes.....Provide GA ES project review documentation to the Savannah District with application/PCN.
3. Determination key(s) were completed in IPaC and a consistency letter was auto-generated for the project.
 - a. No..... Provide completed EDGES Applicant Consultation Form and supporting documentation to the Savannah District with 404 application/PCN.
 - b. Yes.....Provide IPaC determination key and consistency letter to the Savannah District with application/PCN.

Savannah District:

4. IPaC indicates gray bat may occur in the project area.
 - a. No..... No effect.
 - b. Yes.....Go to #5.

5. GA ES has reviewed the project and provided information that gray bat will not be impacted by the project or the Savannah district has determined that the project will have ‘no effect’ on gray bat.
 - a. No..... Go to #6.
 - b. Yes.....No effect.

6. The applicant has provided a consistency letter from IPaC indicating the project will have ‘no effect’ or is ‘not likely to adversely affect’ federally listed species.
 - a. No..... Go to #7.
 - b. Yes.....Verify that the applicant has completed the IPaC determination key properly. No concurrence from GAES is required. Section 7 consultation complete.

7. Has the Savannah district completed the required determination key in IPaC and generated a concurrence letter?
 - a. No..... Go to #8.
 - b. Yes..... No concurrence from GAES required. Section 7 consultation complete.

8. Does the project require any of the following activities: (a) construction or operation of wind turbines, (b) activities requiring an individual permit under 404 of the Clean Water Act, (c) new point source discharge from a facility other than a water treatment plant, (d) contaminants in the environment (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant), or construction activities within 0.5 miles of a known cave or other priority area?
 - a. No..... Go to #9.
 - b. Yes.....Go to #20.

9. Does the project area contain features that potentially provide undocumented hibernacula and/or roosting habitat for gray bats (i.e. bridges, culverts, undocumented caves, karst geology)?
 - a. No..... Go to #16.
 - b. Yes..... Go to #10.

10. Will the project include activities associated with (a) maintenance, alteration, and/or removal of an existing bridge/culvert; (b) removal of an existing structure that may provide maternity or roost habitat for bats; (c) drilling or boring activities, land disturbance activities, or activities that result in increases of impervious surface?
 - a. No..... NLAA. No concurrence from GAES required. Section 7 consultation complete.
 - b. Yes..... Go to #11.

11. Will the project require activities involving removal, repair, or maintenance of an existing bridge or culvert?
 - a. No..... Go to #14.
 - b. Yes..... Go to #12.

12. Has a bat inspection been conducted of said structure within the last two years?
 - a. No..... Go to #20.
 - b. Yes..... Go to #13.

13. Were any bats observed on/in the structure or was any evidence of bats found on/around the structure? Please attach inspection form this worksheet.
 - a. No..... Go to #14.
 - b. Yes..... Go to #20.

14. Will the project require drilling or boring activities?
 - a. No..... Go to #16.
 - b. Yes..... Go to #15.

15. Have preliminary evaluations been conducted to ensure karst voids or other voids are unlikely to be encountered prior to drilling or boring? Please attach evaluation to this worksheet.
 - a. No..... Go to #20.
 - b. Yes..... Go to #16.

16. Will the project involve land disturbance activities that may result in discharge of sediment into a stream?
 - a. No..... NLAA. No concurrence from GAES required. Section 7 consultation complete.
 - b. Yes..... Go to #17.

17. Will the project implement erosion and sedimentation control BMPs in compliance with Georgia Erosion and Sedimentation Control Act?
 - a. No..... Got to #20.
 - b. Yes..... Go to #18.

18. Will the project result in increases in impervious surface?
 - a. No..... NLAA. No concurrence from GAES required. Section 7 consultation complete.
 - b. Yes..... Go to #19.

19. Will the project implement stormwater management BMPs necessary to comply with water quality performance criteria in the Georgia Stormwater Management Manual?
 - a. No.....Go to #20.
 - b. Yes..... NLAA. No concurrence from GAES required. Section 7 consultation complete.

20. Is the necessary information provided in the PCN or application to assist the Savannah District and GAES in Section 7 consultation?
 - a. No.....Request the information and, once received, continue with 20b.
 - b. Yes.....Share data with GAES and continue consultation. Go to #21.

21. Consultation results in a Savannah district determination of:
 - a. NLAA..... Concurrence letter from GAES required to complete Section 7 consultation.
 - b. LAA.....Initiate formal consultation.

Information to Provide the Savannah District for Endangered Species Act Review

All (where applicable):

- Sediment and erosion control plan, construction stormwater management, and waste disposal.
- A post-construction stormwater management plan.
- A timeline documenting when land clearing, construction, and post-construction actions will be implemented.
- An estimate of total acreage that will be disturbed.
- Bat inspection reports of any structures that will be modified or removed.
- An estimate of the total forested acres to be cleared.
- Location of new or improved culverts, bridges, dams, stormwater facilities, and utility crossings of streams.
- Total acreage of the development and estimate percentage of impervious surface post-construction.

References

Keeley, Brian M. and Merlin D. Tuttle. 1999. Bats in American Bridges. Bat Conservation International, Inc. Resource Publication No. 4, Austin, TX.

Morris, Katrina. Georgia Department of Natural Resources. Personal Communication.

U.S. Fish and Wildlife Service. 1976. Determination that Two Species of Butterflies are Threatened Species and Two Species of Mammals are Endangered Species. Federal Register Volume 41, Number 83, pages 17736–17740, April 28, 1976.

U.S. Fish and Wildlife Service. 1982. Gray Bat (*Myotis grisescens*) Recovery Plan. U.S. Fish and Wildlife Service, Denver, CO. https://ecos.fws.gov/docs/recovery_plan/820701.pdf.

U.S. Fish and Wildlife Service. 2009. Gray Bat (*Myotis grisescens*) 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service, Midwest Region, Missouri Ecological Services Field Office, Columbia, MO.