

-- Flatwoods Salamanders --
Effects Determination Guidance for Endangered & Threatened Species (EDGES)

Baker, Bryan, Charlton, Chatham, Decatur, Dougherty, Early, Evans, Lanier, Lee, Liberty, Long, Mackintosh, Miller, Screven, and Seminole Counties

Species Covered by This EDGES:

Southeast and South Central Georgia (Ben Hill, Berrien, Brooks, Bryan, Bulloch, Burke, Charlton, Chatham, Effingham, Emanuel, Evans, Irwin, Jeff Davis, Lanier, Liberty, Long, McIntosh, Screven, Ware, Worth Counties)

- Threatened: Frosted Flatwoods Salamander (*Ambystoma cingulatum*)



Frosted flatwoods salamander (above)

Southwest Georgia (Baker, Calhoun, Dougherty, Early, Lee, Miller Counties):

- Endangered: Reticulated Flatwoods Salamander (*Ambystoma bishopi*)



Reticulated flatwoods salamander (above)

These flatwoods salamanders are found only in the Georgia and South Carolina coastal plain and the Florida panhandle. They occur in isolated populations scattered across the historical range in remnants of their suitable habitat.

Flatwoods salamanders are pond-breeding amphibians that have aquatic larval stages and terrestrial juvenile and adult stages. Adult flatwoods salamanders migrate in the fall to seasonally-flooded depressional wetlands, where they breed in small, isolated ephemeral ponds. Eggs hatch into larvae in the winter and metamorphose between March and May. Juveniles disperse from ponds to terrestrial habitat after metamorphosing. The terrestrial adults and juveniles spend much of their time below ground in crayfish burrows or root channels until it is time to return to their natal pond to breed. Breeding wetlands are located in the same mesic longleaf pine-wire grass dominated flatwoods where adults and juveniles reside outside of the breeding season.



Seasonally-flooded depressional wetland (above)

Habitat loss is the primary cause of the rapid decline of these species throughout their ranges. Agriculture and silviculture have altered much of Georgia's longleaf pine-flatwoods ecosystem and eliminated adult habitat and their breeding wetlands. Fire suppression in the Coastal Plain has reduced suitable habitat by allowing midstories and closed canopies to develop which shade and suppress herbaceous groundcover.

This EDGES covers (1) existing structure maintenance and (2) new development, including subdivisions, commercial development, roads, pipelines and powerlines, stream and wetland restoration/ stabilization, and similar projects. It does not cover new drinking water reservoirs, airports, or similar large-impact projects.

Endangered Species Act Consultation Checklist:

Applicant:

1. IPAC indicates one of these flatwoods salamanders may occur in the project area (see range map on Page 2).
 - 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 Field Office (GAES) provided documentation stating project impacts to listed flatwoods salamanders were likely to be minimal (GAES signed letter or sticker, T&E survey where GAES provided concurrence with negative findings, or similar documentation).
 - a. No.....Provide completed EDGES Applicant Consultation Form and supporting documentation to the Savannah District with 404 application/PCN.
 - b. Yes.....Provide GAES project review documentation and/or survey data to the Savannah District with application/PCN.

Savannah District:

3. IPAC indicates either species of flatwoods salamander or designated Critical Habitat may occur in the project's potential area of effect?
 - c. No..... No effect.
 - d. Yes Go to #2.

4. Lead federal agency made a no effect determination for both species of federally listed flatwoods salamanders and designated Critical Habitat?
 - a. No..... Go to #3.
 - b. Yes..... No effect. No additional coordination with FWS GAES is necessary.

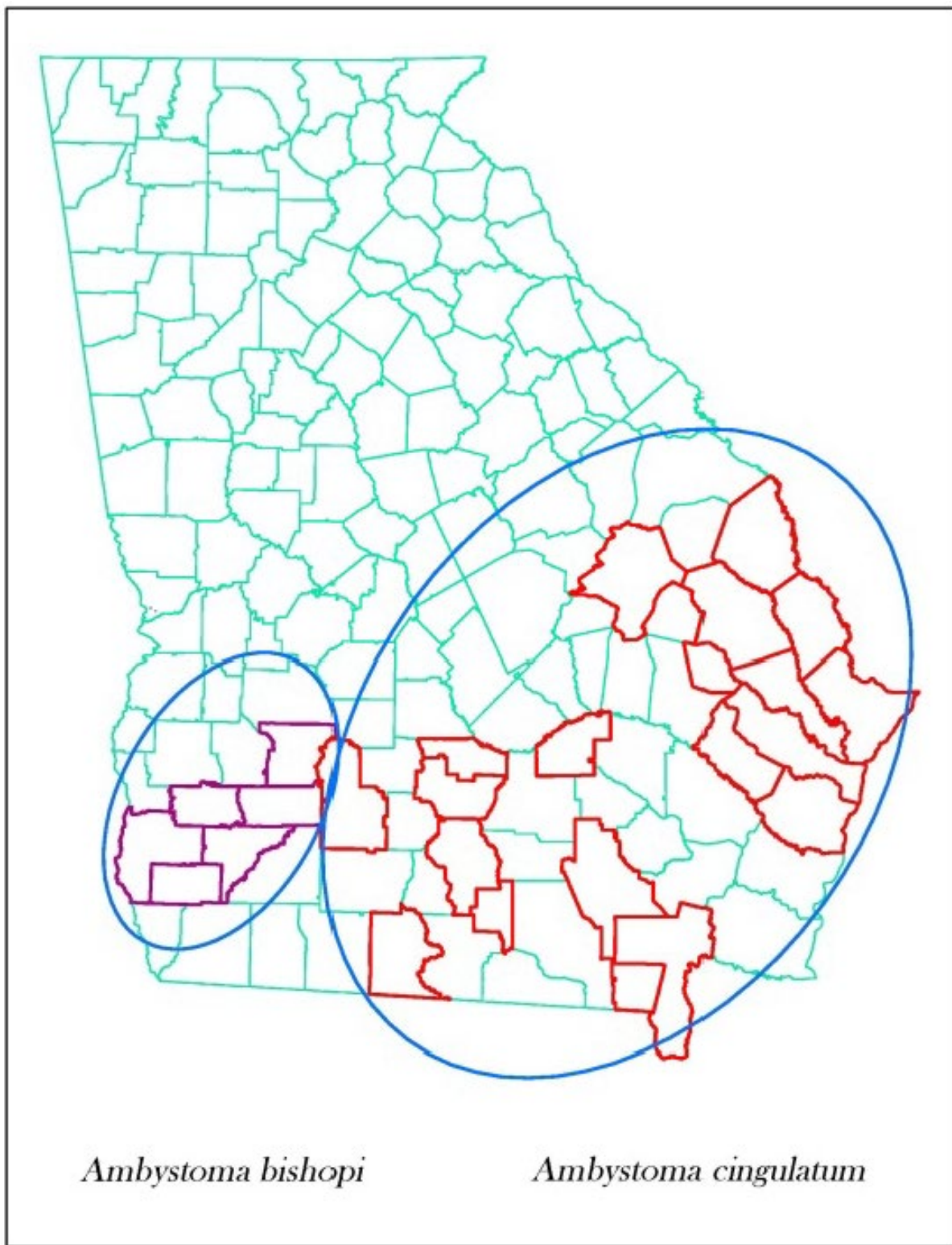
5. IPAC indicates that the project is located within designated Critical Habitat for reticulated flatwoods salamander?
 - a. No..... Go to #4.
 - b. Yes Contact FWS GAES to determine if consultation is needed.

6. The project's potential area of effect includes longleaf pine –wiregrass flatwoods savannas or slash pine flatwoods savannas?
 - a. No..... No effect.
 - b. Yes Go to #5.

7. The project's actions include ground disturbance within 450 meters¹ of depressional isolated wetlands, such as cypress domes, swamp tupelo/black gum ponds, shrub-scrub ponds, or ponds dominated by grassy emergent vegetation?
 - a. No..... No effect.
 - b. Yes May affect. Please upload project documentation into IPAC and consult with the appropriate FWS GAES field office.

Information to provide to the Savannah District for Endangered Species Act Review

- Representative images of suitable habitat(s).
- A map detailing the size and location of pine flatwoods and isolated depressional wetlands on the site.
- A description of each wetland and flatwoods habitat that will be impacted by the project, keyed to the map.
- An evaluation of the effects of the project on fire frequency on the site.
- Survey report completed by qualified biologist with experience with flatwoods salamanders.



Map of Georgia counties where the two federally listed flatwoods salamanders may occur. Southwestern Georgia counties where Reticulated Flatwoods Salamander (*Ambystoma bishopi*) occur are highlighted in purple, and southeastern Georgia counties where Frosted Flatwoods Salamander (*Ambystoma cingulatum*) are found are highlighted in red.