

Proposed Listing, Critical Habitat Designation, and Draft Economic Analysis for the Black Warrior Waterdog

Questions and Answers

What action is the U.S. Fish and Wildlife Service taking?

Based on a review of the best available information and full status assessment, the Service proposes to list the Black Warrior waterdog as endangered under the Endangered Species Act. The agency also is proposing to designate 669 river miles of critical habitat in eight units.

What does it mean when a species is endangered?

A species is listed in one of two categories: endangered or threatened. An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future throughout all or a significant portion of its range.

What are the criteria for deciding whether to add a species to the endangered and threatened species list?

A species is added to the list when it is determined to be endangered or threatened because of any of the following factors:

- The present or threatened destruction, modification, or curtailment of its habitat or range;
- Overutilization for commercial, recreational, scientific, or educational purposes;
- Disease or predation;
- The inadequacy of existing regulatory mechanisms; and,
- Other natural, manmade factors affecting its survival.

What does the Black Warrior waterdog look like?

The Black Warrior waterdog is a large, aquatic, nocturnal salamander that permanently retains a larval form and external gills throughout its life. Its head and body are depressed, its

tail is compressed laterally, and it has four toes on each of its four feet. Larval Black Warrior waterdogs (1 to 2 inches or 28 to 48 millimeters in total length) are dark brown or black on their upper surface and have two light stripes running along their sides.

Adults may reach a maximum of 9 ½ inches or 240 millimeters in total length. Sub-adults are 1 ½ to 4 inches (40 to 100 mm) in total length, do not have the stripes that are present on larvae and are not conspicuously marked although they do have a dark stripe extending from the nostril through the eye to the gills. Adults are usually brown, may be spotted or unspotted, and retain the dark eye stripe. The lower surface of all age classes is plain white.

Where does the Black Warrior waterdog live and what unique characteristics does it require of its environment for survival?

The Black Warrior waterdog is only found in streams within the Black Warrior River Basin in Alabama.

Black Warrior waterdogs depend on specific stream substrates for normal and robust life processes such as breeding, rearing, protection of young, protection of adults when threatened, foraging, and feeding. Preferred substrates are dominated by clay or bedrock with little sand, also containing abundant rock crevices and rock slabs for shelter and areas for egg laying. Not much is currently known about the Black Warrior waterdog's life history.

What does the Black Warrior waterdog eat?

Larval and adult Black Warrior waterdogs are assumed to be opportunistic carnivores; but, prey taken in the wild has not been described. Captive Black Warrior waterdogs have eaten small fish and earthworms. Other waterdogs feed on aquatic invertebrates found in leaf packs. Currently, Service biologists don't have much information about the waterdog's life history.

Where was the Black Warrior waterdog found before it was proposed as an endangered species?

There are a total of 11 historical sites in Blount, Tuscaloosa, Jefferson, and Winston Counties, Alabama. Black Warrior waterdog habitat is similar to that of the threatened flattened musk turtle, a species restricted to permanent streams above the Fall Line in the Black Warrior Basin.

Where is the Black Warrior waterdog found now, and where could I see it?

The waterdog is most abundant in Bankhead National Forest, which includes Brushy Creek and Sipsey Fork in Winston County. They can also be found in Browns Creek a tributary to Black Water Creek (Winston and Walker Counties), in Yellow Creek in Tuscaloosa County, and in Locust Fork/ Gurley Creek.

What is critical habitat?

The Service identifies critical habitat when it proposes to list an animal or plant for listing as endangered or threatened. Critical habitat, a term defined in the Endangered Species Act, is identified based on what an animal or plant needs to survive and reproduce by reviewing the best scientific information concerning a species' present and historical ranges, habitat and biology.

The designation of critical habitat helps ensure that federal agencies and the public are aware of the habitat needs of the Black Warrior waterdog, and proper consultation is conducted by federal agencies when required by law.

What areas are proposed as critical habitat for the Black Warrior waterdog?

The Service recommends designating critical habitat in eight units all within the historic range of the Black Warrior waterdog. The designation includes sites within the present and historic range of the species. The recommended critical habitat is comprised of 11 tributaries within the Black Warrior River Basin; three of the tributaries are on Bankhead National Forest (Lawrence and Winston Counties) and include Sipsey Fork, Brushy Creek, and Rush Creek; Locust Fork and Gurley Creek (Blount, Etowah, Marshall, and Jefferson Counties); Blackwater Creek and Browns Creek (Walker and Winston Counties); North River, (Fayette and Tuscaloosa Counties); Yellow Creek and Lye Branch (Tuscaloosa County); and Mulberry Fork (Cullman, Walker, and Winston Counties).

Unit 8 falls completely within the boundaries of Bankhead National Forest, and approximately 10 percent of the land within the Unit is in private ownership. The Bureau of Land Management has split estate federal mineral ownership (all minerals to include coal) in various areas in the basin.

TABLE 1. Occupancy of Black Warrior waterdog by Proposed Critical Habitat Units and Existing Overlapping Critical Habitat Designation for Federally Listed Species.

Units	Location	Occupied	Private Ownership rkm/rmi	Federal Ownership rkm/rmi	Existing Critical Habitat rkm/rmi	Total Length rkm/rmi
1	Lye Branch	No	16/10			16/10
2	North River	No	108/67		61/38*	108/67
3	Yellow Creek	Yes	30/19			30/19
4	Lost Creek	No	93/58			93/58
5	Locust Fork	Yes	391/243		101/63**	391/243
6	Mulberry Fork	No	183/114			183/114
7	Blackwater Creek	Yes	128/80			128/80
8	Sipsey Fork	Yes	11/7	113/71	103/64***	124/78
	TOTALS		960/598	113/71	265/165	1073/669

* Alabama moccasinshell, Dark pigtoe, Orangenacre mucket, Ovate clubshell, Triangular kidneyshell

** Alabama moccasinshell, Dark pigtoe, Orangenacre mucket, Ovate clubshell, Upland Combshell, Triangular kidneyshell,

*** Alabama moccasinshell, Dark pigtoe, Orangenacre mucket, Ovate clubshell, Southern acornshell, Triangular kidneyshell

How did you go about selecting these eight units for critical habitat?

First, Service biologists looked to see where the Black Warrior waterdog was known to occur based on collections and reports. Then, they determined whether the potential critical habitat designation includes the habitat these waterdogs need to survive and thrive. Finally, biologists examined the bodies of water that are occupied by the waterdog. The waterdog was actually collected from the four unoccupied critical habitat units in the 1990's; but, none have been collected in recent times. When looking at both occupied and unoccupied habitat, eDNA was used as a screening tool.

What is eDNA?

eDNA is short for environmental DNA. It is a surveillance tool used to monitor the genetic presence of an aquatic species.

Was the presence of eDNA a factor when designating critical habitat?

The presence of eDNA was used to help verify the presence of the Black Warrior waterdog. However, the Service did not base the designation of critical habitat units on eDNA.

What does a critical habitat designation do?

When an area is designated as critical habitat for a listed species, federal agencies are required by law to ensure that any action they fund, authorize or carry out is not likely to result in the destruction or adverse modification of the habitat. This is carried out through consultation with the Service.

The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve or other conservation area. A critical habitat designation also does not allow the government or public to access private lands, nor does it require implementation of restoration, recovery or enhancement measures by non-federal landowners.

Activities on areas within critical habitat are only impacted if they are authorized, funded or carried out by a federal agency. Activities in designated critical habitat that require federal involvement (for example, a U.S. Army Corps of Engineers permit to build a dam) would need to be reviewed by the Service. The federal agency would work with the Service to help landowners avoid, reduce or offset potential negative impacts to the critical habitat and the listed species.

There should be few if any impacts on agricultural or timber companies, private landowners, or residential development. The Service relies on a number of voluntary, non-regulatory conservation programs to provide willing landowners with assurances to protect them for the work they do on their lands.

Is there already existing critical habitat in the Black Warrior River Basin?

Yes, there are 165 existing miles of critical habitat for seven freshwater mussels. There also are 26 federally-listed species in the basin, including 15 aquatic species (freshwater fish and mollusks).

What other conservation efforts are taking place?

Bankhead National Forest's Forest Plan identifies goals, objectives, and standards that conserve aquatic habitats and benefit the Black Warrior waterdog. The entire recommended critical habitat of Unit 8 falls within the boundaries of Bankhead National Forest, and about 90 percent of the surrounding land is federally owned. Bureau of Land Management has split estate federal mining ownership (all minerals to include coal) in various areas in the basin. Mining regulations already require 100-foot buffers along creeks and streams and implement Best Management Practices to reduce sedimentation.

What features or elements were identified as important to Black Warrior waterdog?

Physical features, such as rocks, submerged ledges, and other instream structures, play an important role in determining habitat suitability for the waterdog. One of the most important habitat features is the presence of semi-permanent leaf packs. These provide both shelter and foraging habitat for larval and adult waterdogs. The habitat of the Black Warrior waterdog is similar to that of the flattened-musk turtle, and the two overlap in geographic range.

What threats were identified?

Water quality degradation is likely one of the biggest threats to the continued existence of the Black Warrior waterdog, and is considered the primary reason for the extirpation of this species over much of its historical range. Because of their highly permeable skin and external gills, waterdogs are particularly sensitive to declines in water quality and oxygen concentration.

Sources of pollution in the basin have been numerous and widespread, and include runoff from industrial plants, landfills, sewage treatment plants, construction, silviculture, and surface mining.

If the Black Warrior waterdog is listed, what will it mean for the forestry and coal mining community?

There should be minimal or no impact on the forestry and coal mining community. Since there is already designated critical habitat for other species in this area, very little additional regulatory mechanisms will be requested for the Black Warrior waterdog. When an area is designated as critical habitat for a listed species, federal agencies are required by law to ensure that any action they fund, authorize or carry out is not likely to result in the destruction or adverse modification of the habitat.

In addition to critical habitat, there are already 26 listed species in, including 15 aquatics, and federal agencies are already consulting on all of these species so impacts to daily operations should not be significant.

Can comments or information that is relevant to the Service's critical habitat proposal be provided?

Yes. To ensure any final action resulting from this proposal is based on the best scientific data available, the Service is seeking information and comments from all stakeholders and the general public. However, comments simply offering support for or opposition to the proposed rule, while noted, are not used in determining a final action.

Also, the Service will seek peer review from independent specialists during the public comment period to ensure that the proposal is based on scientifically sound data and analyses.

A list of the specific types of information and comments being sought is provided in the "Information Requested" section of the proposed rule available via the Federal eRulemaking Portal at <http://www.regulations.gov/> and at <http://www.fws.gov/daphne>. Further, if requested, the Service will hold a public hearing to allow the public to provide comments as well.

How can comments or information be submitted?

Written comments and information concerning the proposal can be submitted by one of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments to Docket No. FWS-R4-ES-2016-0029 (proposed listing) or FWS-R4-ES-2016-0031 (proposed critical habitat)
- Mail or hand deliver to U.S. Fish and Wildlife Service, Public Comments Processing, Attn: FWS-R4-ES-2016-0029 (proposed listing) or FWS-R4-ES-2016-0031 (proposed critical habitat), U.S. Fish and Wildlife Headquarters, MS: BPHC, 5275 Leesburg Pike, Falls Church, VA 22041-3803.

These actions will publish in the Federal Register on October 6, 2016. The Service invites citizens and organizations to provide comments on these proposed rules and the draft economic analysis within 60 days, on or before December 5, 2016. The Service will post all comments on <http://www.regulations.gov>. This generally means the agency will post any personal information provided through the process. The Service is not able to accept e-mails or faxes.

Written requests for public hearings may be submitted, using the same methods, and must be received within 45 days by November 21, 2016.

Are comments and information considered by the Service in making the final decision?

Yes. All comments and information are reviewed and given appropriate consideration as Service staff members work through the final decision making processes. Stakeholders and the general public play an important role in helping the Service ensure any final actions are not only based on the best scientific and commercial information available, but are also accurate and more effective. The Service has a history of producing final decisions and actions that reflect this invaluable input.