

# USACE Natural Resource Management

## Reptiles & Amphibians



### Red Hills Salamander

### FAST FACTS

**REASONS FOR LISTING STATUS:** The Red Hills salamander was proposed for listing as Endangered under the Endangered Species Act in 1975. In 1976, the U.S. Fish and Wildlife Service determined that the Threatened status was more appropriate and granted the associated federal protections.

This salamander has a restricted range and is found in the Red Hills physiographic province in Conecuh, Covington, Crenshaw, Butler, Monroe, and Wilcox Counties, Alabama. The small range increases vulnerability to threats. The conversion of deciduous forest to pine plantation, and/or severe soil disturbance associated with logging on private lands continue to threaten the species. (USFWS)

**MANAGEMENT AND PROTECTION:** The USFWS published a recovery plan for this species in 1983. While the recovery plan does not detail specific actions for species' recovery, it does note that protecting available habitat is paramount.

Maintaining adequate canopy coverage is crucial as it helps to regulate both temperature and moisture. Limiting timber harvest in occupied habitat is necessary as harvest activities can damage species' burrows and result in mortality. (USFWS)

**HABITAT NEEDS:** This species is most often found on mesic ravine slopes or bluff-sides dominated by hardwood trees. (USFWS)

- Outcrops and/or underlying layers of siltstone are often used to create branches of the specie's burrows. Siltstone is likely important for burrows due to its tendency to retain moisture. This may enable the salamander to better survive drought periods.
- Most occupied habitat is characterized by loamy, friable topsoil and an abundance of arthropods.
- Other important habitat features include deciduous leaf litter and forest canopy which provides shade and moisture. These salamanders rarely leave their burrows and prey on invertebrates and snails both within and just outside the burrow entrance. (USFWS)

**Description:** This salamander is fossorial (burrowing) and lungless. This is a fairly large species and grows to a total length of about 11 inches. This species is distinct from other lungless salamanders because of its large size, an elongated body, short limbs, and a prehensile tail. Coloration is a uniform dark gray to dark brownish. There are no distinct markings present on the body. (USFWS)

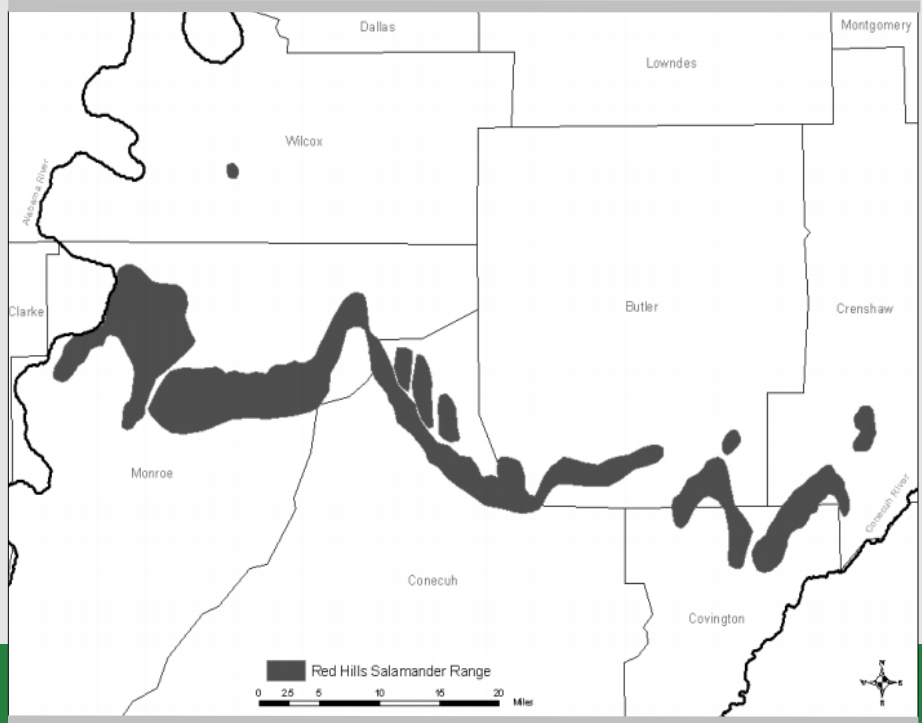
Photos: U.S. Fish and Wildlife Service and U.S. Geological Survey

#### *Natural Resource Management (NRM)*

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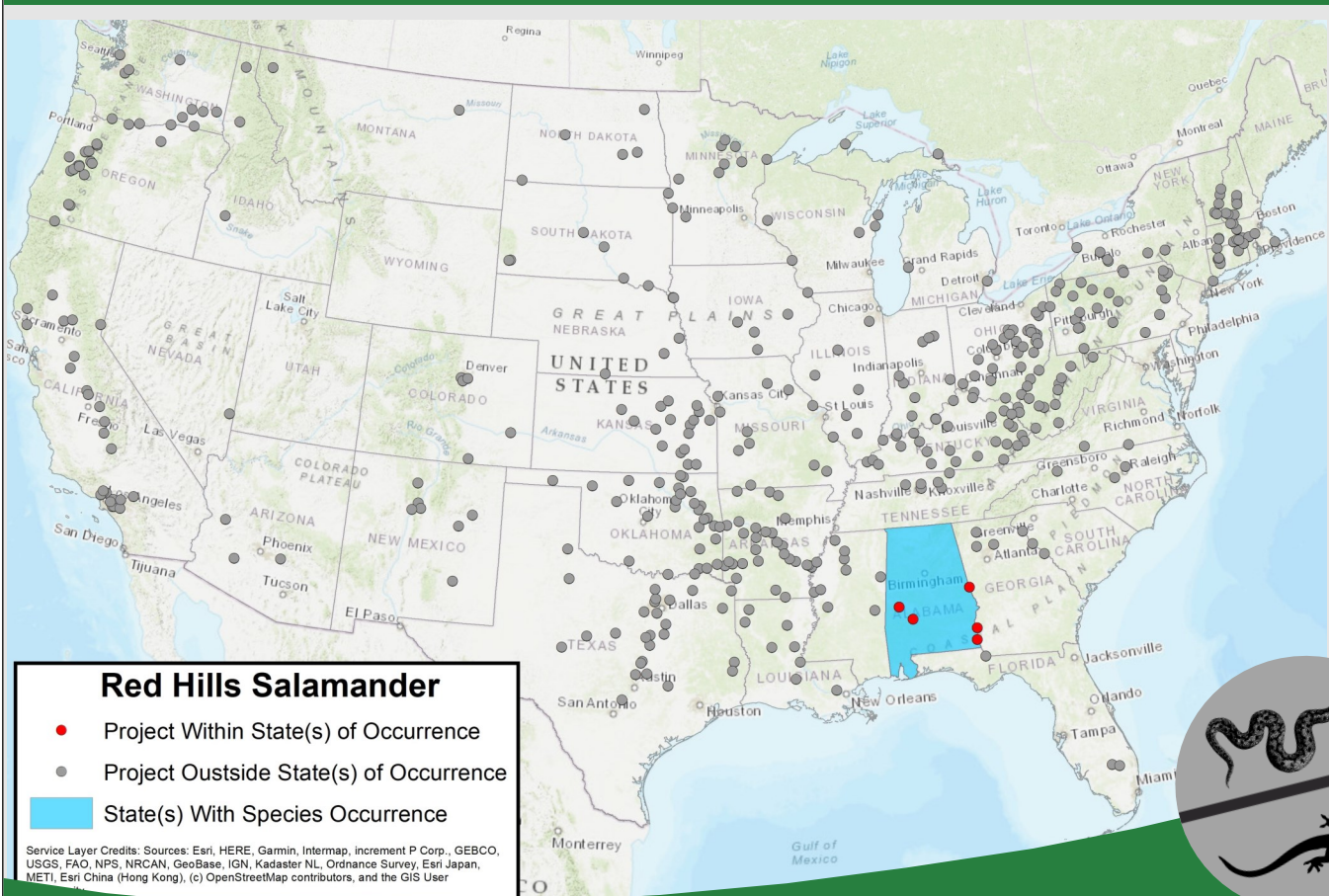
**USACE ROLE:** Even with such a small, restricted range the Red Hills salamander is still known to occur on USACE's project lands. In the 2019 Natural Resource Management Assessment, the Alabama River Lakes project of Mobile District is documented as having occasional occurrences of the Red Hills salamander. This Project consists of three lakes; Claiborne Lake, Woodruff Lake, and the William Dannelly reservoir. While not indicated in 2019 NRM Assessment, the Mobile District website indicates the Tennessee Tombigbee Waterway Project also has occurrences of the species.



Map Above: Map of the species' range as depicted in USFWS's 2013 5-Year Review.

**WHAT IS USACE NRM DOING:**

According to the Engineer Research and Development Center's Threatened and Endangered Species Cost Estimates database, the USACE has expended over \$120,000 on efforts related to the Red Hills salamander since 2005. Of that sum, approximately \$2,000 has been spent by the Environmental Stewardship business line. These funds went toward inventorying, surveying, and monitoring efforts as well as the protection of either the species or its habitat.



**Reptiles & Amphibians**  
 Source: Map provided by Ashleigh Boss, ORISE Fellowship, Institute for Water Resources



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