Conserving South Carolina’s At-Risk Species:
Species facing threats to their survival

Eastern hellbender
(Cryptobranchus alleganiensis)

Description
The Eastern hellbender is a large, totally aquatic salamander that can reach lengths between 30 and 50 cm (11.8 to 19.6 inches) and has a maximum length of approximately 68 cm (26.7 inches). One of the largest salamanders in North America, the Eastern hellbender is typically gray or brown to dark brown in color, occasionally yellow, with a flattened head and a paddle-like tail. Fleshy folds of skin are prominent along both sides of these salamanders. Although this is an aquatic species, adults do not possess external gills; respiration occurs chiefly through the fleshy folds of skin.

Range
The range extends from southern Illinois, southern Indiana, Ohio, Pennsylvania, and southwestern and south central New York to central and south central Missouri, northern Arkansas, northern Mississippi, Alabama, northern Georgia, the western Carolinas (Oconee County, SC), western Virginia, West Virginia, and extreme western Maryland. Populations in the White River system in southern Missouri and northern Arkansas often have been recognized as a distinct subspecies, Cryptobranchus alleganiensis bishopi. To date no exhaustive population study for the Eastern hellbender exists in South Carolina.

Habitat
The Eastern hellbender is a stream dweller found in large, fast-flowing, rocky streams with abundant flat rocks that are typically broad and shallow. They only survive in flowing, cool, clean, well-oxygenated streams and rivers and do not tolerate sedimentation. Males prepare nests and attend eggs beneath large flat rocks or submerged logs.

Status
There are only two records of the Eastern hellbender in South Carolina; fishermen caught both of these salamanders from Lake Tugaloo in Oconee County. It is likely that the two South Carolina specimens were introduced (Source—SCDNR). To date, no population of Eastern hellbenders has been documented in the state of South Carolina. The Eastern hellbender is ranked S? (unknown) in South Carolina and G4 (apparently secure globally). This species is also listed as a Species of Concern. The U.S. Fish and Wildlife Service (Service) was petitioned in April 2010 to list the species. A 90-day finding by the Service found that listing may be warranted. Currently the species is undergoing a status review.

Threats
The main threats to the species are degradation of habitat: impoundments, channelization, mining, silt and nutrient runoff, water pollution, and den site disturbance due to recreational uses of rivers. Overexploitation (collection and illegal or unintentional harvest) may be a threat to already declining populations. Many populations have become reduced to the point at which the usual problems associated with small population size come into effect.

Management/Protection Needs
Actions needed to manage and protect existing populations of the Eastern hellbender consist of: maintaining current regulations/statutes protecting wetlands and streams; protection of known populations; supporting survey efforts; education.

References
Center for Biological Diversity—Southeast Aquatic Species Petition, April 2010.

Contact
U.S. Fish & Wildlife Service South Carolina Field Office 843/727-4707 morgan_wolf@fws.gov