

Development of a Strategic Habitat Plan for the Mobile River Basin

In 2004, the U.S. Fish and Wildlife Service (USFWS) designated 26 river and stream segments (units) in the Mobile River Basin (MRB) (69 FR 40084) as critical habitat for three threatened and eight endangered freshwater mussel species under the Endangered Species Act. The habitat units encompass approximately 1,093 miles (1,760 kilometers) of stream and river channels in four states. Although this is a small portion of each species' historic range, the habitat units include a significant part of the MRB's remaining high-quality, free-flowing rivers and streams and reflect the variety of small stream to large river habitats once occupied by these species. In addition to the listed mussels, these units also contain a major proportion of the MRB's endemic aquatic fauna including other imperiled mussels, fishes, snails, and crayfish. The 26 critical habitat units were selected by USFWS based on the best available information about the essential habitat features required by freshwater mussel species. Most of these units still support some mussel populations for which the unit was designated as critical habitat. The USFWS in cooperation with the Alabama Aquatic Biodiversity Center (AABC) of the Wildlife and Freshwater Fisheries Division (WFF) of the Alabama Department of Conservation and Natural Resources (ADCNR), the Geological Survey of Alabama (GSA), and the Alabama Clean Water Partnership (AL CWP) have recently initiated efforts to provide strategic management opportunities for imperiled species in the MRB. This initiative has been and will be facilitated through the following activities:

1. Establishment of strategic habitat units (SHU). SHU's were established for each of the 26 critical habitat units designated by USFWS, were delineated by determining the watershed boundary from the most downstream point of each habitat reach to the headwaters, and were mapped in a Geographic Information System (GIS).
2. Development of SHU-specific watershed information. For imperiled species management and recovery to proceed systematically and with some reasonable expectation of success, watersheds must be understood from a biological, water quality, and land use perspective.
3. Use the SHU watershed assessment data to identify stream reaches that need protection, management, or restoration. Linking the location of imperiled species with threats is a critical part of this process. Linking can be done only by conducting SHU-specific studies at a local scale. Broad understanding of threats and species distributions is good but not sufficient for recovery purposes.
4. Develop an action plan for SHU management and restoration. This involves a cooperative partnership of local landowners, local and county governments, local businesses and farmers, state and federal agencies, environmental organizations, and watershed partnerships. Restoration activities will include 319-related stream and watershed improvement projects, species reintroduction and augmentation, and educational components.

Presenter:

Jeff Powell

jeff_powell@fws.gov

U.S. Fish and Wildlife Service

Co-authors:

Jeff Powell¹, Pat O'Neil², Paul Hartfield¹, Paul Johnson³, and Allison Jenkins⁴

¹U.S. Fish and Wildlife Service

²Geological Survey of Alabama

³Alabama Department of Conservation and Natural Resources

⁴Alabama Clean Water Partnership