

River (central Florida river, not the tributary of the Suwannee River), West Bay, East Bay of St. Andrew Bay system, St. Andrew Bay, St. Joseph Bay, Tampa Bay, and the Hillsborough River in Florida; an additional Choctawhatchee River reach, Mobile Bay, Murder Creek (tributary of the Conecuh River), Alabama River, Bayou La Batre, and Perdido Bay in Mobile Bay, in Alabama; Strong River in Mississippi; the western portion of Lake Pontchartrain, Tickfaw River, Tchefuncte River, Lake Maurepas, Chandeleur Sound, in Louisiana; and the coastline from Mississippi to Tampa Bay, Florida.

*Our Response:* Section 4(b)(2) of the Act directs us to designate critical habitat on the basis of the best scientific data available. However, no or insufficient data were provided to us to support inclusion of any of the above areas as critical habitat. While many of these areas may have historically supported Gulf sturgeon populations and/or may currently support populations, we cannot document that they are essential to the conservation of the Gulf sturgeon.

The definition of critical habitat in section 3(5)(A) of the Act includes "(I) specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species." By definition, essential critical habitat generally describes a subset of the area potentially containing primary constituent elements for a species. As discussed in the methods section of the proposed and this final rule, to determine areas essential for the conservation of the Gulf sturgeon, we used the best scientific data available pertaining to known habitat requirements of the species. Areas designated as critical habitat for the Gulf sturgeon are within the current known range of the species and contain one or more primary constituent elements essential for the conservation of the species. In our proposed and final designation of critical habitat, we selected essential habitat areas that currently contain populations or provide habitat components essential to the conservation of the species. During this analysis, it was determined that some areas containing one or more primary constituent elements did not

represent suitable habitat or were otherwise not essential to the conservation of the species.

*Comment 2:* One peer reviewer stated that the designation of critical habitat for the Chickasawhay River (Unit 2) should be expanded upstream to the beginning of the Chickasawhay River starting at the confluence of the Chunky and Okatibbee Rivers, north of Enterprise (Clarke County, Mississippi). This area contains the primary constituent elements as noted in the proposed rule, including potential spawning habitat. Research efforts conducted during spring 2002 by the University of Southern Mississippi (USM)-MMNS Gulf sturgeon research group documented the most upstream movement of a radio-tagged individual on the Chickasawhay River traveling as far upstream as the confluence of the Chunky and Okatibbee rivers. This individual was originally tagged at the mouth of the Pascagoula River during early-March 2002.

*Our Response:* The area requested for inclusion would add 19 rkm (12 rmi) to the designation on the Chickasawhay River in Mississippi. However, we believe that what we proposed for the Gulf sturgeon including the portion of the Chickasawhay River proposed for designation, includes sufficient habitat to conserve the species. Accordingly, we have not made the requested change. Moreover, areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under section 7(a)(1) and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard and the section 9 take prohibitions.

*Comment 3:* One peer reviewer questioned whether all Gulf sturgeon overwinter in the marine and estuarine environment and what the potential impacts on the population would be if critical habitat had a temporal component to its designation.

*Our Response:* A few Gulf sturgeon have been documented remaining at or near their spawning grounds throughout the winter (Wooley and Crateau, 1985; Slack *et al.*, 1999; and Heise *et al.*, 1999a). However, this is an exception to the normal behavior of adult Gulf sturgeon. During winter months, juveniles often remain in the estuary near the river mouth, but adult and sub-adults leave the riverine habitat to forage in the estuarine and marine areas. Critical habitat has no temporal boundaries, only spatial. If an area is designated as critical habitat, it receives equal protection throughout the year regardless of the presence or absence of the species.

*Comment 4:* One peer reviewer and one commenter questioned our rationale for deriving seven subpopulations from the five that were proposed by Stabile *et al.* (1996).

*Our Response:* We first evaluated the Gulf sturgeon in the context of its current distribution throughout the historic range to determine what portion of the range must be designated to ensure conservation of the species. We considered several factors in this evaluation: (1) Maintaining overall genetic integrity and natural rates of inter-river genetic exchange, thereby minimizing the potential for inbreeding, (2) retaining potentially important selective pressure at the margins of the species' range by protecting the eastern- and western-most subpopulations, (3) decreasing the extinction risk of a subpopulation by protecting adjacent subpopulations that can provide a rescue effect, if needed, (4) avoiding the potential for subpopulation extirpation from environmental catastrophes, and (5) protecting sufficient habitat essential to the conservation of the species.

In their analysis of Gulf sturgeon subpopulations from eight drainages along the Gulf of Mexico for genetic diversity, Stabile *et al.* (1996) identified five regional or river-specific stocks (from west to east)—(1) Lake Pontchartrain and Pearl River, (2) Pascagoula River, (3) Escambia and Yellow Rivers, (4) Choctawhatchee River, and (5) Apalachicola, Ochlockonee, and Suwannee Rivers.

All five genetic stocks are represented by the seven subpopulations occupying the critical habitat units. The number, distribution, and range of the seven Gulf sturgeon subpopulations included in these units are necessary to protect and support the extent and diversity of the species' genetic integrity and can provide a rescue effect, if needed (see "Methods" section). We believe that these seven river systems, with their associated estuarine and marine environments, represent habitat that is essential for the conservation of the Gulf sturgeon.

*Comment 5:* Four commenters, including one peer reviewer, noted that the western boundary in Lake Pontchartrain (Unit 8) seemed arbitrary.

*Response:* Critical habitat areas in Unit 8 provide juvenile, subadult and adult feeding, resting and passage habitat for Gulf sturgeon from the Pascagoula and Pearl Rivers subpopulations. Lake Pontchartrain is divided into eastern and western areas by the Lake Pontchartrain Causeway (a twin highway bridge supported by pilings extending 33.6 km (20.9 mi) from the north to the south). Gulf