

The entire main stem of the Brothers River, a major tributary of the Apalachicola River, is also included as critical habitat. Spawning has not been documented within this tributary, but an important resting area is located in the uppermost section of the Brothers River between Brickyard Cutoff and Bearman Creek (FWS, 1999; and Lorio, 2000). Sturgeon use the lower Brothers River as a resting and possible osmoregulation area (staging) before migrating into the estuarine and marine habitats for winter feeding (Wooley and Crateau, 1985). The Apalachicola River distributaries, including the East River, St. Marks River and Little St. Marks River, are included, based on information derived from other systems. Gulf sturgeon tend to use more than just the main stem for migration into and out of the river systems (*e.g.*, Suwannee, Choctawhatchee, and Pearl Rivers).

*Unit 7. Suwannee River System in Hamilton, Suwannee, Madison, Lafayette, Gilchrist, Levy, Dixie, and Columbia Counties, Florida*

Unit 7 includes the Suwannee River main stem, beginning from its confluence with Long Branch Creek, Hamilton County, Florida, downstream to the mouth of the Suwannee River. It includes all the Suwannee River distributaries, including the East Pass, West Pass, Wadley Pass, and Alligator Pass, Dixie and Levy Counties, Florida, to their discharge into the Suwannee Sound or the Gulf of Mexico. The Withlacoochee River main stem from Florida State Road 6, Madison and Hamilton Counties, Florida, to its confluence with the Suwannee River is included. The lateral extent of Unit 7 is the ordinary high water line on each bank of the associated rivers and shorelines.

The Suwannee River supports the largest Gulf sturgeon subpopulation among the coastal rivers of the Gulf of Mexico (Huff, 1975; and Gilbert, 1992). Sulak and Clugston (1999) reported 5,344 uniquely tagged Suwannee River sturgeons from 1986 to 1998. Multiple models using various age classes have been used to estimate the subpopulation size of Gulf sturgeon on the Suwannee River system. Chapman *et al.* (1997) estimated the subpopulation at 3,152 fish greater than age 6. Sulak and Clugston's (1999) estimate was 7,650 individuals greater than 61 cm (24 in) total length and older than age 2. Pine and Allen (2001) estimated the Suwannee River subpopulation at 5,500 individuals age 2 to 25. Based on intensive egg sampling efforts conducted between 1993 and 1998,

Sulak and Clugston (1999) estimated that 30 to 90 female fish spawn per year.

Marchant and Shutters (1996) collected two Gulf sturgeon eggs from the Suwannee River in April 1993. These were the first Gulf sturgeon eggs collected in the wild. Between 1993 and 1998, three spawning sites were confirmed with the collection of Gulf sturgeon eggs on artificial substrate samplers (Marchant and Shutters, 1996; and Sulak and Clugston, 1999). Young-of-the-year have been documented using the river between rkm 10 to the confluence with Roaring Creek at approximately rkm 285 (177 rmi) on the Suwannee River main stem (Carr *et al.*, 1996a; Sulak and Clugston, 1999; K. Sulak, pers. comm. 2002; and J. Clugston, pers. comm. 2002). It is believed that the farthest upstream that sturgeon spawn during high water is Big Shoals, near White Springs, Hamilton and Columbia Counties, Florida, but adult sturgeon are probably unable to move upstream of Big Shoals (Huff, 1975; K. Sulak, pers. comm. 2002; and M. Randall, pers. comm. 2002). Suitable spawning habitat has been identified upstream to Big Shoals (Huff, 1975; H. Blalock-Herod, pers. comm. 2002). Foster and Clugston (1997) located five major resting areas throughout the Suwannee River. A deep river bend and a shallow sandy section were characteristic features of the resting areas (Foster and Clugston, 1997). Confirmed use for spawning, identified and probable spawning habitat upstream to Big Shoals, young-of-year and juvenile feeding, and summer resting support the inclusion of the Suwannee River as critical habitat. For ease of identification, the Suwannee River has been included in the unit upstream of Big Shoals 0.8 rkm (0.5 rmi) to its confluence with Long Branch Creek.

Adult Gulf sturgeon sightings and suitable spawning habitat on the lower Withlacoochee River near Florida State Road 141, Hamilton and Madison Counties, Florida, support the inclusion of this area as critical habitat. We have included shoals (5 rkm (3 rmi)) located just upstream of where sturgeon have been observed as possible spawning habitat, and have stopped at Florida State Road 6 (14 rkm (9 rmi)), upstream from the shoals, for ease of identification.

The Suwannee River branches near its mouth into the East Pass and West Pass. Gulf sturgeon adults use the East Pass and West Pass for emigration and immigration (Mason and Clugston, 1993; and Edwards *et al.*, in prep.). The West pass is divided into two primary channels—Wadley Pass, connected to

the Gulf of Mexico by a straight dredged channel across the northern portion of the Sound, and Alligator Pass, used by juveniles (Huff, 1975), connected to the Gulf of Mexico by an undredged, natural channel. Confirmed use of the East Pass, West Pass, and Alligator Pass, and probable use of the Wadley Pass by adult and juvenile Gulf sturgeon for migration and feeding support the inclusion of all distributaries of the Suwannee River as critical habitat.

*Unit 8. Lake Pontchartrain, Lake St. Catherine, The Rigolets, Little Lake, Lake Borgne, and Mississippi Sound in Jefferson, Orleans, St. Tammany, and St. Bernard Parish, Louisiana, Hancock, Jackson, and Harrison Counties in Mississippi, and in Mobile County, Alabama*

Unit 8 encompasses Lake Pontchartrain east of the Lake Pontchartrain Causeway, all of Little Lake, The Rigolets, Lake St. Catherine, Lake Borgne, including Heron Bay, and the Mississippi Sound. Critical habitat follows the shorelines around the perimeters of each included lake. The Mississippi Sound includes adjacent open bays including Pascagoula Bay, Point aux Chenes Bay, Grand Bay, Sandy Bay, and barrier island passes, including Ship Island Pass, Dog Keys Pass, Horn Island Pass, and Petit Bois Pass. The northern boundary of the Mississippi Sound is the shoreline of the mainland between Heron Bay Point, Mississippi and Point aux Pins, Alabama. Critical habitat excludes St. Louis Bay, north of the railroad bridge across its mouth; Biloxi Bay, north of the U.S. Highway 90 bridge; and Back Bay of Biloxi. The southern boundary follows along the broken shoreline of Lake Borgne created by low swamp islands from Malheureux Point to Isle au Pitre. From the northeast point of Isle au Pitre, the boundary continues in a straight north-northeast line to the point 1 nautical mile (nm) (1.9 km) seaward of the western most extremity of Cat Island (30°13'N, 89°10'W). The southern boundary continues 1 nm (1.9 km) offshore of the barrier islands and offshore of the 72 COLREGS lines at barrier island passes (defined at 33 CFR 80.815 ©), (d) and (e)) to the eastern boundary. Between Cat Island and Ship Island there is no 72 COLREGS line. We, therefore, have defined that section of the unit southern boundary as 1 nm (1.9 km) offshore of a straight line drawn from the southern tip of Cat Island to the western tip of Ship Island. The eastern boundary is the line of longitude 88°18.8'W from its intersection with the shore (Point aux Pins) to its intersection with the southern boundary. The lateral