

contained within 1 nm (1.9 km) from shore. Gulf nearshore substrate contains unconsolidated, fine-medium grain sands which support crustaceans such as mole crabs, sand fleas, various amphipod species, and lancelets (Menzel, 1971; Abele and Kim, 1986; and American Fisheries Society, 1989). Based on movement patterns, it appears these Gulf sturgeon were feeding in the nearshore Gulf of Mexico on route to their natal rivers. Given this information, we have included the nearshore (up to 1 nm (1.9 km)) Gulf of Mexico waters in this unit between Pensacola and Apalachicola Bays.

*Unit 12. Choctawhatchee Bay in Okaloosa and Walton Counties, Florida*

Unit 12 includes the main body of Choctawhatchee Bay, Hogtown Bayou, Jolly Bay, Bunker Cove, and Grassy Cove. All other bayous, creeks, and rivers are excluded at their mouths/entrances. The western unit boundary is the U.S. Highway 98 bridge at Fort Walton Beach, Florida; the southern boundary is the 72 COLREGS line across East (Destin) Pass as defined at 33 CFR 80.810 (f). The lateral extent of unit 12 is the MHW line on each shoreline of the included water bodies.

Choctawhatchee Bay provides important habitat for maintaining the health of subadult and adult Gulf sturgeon as evidenced by a large number of Gulf sturgeon overwintering in the system (FWS, 1997; FWS 1998; and Parauka *et al.*, in press). The Choctawhatchee Bay offers a feeding area for both subadults and adults (FWS, 1998; and Fox *et al.*, 2002). Tagged subadults showed a preference for shoreline habitats which are predominated by sandy substrates, low salinity and water depths less than 3 m (10 ft) (FWS, 1997; FWS, 1998; and Parauka *et al.*, in press). Most adult Gulf sturgeon were located in shallow water (2 to 4 m (6.6 to 13.1 ft)) with predominantly (greater than 80 percent) sandy sediment (Fox *et al.*, 2002). Ghost shrimp, a component of the sturgeon diet, are typically found in substrates ranging from sandy mud to organic silty sand (Felder and Lovett, 1989), and their densities were greatest nearshore along the middle and eastern portions of the Choctawhatchee Bay (Heard *et al.*, 2000), the area frequented by the Gulf sturgeon (Fox *et al.*, 2002). We have included the deeper central portion of the Bay in unit 12 as critical habitat because the Gulf sturgeon are known to use the deeper bay waters for movement between the shoreline areas (Fox *et al.*, 2002).

*Unit 13. Apalachicola Bay in Gulf and Franklin County, Florida*

Unit 13 includes the main body of Apalachicola Bay and its adjacent sounds, bays, and the nearshore waters of the Gulf of Mexico. These consist of St. Vincent Sound, including Indian Lagoon; Apalachicola Bay including Horseshoe Cove and All Tides Cove; East Bay including Little Bay and Big Bay; and St. George Sound, including Rattlesnake Cove and East Cove. Barrier Island passes (Indian Pass, West Pass, and East Pass) are also included. Sike's Cut is excluded from the lighted buoys on the Gulf of Mexico side to the day boards on the bay side. The southern unit boundary includes water extending into the Gulf of Mexico 1 nm (1.9 km) from the MHW line of the barrier islands and from 72 COLREGS lines between the barrier islands (defined at 33 CFR 80.805 (e-h)); the western boundary is the line of longitude 85°17.0'W from its intersection with the shore (near Money Bayou between Cape San Blas and Indian Peninsula) to its intersection with the southern boundary. The eastern boundary of the unit is formed by a straight line drawn from the shoreline of Lanark Village at 29°53.1'N, 84°35.0'W to a point that is 1 nm (1.9 km) offshore from the northeastern extremity of Dog Island at 29°49.6'N, 84°33.2'W. The lateral extent of unit 13 is the MHW line on each shoreline of the included water bodies or the entrance of excluded rivers, bayous, and creeks.

The Apalachicola River empties into Apalachicola Bay near Little Bay and Big Bay. The Apalachicola Bay system, a highly productive lagoon-and-barrier-island complex, consists of the bay proper, East Bay, St. George Sound, Indian Lagoon, and St. Vincent Sound (Wakeford, 2001). It is relatively shallow, averaging 2 to 3 m (6.6 to 9.8 ft) in depth (Livingston, 1980). The benthic habitat type most often found in Apalachicola Bay system is soft sediment, comprising approximately 70 percent of the estuarine area (Livingston, 1980). Its composition of sand, clay, and silt varies considerably depending on the location in the bay. The Apalachicola Bay connects with the Gulf of Mexico through several passes, including Indian Pass, West Pass, East Pass, and Sike's Cut, a man-made opening established in the mid 1950s (Odenkirk, 1989).

Unit 13 provides winter feeding migration habitat for the Apalachicola River Gulf sturgeon subpopulation. Gulf sturgeon have been documented by sightings, incidental captures, and telemetry studies throughout

Apalachicola Bay, East Bay, St. George Sound, St. Vincent Sound, and Indian Lagoon (Swift *et al.*, 1977; Wooley and Crateau, 1985; Odenkirk, 1989; FWS, 2000; and F. Parauka, pers. comm. 2002). Gulf sturgeon have also been documented in Indian Pass, West Pass, East Pass, and just north of Dog Island (Wooley and Crateau, 1985; Odenkirk, 1989; FWS, 2000; and F. Parauka, pers. comm. 2002). Substantial weight gains and the presence of suitable habitat for prey items indicate that Gulf sturgeon are feeding while within these bodies of water (Wooley and Crateau, 1985; and Odenkirk, 1989). These areas are also used for accessing adjacent marine and estuarine feeding areas designated in unit 11. Gulf sturgeon are believed to migrate from Apalachicola Bay into the Gulf of Mexico following prevailing currents and exiting primarily through the two most western passes (Indian and West) (Odenkirk, 1989). No Gulf sturgeon have been documented using Sike's Cut, a man-made opening established in the 1950s bisecting Little St. George Island and St. George Island; therefore, Sike's Cut is excluded from our designation.

Tag return data from incidental captures and recent relocation data document Gulf sturgeon south of the Apalachicola barrier islands, generally within a mile of the shoreline (Odenkirk, 1989; and FWS, 2000). On June 8, 1992, a commercial shrimp fisherman provided anecdotal information that he and other shrimp fishermen, had caught hundreds of Gulf sturgeon, with estimated weights generally between 22.7 to 27.2 kg (50 to 60 lbs), in the same location, each spring (April, May, and June), for the past thirty years (1962 to 1992) (F. Parauka, pers. comm. 2002). The fishermen described the location as south of St. George Island, within a few hundred yards of the beach. He described the capture areas as being adjacent to a shoal extending approximately 3.2 km (2 mi) offshore. Examination of bathymetric data shows that there are several shoals in that general vicinity. Since we are unable to confirm the specific location of the area described by this fisherman, we are extending this critical habitat unit only 1 nm (1.9 km) offshore of the barrier islands bordering Apalachicola Bay and Cape San Blas, a distance for which we have supporting telemetry data. In doing so, we will capture some of the shallow shoals extending south of the barrier islands, which we believe provide important foraging substrate.