

determination that the seven riverine units with known spawning and seven associated estuarine and marine units included in this rule include the habitats essential for the conservation of the Gulf sturgeon. With unobstructed passage in the estuarine and marine habitat, the subpopulations within the designated critical habitat units may eventually populate presently unoccupied coastal river systems or augment adjacent surviving small subpopulations.

Although the Mobile River Basin is the largest Gulf of Mexico drainage east of the Mississippi River, it has been extensively impounded and modified for navigation. Further, there have been relatively limited reports of captures and no evidence of reproduction of Gulf sturgeon from that system for many years. Gulf sturgeon have been reported from other river systems. Some of these other systems historically supported a commercial fishery (e.g., Mobile River, Ochlockonee River) and some may support small reproducing subpopulations (e.g., Techefuncte River, Ochlockonee River, Mobile River); however, there is no recent documented spawning and we have no evidence at this time that these systems are essential to the conservation of the species. Therefore, we have not included them as critical habitat.

The data available to us are insufficient to support a determination that Lake Maurepas, Breton and Chandeleur Sounds, the Mississippi River Delta, St. Louis, Biloxi, Mobile, Perdido, St. Andrews, St. Joseph, Ochlockonee, or Apalachee Bays are essential to the conservation of the species. Records within the majority of these bays are relatively scarce. Although some Gulf sturgeon from the seven subpopulations may occasionally use these bays for winter foraging, there are insufficient data to support these bays' regular winter use or importance and no documented spawning. Therefore, we have not included these bays in our critical habitat designation.

The amount of research and status surveys conducted on many Gulf sturgeon subpopulations is limited. Because of the limited availability of data specific to each river system and specific to the Gulf sturgeon's use of the marine environment, we are aware that habitat other than that identified in this final rule may later be found to be essential to the conservation of Gulf sturgeon. To the extent feasible, we will continue, with the assistance of other Federal, State, and private researchers, to conduct surveys, research, and conservation actions on the species and its habitat in areas designated and not

designated as critical habitat. If additional information becomes available on the species' biology, distribution, and threats, we will evaluate the need to designate additional critical habitat, delete or reduce critical habitat, or refine the boundaries of critical habitat. Gulf sturgeon surviving in, or moving to rivers that are not being included as critical habitat will continue to receive protection under the section 7 of the Act including the jeopardy standard and the section 9 of the Act prohibitions on take (see "Critical Habitat" section).

Primary Constituent Elements

In accordance with sections 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas to designate as critical habitat, we are required to base critical habitat determinations on the best scientific data available and to focus on those physical and biological features (primary constituent elements) that are essential to the conservation of the species and that may require special management considerations or protection. Such requirements include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing of offspring; and habitats that are protected from disturbance or are representative of the historical geographical and ecological distribution of a species.

Based on the best available information, primary constituent elements essential for the conservation of the Gulf sturgeon include the following:

(1) Abundant food items, such as detritus, aquatic insects, worms, and/or molluscs, within riverine habitats for larval and juvenile life stages; and abundant prey items, such as amphipods, lancelets, polychaetes, gastropods, ghost shrimp, isopods, molluscs and/or crustaceans, within estuarine and marine habitats and substrates for subadult and adult life stages.

(2) Riverine spawning sites with substrates suitable for egg deposition and development, such as limestone outcrops and cut limestone banks, bedrock, large gravel or cobble beds, marl, soapstone, or hard clay;

(3) Riverine aggregation areas, also referred to as resting, holding, and staging areas, used by adult, subadult, and/or juveniles, generally, but not always, located in holes below normal riverbed depths, believed necessary for

minimizing energy expenditures during fresh water residency and possibly for osmoregulatory functions;

(4) A flow regime (*i.e.*, the magnitude, frequency, duration, seasonality, and rate-of-change of fresh water discharge over time) necessary for normal behavior, growth, and survival of all life stages in the riverine environment, including migration, breeding site selection, courtship, egg fertilization, resting, and staging, and for maintaining spawning sites in suitable condition for egg attachment, egg sheltering, resting, and larval staging;

(5) Water quality, including temperature, salinity, pH, hardness, turbidity, oxygen content, and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages;

(6) Sediment quality, including texture and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages; and

(7) Safe and unobstructed migratory pathways necessary for passage within and between riverine, estuarine, and marine habitats (*e.g.*, an unobstructed river or a dammed river that still allows for passage).

Need for Special Management Consideration or Protection

An area designated as critical habitat contains one or more of the primary constituent elements that are essential to the conservation of the species (see "Primary Constituent Elements" section), and that may require special management considerations or protection. Various activities in or adjacent to each of the critical habitat units described in this rule may affect one or more of the primary constituent elements that are found in the unit. These activities include, but are not limited to, those listed in the "Effects of Critical Habitat" section as "Federal Actions That May Affect Critical Habitat and Require Consultation." For example, riverine spawning sites for Gulf sturgeon must be relatively sediment-free for successful egg development and may need best management practices implemented in the watershed upstream to prevent an excessive accumulation of sediment in these areas. None of the critical habitat units are presently under special management or protection provided by a legally operative plan or agreement for the conservation of the Gulf sturgeon. Therefore, we have determined that all units may require special management or protection.