

Comment 37: One commenter suggested that we clarify our use of vague terms in the proposed rule (e.g., strongly suspect, believed to appear, possibly appropriate, relatively sediment free).

Our Response: We appreciate the commenter's sentiments. However, it is seldom possible to make statements with complete or even relative certainty when describing the biological and habitat requirements of an endangered or threatened species. We have expressed ourselves as definitively as possible using the best available scientific data, recognizing the need for consultation-specific flexibility over time as new information is developed about the species and its habitat.

Comment 38: Two commenters requested clarification of the lateral extent of the critical habitat unit descriptions in the estuarine and marine areas; clarification of our mean high water line determination, and clarification of our use of an average high water calculation over an 18.6 year period rather than using all available tidal data.

Our Response: Regulatory jurisdiction in coastal areas is administered by the USACE and is described in 33 CFR 329.14(a)(2) as "the line on the shore reached by the plane of the mean (average) high water (MHW)." 33 CFR 329.14(a)(2) further states that when precise determination of the MHW line is necessary, it is preferable to average tidal data over a period of 18.6 years, which is a Metonic cycle, i.e., the period in which new and full moon recur in the same order and on the same days as in the preceding cycle.

Issue G: Jurisdiction

Comment 39: Three comments were received on the proposed jurisdictional responsibilities for the management of the Gulf sturgeon. Two commenters believe that FWS, instead of NMFS, should have jurisdiction in the estuarine areas, and one commenter requested clarification on the technical basis for determining areas of regulatory jurisdiction in coastal areas.

Our Response: In 1974, a memorandum of understanding (MOU) was developed to clarify jurisdictional responsibilities for the NMFS and FWS. Section 1(a) of the 1974 MOU outlines jurisdiction by waterbody and states that all non-mammalian species, with a few exceptions not including Gulf sturgeon, that reside the major portion of their lifetime in estuarine waters shall be under the jurisdiction of the NMFS. Similarly, the FWS would have jurisdiction over species that spend the

major portion of their lifetimes on land and/or in fresh water.

While the MOU does not contain specifics on jurisdictional boundaries for critical habitat, the Services have applied the standard set for listing species to this critical habitat rule—that is, NMFS will have jurisdictional responsibility for marine waters and the FWS for fresh water. In estuarine waters, the Services will consult based on their respective expertise as described in the proposed rule. Under this arrangement, the FWS will consult with the EPA since it has expertise in water quality issues, and the NMFS will consult with the USACE to maximize efficiency for the action agency when other federally protected species may be present (e.g., protected sea turtles which fall under the jurisdiction of NMFS in marine and estuarine waters).

Issue H: Economic Analysis

Comment 40: One commenter supported the two-baseline approach to the economic analysis used by the Services, and went on to suggest that the lower baseline, that identifies costs solely attributable to critical habitat designation, need not be included in the analysis to be responsive to the decision in *New Mexico Cattle Growers Association v. USFWS*, 248 F.3d 1277 (10th Cir. 2001). The commenter paraphrased the 10th Circuit's holding as requiring that costs resulting from the listing of a species must be considered along with the costs of critical habitat designation in determining whether the costs of such designation outweigh the benefits. The commenter went on to support the inclusion of costs associated with both jeopardy consultations and adverse modification consultations, and resulting project modification costs, in the economic analysis, stating that the full spectrum of impacts associated with the listing and critical habitat designation presents a more realistic and comprehensive understanding of probable impacts in the affected region.

Our Response: In *New Mexico Cattle Growers Association*, the 10th Circuit ruled that the full costs of critical habitat designation must be captured in an economic analysis performed in accordance with section 4(b)(2) of the Act, and thus that costs that might be incurred co-extensively as a result of both listing and critical habitat designation must be included in the analysis. For example, projects that might modify spawning habitat of Gulf sturgeon would give rise to a consultation on both jeopardy and adverse modification grounds, and the costs of such consultations must be

attributable to critical habitat designation.

Comment 41: One commenter raised questions about impacts to Federal hydropower generation in the ACF Basin. Without specific details as to the minimum and maximum flows necessary for spawning and other flow-related habitat questions, the commenter contends "the economic ramifications of this proposal cannot be properly considered, as required by law."

Our Response: We agree that a meaningful assessment of economic impacts that could result from modifying the operations of the USACE's ACF reservoirs to avoid or minimize impacts to Gulf sturgeon habitat in the Apalachicola River is not possible at this time because too many variables, such as those listed by the commenter, are unknown. Based on the limited data that are currently available about the flow rates that inundate potential spawning habitat, the FWS believes that any reasonable and prudent adjustments to ACF project operations to protect sturgeon spawning would be infrequent. As a result, the costs over time to project purposes such as hydropower would be relatively small. The basis for this preliminary determination and a brief description of the informal consultation that is underway between the USACE and the FWS about ACF project operations effects on sturgeon follows.

Possible flow-related limitations to spawning habitat in the Apalachicola River were not recognized until the spring of 2002, when project operations and unusually low basin runoff entering the fourth year of a regional drought exposed limestone outcroppings and other hard-bottom portions of the main channel. These hard-bottom areas, which likely support spawning by the small Apalachicola sub-population, are inundated during the spring months of most years by the combination of unregulated basin runoff and the USACE's operations of the ACF reservoirs for project purposes other than the conservation of species and habitats protected under the Act. On May 2, 2002, FWS personnel surveyed a site near where sturgeon larvae were collected in 1977 (Wooley *et al.*, 1982) and 1987 (Foster *et al.*, 1988). FWS estimated the maximum discharge that would fully expose the outcropping and the minimum discharge that would fully inundate it. These estimates were 173 cubic meters per second (cms) (6,118 cubic feet per second (cfs)) and 317 cms (11,200 cfs), respectively. The minimum depth at which Gulf sturgeon eggs have been collected is 1.4 m (4.6 ft) (Fox *et*