

example, the Alabama moccasinshell historically inhabited 16 of the units, and currently inhabits 7; fine-lined pocketbook was known from 12 of the units, and currently inhabits 10; orange-nacre mucket historically occupied 15 units, and is currently found in 12; and Coosa moccasinshell historically occupied 9 of the units, but is currently found in only 1. Successful reintroduction of the species into units that they historically occupied (and that are currently occupied by 1 or more of the 11 species) would expand the number of populations, thereby reducing threat of extinction. Each of the 25 of the 26 habitat units (Units 1–25) are currently occupied by 1 or more of the listed mussels. Only two occupied habitat units and one unoccupied habitat unit are proposed for the dark pigtoe because its range was naturally restricted to the Black Warrior drainage, and we are unable to identify any other unoccupied habitat units in the drainage that provide constituent elements.

As noted above, conservation of these species requires expanding their ranges into unoccupied portions of historic habitat. Therefore, in addition to these 25 habitat units, we also propose to designate the Coosa River below Jordan Dam (Unit 26) as critical habitat for 9 of the 11 mussel species. Shells of the fine-lined pocketbook were last collected from this reach in 1989 (Pierson 1991a), and it is also within the historic range of 8 other species. This is the only unit currently not occupied by at least 1 of the 11 species (Johnson 2002). This area has recently been identified as presenting high potential for the successful reintroduction of imperiled mussels in the Coosa River drainage (Johnson 2002). In 1990, the Alabama Power Company initiated a 2000 cubic feet per second minimum flow into the Coosa River below Jordan Dam (Federal Energy Regulatory Commission (FERC) 1990), greatly improving aquatic habitat quality. The lower Coosa River not only offers high-quality riverine habitat, but due to local geology it is relatively protected from non-point runoff, a major threat to all existing populations of these species. There are historic records of fine-lined pocketbook and southern clubshell from this 13 km (8 mi) reach of river (Johnson 2002, Pierson 1991a), and it is within the historic range of Alabama moccasinshell, Coosa moccasinshell, ovate clubshell, southern pigtoe, triangular kidneyshell, southern acornshell, and upland combshell. As noted above, threats to these species can be reduced by expanding their current ranges through reintroduction into

suitable habitats. Since the Coosa River below Jordan Dam is recognized as presenting the best opportunity for reestablishing populations of 9 of the 11 species and is viewed by experts as a high-quality example of remaining mussel habitat in the Basin, we believe it is also essential for their conservation, and propose to designate it as unoccupied habitat for these 9 mussel species.

As a result, we have defined 26 habitat units encompassing approximately 1,760 km (1,093 mi) of stream and river channels in Alabama, Mississippi, Georgia, and Tennessee, for these 11 mussel species (Figure 1). Although this represents only a small proportion of each species' historic range, these habitat units include a significant proportion of the Basin's remaining, highest quality, free-flowing rivers and streams, and reflect the variety of small stream to large river habitats historically occupied by each species. Because mussels are naturally restricted by certain physical conditions within a stream or river reach (*i.e.*, flow, substrate), they may be unevenly distributed within these habitat units. Uncertainty on upstream and downstream distributional limits of some populations may have resulted in small areas of occupied habitat excluded from, or areas of unoccupied habitat included in the designation.

We recognize that both historic and recent collection records upon which we relied are incomplete, and that there are river segments or small tributaries not included in this proposed designation that may harbor small, limited populations of one or more of the 11 species considered in this proposed designation, or that others may become suitable in the future. The exclusion of such areas does not diminish their potential individual or cumulative importance to the conservation of these species. However, we believe that with proper management each of the 26 habitat units are capable of supporting 1 or more of these 11 species, and will serve as source populations for artificial reintroduction into designated stream units, as well as assisted or natural migration into adjacent undesignated streams within the Basin.

At this time, the habitat areas contained within the units described below constitute our best evaluation of areas needed for the conservation of these species. Proposed critical habitat may be revised for any or all of these species should new information become available prior to the final rule, and existing critical habitat may be revised

if new information becomes available after the final rule.

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 proposed 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." None of the proposed critical habitat units is presently under special management or protection provided by a legally operative plan or agreement for the conservation of these mussels. Therefore, we have determined that the proposed units may require special management or protection.

Proposed Critical Habitat Designation

The areas that we are proposing for designation as critical habitat for the 11 mussel species provide one or more of the primary constituent elements described above. In accordance with the Mobile River Aquatic Ecosystem Recovery Plan (2000), protection of the habitat in these units and their surviving populations is essential to the conservation of these 11 mussel species. All of the proposed areas require special management considerations to ensure their contribution to the conservation of these mussels. For each stream reach proposed as a critical habitat unit, the up- and downstream boundaries are described in general detail below; more precise estimates are provided in the Regulation Promulgation of this rule.

Critical Habitat Unit Descriptions

The critical habitat units described below include the stream and river channels within the ordinary high water line. As defined in 33 CFR 329.11, the ordinary high water line on nontidal rivers is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas. We are proposing the following areas for