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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R4–ES–2019–0059; 4500030114]

RIN 1018–BD09

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Suwannee Moccasinshell

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to designate critical habitat for the Suwannee moccasinshell (*Medionidus walkeri*) under the Endangered Species Act (Act). The Suwannee moccasinshell is a freshwater mussel species from the Suwannee River Basin in Florida and Georgia. In total, approximately 306 kilometers (190 miles) of stream channels in Alachua, Bradford, Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Madison, Suwannee, and Union Counties, Florida, and Brooks and Lowndes Counties, Georgia, fall within the boundaries of the proposed critical habitat designation. If we finalize this rule as proposed, it would extend the Act's protections to this species' critical habitat. The effect of this regulation is to designate critical habitat for the Suwannee moccasinshell under the Act. We also announce the availability of a draft economic analysis of the proposed designation.

DATES: We will accept comments on the proposed rule or draft economic analysis that are received or postmarked on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Comments submitted electronically

using the Federal eRulemaking Portal (see **ADDRESSES** below) must be received by 11:59 p.m. Eastern Time on the closing date. We must receive requests for public hearings, in writing, at the address shown in **ADDRESSES** by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments on the proposed rule or draft economic analysis by one of the following methods:

(1) *Electronically*: Go to the Federal eRulemaking Portal: *http://www.regulations.gov*. In the Keyword box, enter FWS–R4–ES–2019–0059, which is the docket number for this rulemaking. Then, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on "Comment Now!"

(2) *By hard copy*: Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R4–ES–2019–0059; U.S. Fish and Wildlife Service Headquarters, MS: JAO/1N, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We request that you send comments **only** by the methods described above. We will post all comments on *http://www.regulations.gov*. This generally means that we will also include any personal information you provide during the comment period (see the **Information Requested** section below for more information).

Document availability: The DEA is available at *http://www.fws.gov/PanamaCity* and at *http://www.regulations.gov* at Docket No. FWS–R4–ES–2019–0059, and at the Panama City Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

The coordinates from which the maps are generated are included in the critical habitat unit descriptions of this document and are available at *http://www.fws.gov/PanamaCity*, and at *http://www.regulations.gov* at Docket No. FWS–R4–ES–2019–0059 and at the Panama City Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**). Additional tools or supporting information that we may develop for this critical habitat designation will be available at the Fish and Wildlife Service website and Field Office set out above, and may also be included in the preamble and/or at *http://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Sean M. Blomquist, Acting Field Supervisor, U.S. Fish and Wildlife Service, Panama City Ecological Services Field Office, 1601 Balboa Avenue, Panama City, FL 32405; by telephone 850–769–0552; or by facsimile at 850–763–2177. If you use a telecommunications device for the deaf, call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Endangered Species Act, when we list any species as threatened or endangered we must designate critical habitat to the maximum extent prudent and determinable. Designation of critical habitat can only be completed by issuing a rule.

What this document does. This document is a proposed rule for designation of critical habitat for the Suwannee moccasinshell in the Suwannee River Basin in Florida and Georgia. It provides our rationale for pursuing this rulemaking action.

The basis for our action. Under the Endangered Species Act, when we determine

that a species is threatened or endangered, we must, to the maximum extent prudent and determinable, designate critical habitat. Section 4(b)(2) of the Endangered Species Act states that the Secretary shall designate critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

Economic impacts. We have prepared an analysis of the economic impacts of the proposed critical habitat designation and related factors. We hereby announce the availability of the draft economic analysis and seek additional public review and comment.

We will seek peer review. We are seeking comments from independent specialists to ensure that our listing proposal is based on scientifically sound data and analyses. We have invited these peer reviewers to comment on our specific assumptions and conclusions in this listing proposal.

Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other concerned government agencies, the scientific community, industry, or any other interested party concerning this proposed rule. We particularly seek comments concerning:

(1) The reasons why we should or should not designate habitat as "critical habitat" under section 4 of the Act (16 U.S.C. 1531 *et seq*.) including information to inform the following factors such that a designation of critical habitat may be determined to be not prudent:

(a) The species is threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of such threat to the species;

(b) The present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or threats to the species' habitat stem solely from causes that cannot be addressed through management actions resulting from consultations under section 7(a)(2) of the Act;

(c) Areas within the jurisdiction of the United States provide no more than negligible conservation value, if any, for a species occurring primarily outside the jurisdiction of the United States; or

(d) No areas meet the definition of critical habitat.

(2) Specific information on:

(a) The amount and distribution of Suwannee moccasinshell habitat,

(b) What areas, that were occupied at the time of listing and that contain the physical or biological features essential to the conservation of the species, should be included in the designation and why,

(c) Special management considerations or protection that may be needed in critical habitat areas we are proposing, including managing for the potential effects of climate change, and

(d) What areas not occupied at the time of listing are essential for the conservation of the species. We particularly seek comments regarding:

(i) Whether occupied areas are inadequate for the conservation of the species; and,

(ii) Specific information that supports the determination that unoccupied areas will, with reasonable certainty, contribute to the conservation of the species and, contain at least one physical or biological feature essential to the conservation of the species

(3) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat.

(4) Information on the projected and reasonably likely impacts of climate change on the Suwannee moccasinshell and proposed critical habitat.

(5) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation and the benefits of including or excluding areas that exhibit these impacts.

(6) Information on the extent to which the description of economic impacts in the draft economic analysis is a reasonable estimate of the likely economic impacts.

(7) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments **only** by the methods described in **ADDRESSES**.

All comments submitted electronically via *http://www.regulations.gov* will be

presented on the website in their entirety as submitted. For comments submitted via hard copy, we will post your entire comment—including your personal identifying information—on *http://www.regulations.gov*. You may request at the top of your document that we withhold personal information such as your street address, phone number, or email address from public review; however, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *http://www.regulations.gov*, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Panama City Ecological Services Office, Panama City, FL (see **FOR FURTHER INFORMATION CONTACT**). Because we will consider all comments and information received during the comment period, our final determinations may differ from this proposal.

Previous Federal Actions

On October 6, 2015, we published a proposed rule to list the Suwannee moccasinshell as threatened (80 FR 60335) under the Endangered Species Act of 1973, as amended (ESA or Act; 16 U.S.C. 1531 *et seq*.). Publication of the proposed rule opened a 60-day comment period, which closed on December 7, 2015. On October 6, 2016, we published the final rule listing the species as threatened (81 FR 69417). Federal actions prior to October 6, 2016, affecting the species are outlined in the proposed listing rule.

Critical Habitat

Background

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Our regulations at 50 CFR 424.02 define the geographical area occupied by the species as: An area that may generally be delineated around species' occurrences, as determined by the Secretary (i.e., range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (e.g., migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals).

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the

requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat). In identifying those physical or biological features that occur in specific areas, we focus on the specific features that are essential to support the life-history needs of the species, including but not limited to,

water characteristics, soil type, geological features, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic, or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity.

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. When designating critical habitat, the Secretary will first evaluate areas occupied by the species. The Secretary will only consider unoccupied areas to be essential where a critical habitat designation limited to geographical areas occupied by the species would be inadequate to ensure the conservation of the species. In addition, for an unoccupied area to be considered essential, the Secretary must determine that there is a reasonable certainty both that the area will contribute to the conservation of the species and that the area contains one or more of those physical or biological features essential to the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the *Federal Register* on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines, provide criteria, establish procedures,

and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, other unpublished materials, or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) section 9 of the Act's prohibitions on taking any individual of the species, including taking caused by actions that affect habitat. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas

may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

Prudency Determination

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12), require that the Secretary shall designate critical habitat at the time the species is determined to be an endangered or threatened species to the maximum extent prudent and determinable. Our regulations (50 CFR 424.12(a)(1)) state that the Secretary may, but is not required to, determine that a designation would not be prudent in the following circumstances:

(i) The species is threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of such threat to the species;

(ii) The present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or threats to the species' habitat stem solely from causes that cannot be addressed through management actions resulting from consultations under section 7(a)(2) of the Act;

(iii) Areas within the jurisdiction of the United States provide no more than negligible conservation value, if any, for a species occurring primarily outside the jurisdiction of the United States;

(iv) No areas meet the definition of critical habitat; or

(v) The Secretary otherwise determines that designation of critical habitat would not be prudent based on the best scientific data available.

As discussed in the final rule listing this species as threatened, at the time of listing, there was no imminent threat of take attributed to collection or vandalism of this species; and in the years since listing, no threat of taking or vandalism have emerged. Identification and mapping of critical habitat is not expected to initiate any such threat. In our final listing rule, we determined that the present or threatened destruction, modification, or curtailment of habitat or range is a threat to the Suwannee moccasinshell and those threats may be addressed by section 7(a)(2) consultation measures. The species occurs wholly in the jurisdiction of the United States and we are able to identify areas that meet the definition of critical habitat. Therefore, because none of the circumstances enumerated in our regulations at 50 CFR 424.12(a)(1) have been met and because there are no other circumstances the Secretary has identified for which this designation of critical habitat would be not prudent we have determined that the designation of critical habitat is prudent for the Suwannee moccasinshell.

Critical Habitat Determinability

Having determined that designation is prudent, under section 4(a)(3) of the Act we must find whether critical habitat for the Suwannee moccasinshell is determinable. Our regulations at 50 CFR 424.12(a)(2) state that critical habitat is not determinable when one or both of the following situations exist:

(i) Data sufficient to perform required analyses are lacking, or

(ii) The biological needs of the species are not sufficiently well known to identify any area that meets the definition of "critical habitat."

We reviewed the available information pertaining to the biological needs of the species and habitat characteristics where the species is located. This and other information represent the best scientific data available and lead us to conclude that the designation of critical habitat is determinable for the Suwannee moccasinshell.

Physical or Biological Features Essential to the Conservation of the Species

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas we will designate as critical habitat from within the geographical area occupied by the species at the time of listing, we consider the physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection. We have defined physical or biological features essential to the conservation of the species in 50 CFR 424.02. Categories of physical or biological features include, but are not limited to:

(1) Space for individual and population growth and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, or rearing (or development) of offspring; and

(5) Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

Summary of Essential Physical or Biological Features

We derive the specific physical or biological features essential for the Suwannee moccasinshell from studies of its habitat, ecology, and life history as described below.

Additional information can be found in the final listing rule published in the *Federal Register* on October 6, 2016 (81 FR 69417).

Space for Individual and Population Growth and for Normal Behavior

Mussels generally live embedded in the bottom of stable streams and other bodies of water, in areas where flow velocities are sufficient to remove finer sediments and provide well-oxygenated waters. The Suwannee moccasinshell inhabits creeks and rivers where it is found in substrates of sand or a mixture of sand and gravel, and in areas with slow to moderate current (Williams 2015, p. 2). The Suwannee moccasinshell, similar to other mussels, is dependent on areas with flow refuges, where shear stress is relatively low and sediments remain stable during high flow events (Strayer 1999, pp. 468, 472; Hastie *et al.* 2001, pp. 111–114; Gangloff and Feminella 2007, p. 71). The species is often associated with large woody material embedded in the substrate, which may help stabilize substrates and act as a flow refuge. Substrates that remain stable in high flows conceivably allow these relatively sedentary animals to remain in the same general location throughout their entire lives. These habitat conditions not only provide space for Suwannee moccasinshell populations, but also provide cover and shelter and sites for breeding, reproduction, and growth of offspring.

Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements

Freshwater mussels, such as the Suwannee moccasinshell, siphon water into their shells and across four gills that are specialized for respiration, food collection, and brooding larvae in females. Food items include fine detritus (particles of organic debris), algae, diatoms, and bacteria (Strayer *et al*. 2004, pp. 430–431, Vaughn *et al*. 2008, p. 410). Adult mussels obtain food items both from the water column and from the

sediment, either by taking water in through the incurrent siphon or by moving material extracted from sediments into their shell using cilia (hair-like structures) on their foot. For the first several months, juvenile mussels feed primarily with their foot, although they also may filter interstitial (pore) water (Yeager *et al*. 1994, pp. 217–221). Food availability and quality for the Suwannee moccasinshell is affected by habitat stability, floodplain connectivity, flow, and water and sediment quality. Adequate food availability and quality is essential for normal behavior, growth, and viability during all life stages of this species.

The Suwannee moccasinshell is a riverine species that depends upon adequate amounts of flowing water. Flowing water transports food items to the sedentary juvenile and adult life stages, provides oxygen for respiration, removes wastes, transports sperm to females, and maintains the stream bottom habitats where the species is found (the effects of flow alteration on habitat is discussed below under *Habitats Protected from Disturbance*). A sufficient amount of continuously flowing water is a feature essential to this species.

The ranges of standard water quality characteristics (such as temperature, dissolved oxygen, pH, and conductivity) required by the Suwannee moccasinshell for normal behavior, growth, and viability of all life stages have not been investigated or are poorly understood. However, as relatively sedentary animals, mussels must tolerate the full range of physical and chemical conditions that occur naturally within the streams where they persist. The physical and chemical conditions (water quality) within the Suwannee moccasinshell's historical range may vary according to season, geology, climate events, and human activities within the watershed. The combined effects of

groundwater pumping and drought can lower groundwater levels in the basin, which can result in severely reduced stream flows for extended periods (Grubbs and Crandall 2007, p. 78; Torak *et al*. 2010, pp. 46–47). Moreover, increased stream temperatures and decreased dissolved oxygen concentrations are important secondary effects associated with flow reduction and cessation. Sensitive mussel species like the Suwannee moccasinshell may suffer lethal and non-lethal effects to low dissolved oxygen levels and elevated stream temperatures (Johnson *et al.* 2001, pp. 5–8; Golladay *et al*. 2004, p. 501; Haag and Warren 2008, pp. 1174–1176), and is particularly susceptible to these conditions during its early life stages (Sparks and Strayer 1998, pp. 132–133; Pandolfo *et al*. 2010, p. 965; Archambault *et al*. 2013, p. 247). Although specific physical and chemical tolerance ranges are not known for the Suwannee moccasinshell, we believe that current numeric standards for water quality criteria that have been adopted by the States under the Clean Water Act (CWA) represent levels that are essential to the conservation of the species.

Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring

Sites for breeding, reproduction, and development are tied to areas in stable rivers and creeks where flow velocities are sufficient to maintain habitats, and bottom substrates are composed of sand or a mixture of sand and gravel (see *Space for Individual and Population Growth and for Normal Behavior* above). Juvenile mussels depend upon areas where substrates remain stable during high flow events. The presence of large embedded logs may contribute to substrate stability and act as flow refuges. The larvae of most freshwater mussels are parasitic, requiring a period of encystment on a fish host in order to transform into juvenile mussels. Thus, the presence of appropriate host fishes

to complete its reproductive life cycle is essential to the Suwannee moccasinshell. In laboratory host trials, Suwannee moccasinshell larvae transformed primarily on the blackbanded darter (*Percina nigrofasciata*) and to a lesser extent on the brown darter (*Etheostoma edwini*) (Johnson *et al.* 2016, p. 171). The blackbanded darter is one of the most abundant darter species in coastal plain streams, and the distribution of both fish species overlap with the historical distribution of the Suwannee moccasinshell (Kuehne and Barbour 1983, pp. 29–30; Robins *et al*. 2018, pp. 317, 336).

Habitats Protected from Disturbance

The Suwannee moccasinshell's habitat has been impacted by pollution and reduced flows throughout its range, and by channel instability and excessive sedimentation in portions of its range (see *Factor A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range* of the proposed listing rule).

An environment free from toxic levels of pollutants is essential to the Suwannee moccasinshell, especially to its early life stages. There is no specific information on the sensitivity of the species to common municipal, agricultural, and industrial pollutants. However, as a group, freshwater mussels are more sensitive to pollution than many other aquatic organisms, and are one of the first species to respond to water quality impacts (Haag 2012, p. 355) (see Pollution discussion under Factor A of the final listing rule). We currently believe that most numeric standards for pollutants that have been adopted by the States under the CWA represent levels that are essential to the conservation of the Suwannee moccasinshell. However, some standards may not adequately protect sensitive mollusks like the Suwannee moccasinshell, or are not being appropriately measured,

monitored, or achieved in some reaches (see *Factor D. The Inadequacy of Existing Regulatory Mechanisms* section of the final listing rule).

The Suwannee moccasinshell is a riverine species that depends upon a natural flow regime to maintain the benthic habitats where it lives. A natural hydrologic regime is critical for the exchange of nutrients, movement and spawning activities of potential fish hosts, and maintenance of habitats. Altered flow regimes (including higher peak flows, lower base flows, and changes to seasonal flow pulses) can physically alter stream habitats. For example, increases in the amount and rate at which stormwater runoff enters stream channels can erode the stream bed and banks and cause sedimentation in downstream areas. Reductions in stream flow can alter hydraulically mediated sediment sorting throughout the river, which may displace or otherwise alter habitat for the Suwannee moccasinshell and its host fishes. Changes in flow regimes are attributable to factors such as lowering of the groundwater table due to pumping, changes in land use, and impoundments.

The Suwannee moccasinshell requires geomorphically stable stream channels to maintain its habitats. Channel instability occurs when the natural erosion process is accelerated leading to erosion (degradation) and sediment deposition (aggradation), and can eventually lead to channel incision (lowering of the streambed). Channel instability can lead to profound changes to mussel habitats due to scouring and sediment deposition (Hartfield 1993, p. 138). Stream channels can become destabilized as a result of physical alterations to the channel (such as dredging, straightening, impounding, and hardening), altered stormwater runoff patterns, and disturbance to riparian areas. Natural stream channel stability is achieved by allowing the river or creek to develop a stable dimension,

pattern, and profile such that, over time, channel features are maintained and the stream channel neither degrades nor aggrades. Stable rivers and creeks consistently transport their sediment load, both in size and type, associated with local deposition and scour (Rosgen 1996, pp. 1–3). These habitats are dynamic and are formed and maintained by water quantity, channel features (dimension, pattern, and profile), and natural sediment input to the system through periodic flooding, which maintains connectivity and interaction with the floodplain.

The Suwannee moccasinshell requires habitats that are free from excessive sedimentation. Although sediment deposition is a normal stream process, habitat may be degraded or destroyed in areas where excessive amounts of sediment accumulate and smother habitat. Sediments that enter via stormwater runoff, may also serve to transport pollutants (like pesticides and surfactants) into streams (Haag 2012, p. 378). Heavy accumulations of unconsolidated sediments can alter bottom substrates to such a degree that it becomes uninhabitable for mussels, particularly juveniles.

In conclusion, based on the analysis above, we have determined that the following physical or biological features are essential to support the Suwannee moccasinshell:

(1) Geomorphically stable stream channels (channels that maintain lateral dimensions, longitudinal profiles, and sinuosity patterns over time without an aggrading or degrading bed elevation).

(2) Stable substrates of muddy sand or mixtures of sand and gravel, and with little to no accumulation of unconsolidated sediments and low amounts of filamentous algae.

(3) A natural hydrologic flow regime (magnitude, frequency, duration, and

seasonality of discharge over time) necessary to maintain benthic habitats where the species is found, and connectivity of stream channels with the floodplain, allowing the exchange of nutrients and sediment for habitat maintenance, food availability, and spawning habitat for native fishes.

(4) Water quality conditions needed to sustain healthy Suwannee moccasinshell populations, including low pollutant levels (not less than State criteria), a natural temperature regime, pH (between 6.0 to 8.5), adequate oxygen content (not less than State criteria), hardness, turbidity, and other chemical characteristics necessary for normal behavior, growth, and viability of all life stages.

(5) The presence of abundant fish hosts necessary for recruitment of the Suwannee moccasinshell. The presence of blackbanded darters (*Percina nigrofasciata*) and brown darters (*Etheostoma edwini*) will serve as an indication of fish host presence.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features that are essential to the conservation of the species and which may require special management considerations or protection. All three units that we are proposing for designation, including the unit that was occupied by the species at the time of listing, have mixed ownership of adjacent riparian lands with mainly private (72 percent) and State (27 percent) lands (table 1). All State-owned riparian lands are in Florida, and the majority are managed by Florida's Suwannee River Water Management District (SRWMD). Tracts are managed to maintain adequate water supply and water quality for natural systems by preserving riparian habitats and restricting development (SRWMD 2014, p.

3). The SRWMD also established minimum flows and levels for the river channel in the lower basin, downstream of Fanning Springs. Minimum flow and level criteria establish a limit at which further withdrawals would be detrimental to water resources, taking into consideration fish and wildlife habitats, the passage of fish, sediment loads, and water quality, among others (SRWMD 2005, pp. 6–8). In addition, the Suwannee River and Santa Fe River system have been designated Outstanding Florida Waters (OFW), which prevents the permitted discharge of pollutants that would lower existing water quality of, or significantly degrade, the OFW. While these programs may indirectly alleviate some detrimental impacts on aquatic habitats, there currently are no plans or agreements designed specifically for the conservation of the Suwannee moccasinshell or for freshwater mussels in general.

The features essential to the conservation of the Suwannee moccasinshell may require special management considerations or protection to ameliorate the following threats: reduced flows, nonpoint source pollution (from stormwater runoff or infiltration), point source pollution (from wastewater discharges or accidental releases), and physical alterations to the stream channel (for example, dredging, straightening, impounding, etc.). Special management considerations or protection are required within critical habitat areas to ameliorate these threats, and include (but are not limited to): (1) moderation of surface and ground water withdrawals; (2) improvement of the treatment of wastewater discharged from permitted facilities and the operation of those facilities; (3) reductions in pesticide and fertilizer use especially in groundwater recharge areas and near stream channels; (4) use of best management practices (BMPs) designed to reduce sedimentation, erosion, and stream bank alteration; (5) protection and restoration of

riparian buffers; and (6) avoidance of physical alternations to the stream channel. This only applies to federal actions (see the Application of the "Adverse Modification" Standard below for more information).

Criteria Used To Identify Critical Habitat

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b), we review available information pertaining to the habitat requirements of the species and identify specific areas within the geographical area occupied by the species at the time of listing and any specific areas outside the geographical area occupied by the species to be considered for designation as critical habitat.

The current distribution of the species is much reduced from its historical range. We anticipate that recovery will require continued protection of the existing population and its habitat, as well as reintroduction of Suwannee moccasinshell into historically occupied areas, ensuring there are viable populations and that they occur over a wide geographic area. Rangewide recovery considerations, such as maintaining existing genetic diversity and striving for representation of all major portions of the species' current range, were considered in formulating this proposed critical habitat.

For this proposed rule, we completed the following steps to delineate critical habitat (specific methods follow below):

(1) We compiled all available occurrence data records.

(2) We used confirmed presences from June 2001–March 2016 as the foundation for identifying areas currently occupied.

(3) We evaluated habitat suitability of stream segments currently occupied by the species, and retained all occupied stream segments.

(4) We evaluated unoccupied stream segments for suitability, connectivity, and expansion, and identified areas containing the components comprising the physical or biological features that may require special management considerations or protection.

(5) We omitted some unoccupied areas that are highly degraded and are not likely restorable (e.g., insufficient flowing water, channel destabilized), and, therefore, are not considered essential for the conservation of the species.

(6) We delineated boundaries of potential proposed critical habitat units based on the above information.

Specific criteria and methodology used to determine proposed critical habitat unit boundaries are discussed below.

Sources of data for this proposed critical habitat designation include multiple databases maintained by Florida Fish and Wildlife Conservation Commission, Dr. James D. Williams, Florida Museum of Natural History, and U.S. Geological Survey; verified museum records from multiple institutions (see *Methods* in Johnson *et al*. 2016, pp. 164–165); and a status report by Blalock–Herod and Williams (2001, entire). Occurrence data included records collected from May 1916 to March 2016. A large number of surveys were conducted throughout the Suwannee River basin by Florida Fish and Wildlife Conservation Commission biologists during 2012–2016, and all sites with historical occurrences of Suwannee moccasinshell were sampled during this period. Sources of information pertaining to habitat requirements of the Suwannee moccasinshell include observations recorded during surveys and information contained in Blalock–Herod and

Williams (2001, entire) and Williams *et al.* (2014, pp. 278–280).

Areas Occupied at the Time of Listing

We define "currently occupied" as river reaches with positive surveys from 2000 to 2016. In making these determinations, we recognized that known occurrences for some mussel species are extremely localized, and rare mussels can be difficult to locate. In addition, stream habitats are highly dependent upon upstream and downstream channel habitat conditions for their maintenance. Therefore, we considered the entire reach between the uppermost and lowermost currently occupied locations to delineate the probable upstream and downstream extent of the Suwannee moccasinshell's distribution. Within the current range of the species, some habitats may or may not be actively utilized by individuals, but we consider these areas to be occupied at the scale of the geographic range of the species.

We propose to designate one occupied unit as critical habitat for the Suwannee moccasinshell in the Suwannee River and lower Santa Fe River. This area contains one or more of the physical or biological features to support life-history processes essential to the conservation of the Suwannee moccasinshell, and those physical or biological features require special management conditions or protections. This remaining population provides little redundancy for the species, and a series of back-to-back stochastic events or a single catastrophic event could significantly reduce or extirpate the remaining population. Consequently, we have determined that the occupied area is inadequate to ensure the conservation of the species. Therefore, we have also identified, and are proposing for designation of critical habitat, unoccupied areas that are essential for the conservation of the species.

Areas Unoccupied at the Time of Listing

Because we have determined occupied areas alone are not adequate for the conservation of the species, we have evaluated whether any unoccupied areas are essential for the conservation of the species. We are proposing as critical habitat two units that are currently unoccupied. The units have at least one of the physical or biological features essential to the conservation of the species and we are reasonably certain that each will contribute to the conservation of the species. Our specific rationale for each unit can be found below in the unit descriptions below.

An examination of all available collection data shows that the Suwannee moccasinshell's range and numbers have declined over time (see "Distribution and Abundance" discussion in the final listing rule). For example, despite considerable survey effort, the species has not been collected in the lower Suwannee River or Withlacoochee River subbasins since the 1960s, and was last collected in the upper Santa Fe River subbasin in 1996 (Johnson *et al*. 2016, p. 170). There has also been a reduction in numbers, with fewer individuals encountered during recent surveys than were collected historically (Johnson *et al.* 2016, pp. 166, 170).

The Suwannee moccasinshell's reduced range and small population size may increase its vulnerability to many threats. Aquatic species with small ranges, few populations, and small or declining population sizes are the most vulnerable to extinction (Primack 2008, p. 137; Haag 2012, p. 336). The effects of certain environmental pressures, particularly habitat degradation and loss, catastrophic weather events, and introduced species, are greater when population size is small (Soulé 1980, pp. 33, 71;

Primack 2008, pp. 133–137, 152). Threats to the Suwannee moccasinshell are compounded by its reduced and linear distribution, with nearly the entire population presently distributed within the Suwannee River mainstem. A small population also occurs in the lower Santa Fe River, however, only 5 recent collections (3 of which are relic shell) have been reported in this subbasin (Johnson et al. 2016, p. 171).

A larger population of Suwannee moccasinshell occurring over a wide geographic area can have higher resilience. A large population is better able to return to pre–disturbance numbers after stochastic events, and also has increased availability of mates and reduced risk of genetic drift and inbreeding depression. The minimum viable population size needed to withstand stochastic events is not known for mussels. However, for species with complex life histories like freshwater mussels, maximizing the chances of persistence over the long–term, likely requires a population of considerable size (Haag 2012, p. 371). Reestablishing viable populations in the Withlacoochee and upper Santa Fe River subbasins increases Suwannee moccasinshell resiliency by expanding its range into historically occupied areas, potentially increasing population size, and providing refuge from catastrophic events (for example, flooding and spills) in the Suwannee River.

We determined the Withlacoochee and upper Santa Fe River subbasins have the potential for future reoccupation by the species, provided that stressors are managed and mitigated. These specific areas encompass the minimum area of the species' historical range within the proposed critical habitat designation, while still providing ecological diversity so that the species has the ability to evolve and adapt over time (representation) to ensure that the species has an adequate level of redundancy to guard against future

catastrophic events. These areas also represent the stream reaches within the historical range with the best potential for recovery of the species due to their current conditions and likely suitability for reintroductions. Accordingly, we propose to designate one unoccupied unit in the upper Santa Fe River and one unoccupied unit in the Withlacoochee River. As described below in the individual unit descriptions, each unit contains one or more of the physical or biological features and are reasonably certain to contribute to the conservation of the species.

General Information on the Maps of the Proposed Critical Habitat Designation

The critical habitat streams were mapped with USGS National Hydrography Dataset GIS data. The high-resolution 1:24,000 flowlines were used to delineate the upstream and downstream boundaries of the proposed critical habitat units and to calculate river kilometers and miles, according to the criteria explained below. The downstream boundary of a unit is the confluence of a named tributary stream or spring, below the farthest downstream occurrence record. The upstream boundary is the confluence of the first major tributary, road-crossing bridge, or a permanent barrier to fish passage above the farthest upstream occurrence record. The confluence of a large tributary typically marks a significant change in the size of the stream and is a logical and recognizable upstream terminus. Likewise, a dam or other barrier to fish passage marks the upstream extent to which mussels may disperse via their fish hosts. In the unit descriptions, distances between landmarks marking the upstream or downstream extent of a stream segment are given in river kilometers (km) and equivalent miles (mi), as measured tracing the course of the stream, not straight-line distance.

The areas proposed as critical habitat include only stream channels within the ordinary high-water line. There are no developed areas within the critical habitat boundaries except for transportation crossings, which do not remove the suitability of these areas for this species. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical habitat is finalized as proposed, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical or biological features in the adjacent critical habitat.

The critical habitat designation is defined by the maps, as modified by any accompanying regulatory text, presented at the end of this document in the rule portion. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. The coordinates on which each map is based are provided in the critical habitat unit descriptions at the end of this document, and are available at the Service's internet site, (*http://www.fws.gov/panamacity*), (*http://www.regulations.gov*) at Docket No. FWS–R4–ES–2019–0059, and at the field office responsible for this designation (see **FOR FURTHER INFORMATION CONTACT** above).

Proposed Critical Habitat Designation

We are proposing to designate approximately 306 km (190 mi) of stream channel in three units as critical habitat for the Suwannee moccasinshell. The three units we propose as critical habitat are: Unit 1: Suwannee River, Unit 2: Upper Santa Fe River, and Unit 3: Withlacoochee River. Overall, about 81 percent of critical habitat proposed for the Suwannee moccasinshell is already designated as critical habitat for either of two ESA-listed species: the oval pigtoe (*Pleurobema pyriforme*) or Gulf sturgeon *(Acipenser oxyrinchus desotoi).* Table 1 shows the proposed critical habitat units for the Suwannee moccasinshell and ownership of riparian lands adjacent to the units.

TABLE 1. Proposed critical habitat units for the Suwannee moccasinshell. Ownership of riparian lands adjacent to the units is given for each streambank in kilometers (km) and miles (mi). Lengths greater than 10 kilometers are rounded to the nearest whole kilometer and mile.

Bank	Private km (mi)	State km (mi)	County km (mi)	Unit length km (mi)
Unit 1: Suwannee River, FL				**187 (116.2)**
Right descending bank*	133 (83)	51 (31)	3.1 (1.9)	
Left descending bank*	133 (83)	53 (33)	1.5 (0.9)	
Total	*266 (165)*	*103 (64)*	*4.6 (2.9)*	
Unit 2: Upper Santa Fe River, FL				**43 (26.7)**
Right descending bank	34 (21)	8.4 (5.2)	0.4 (0.3)	
Left descending bank	26 (16)	13 (8)	3.6 (2.2)	
Total	*61 (38)*	*22 (13)*	*4 (2.5)*	
Unit 3: Withlacoochee River, FL and GA				**75.5 (46.9)**
Right descending bank	58 (36)	17 (11)	0	
Left descending bank	53 (33)	22 (14)	0	
Total	*112 (69)*	*39 (25)*	*0*	

Note: Totals may not sum due to rounding.
*Right and left descending bank is that bank of a stream when facing in the direction of flow or downstream.

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the Suwannee moccasinshell, below.

Unit 1: Suwannee River, Florida

Unit 1 consists of approximately 187 km (116 mi) of the Suwannee River and lower Santa Fe River in Alachua, Columbia, Dixie, Gilchrist, Lafayette, Madison, and Suwannee Counties, Florida. The unit includes the Suwannee River mainstem from the confluence of Hart Springs (near river kilometer 71) in Dixie–Gilchrist Counties, upstream 137 km (85 mi) to the confluence of the Withlacoochee River in Madison–Suwannee Counties; and the Santa Fe River from its confluence with the Suwannee River in Suwannee–Gilchrist Counties, upstream 50 km (31 mi) to the river's rise in Alachua County. The Santa Fe River flows underground for about 5 km (3.1 mi), "sinking" at O'Leno State Park and "rising" at River Rise Preserve State Park. The lower and upper portions of the Santa Fe are intermittently connected during high flow event. The riparian lands along stream reaches in this unit are generally privately owned agricultural or silvicultural lands, or State-owned or -managed conservation lands (Table 1). The Suwannee moccasinshell occupies all stream reaches in this unit, which contains most of the physical or biological features essential to the conservation of the Suwannee moccasinshell. However, in the Santa Fe River, flow levels have declined over time, and excessive sedimentation and algae growth are a problem; therefore, physical or biological features 1 and 3 are not consistently present in this portion of the unit. Currently, 73

percent of Unit 1 is designated critical habitat for the Gulf sturgeon (a migratory fish). Some small urban areas also exist near the two rivers. Special management considerations and protections that may be required to address threats within the unit include: minimizing ground and surface water withdrawals or other actions that alter stream hydrology; reducing the use of fertilizers and pesticides, especially in spring recharge areas and near stream channels; improving treatment of wastewater discharged from permitted facilities and the operation of those facilities; implementing practices that protect or restore riparian buffer areas along stream corridors; prohibiting the removal of pre-cut submerged timber (deadhead logs); establishing and enforcing restrictions on boat speed and length, especially in the lower Santa Fe River. Many of these measures must also be implemented in areas upstream of the unit to adequately protect habitat within the unit.

Unit 2: Upper Santa Fe River, Florida

Unit 2 consists of approximately 43 km (27 mi) of the Santa Fe River and New River in Alachua, Bradford, Columbia, and Union Counties, Florida. The unit includes the Santa Fe River from the river's sink in Alachua County, upstream 36.5 km (23 mi) to the confluence of Rocky Creek in Bradford–Alachua Counties; and the New River from its confluence with the Santa Fe River, upstream 6.5 km (4 mi) to the confluence of Five Mile Creek in Union–Bradford Counties. Unit 2 is within the historical range of the Suwannee moccasinshell but is not currently occupied by the species. The riparian lands along stream channels in this unit are generally privately owned agricultural or silvicultural lands, or are State-owned or -managed conservation lands (Table 1). All of Unit 2 is already designated critical habitat for the oval pigtoe (a freshwater mussel). The

Suwannee moccasinshell was routinely represented in historical collections in the upper Santa Fe subbasin, however, it is the only mussel species not detected in contemporary surveys. Currently, the unit supports a diverse mussel fauna, including several species that ordinarily co-occur with the Suwannee moccasinshell. This unit has at least one of the physical or biological features essential to the conservation of the species and we are reasonably certain that this area will contribute to the conservation of the species. Our specific rationale for this unit can be found below.

This area is essential to the conservation of the species because it would improve the resiliency and redundancy of the species, which is necessary to conserve and recover the Suwannee moccasinshell. For species resiliency and redundancy, it is important to reestablish Suwannee moccasinshell populations in Unit 2. Presently, nearly the entire population is linearly distributed within the mainstem Suwannee River and vulnerable to catastrophic events (for example, contaminant spills or severe floods) as well as to random fluctuations in population size or environmental conditions (Haag and Williams 2014, p. 48). Reestablishing viable populations in the Santa Fe River subbasin would reduce its extinction risk by expanding its current range into areas beyond the mainstem by providing connectivity to already occupied areas, space for growth and population expansion in portions of historical habitat, and refugia areas from threats in the Suwannee River mainstem.

Although it is considered unoccupied, portions of this unit contain some or all of the physical or biological features essential for the conservation of the species. Unit 2 possesses those characteristics as described by physical or biological features 1 and 2 and stable stream channels and suitable substrates are present throughout much of the unit.

Unit 2 retains the features of a natural stream channel and presently supports a diverse mussel fauna, including several mussel species that ordinarily co-occur with the Suwannee moccasinshell. Both fish species found to serve as larval hosts for the Suwannee moccasinshell occur within the unit (Robins *et al*. 2018, pp. 317, 336).

Physical or biological features 3 and 4 are degraded in the unit during some times of the year. Flow levels in the upper Santa Fe River have declined over time, and the river has ceased to flow multiple times since 2000 (Johnson *et al.* 2016, p. 170). An important effect of reduced flows is altered water quality, especially depressed dissolved oxygen levels and elevated water temperatures (discussed above under "Physical or Biological Features"). In 2007, the SRWMD developed minimum flow levels to establish flows protective of "fish and wildlife habitats and the passage of fish" in the upper Santa Fe River (SRWMD 2007, entire). The restoration of natural flow levels is a complex issue that will require considerable involvement and collaboration of Federal, State, and local governments and private landowners to implement projects that reduce groundwater pumping in order to recover aquifer levels and sustain base flows in the upper Santa Fe River subbasin. However, if implemented, water management strategies would improve physical or biological features 3 and 4.

The need for conservation efforts is recognized by our conservation partners, and methods for restoring and reintroducing the species into unoccupied habitat are being developed. The Florida Fish and Wildlife Conservation Commission has expressed support for including this area in a critical habitat designation (Florida Fish and Wildlife Conservation Commission 2019). Accordingly, we are reasonably certain this unit will contribute to the conservation of the species.

Unit 3: Withlacoochee River, Georgia and Florida

Unit 3 consists of approximately 75.5 km (47 mi) of the Withlacoochee River in Madison and Hamilton Counties, Florida, and Brooks and Lowndes Counties, Georgia. The unit includes the Withlacoochee River from its confluence with the Suwannee River in Madison–Hamilton Counties, FL, upstream 75.5 km (47 mi) to the confluence of Okapilco Creek in Brooks–Lowndes Counties, GA. Unit 3 is within the historical range of the Suwannee moccasinshell but is not currently occupied by the species. The riparian lands along stream channels in this unit are generally agricultural or silvicultural lands (Table 1). Upstream of the unit, urban areas associated with the City of Valdosta, GA are present near the Withlacoochee River. Twenty-five percent of Unit 3 is already designated critical habitat for the Gulf sturgeon. Currently, the unit supports a diverse mussel fauna, however, the Suwannee moccasinshell is the only species not detected in contemporary surveys. This unit has at least one of the physical or biological features essential to the conservation of the species and we are reasonably certain that this area will contribute to the conservation of the species. Our specific rationale for this unit can be found below.

This area is essential to the conservation of the species because it would improve the resiliency and redundancy of the species, which is necessary to conserve and recover the Suwannee moccasinshell. For species resiliency and redundancy, it is important to reestablish Suwannee moccasinshell populations in Unit 3. Presently, nearly the entire population is linearly distributed within the mainstem Suwannee River and vulnerable to catastrophic events (for example, contaminant spills or severe floods) as well as to

random fluctuations in population size or environmental conditions (Haag and Williams 2014, p. 48). Reestablishing viable populations in the Withlacoochee River subbasin would reduce its extinction risk by expanding its current range into areas beyond the mainstem by providing connectivity to already occupied areas, space for growth and population expansion in portions of historical habitat, and refugia areas from threats in the Suwannee River mainstem.

Although it is considered unoccupied, portions of this unit contain some or all of the physical or biological features essential for the conservation of the species. Unit 3 possesses those characteristics as described by physical or biological features 1 and 2, and long reaches of stable stream channel with suitable substrates are present within the unit. Unit 3 retains the features of a natural stream channel and supports a diverse mussel fauna, including several mussel species that ordinarily co-occur with the Suwannee moccasinshell. Both fish species found to serve as larval hosts for the Suwannee moccasinshell occur within the unit (Robins *et al*. 2018, pp. 317, 336). Therefore, we believe the unit has the potential to support the species' life-history functions.

Physical or biological feature 4 is in degraded condition, and pollution may have contributed to the Suwannee moccasinshell's decline in Unit 3. The domestic wastewater treatment plant for the city of Valdosta, GA is approximately 14 river miles upstream of the unit, and has a history of untreated sewage releases to the Withlacoochee River after heavy rain events. However, major renovations to the city's sewer system were completed in June 2016 with the construction of a new treatment plant. Additional projects to address continued problems with sewage spills are ongoing, and the construction of a large retention basin is planned. If these improvements are realized,

water quality could be restored to levels necessary to support the species.

The need for conservation efforts is recognized by our conservation partners, and methods for restoring and reintroducing the species into unoccupied habitat are being developed. The Florida Fish and Wildlife Conservation Commission and Georgia Department of Natural Resources have expressed support for including this area in a critical habitat designation (Florida Fish and Wildlife Conservation Commission 2019; Georgia Department of Natural Resources 2018). Accordingly, we are reasonably certain this unit will contribute to the conservation of the species.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action that is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

We published a final regulation with a revised definition of destruction or adverse modification on August 27, 2019 (84 FR 44976). Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the CWA or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded, or authorized or carried out by a Federal agency, do not require section 7 consultation.

Compliance with the requirements of section 7(a)(2), is documented through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define "reasonable and prudent alternatives" (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the

action,

(2) Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies sometimes may need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat. The regulations also specify some exceptions to this requirement for specific land management plans. See the regulations for a description of those exceptions.

Overall, about 81 percent of critical habitat proposed for the Suwannee moccasinshell is already designated as critical habitat for either the oval pigtoe or Gulf sturgeon. For Federal actions within areas already designated as critical habitat for these

species, conservation measures we would recommend for the Suwannee moccasinshell are likely to be the same or very similar to those we already recommend for the oval pigtoe and Gulf sturgeon. New additional conservation measures will, however, likely be needed within that portion of Unit 3 that is unoccupied by the Suwannee moccasinshell but not currently designated critical habitat for the Gulf sturgeon.

Application of the "Destruction or Adverse Modification" Standard

The key factor related to the destruction or adverse modification determination is whether, with implementation of the proposed Federal action, the critical habitat affected by the action is altered in way that appreciably diminishes the value of the designated critical habitat as a whole for the conservation of the listed species. As discussed above, the role of critical habitat is to support the physical or biological features essential to the conservation of a listed species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may violate section 7(a)(2) of the Act by destroying or adversely modifying such habitat, or that may be affected by such designation.

Activities that may be found likely to destroy or adversely modify critical habitat under 7(a)(2) of the Act include, but are not limited to:

(1) Actions that would introduce contaminants or alter water chemistry or temperature. Such activities could include, but are not limited to, release of chemical or biological pollutants, or heated effluents into the surface water or connected groundwater at a point source or by dispersed release (nonpoint source). These activities could alter water quality conditions to levels that are beyond the tolerances of the mussel or its fish

host.

(2) Actions that would reduce flow levels or alter flow regimes. This could include, but are not limited to, activities that lower groundwater levels including groundwater pumping and surface water withdrawal or diversion. These activities can result in long-term reduced stream flows, which may cause channels to stop flowing or dry up; and also may decrease oxygen levels, elevate water temperatures, degrade water quality, and cause sediments to accumulate. These activities could alter flow levels beyond the tolerances of the mussel or its fish host.

(3) Actions that would significantly increase the filamentous algal community within the stream channel. Such activities could include, but are not limited to, release of nutrients into the surface water or connected groundwater at a point source or by dispersed release (nonpoint source). These activities can result in excessive filamentous algae filling streams and reducing habitat for the mussel and its fish host, degrading water quality during their decay, and decreasing oxygen levels at night from their respiration. Thick algal mats can also entrain young mussels and prevent juveniles from settling into the sediment. These activities could degrade the habitat and reduce oxygen levels below the tolerances of the mussel or its fish host.

(4) Actions that would significantly alter channel morphology or cause channel instability. Such activities could include but are not limited to channelization, impoundment, road and bridge construction, mining, dredging, destruction of riparian vegetation, and land clearing. These activities may lead to changes in flow regimes, erosion of the streambed and banks, and excessive sedimentation that could degrade the habitat of the mussel or its fish host.

(5) Actions that would cause significant amounts of sediments to enter the stream channel. Such activities could include, but are not limited to livestock grazing, road and bridge construction, channel alteration, timber harvest, commercial and residential development, and other watershed and floodplain disturbances. These activities could eliminate or degrade the habitat necessary for the growth and reproduction of the mussel or its fish host.

Exemptions

Application of Section 4(a)(3) of the Act

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that: "The Secretary shall not designate as critical habitat any lands or other geographic areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan [INRMP] prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation." There are no Department of Defense lands with a completed INRMP within the proposed critical habitat designation.

Consideration of Impacts Under Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based

on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

When considering the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation; the continuation, strengthening, or encouragement of partnerships; or implementation of a management plan. In the case of the Suwannee moccasinshell, the benefits of critical habitat include public awareness of the presence of the species and the importance of habitat protection, and, where a Federal nexus exists, increased habitat protection for the Suwannee moccasinshell due to protection from adverse modification or destruction of critical habitat. In practice, situations with a Federal nexus exist primarily on Federal lands or for projects undertaken by Federal agencies. Additionally, continued implementation of an ongoing management plan that provides equal to or more conservation than a critical habitat designation would reduce the benefits of including that specific area in the critical habitat designation.

We have not considered any areas for exclusion from critical habitat. However, the final decision on whether to exclude any areas will be based on the best scientific data available at the time of the final designation, including information obtained during the comment period and information about the economic impact of designation. Accordingly, we have prepared a draft economic analysis concerning the proposed critical habitat designation, which is available for review and comment (see **ADDRESSES**).

Consideration of Economic Impacts

Section 4(b)(2) of the Act and its implementing regulations require that we consider the economic impact that may result from a designation of critical habitat. To assess the probable economic impacts of a designation, we must first evaluate specific land uses or activities and projects that may occur in the area of the critical habitat. We then must evaluate the impacts that a specific critical habitat designation may have on restricting or modifying specific land uses or activities for the benefit of the species and its habitat within the areas proposed. We then identify which conservation efforts may be the result of the species being listed under the Act versus those attributed solely to the designation of critical habitat for this particular species. The probable economic impact of a proposed critical habitat designation is analyzed by comparing scenarios both "with critical habitat" and "without critical habitat." The "without critical habitat" scenario represents the baseline for the analysis, which includes the existing regulatory and socio-economic burden imposed on landowners, managers, or other resource users potentially affected by the designation of critical habitat (e.g., under the Federal listing as well as other Federal, State, and local regulations). The baseline, therefore, represents the costs of all efforts attributable to the listing of the species under the Act (i.e., conservation of the species and its habitat incurred regardless of whether critical habitat is designated). The "with critical habitat" scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts would not be expected without the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat, above and beyond the

baseline costs. These are the costs we use when evaluating the benefits of inclusion and exclusion of particular areas from the final designation of critical habitat should we choose to conduct an optional section 4(b)(2) exclusion analysis.

For this designation, we developed an incremental effects memorandum (IEM) considering the probable incremental economic impacts that may result from this proposed designation of critical habitat. The information contained in our IEM was then used to develop a screening analysis of the probable effects of the designation (Industrial Economics 2017). The purpose of the screening analysis is to filter out the geographic areas in which the critical habitat designation is unlikely to result in probable incremental economic impacts. In particular, the screening analysis considers baseline costs (i.e., absent critical habitat designation) and includes probable economic impacts where land and water use may be subject to conservation plans, land management plans, best management practices, or regulations that protect the habitat area as a result of the Federal listing status of the species. The screening analysis filters out particular areas of critical habitat that are already subject to such protections and are, therefore, unlikely to incur incremental economic impacts. Ultimately, the screening analysis allows us to focus our analysis on evaluating the specific areas or sectors that may incur probable incremental economic impacts as a result of the designation. The screening analysis also assesses whether units unoccupied by the species may require additional management or conservation efforts as a result of the critical habitat designation, and thus may incur incremental economic impacts. This screening analysis, combined with the information contained in our IEM, constitute our draft economic analysis (DEA) of the proposed critical habitat designation for the Suwannee moccasinshell and is summarized in the

narrative below.

Executive Orders 12866 and 13563 direct Federal agencies to assess the costs and benefits of available regulatory alternatives in quantitative (to the extent feasible) and qualitative terms. Consistent with the E.O. regulatory analysis requirements, our effects analysis under the Act may take into consideration impacts to both directly and indirectly affected entities, where practicable and reasonable. If sufficient data are available, we assess to the extent practicable the probable impacts to both directly and indirectly affected entities. As part of our screening analysis, we considered the types of economic activities that are likely to occur within the areas likely affected by the critical habitat designation. In our evaluation of the probable incremental economic impacts that may result from the proposed designation of critical habitat for the Suwannee moccasinshell, first we identified, in the IEM dated June 30, 2016, probable incremental economic impacts associated with the following categories of activities: (1) groundwater pumping; (2) agriculture; (3) mining; (4) grazing; (5) discharge of chemical pollutants; (6) roadway and bridge construction; (7) in-stream dams and diversions; (8) dredging; (9) commercial or residential development; (10) timber harvest; and (11) removal of large in-channel logs. We considered each industry or category individually. Additionally, we considered whether these activities would have any Federal involvement.

Critical habitat designation generally will not affect activities that do not have any Federal involvement; under the ESA, the designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies. In areas where the Suwannee moccasinshell is present, Federal agencies already are required to consult with the Service under section 7 of the Act on activities they fund, permit, or

implement that may affect the species. If we finalize this proposed critical habitat designation, consultations to avoid the destruction or adverse modification of critical habitat would be incorporated into the existing consultation process.

In our IEM, we attempted to clarify the distinction between the effects that will result from the species being listed and those attributable to the critical habitat designation (i.e., difference between the jeopardy and adverse modification standards) for the Suwannee moccasinshell's critical habitat. The following specific circumstances in this case help to inform our evaluation: (1) The physical or biological features identified for occupied critical habitat are the same features essential for the life requisites of the species and (2) any actions that would result in sufficient harm or harassment to constitute jeopardy to the Suwannee moccasinshell would also likely adversely affect the essential physical or biological features of occupied critical habitat. The IEM outlines our rationale concerning this limited distinction between baseline conservation efforts and incremental impacts of the designation of critical habitat for this species.

The proposed critical habitat designation for the Suwannee moccasinshell totals approximately 306 kilometers (190 miles) of stream channels in three units. The riparian lands adjacent to critical habitat are under private (72 percent), State (27 percent), and county (1 percent) ownership. Unit 1 is the only occupied unit and is 61 percent of the total proposed critical habitat designation. As discussed above, in this occupied area, any actions that may affect the species or its habitat would also affect designated critical habitat and it is unlikely that any additional conservation efforts would be recommended to address the adverse modification standard over and above those recommended as necessary to avoid jeopardizing the continued existence of the Suwannee moccasinshell.

Therefore, only administrative costs are expected in actions affecting this unit. While this additional analysis will require time and resources by both the Federal action agency and the Service, it is believed that, in most circumstances, these costs, because they are predominantly administrative in nature, would not be significant.

Units 2 and 3 are currently unoccupied by the species but are essential for the conservation of the species. These units total 119 km (78 mi) and comprise 39 percent of the total proposed critical habitat designation. In these unoccupied areas, any conservation efforts or associated probable impacts would be considered incremental effects attributed to the critical habitat designation.

The screening analysis finds that the total annual incremental costs of critical habitat designation for the Suwannee moccasinshell are anticipated to be less than $100,000 per year. The highest costs are anticipated in Unit 3 because it is unoccupied by the species and is not already designated critical habitat for another mussel species (for comparison, see discussion for Unit 2 below). In this unit, the designation is anticipated to result in a small number of additional section 7 consultations (approximately three per year), primarily related to planned transportation projects that intersect the unit. Anticipated project modifications may include minimizing the extent of in-channel maintenance activities, relocation of discharge outfalls, or requiring strict adherence of water quality and habitat protections. Total annual costs to the Service and action agencies for consultations and project modifications in Unit 3 are anticipated to be less than $80,000 annually (Industrial Economics 2017, pp. 9–12).

In Units 1 and 2, the economic costs of implementing the rule will most likely be limited to additional administrative efforts by the Service and action agencies to consider

adverse modification. Unit 1 is occupied by the Suwannee moccasinshell, and conservation actions taken in order to be protective of the species would also be sufficient to protect its critical habitat. Unit 2 is also designated as critical habitat for the oval pigtoe, a freshwater mussel with nearly identical physical or biological features to the Suwannee moccasinshell. Conservation efforts taken to protect oval pigtoe critical habitat would also be sufficient to protect Suwannee moccasinshell critical habitat. Thus, additional project modifications are not anticipated in Units 1 and 2. In total, up to six section 7 consultations per year are anticipated to occur in Units 1 and 2, with total costs of less than $20,000 annually (Industrial Economics 2017, pp. 7–9).

Exclusions

Exclusions Based on Economic Impacts

We are soliciting data and comments from the public on the DEA discussed above, as well as all aspects of the proposed rule. During the development of a final designation, we will consider the information presented in the DEA and any additional information on economic impacts received through the public comment period to determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19.

Exclusions Based on National Security Impacts

In preparing this proposal, we have determined that none of the lands within the proposed designation of critical habitat for the Suwannee moccasinshell are owned or managed by the Department of Defense or Department of Homeland Security, and, therefore, we anticipate no impact on national security or homeland security. However,

during the development of a final designation we will consider any additional information received through the public comment period on the impacts of the proposed designation on national security or homeland security to determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19.

Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security. We consider a number of factors, including whether the landowners have developed any HCPs or other management plans for the area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at any tribal issues, and consider the government-to-government relationship of the United States with tribal entities. We also consider any social impacts that might occur because of the designation.

In preparing this proposal, we have determined that there are currently no HCPs or other management plans for the Suwannee moccasinshell, and the proposed designation does not include any tribal lands or trust resources. Therefore, we anticipate no impact on tribal lands, partnerships, or HCPs from this proposed critical habitat designation. During the development of a final designation, we will consider any additional information received through the public comment period regarding other relevant impacts to determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19.

Peer Review

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of peer review is to ensure that our critical habitat designation is based on scientifically sound data and analyses. We have invited these peer reviewers to comment during this public comment period.

Public Hearings

Section 4(b)(5) of the Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days after the date of publication of this proposed rule in the *Federal Register*. Such requests must be sent to the address shown in **ADDRESSES**. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the *Federal Register* and local newspapers at least 15 days before the hearing.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order (E.O.) 12866 provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB) will review all significant rules. The Office of Information and Regulatory Affairs has determined that this rule is not significant.

E.O. 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to

use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq*.), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 *et seq*.), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, small entities include small organizations such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include

manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than $5 million in annual sales, general and heavy construction businesses with less than $27.5 million in annual business, special trade contractors doing less than $11.5 million in annual business, and agricultural businesses with annual sales less than $750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term "significant economic impact" is meant to apply to a typical small business firm's business operations.

The Service's current understanding of the requirements under the RFA, as amended, and following recent court decisions, is that Federal agencies are only required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself and, therefore, not required to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried out by the Agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7, only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies will be directly regulated by this designation. Moreover, Federal agencies are not small entities. Therefore, because no small entities are directly regulated by this

rulemaking, the Service certifies that, if promulgated, the proposed critical habitat designation will not have a significant economic impact on a substantial number of small entities.

In summary, we have considered whether the proposed designation would result in a significant economic impact on a substantial number of small entities. For the above reasons and based on currently available information, we certify that, if promulgated, the proposed critical habitat designation would not have a significant economic impact on a substantial number of small business entities. Therefore, an initial regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. In our economic analysis, we did not find that the designation of this proposed critical habitat will significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required. We will further evaluate this issue if relevant comments are received during the comment period.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq*.), we make the following findings:

(1) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector, and includes both "Federal

intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)–(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or tribal governments" with two exceptions. It excludes "a condition of Federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding," and the State, local, or tribal governments "lack authority" to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. "Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program."

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal

agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule would significantly or uniquely affect small governments because it will not produce a Federal mandate of $100 million or greater in any year, that is, it is not a "significant regulatory action" under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments and, as such, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the Suwannee moccasinshell in a takings implications assessment. The Act does not authorize the Service to regulate private actions on private lands or confiscate private property as a result of critical habitat designation. Designation of critical habitat does not affect land ownership, or establish any closures, or restrictions on use of or access to the designated areas. Furthermore, the designation of critical habitat does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal

funding or permits to go forward. However, Federal agencies are prohibited from carrying out, funding, or authorizing actions that would destroy or adversely modify critical habitat. A takings implications assessment has been completed and concludes that this designation of critical habitat for Suwannee moccasinshell does not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with E.O. 13132 (Federalism), this proposed rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this proposed critical habitat designation with, appropriate State resource agencies in Florida and Georgia. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the rule does not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical or biological features of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-range planning (because these local governments no longer have to wait for case-by-case section 7

consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the species, the rule identifies the elements of physical or biological features essential to the conservation of the species. The designated areas of critical habitat are presented on maps, and the rule provides several options for the interested public to obtain more detailed location information, if desired.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq*.). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Government–to–Government Relationship with Tribes

In accordance with the President's memorandum of April 29, 1994 (Government–to–Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal–Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes.

As stated above (see *Exclusions Based on Other Relevant Impacts*, above), we have determined that no tribal lands or interests are affected by this proposed designation.

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(1) Be logically organized;

(2) Use the active voice to address readers directly;

(3) Use clear language rather than jargon;

(4) Be divided into short sections and sentences; and

(5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

References Cited

A complete list of references cited in this rulemaking is available on the Internet at *http://www.regulations.gov* and upon request from the Panama City Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this proposed rulemaking are the staff members of the Panama City Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361–1407; 1531–1544; and 4201–4245; unless otherwise noted.

2. In § 17.11(h), revise the entry for "Moccasinshell, Suwannee" under "CLAMS" in the List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) ***

Common Name	Scientific Name	Where Listed	Status	Listing Citations and Applicable Rules
* * * * * * *				
CLAMS				
* * * * * * *				
Moccasinshell, Suwannee	*Medionidus walkeri*	Wherever found	T	81 FR 69417, 10/6/2016; 50 CFR 17.95(f).[CH]
* * * * * * *				

3. In § 17.95, amend paragraph (f) by adding an entry for "Suwannee moccasinshell (*Medionidus walkeri*)," in the same alphabetical order that the species

appears in the table at § 17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(f) *Clams and Snails*.

* * * * *

SUWANNEE MOCCASINSHELL (*MEDIONIDUS WALKERI*)

(1) Critical habitat units are depicted on the maps below for Alachua, Bradford, Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Madison, Suwannee, and Union Counties, Florida; and Brooks and Lowndes Counties, Georgia.

(2) Within these areas, the physical or biological features essential to the conservation of Suwannee moccasinshell consist of the following components:

(i) Geomorphically stable stream channels (channels that maintain lateral dimensions, longitudinal profiles, and sinuosity patterns over time without an aggrading or degrading bed elevation).

(ii) Stable substrates of muddy sand or mixtures of sand and gravel, and with little to no accumulation of unconsolidated sediments and low amounts of filamentous algae.

(iii) A natural hydrologic flow regime (magnitude, frequency, duration, and seasonality of discharge over time) necessary to maintain benthic habitats where the species is found, and connectivity of stream channels with the floodplain, allowing the exchange of nutrients and sediment for habitat maintenance, food availability, and spawning habitat for native fishes.

(iv) Water quality conditions needed to sustain healthy Suwannee moccasinshell populations, including low pollutant levels (not less than State criteria), a natural

temperature regime, pH (between 6.0 to 8.5), adequate oxygen content (not less than State criteria), hardness, turbidity, and other chemical characteristics necessary for normal behavior, growth, and viability of all life stages.

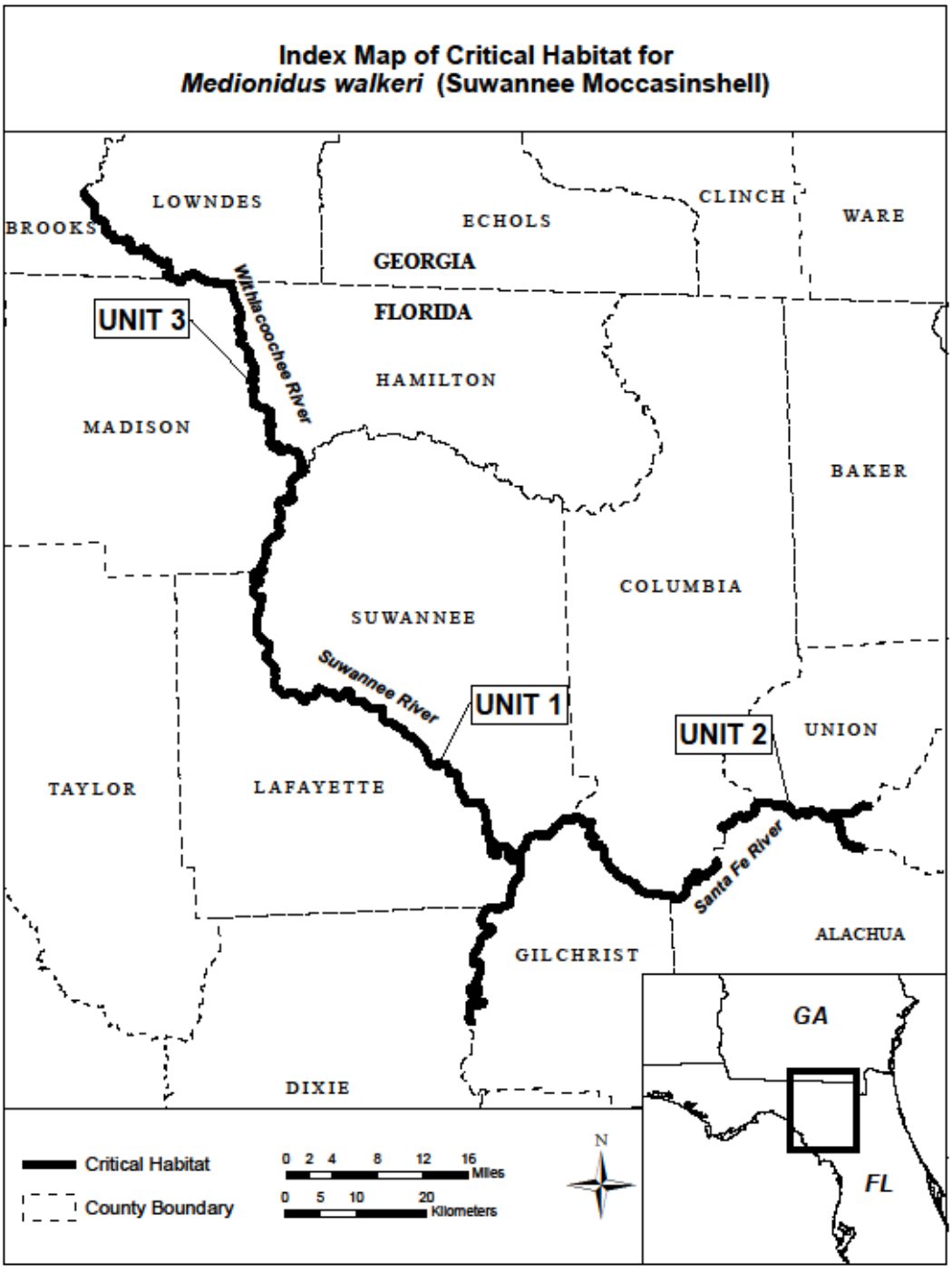
(v) The presence of fish hosts necessary for recruitment of the Suwannee moccasinshell. The presence of blackbanded darters (*Percina nigrofasciata*) and brown darters (*Etheostoma edwini*) will serve as an indication of fish host presence.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, dams, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on [EFFECTIVE DATE OF THE FINAL RULE].

(4) *Critical habitat map units*. Data layers defining map units were created with USGS National Hydrography Dataset GIS data. The high-resolution 1:24,000 flowlines were used to calculate river kilometers and miles. ESRIs ArcGIS 10.2.2 software was used to determine longitude and latitude coordinates using decimal degrees. The projection used in mapping all units was Universal Transverse Mercator, NAD 83, Zone 16 North. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates on which each map is based are provided in the critical habitat unit descriptions and are available at the Service's internet site, (*http://www.fws.gov/panamacity*), (*http://www.regulations.gov*) at Docket No. FWS–R4–ES–2019–0059, and at the field office responsible for this designation. You may obtain field office location by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) *Note*: Index map of critical habitat units for the Suwannee moccasinshell in

Florida and Georgia follows:

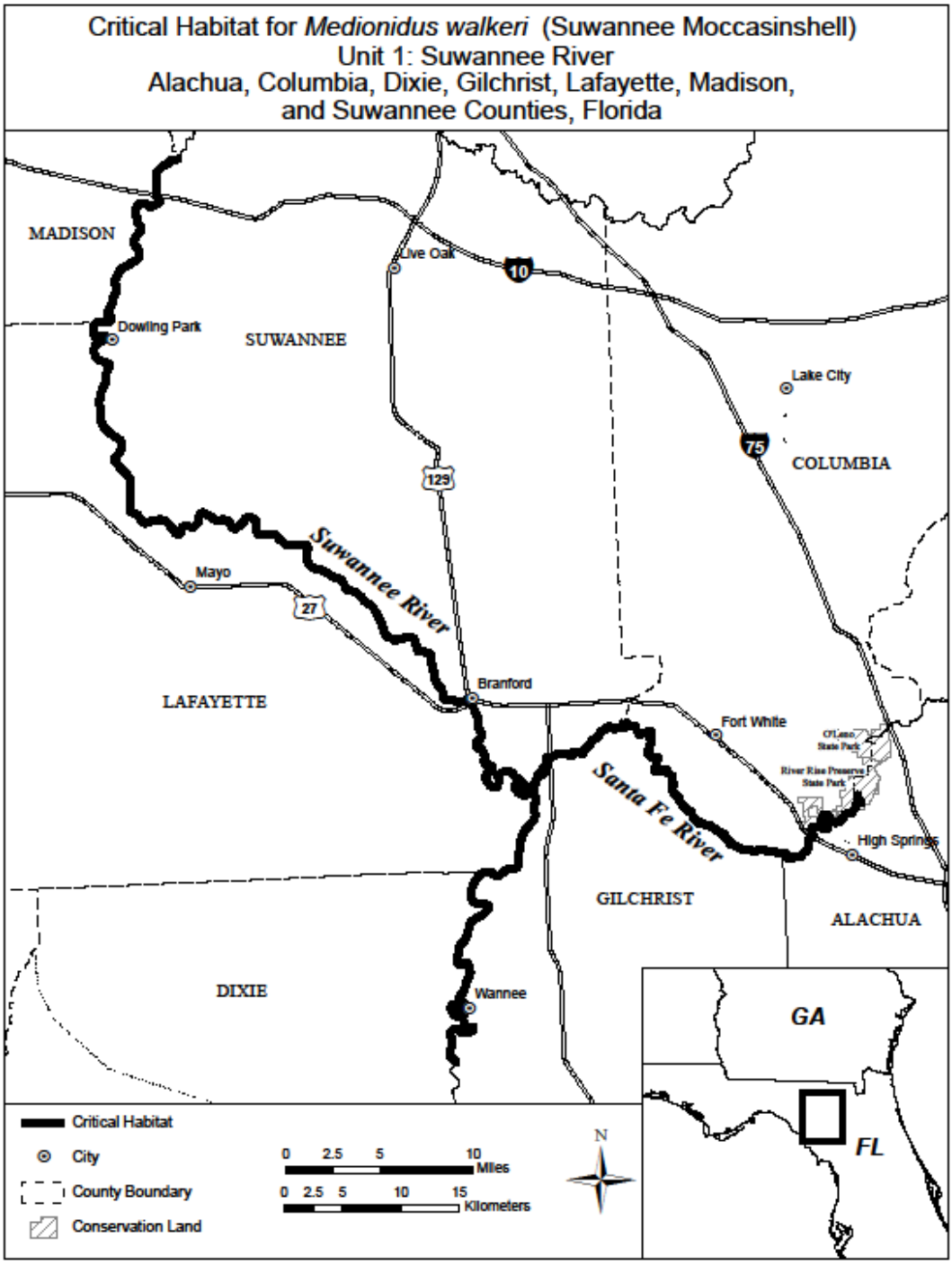


(6) Unit 1: Suwannee River in Alachua, Columbia, Dixie, Gilchrist, Lafayette,

Madison, and Suwannee Counties, Florida.

(i) *General description:* Unit 1 consists of approximately 187 kilometers (km) (116 miles (mi)) of the Suwannee River and lower Santa Fe River in Alachua, Columbia, Dixie, Gilchrist, Lafayette, Madison, and Suwannee Counties, Florida. The unit includes the Suwannee River mainstem from the confluence of Hart Springs (–82.954, 29.676) in Dixie–Gilchrist Counties, upstream 137 km (85 mi) to the confluence of the Withlacoochee River (–83.171, 30.385) in Madison–Suwannee Counties; and the Santa Fe River from its confluence with the Suwannee River in Suwannee–Gilchrist Counties (–82.879, 29.886), upstream 50 km (31 mi) to the river's rise (the Santa Fe River runs underground for more than 3 miles, emerging at River Rise Preserve State Park) in Alachua County (–82.591, 29.873).

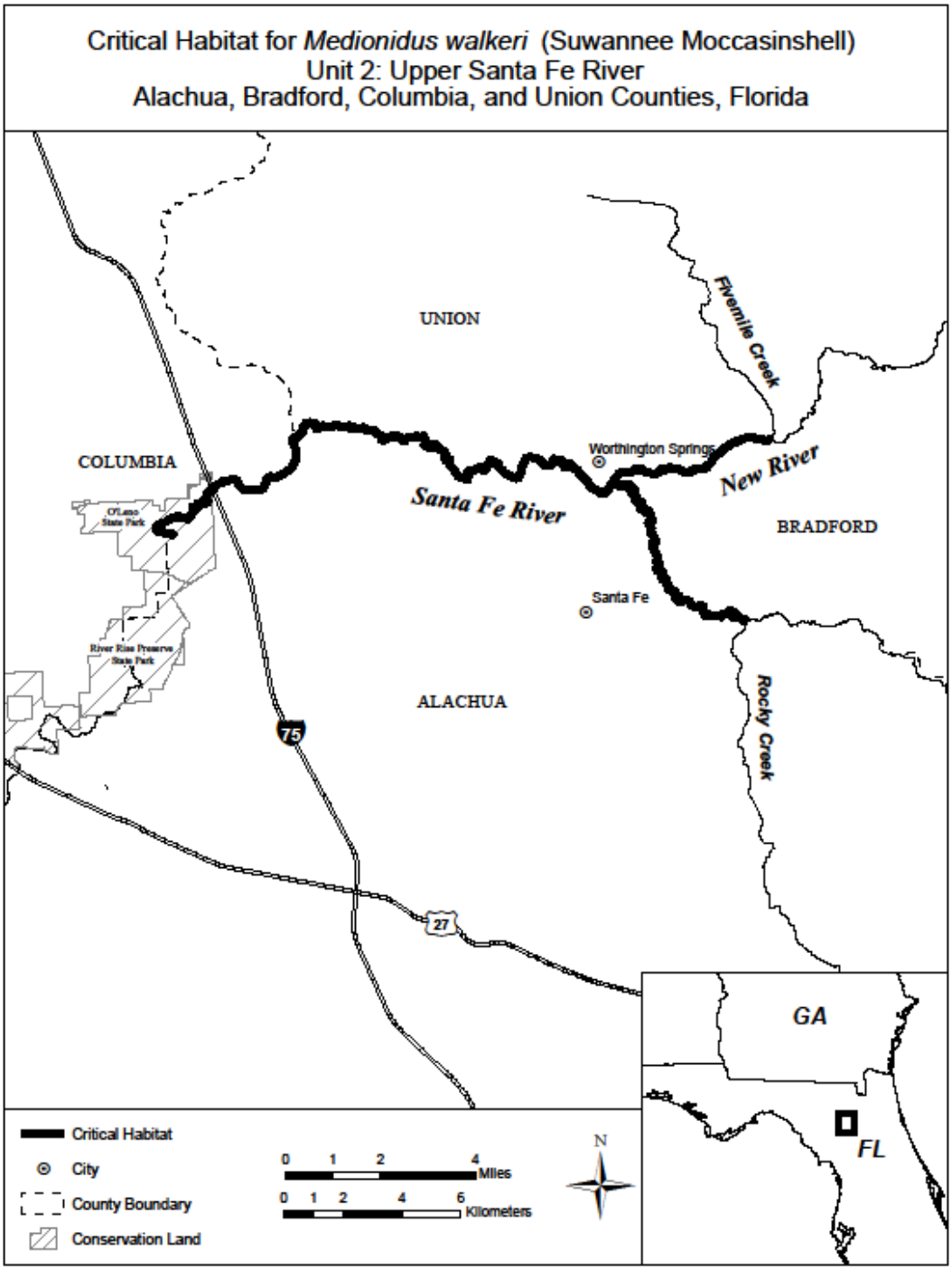
(ii) Map of Unit 1, Suwannee River, follows:


Critical Habitat for *Medionidus walkeri* (Suwannee Moccasinshell)
Unit 1: Suwannee River
Alachua, Columbia, Dixie, Gilchrist, Lafayette, Madison,
and Suwannee Counties, Florida
MADISON
Live Oak
10
Dowling Park
SUWANNEE
Lake City
75
COLUMBIA
129
Suwannee River
Mayo
27
Branford
LAFAYETTE
Fort White
Santa Fe River
High Springs
GILCHRIST
ALACHUA
DIXIE
Wannee
GA
FL
Critical Habitat
City
County Boundary
Conservation Land
0 2.5 5 10 Miles
0 2.5 5 10 15 Kilometers
N

(7) Unit 2: Upper Santa Fe River in Alachua, Bradford, Columbia, and Union, Counties, Florida.

(i) The Upper Santa Fe River Unit consists of approximately 43 km (27 mi) of the Santa Fe River and New River in Alachua, Bradford, Columbia, and Union Counties, Florida. The unit includes the Santa Fe River from the river's sink (–82.572, 29.912) in Alachua County, upstream 36.5 km (23 mi) to the confluence of Rocky Creek (–82.373, 29.879) in Bradford–Alachua Counties; and the New River from its confluence with the Santa Fe River (–82.418, 29.923), upstream 6.5 km (4 mi) to the confluence of Five Mile Creek (–82.362, 29.934) in Union–Bradford Counties.

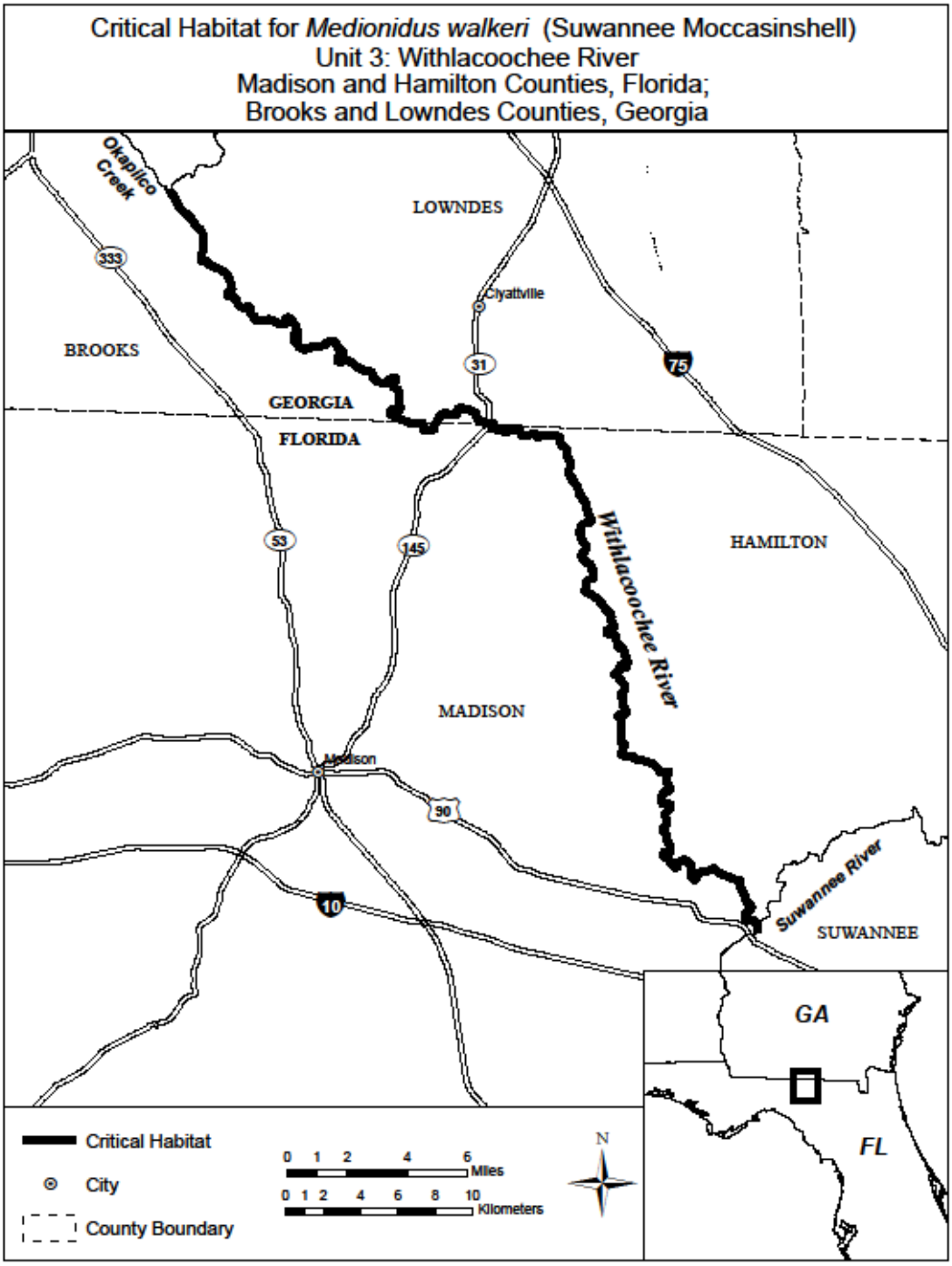
(ii) Map of Unit 2, Upper Santa Fe River, follows:



(8) Unit 3: Withlacoochee River in Hamilton and Madison Counties, Florida; Brooks and Lowndes Counties, Georgia.

(i) The Withlacoochee River Unit consists of approximately 75.5 km (47 mi) of the Withlacoochee River in Hamilton and Madison Counties, Florida, and Brooks and Lowndes Counties, Georgia. The unit includes the Withlacoochee River from its confluence with the Suwannee River (–83.171, 30.385) in Madison–Hamilton Counties, FL, upstream 75.5 km (47 mi) to the confluence of Okapilco Creek (–83.484, 30.752) in Brooks–Lowndes Counties, GA.

(ii) Map of Unit 3, Withlacoochee River, follows:


Critical Habitat for *Medionidus walkeri* (Suwannee Moccasinshell)
Unit 3: Withlacoochee River
Madison and Hamilton Counties, Florida;
Brooks and Lowndes Counties, Georgia
Okapilco Creek
LOWNDES
333
Clyattville
BROOKS
31
75
GEORGIA
FLORIDA
53
145
HAMILTON
Withlacoochee River
MADISON
Madison
90
10
Suwannee River
SUWANNEE
GA
FL
Critical Habitat
City
County Boundary
0 1 2 4 6 Miles
0 1 2 4 6 8 10 Kilometers
N

* * * * *

Dated: November 18, 2019

Margaret E. Everson

Principal Deputy Director, U.S. Fish and Wildlife Service,

Exercising the authority of the Director, U.S. Fish and Wildlife Service.

Billing Code 4333–15

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