DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R4–ES–2020–0078; FF09E21000 FXES11110900000 201]

RIN 1018–BE82

Endangered and Threatened Wildlife and Plants; Endangered Species Status for the Canoe Creek Clubshell and Designation of Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list the Canoe Creek clubshell (*Pleurobema athearni*), a freshwater mussel species endemic to a single watershed in north-central Alabama, as an endangered or threatened species and to designate critical habitat under the Endangered Species Act of 1973, as amended (Act). After a review of the best available scientific and commercial information, we find that listing the species is warranted. Accordingly, we propose to list the Canoe Creek clubshell as an endangered species under the Act. We also propose to designate critical habitat for the Canoe Creek clubshell under the Act. In total, approximately 58.5 river kilometers (36.3 river miles) in St. Clair and Etowah Counties, Alabama, fall within the boundaries of the proposed critical habitat designation. Finally, we announce the availability of a draft economic analysis (DEA) of the proposed designation of critical habitat for the Canoe Creek clubshell.

DATES: We will accept comments received or postmarked on or before January 4, 2021. 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 a public hearing, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by December 18, 2020.

ADDRESSES: You may submit comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal: *http://www.regulations.gov.* In the Search box, enter FWS–R4–ES–2020–0078, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on ''Comment Now!''

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn: FWS–R4–ES–2020–0078, U.S. Fish and Wildlife Service, MS: PRB/3W, 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 post any personal information you provide us (see Information Requested, below, for more information).

Availability of supporting materials: For the critical habitat designation, the coordinates or plot points or both from which the maps are generated are included in the administrative record and are available at *https://www.fws.gov/daphne* and at *http://www.regulations.gov* under Docket No. FWS–R4–ES–2020–0078. Any additional tools or supporting information that we may develop for the critical habitat designation will also be available at the Service website set out above, and may also be included in the preamble and/or at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: William J. Pearson, Field Supervisor, U.S. Fish and Wildlife Service, Alabama Ecological Services Field Office, 1208 Main Street, Daphne, AL 36526; telephone 251–441–5181. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act, if we determine that a species is warranted for listing as an endangered or threatened species throughout all or a significant portion of its range, we are required to promptly publish a proposal in the **Federal Register** and make a determination on our proposal within one year. To the maximum extent prudent and determinable, we must designate critical habitat for any species that we determine to be an endangered or threatened species under the Act. Listing a species as an endangered or threatened species and designation of critical habitat can only be completed by issuing a rule.

What this document does. We propose to list the Canoe Creek clubshell as an endangered species under the Act, and we propose the designation of critical habitat for the species.

The basis for our action. Under the Act, we may determine that a species is an endangered or threatened species because of any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. We have determined that habitat degradation through changes in water quality and quantity (Factor A), increased sedimentation (Factor A), and climate events (Factor E) are the primary threats to the species.

Section 4(a)(3) of the Act requires the Secretary of the Interior (Secretary) to designate critical habitat concurrent with listing to the maximum extent prudent and determinable. Section 3(5)(A) of the Act defines critical habitat as (i) the specific areas within the geographical area occupied by the species, at the time it is listed, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protections; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination by the Secretary that such areas are essential for the conservation of the species. Section 4(b)(2) of the Act states that the Secretary must make the designation on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impacts of specifying any particular area as critical habitat.

Peer review. In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we sought the expert opinions of eight appropriate specialists with expertise in biology, habitat, and threats to the species regarding the species status assessment report. We did not receive any responses to our peer review requests. The purpose of peer review is to ensure that our listing determinations, critical habitat designations, and 4(d) rules are based on scientifically sound data, assumptions, and analyses.

Because we will consider all comments and information we receive during the comment period, our final determinations may differ from this proposal. Based on the new information

we receive (and any comments on that new information), we may conclude that the species is threatened instead of endangered, or we may conclude that the species does not warrant listing as either an endangered species or a threatened species and withdraw this proposed rule. Such final decisions would be a logical outgrowth of this proposal, as long as we: (1) Base the decisions on the best scientific and commercial data available after considering all of the relevant factors; (2) do not rely on factors Congress has not intended us to consider; and (3) articulate a rational connection between the facts found and the conclusions made, including why we changed our conclusion.

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 governmental agencies, Native American tribes, the scientific community, industry, or any other interested parties concerning this proposed rule.

We particularly seek comments concerning:

(1) The species' biology, range, and population trends, including:

(a) Biological or ecological requirements of the species, including habitat requirements for feeding, breeding, and sheltering;

(b) Genetics and taxonomy;

(c) Historical and current range, including distribution patterns;

(d) Historical and current population levels, and current and projected trends; and

(e) Past and ongoing conservation measures for the species, its habitat, or both.

(2) Factors that may affect the continued existence of the species, which may include habitat modification or destruction, overutilization, disease, predation, the inadequacy of existing regulatory mechanisms, or other natural or manmade factors.

(3) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof) to this species and existing regulations that may be addressing those threats.

(4) Additional information concerning the historical and current status, range, distribution, and population size of this species, including the locations of any additional populations of this species.

(5) 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 that the regulations identify as reasons why designation of critical habitat may 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.

(6) Specific information on:

(a) The amount and distribution of Canoe Creek clubshell 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:

(i) Regarding whether occupied areas are adequate for the conservation of the species; and

(ii) Providing specific information regarding whether or not unoccupied areas would, 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.

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

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

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

(10) Whether any specific areas we are proposing for critical habitat designation should be considered for exclusion under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any specific area outweigh the benefits of including that area under section 4(b)(2) of the Act.

(11) 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.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or a threatened species must be made ''solely on the basis of the best scientific and commercial data available.''

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**.

If you submit information via *http://www.regulations.gov,* your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on *http://www.regulations.gov.*

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.*

Public Hearing

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. Requests must be received by the date specified in **DATES.** Such requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule a public hearing on this proposal, if requested, and announce the date, time, and place

of the hearing, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing. For the immediate future, we will provide these public hearings using webinars that will be announced on the Service's website, in addition to the **Federal Register**. The use of these virtual public hearings is consistent with our regulation at 50 CFR 424.16(c)(3).

Previous Federal Actions

On April 20, 2010, the Service was petitioned by the Center for Biological Diversity, Alabama Rivers Alliance, Clinch Coalition, Dogwood Alliance, Gulf Restoration Network, Tennessee Forests Council, West Virginia Highlands Conservancy, Tierra Curry, and Noah Greenwald to list 404 aquatic, riparian, and wetland species, including the Canoe Creek clubshell (named as the ''Canoe Creek pigtoe'' in the petition) as endangered or threatened species under the Act. On September 27, 2011, we published a 90-day finding in the **Federal Register** (76 FR 59836), concluding that the petition presented substantial information indicating that listing the Canoe Creek clubshell may be warranted. On March 16, 2016, the Center for Biological Diversity filed a complaint against the Service for failure to complete a 12-month finding for the Canoe Creek clubshell. On August 30, 2016, the Service entered into a settlement agreement with the Center for Biological Diversity whereby the Service agreed to submit a 12-month finding for the Canoe Creek clubshell to the **Federal Register** by September 30, 2020. This document serves as our 12-month finding on the April 20, 2010, petition.

Supporting Documents

A species status assessment (SSA) team prepared an SSA report for the Canoe Creek clubshell. The SSA team was composed of Service biologists, in consultation with other species experts. The SSA report represents a compilation of the best scientific and commercial data available concerning the status of the species, including the impacts of past, present, and future factors (both negative and beneficial) affecting the species. The Service sent the SSA report to eight independent peer reviewers. Although we made several attempts to obtain responses from the peer reviewers, we did not receive a review from any of them. The Service also sent the SSA report to four partners, including scientists with expertise in the ecology and life history of the Canoe Creek clubshell and related freshwater mussels, as well as in the mussel habitat of the Big Canoe Creek watershed in which the species lives, for review. We received reviews from two partners: The State of Alabama and the Service's Conservation Genetics Laboratory.

I. Proposed Listing Determination

Background

A thorough review of the taxonomy, life history, and ecology of the Canoe Creek clubshell (*Pleurobema athearni*) is presented in the SSA report (version 1.1, Service 2020, pp. 14–27).

The Canoe Creek clubshell is a medium-sized mussel that grows up to 93 millimeters (mm) in length. The shell outline is roughly ovate or sub-ovate with slight sculpturing on the posterior-dorsal third of the valves (Gangloff *et al.* 2006, p. 48). The outside of the shell is tawny to brown in color and without rays (Williams *et al.* 2008, p. 505).

The Canoe Creek clubshell occurs only in the Big Canoe Creek watershed in St. Clair and Etowah Counties, Alabama (Gangloff *et al.* 2006, p. 53; Williams *et al.* 2008, p. 506). Information on the historical distribution of the species is limited and gleaned primarily from vouchered museum specimens (Gangloff *et al.* 2006, p. 47; MRBMRC 2010, p. 26). A genetic analysis of *Pleurobema* and *Fusconaia* species in the Coosa River led to the description of this species in 2006 (Gangloff *et al.* 2006, entire). Thus, it is difficult to quantify the historical population. The animal was likely collected in historical samplings but reported as a different species that is similar in appearance (*e.g.,* southern pigtoe (*Pleurobema georgianum*), ovate clubshell (*Pleurobema perovatum*), Georgia pigtoe (*Pleurobema hanleyianum*), or Gulf pigtoe (*Fusconaia cerina*)). Recent comprehensive surveys of the species in 2017 and 2018 verified that it is present at historical locations; therefore, we conclude that the current distribution of the species is likely similar to its historical distribution (Gangloff *et al.* 2006, p. 47; Fobian *et al.* 2017, pp. 26–29). However, the population within that distribution may be patchily distributed, in very low abundance, and absent of recent recruitment (Fobian *et al.* 2017, pp. 10–11, 38).

The species' distribution is disjunct; the Little Canoe Creek West and Big Canoe Creek mainstem portions are separated from the Little Canoe Creek East portion by 28 kilometers (km) (17 miles (mi)) of unoccupied stream. In this unoccupied area sits the backwaters of the H. Neely Henry Reservoir, an inundated portion of the river constructed in 1966 that is unsuitable habitat for the Canoe Creek clubshell. The distance between the two portions of the clubshell's range likely exceeds the dispersal distance of the species' host fish (the clubshell's primary mode of dispersal). In addition, the unsuitable stretch of river caused by the reservoir presents a significant barrier to dispersal. As a result, we conclude no genetic exchange occurs between the western and eastern parts of the species' range and these two areas have likely been physically separated since the construction of the reservoir in the late 1960s. Although genetic research supports the Canoe Creek clubshell as a valid species, we do not have any genetic information regarding the two areas of the species' range (Gangloff *et al.* 2006, entire). Due to the physical barrier between these areas and the inability of a host fish to travel between them, we characterize these areas as subpopulations (referred to throughout this document as the western and eastern subpopulations).

The Canoe Creek clubshell, like other freshwater mussels, has a complex life history involving an obligate parasitic larval life stage that is wholly dependent on a suitable host fish (Haag 2012, pp. 38–41). For reproduction, males release sperm into the water column, females take up the sperm, and the sperm fertilizes eggs held in the female. The developing larvae remain in the female's gill chamber until they mature and are ready to be released. These mature larvae are called glochidia.

The Canoe Creek clubshell targets host fish to infest with their glochidia by releasing the glochidia in packets called conglutinates that resemble fish prey items (Haag 2012, pp. 148, 163; Williams *et al.* 2008, p. 506). Host fish used by the Canoe Creek clubshell include the tricolor shiner (*Cyprinella trichroistia*), Alabama shiner (*C. callistia*), and striped shiner (*Luxilus chrysocephalus*), among others (Fobian 2019, pp. 6, 14). Since adult mussels are sedentary, dispersal of individuals is accomplished during the glochidial life stage when they are attached to their mobile host fish (Smith 1985, p. 105). The clubshell's host fish species are common and widely distributed within the Big Canoe Creek watershed; therefore, host availability is not likely limiting the reproductive success of the mussel. However, these fish move relatively short distances, which means that dispersal of the clubshell is also limited.

Once attached to a fish host, the larvae draw nutrients from the fish and develop into juvenile mussels (Arey

1932, pp. 213–214; Haag 2012, p. 42). After about 2 to 4 weeks, when the metamorphosis is complete, juveniles fall to the stream bottom where they live the remainder of their lives as free-living benthic animals (Haag 2012, p. 42; Fobian 2019, pp. 6, 17).

Canoe Creek clubshells, like other freshwater mussels, are naturally inefficient reproducers because recruitment success is very low. While survival of adult mussels is generally high (annual adult survival is greater than 90 percent) (Haag 2012, pp. 219–221), the survival from the glochidial stage to the benthic recruitment stage is exceptionally low (0.00001 percent to 0.000001 percent) (Haag 2012, p. 220). This means that individual females may successfully produce only 0.1 to 1.3 juveniles per year (Haag 2012, p. 220), despite an annual fecundity of many thousands to millions of glochidia (Haag and Staton 2003, pp. 2122–2123; Haag 2013, pp. 748–751; Fobian 2019, p. 12). Further, survival of recruits immediately after settlement is also extremely low; in a hatchery, about 50 percent survive during the first 50 days (Hanlon and Neves 2006, pp. 47–48), and the rate in the wild is likely lower. After settlement, survival increases significantly. Individuals reach sexual maturity around 4 to 6 years of age (Fobian 2019, pers. comm.) and have a life expectancy of about 25 to 35 years (Haag and Rypel 2010, p. 6).

Mussels are omnivores, and their diet consists of a wide variety of particulate material (primarily less than 20 micrometers in size), including algae, bacteria, detritus, and microscopic animals (Gatenby *et al.* 1996, p. 606; Haag 2012, pp. 26–27). Dissolved organic matter may also be a significant source of nutrition (Vaughn *et al.* 2008, p. 411). Adult freshwater mussels are primarily suspension-feeders that filter water and nutrients to eat. Filter feeding also allows mussels to uptake oxygen, excrete waste, and disperse and acquire gametes (Haag 2012, p. 27).

Regulatory and Analytical Framework

Regulatory Framework

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species is an ''endangered species'' or a ''threatened species.'' The Act defines an endangered species as a species that is ''in danger of extinction throughout all or a significant portion of its range,'' and a threatened species as a species that is ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' The Act requires that we determine whether any species is an ''endangered species'' or a ''threatened species'' because of any of the following factors:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;

(B) Overutilization for commercial, recreational, scientific, or educational purposes;

(C) Disease or predation;

(D) The inadequacy of existing regulatory mechanisms; or

(E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

We use the term ''threat'' to refer, in general, to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term ''threat'' includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term ''threat'' may encompass—either together or separately—the source of the action or condition or the action or condition itself.

However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an ''endangered species'' or a ''threatened species.'' In determining whether a species meets either definition, we must evaluate all identified threats by considering the expected response by the species, and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species, such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an ''endangered species'' or a ''threatened species'' only after conducting this cumulative analysis and describing the expected effect on the species now and in the foreseeable future.

The Act does not define the term ''foreseeable future,'' which appears in the statutory definition of ''threatened species.'' Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis. The term ''foreseeable future'' extends only so far into the future as the Services can reasonably determine that both the future threats and the species' responses to those threats are likely. In other words, the foreseeable future is the period of time in which we can make reliable predictions. ''Reliable'' does not mean ''certain''; it means sufficient to provide a reasonable degree of confidence in the prediction. Thus, a prediction is reliable if it is reasonable to depend on it when making decisions.

It is not always possible or necessary to define foreseeable future as a particular number of years. Analysis of the foreseeable future uses the best scientific and commercial data available and should consider the timeframes applicable to the relevant threats and to the species' likely responses to those threats in view of its life-history characteristics. Data that are typically relevant to assessing the species' biological response include species-specific factors such as lifespan, reproductive rates or productivity, certain behaviors, and other demographic factors.

Analytical Framework

The SSA report documents the results of our comprehensive biological review of the best scientific and commercial data regarding the status of the species, including an assessment of the potential threats to the species. The SSA report does not represent a decision by the Service on whether the species should be proposed for listing as an endangered or threatened species under the Act. It does, however, provide the scientific basis that informs our regulatory decisions, which involve the further application of standards within the Act and its implementing regulations and policies. The following is a summary of the key results and conclusions from the SSA report; the full SSA report can be found at Docket No. FWS–R4–ES–2020–0078 on *http://www.regulations.gov.*

To assess the Canoe Creek clubshell's viability, we used the three conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, pp. 306–310). Briefly, resiliency supports the ability of the species to withstand environmental and demographic stochasticity (*e.g.,* wet or dry, warm or cold years), redundancy

supports the ability of the species to withstand catastrophic events (*e.g.,* droughts, large pollution events), and representation supports the ability of the species to adapt over time to long-term changes in the environment (*e.g.,* climate changes). In general, the more resilient and redundant a species is and the more representation it has, the more likely it is to sustain populations over time, even under changing environmental conditions. Using these principles, we identified the species' ecological requirements for survival and reproduction at the individual, population, and species levels, and described the beneficial and risk factors influencing the species' viability.

The SSA process can be categorized into three sequential stages. During the first stage, we evaluated the individual species' life-history needs. The next stage involved an assessment of the historical and current condition of the species' demographics and habitat characteristics, including an explanation of how the species arrived at its current condition. The final stage of the SSA involved making predictions about the species' responses to positive and negative environmental and anthropogenic influences. Throughout all of these stages, we used the best available information to characterize viability as the ability of a species to sustain populations in the wild over time. We use this information to inform our regulatory decision.

Summary of Biological Status and Threats

In this discussion, we review the biological condition of the species and its resources, and the threats that influence the species' current and future condition, in order to assess the species' overall viability and the risks to that viability.

We note that, by using the SSA framework to guide our analysis of the scientific information documented in the SSA report, we have not only analyzed individual effects on the species, but we have also analyzed their potential cumulative effects. We incorporate the cumulative effects into our SSA analysis when we characterize the condition of the species. Our assessment of the condition encompasses and incorporates the threats individually and cumulatively. Our condition assessment is iterative because it accumulates and evaluates the effects of all the factors that may be influencing the species, including threats and conservation efforts. Because the SSA framework considers not just the presence of the factors, but to what degree they collectively influence risk to the entire species, our assessment integrates the cumulative effects of the factors and replaces a standalone cumulative effects analysis.

Individual, Subpopulation, and Species Needs

The primary requirements for individual Canoe Creek clubshells include the following: Stable instream substrate for settling and burrowing; clean, flowing water to keep substrates free from excess sedimentation and to facilitate host fish interactions and feeding; appropriate water quality and temperatures to meet physiological needs for survival, growth, and reproduction; food and nutrients to survive and grow; and host fish for reproduction and dispersal.

Juvenile and adult Canoe Creek clubshells need stable instream substrates, including, but not limited to, coarse sand and gravel for settlement and sheltering. Clean, flowing water is needed to keep these substrates free from excess sedimentation that may reduce the amount of available habitat for sheltering, hinder a mussel's ability to feed, and, in severe instances, cause smothering and death (see *Risk Factors for the Canoe Creek Clubshell,* below, for information on impacts of sedimentation). Clean, flowing water is also needed to attract host fish and disperse juveniles throughout stream reaches. In addition, freshwater mussels are sensitive to changes in water quality parameters such as temperature, dissolved oxygen, ammonia, and pollutants. Therefore, while the precise tolerance thresholds for these water quality parameters are unknown for the Canoe Creek clubshell, we know the species requires water of sufficient quality to sustain its natural physiological processes for normal behavior, growth, and survival at all life stages (see *Risk Factors for the Canoe Creek Clubshell,* below, for more information on water quality impairments). Food and nutrients are needed for individuals at all life stages for survival and growth (see Background, above, for information on food sources and feeding). Lastly, the presence of host fish is needed for successful reproduction and dispersal. Host fish used by the Canoe Creek clubshell include the tricolor shiner (*Cyprinella trichroistia*), Alabama shiner (*C. callistia*), and striped shiner (*Luxilus chrysocephalus*), among others (see Background, above, for more information on reproduction and host fish).

To be healthy at the subpopulation and species levels, the Canoe Creek clubshell needs individuals to be present in sufficient numbers throughout the subpopulations; reproduction, which is evidenced by the presence of multiple age classes within a subpopulation; and connectivity among mussel beds (local aggregations) within a subpopulation and between subpopulations. Mussel abundance facilitates reproduction. Mussels do not actively seek mates; males release sperm into the water column, where it drifts until a female takes it in (Moles and Layzer 2008, p. 212). Therefore, successful reproduction and subpopulation growth requires a sufficient number of females to be downstream of a sufficient number of males.

There must also be multiple mussel beds of sufficient density such that local stochastic events do not eliminate most or all the beds. Connectivity among beds within each subpopulation is also needed to allow mussel beds within a stream reach to be recolonized by one another and recover from stochastic events. A nonlinear distribution of beds over a sufficiently large area also helps buffer against stochastic events that may impact portions of a clubshell subpopulation. Similarly, having multiple subpopulations that are connected to one another protects the species from catastrophic events, such as spills, because subpopulations can recolonize one another following events that impact the entirety or portions of one subpopulation.

Risk Factors for the Canoe Creek Clubshell

We identified several factors that are influencing the viability of the Canoe Creek clubshell. The primary factors include sedimentation, water quality, and climate events.

Sedimentation

Under a natural flow regime, sediments are washed through river and stream systems, and the overall amount of sediment in the substrate remains relatively stable over time. However, some past and ongoing activities or practices can result in elevated levels of sediment in the substrate. This excessive stream sedimentation (or siltation) can be caused by soil erosion associated with upland activities (*e.g.,* agriculture, forestry, unpaved roads, road construction, development, unstable streambanks, and urbanization) and stream channel destabilization associated with other activities (*e.g.,* dredging, poorly installed culverts, pipeline crossings, or other instream structures) (Brim Box and Mossa 1999, p. 102; Wynn *et al.* 2016, pp. 36–52). In severe cases, stream bottoms can

become ''embedded,'' whereby substrate features including larger cobbles, gravel, and boulders are surrounded by, or buried in, sediment, which eliminates interstitial spaces (small openings between rocks and gravels).

The negative effects of increased sedimentation on mussels are relatively well-understood (Brim Box and Mossa 1999, entire; Gascho Landis *et al.* 2013, entire; Poole and Downing 2004, pp. 118–124). First, the river processes and sediment dynamics caused by increased sedimentation degrade and reduce the amount of habitats available to mussels. Juvenile mussels burrow into interstitial spaces in the substrate. Therefore, juveniles are particularly susceptible to excess sedimentation that removes those spaces, and they are unable to find adequate habitat to survive and become adults (Brim Box and Mossa 1999, p. 100). Second, sedimentation interferes with juvenile and adult physiological processes and behaviors. Mussels can die from being physically buried and smothered by excessive sediment. However, the primary impacts of excess sedimentation on individuals are sublethal; sedimentation can reduce a mussel's ability to feed (Brim Box and Mossa 1999, p. 101) and reproduce (by reducing the success of glochidial attachment and metamorphosis; Beussink 2007, pp. 19–20).

The primary activities causing sedimentation that have occurred, and continue to occur, in the Big Canoe Creek watershed include urbanization and development, agricultural practices, and forestry practices (Wynn *et al.* 2016, pp. 9–10, 50–51). Approximately 59 percent of the Big Canoe Creek watershed is in evergreen or mixed deciduous forest, and forestry activities are common in central Big Canoe Creek and Little Canoe Creek West. Agriculture is also common, with pasture and small farms comprising 18 percent, and cultivated crops comprising 2.3 percent, of land use in the watershed. Urban development comprises 6 percent of the watershed's land use and is concentrated near the cities of Ashville and Springville near the western clubshell subpopulation, and Steele near the eastern subpopulation (Wynn *et al.* 2016, p. 9).

A rapid habitat assessment survey that included an evaluation of sedimentation deposition was completed at multiple sites in the Big Canoe Creek watershed from 2008–2013 (Wynn *et al.* 2016, pp. 37–39). Overall habitat quality varied from poor to optimal throughout Big Canoe Creek's nine subwatersheds, but six subwatersheds were reported impaired by sedimentation (Wynn *et al.* 2016, p. 51).

Water Quality

Water quality in freshwater systems can be impaired through contamination or alteration of water chemistry. Chemical contaminants are ubiquitous throughout the environment and are a major reason for the current declining status of freshwater mussel species nationwide (Augspurger *et al.* 2007, p. 2025). Chemicals such as ammonia enter the environment through both point and nonpoint discharges, including spills, industrial sources, municipal effluents, and agricultural runoff. These sources contribute organic compounds, heavy metals, pesticides, herbicides, and a wide variety of newly emerging contaminants to the aquatic environment.

Alteration of water chemistry parameters is another type of impairment. Reduced dissolved oxygen levels and increased water temperatures are of particular concern. Runoff and wastewater can wash nutrients (*e.g.,* nitrogen and phosphorus) into the water column, which can stimulate excessive plant growth (Carpenter *et al.* 1998, p. 561). The decomposition of this plant material can lead to reduced dissolved oxygen levels and eutrophication. Increased temperatures from climate changes (Alder and Hostetler 2013, U.S. Geological Survey (USGS) National Climate Change Viewer) and low flow events during periods of drought can also reduce dissolved oxygen levels (Haag and Warren 2008, p. 1176).

The effects of water quality impairments on freshwater mussels is well studied (Naimo 1995, entire; Havlik and Marking 1987, entire; Milam *et al.* 2005, entire; Markick 2017, entire). Contaminants, reduced dissolved oxygen levels, and increased temperatures are primary types of impairments that affect mussel survival, reproduction, and fitness. Freshwater mussels in their early life stages are among the most sensitive organisms to contaminants, but all life stages are vulnerable and can suffer from both acute and chronic effects (Augspurger *et al.* 2003, p. 2569). Depending on the type and concentration, contaminants can cause mortality of or sublethal effects (*e.g.,* reduced filtration efficiency, growth, and reproduction) on mussels at all life stages.

In addition to contaminants, alterations in water chemistry, especially reduced dissolved oxygen levels and increased temperatures, can have negative impacts on mussels. Although juveniles tend to be more vulnerable, reduced dissolved oxygen levels can have lethal and sublethal impacts on mussels in all life stages. Mussels require oxygen for metabolism and when levels are low, normal functions and behaviors (*e.g.,* ventilation, filtration, oxygen consumption, feeding, growth, and reproduction) are impaired. Below a certain level, mortality can occur. Lastly, increased water temperatures can impact mussel health. Young juveniles (less than 3 weeks old) are particularly sensitive, with upper and lower thermal limits 2 to 3 degrees Celsius (°C) higher or lower than juveniles 1 to 2 years older (Martin 2016, pp. 14–17). While drastic increases in temperatures beyond thermal tolerances can cause mortality, the most common negative effects of temperatures on mussels is caused by relatively minor increases that exacerbate impacts caused by other issues, such as contamination. For example, temperature increases impair physiological functions like immune response, filtration and excretion rates, oxygen consumption, and growth (Pandolfo *et al.* 2012, p. 73). Temperature increases have been linked to increased respiration rates and have also been linked to increased toxicity of some metals, like copper (Rao and Khan 2000, pp. 176–177).

In the Big Canoe Creek watershed, water quality impairments have historically impacted the Canoe Creek clubshell and continue to do so. Historically, point source discharges and pesticide and herbicide applications were not well regulated. The Clean Water Act (CWA; 33 U.S.C. 1251 *et seq.*) is the primary Federal law in the United States governing water pollution. A primary role of the CWA is to regulate the point source discharge of pollutants to surface waters through a permit process pursuant to the National Pollutant Discharge Elimination System (NPDES). The NPDES permit process may be delegated by the Environmental Protection Agency (EPA) to the States. In Alabama, this authority has been delegated to the Alabama Department of Environmental Management (ADEM).

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 U.S.C. 136 *et seq.*) is intended to protect against unreasonable human health or environmental effects. While pesticides are usually tested on standard biological media (*e.g.,* honey bees (*Apis sp.*), daphnia (*Daphnia magna*), bluegill sunfish (*Lepomis macrochirus*), rainbow trout (*Oncorhynchus mykiss*), mice (*Mus musculus*)), often endangered and threatened species are more susceptible to pollutants than test organisms commonly used in bioassays. While

State and Federal regulations have become more stringent and toxicity and environmental consequences of contaminants are better understood, the use of many pesticides and herbicides are more commonplace. Runoff and discharges are also concerns now and into the future with the ongoing urbanization of the area. Increasing water temperatures from drought events have been and will continue to exacerbate water quality issues (see ''Climate Events,'' below).

Climate Events

Climate events such as droughts and floods can have significant impacts on freshwater systems and their fundamental ecological processes (Poff *et al.* 2002, pp. ii–v). Drought can cause dewatering of freshwater habitats and low flows, which exacerbate water quality impairments (*e.g.,* dissolved oxygen, temperature, contaminants). Streams with smaller drainage areas are especially vulnerable to drought because they are more likely to experience extensive dewatering than larger streams that maintain substantial flow (Haag and Warren 2008, pp. 1172–1173). Floods can cause excessive erosion, destabilize banks and bed materials, and lead to increases in sedimentation and suspended solids. Climate change can affect the frequency and duration of drought and floods, as well as alter normal temperature regimes. Higher water temperatures, which are common during the low flow periods of droughts, decrease mussel survival (Gough *et al.* 2012, p. 2363).

Severe drought and major floods can have significant impacts on mussel communities (Haag and Warren 2008, p. 1165; Hastie *et al.* 2001, p. 107; Hastie *et al.* 2003, pp. 40–45). Reduced flows from drought can isolate or eliminate areas of suitable habitat for mussels in all life stages and render individuals exposed and vulnerable to drying and predation (Golladay *et al.* 2004, pp. 503–504). Drought can also degrade water quality (*e.g.,* decreased dissolved oxygen levels and increased temperatures), which can reduce mussel survival, reproduction, and fitness (Golladay *et al.* 2004, p. 501; Haag and Warren 2008, pp. 1174–1176) (see discussion above under ''Water Quality''). If severe or frequent, droughts can cause substantial declines in mussel abundance. Flooding can also affect mussels by dislodging individuals and depositing them in unsuitable habitat, which can affect their ability to survive and reproduce (Hastie *et al.* 2001, pp. 108, 114). Higher turbidity and reduced visibility during high flows reduce the chances of successful fertilization of the female and impede the host fish's ability to find and take up conglutinates.

While the Canoe Creek clubshell evolved in an environment that experiences periods of drought, the frequency of severe droughts in the Big Canoe Creek watershed has increased in recent decades (NOAA 2020). The stream segments within Big Canoe Creek where clubshells occur have relatively small drainage sizes, which render them particularly vulnerable to drought. Combined with other stressors such as water quality degradation that occur within the watershed, severe droughts can have significant impacts on the species (Haag and Warren 2008, p. 1175). No studies have been conducted specifically on the impacts of Canoe Creek clubshells within Big Canoe Creek following drought events. However, neighboring streams of similar size and condition experienced drastic declines in the density and abundance of the warrior pigtoe (*Pleurobema rubellum,* a mussel species similar to the clubshell). Following a severe drought event in 2000, warrior pigtoe abundance declined by 65 to 83 percent (Haag and Warren 2008, p. 1165), and multiple sites were extirpated. We presume that Big Canoe Creek faced similar conditions following this and other severe drought events because of its geographic proximity and similar size and condition. Additionally, we presume the Canoe Creek clubshell's response to the drought event was comparable to that of the warrior pigtoe given its similar life-history characteristics and physiological and habitat needs.

While the impacts on mussels following the drought in 2000 were well documented (Golladay et al. 2004, entire; Haag and Warren 2008, entire), drought events have been occurring in the area and affecting mussel communities for decades. The severity and frequency of droughts is closely monitored and recorded at the local and State levels by multiple initiatives (NDMC 2019; USGS 2019). The National Oceanic and Atmospheric Administration's (NOAA) National Integrated Drought Information System (NIDIS) program keeps one of the most extensive records (beginning in 1895) of drought in Alabama. The program uses the Palmer Drought Severity Index (PDSI), which is a measurement of dryness based on evapotranspiration (NOAA 2020). These data indicate that over the past 100 years (1918–2018), approximately 6 percent of years experienced severe drought.

While severe droughts are natural events that these streams have always experienced, this part of Alabama has undergone more frequent severe drought events over the last 20 years; the number of severe drought years has increased to approximately 11 percent (NOAA 2020, unpaginated). This drying trend was also recorded at the local scale. Water flow gauge data at a Big Canoe Creek gauging site reported low flows that correlate to the severe and exceptional droughts in the Big Canoe Creek watershed during 2000, 2007, and 2008 (USGS 2019). The severe drought events that occurred in relatively short succession during a prolonged dry period likely caused severe impacts to the survival, reproduction, and abundance of Canoe Creek clubshells. Although we do not have specific data on the Canoe Creek clubshell in response to these drought events, the decline of other freshwater mussel species was documented in a nearby watershed. The dark pigtoe (*Pleurobema furvum*), a freshwater mussel with similar life history characteristics of the Canoe Creek clubshell, was extirpated at sites with low densities following the 2000 severe drought event (Haag and Warran 2008, pp. 1173).

Species Condition

The Canoe Creek clubshell's ability to withstand, or be resilient to, stochastic events and disturbances such as drought and fluctuations in reproductive rates is extremely limited. The species has likely always been a rare, narrow endemic of the Big Canoe Creek watershed; however, past and ongoing stressors, including decreased water quality from drought events, development, and agriculture, among other sources, have greatly reduced the resiliency of the species. At present, the clubshell has extremely low abundance, shows no signs of successful reproduction, and has poor connectivity within and among subpopulations.

During comprehensive mussel surveys conducted in 2017 and 2018 in the Big Canoe Creek watershed, only 25 Canoe Creek clubshells were found (Fobian *et al.* 2017, entire; Fobian 2018, entire). In the western subpopulation, 9 individuals were found in 2 of the 40 sites that were surveyed. In the eastern subpopulation, 16 individuals were found at only 1 of the 8 sites that were surveyed. In the 25 years prior to these surveys, fewer than 15 live individuals were found (Fobian et al. 2017, pp. 9–10). However, despite the numbers of clubshell found in the 2017 surveys, the age structure of the individuals consisted of aged adults and the surveys found no evidence of successful recruitment (*i.e.,* sub adults (Fobian et al. 2017, pp. 9–10)).

In addition to a low abundance, the clubshell is experiencing recruitment failure; juveniles are not surviving to reproductive ages and joining the adult population (Strayer and Malcom 2012, pp. 1783–1785). This is evidenced by the species' heavily skewed age class distribution. Of the 25 individuals found in recent surveys, all were aging adults (Fobian *et al.* 2017, entire; Fobian 2018, entire). This skewed age class distribution is indicative of a species that is not successfully reproducing and is in decline.

Lastly, the resiliency of each subpopulation is limited by their disjunct distribution. The stretch of unsuitable habitat separating the subpopulations prevents individuals from dispersing from one subpopulation to another. This isolation renders the subpopulations vulnerable to extirpation because individuals are unable to recolonize portions of the range following stochastic disturbances that eliminate entire mussel beds or a subpopulation.

The Canoe Creek clubshell's ability to withstand catastrophic events (redundancy) is also limited primarily because of its narrow range. Severe droughts resulting in decreased water quality and direct mortality were likely the primary causes of the species' recent decline. This is in part because of the species' limited ability to withstand this type of catastrophic event. Compared to a more wide-ranging species whose risk is spread over multiple populations across its range, the entirety of the clubshell's range is impacted by a severe drought event. However, the impacts of other potential catastrophic events, such as contaminant spills, may be restricted to a portion of the clubshell's range, especially because the species' subpopulations are not directly downstream from one another.

The ability of the Canoe Creek clubshell to adapt to changing environmental conditions (representation) over time is also likely limited. There are no studies that have explicitly explored the species' adaptive capacity or the fundamental components—phenotypic plasticity, dispersal ability, and genetic diversity—by which it is characterized. The clubshell is a narrow endemic, inhabiting a single watershed, and we do not observe any ecological, behavioral, or other form of diversity that may indicate adaptive capacity across its range; thus, we presume the species currently has limited ability to adapt to changing environmental conditions.

Future Condition

As part of the SSA, we also developed three future condition scenarios to capture the range of uncertainties regarding future threats and the projected responses by the Canoe Creek clubshell. Our scenarios assumed a moderate or enhanced probability of severe drought, and either propagation or no propagation of the species. Because we determined that the current condition of the Canoe Creek clubshell was consistent with an endangered species (see Determination of Species Status, below), we are not presenting the results of the future scenarios in this proposed rule. Please refer to the SSA report (Service 2020) for the full analysis of future scenarios.

Determination of the Canoe Creek Clubshell's Status

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition of an endangered species or a threatened species. The Act defines an ''endangered species'' as a species that is ''in danger of extinction throughout all or a significant portion of its range,'' and a ''threatened species'' as a species that is ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' The Act requires that we determine whether a species meets the definition of ''endangered species'' or ''threatened species'' because of any of the following factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) Overutilization for commercial, recreational, scientific, or educational purposes; (C) Disease or predation; (D) The inadequacy of existing regulatory mechanisms; or (E) Other natural or manmade factors affecting its continued existence.

Status Throughout All of Its Range

After evaluating threats to the species and assessing the cumulative effect of the threats under the Act's section 4(a)(1) factors, we find that past and ongoing stressors including decreased water quality from drought, development, and agriculture, among other sources (Factor A), have reduced the resiliency of the Canoe Creek clubshell to such a degree that the species is particularly vulnerable to extinction. The Canoe Creek clubshell has likely always been a rare, narrow endemic within the Big Canoe Creek, and the species has some natural ability to withstand stochastic demographic fluctuations and catastrophic events such as a severe drought, which are characteristic of the environment in which it evolved. However, the frequency of severe drought events in the past two decades, combined with other ongoing habitat-related stressors and the mussel's naturally inefficient reproductive strategy, likely caused the decline of the species to its current vulnerable condition from which it is unable to recover naturally. The species' declining trend and inability to recover is evidenced by recent comprehensive surveys in both the western and eastern subpopulations that reveal the species is comprised of a limited number of older adults that are failing to recruit young. While we anticipate these threats will continue to act on the species in the future, they are affecting the species such that it is in danger of extinction now, and therefore we find that a threatened species status is not appropriate. We find that the Canoe Creek clubshell's vulnerability to ongoing stressors is heightened to such a degree that it is currently in danger of extinction as a result of its narrow range and critically low numbers. Thus, after assessing the best available information, we conclude that the Canoe Creek clubshell is in danger of extinction throughout all of its range.

Status Throughout a Significant Portion of Its Range

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. We have determined the Canoe Creek clubshell is in danger of extinction throughout all of its range and, accordingly, did not undertake an analysis of any significant portion of its range. Because we have determined the Canoe Creek clubshell warrants listing as endangered throughout all of its range, our determination is consistent with the decision in *Center for Biological Diversity* v. *Everson,* 2020 WL 437289 (D.D.C. Jan. 28, 2020), in which the court vacated the aspect of our Final Policy on Interpretation of the Phrase ''Significant Portion of Its Range'' in the Endangered Species Act's Definitions of ''Endangered Species'' and ''Threatened Species'' (79 FR 37578; July 1, 2014) that provided that the Service and the National Marine Fisheries Service do not undertake an analysis of significant portions of a species' range if the species warrants listing as threatened throughout all of its range.

Determination of Status

Our review of the best available scientific and commercial information indicates that the Canoe Creek clubshell meets the definition of an endangered species. Therefore, we propose to list the Canoe Creek clubshell as an endangered species in accordance with sections 3(6) and 4(a)(1) of the Act.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened species under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing results in public awareness, and conservation by Federal, State, tribal, and local agencies, private organizations, and individuals. The Act encourages cooperation with the States and other countries and calls for recovery actions to be carried out for listed species. The protection required by Federal agencies and the prohibitions against certain activities are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Section 4(f) of the Act calls for the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival and recovery. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

Recovery planning consists of preparing draft and final recovery plans, beginning with the development of a recovery outline and making it available to the public within 30 days of a final listing determination. The recovery outline guides the immediate implementation of urgent recovery actions and describes the process to be used to develop a recovery plan. Revisions of the plan may be done to address continuing or new threats to the species, as new substantive information becomes available. The recovery plan also identifies recovery criteria for review of when a species may be ready for reclassification from endangered to threatened (''downlisting'') or removal from protected status (''delisting''), and methods for monitoring recovery progress. Recovery plans also establish a framework for agencies to coordinate their recovery efforts and provide estimates of the cost of implementing recovery tasks. Recovery teams (composed of species experts, Federal and State agencies, nongovernmental organizations, and stakeholders) are often established to develop recovery plans. When completed, the recovery outline, draft recovery plan, and the final recovery plan will be available on our website (*http://www.fws.gov/endangered*), or from our Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribes, nongovernmental organizations, businesses, and private landowners. Examples of recovery actions include habitat restoration (*e.g.,* restoration of native vegetation), research, captive propagation and reintroduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their range may occur primarily or solely on non-Federal lands. To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands.

If this species is listed, funding for recovery actions will be available from a variety of sources, including Federal budgets, State programs, and cost-share grants for non-Federal landowners, the academic community, and nongovernmental organizations. In addition, pursuant to section 6 of the Act, the State of Alabama would be eligible for Federal funds to implement management actions that promote the protection or recovery of the Canoe Creek clubshell. Information on our grant programs that are available to aid species recovery can be found at: *http://www.fws.gov/grants.*

Although the Canoe Creek clubshell is only proposed for listing under the Act at this time, please let us know if you are interested in participating in recovery efforts for this species. Additionally, we invite you to submit any new information on this species whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as an endangered or threatened species and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions within the species' habitat that may require conference or consultation or both as described in the preceding paragraph include management and any other landscape-altering activities. These actions include work by the U.S. Fish and Wildlife Service under the Partners for Fish and Wildlife Program. This program provides technical and financial assistance to private landowners and Tribes who are willing to help meet habitat needs of Federal trust species. The Farm Service Agency administers the Conservation Reserve Program, which includes working with farmers and private landowners to use their environmentally sensitive agricultural land for conservation benefit. The Natural Resources Conservation Service works with private landowners under multiple Farm Bill programs, all aimed at the conservation of water and soil. The U.S. Army Corps of Engineers administers the issuance of section 404 Clean Water Act permits that regulate fill of wetlands, and the Federal Highway Administration regulates the construction and maintenance of roads or highways.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to endangered wildlife. The prohibitions of section 9(a)(1) of the Act, codified at 50 CFR 17.21, make it illegal for any person subject to the jurisdiction of the United States to take (which includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these) endangered fish or wildlife within the United States or on the high seas. In addition, it is unlawful to import; export; deliver, receive, carry, transport, or ship in interstate or foreign commerce in the course of commercial activity; or sell or offer for sale in interstate or foreign commerce any species listed as an

endangered species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to employees of the Service, the National Marine Fisheries Service, other Federal land management agencies, and State conservation agencies.

We may issue permits to carry out otherwise prohibited activities involving endangered wildlife under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22. With regard to endangered wildlife, a permit may be issued for the following purposes: For scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities. There are also certain statutory exemptions from the prohibitions, which are found in sections 9 and 10 of the Act.

It is our policy, as published in the **Federal Register** on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of a proposed listing on proposed and ongoing activities within the range of the species proposed for listing. Based on the best available information, the following actions are unlikely to result in a violation of section 9, if these activities are carried out in accordance with existing regulations and permit requirements; this list is not comprehensive:

(1) Normal agricultural and silvicultural practices, including herbicide and pesticide use, that are carried out in accordance with any existing regulations, permit and label requirements, and best management practices.

(2) Normal residential development and landscape activities that are carried out in accordance with any existing regulations, permit requirements, and best management practices.

(3) Normal recreational hunting, fishing, or boating activities that are carried out in accordance with all existing hunting, fishing, and boating regulations, and following reasonable practices and standards.

Based on the best available information, the following activities, which are activities that the Service finds could potentially harm the Canoe Creek clubshell and result in ''take'' of the species, may potentially result in a violation of section 9 of the Act if they are not authorized in accordance with applicable law; this list is not comprehensive:

(1) Unauthorized collecting, handling, possessing, selling, delivering, carrying, or transporting of the Canoe Creek clubshell, including import or export across State lines and international boundaries, except for properly documented antique specimens of the taxon at least 100 years old, as defined by section 10(h)(1) of the Act.

(2) Unauthorized modification of the channel, substrate, temperature, or water flow of any stream or water body in which the Canoe Creek clubshell is known to occur.

(3) Unauthorized discharge of chemicals or fill material into any waters in which the Canoe Creek clubshell is known to occur.

(4) Introduction of nonnative species that compete with or prey upon the Canoe Creek clubshell, such as the zebra mussel (*Dreissena polymorpha*) and Asian clam (*Corbicula fluminea*).

(5) Pesticide applications in violation of label restrictions.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

II. 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. Designation also does not allow the government or public to access private lands, nor does designation 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 Federal agency would be required to consult with the Service under section 7(a)(2) of the Act. However, even if the Service were to conclude that the proposed activity would result in destruction or adverse modification of the critical habitat, the Federal action agency and the landowner are not required to abandon the proposed activity, or to restore or recover the species; instead, they must 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 occupied 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 from the SSA report and information developed during the listing process for the species. Additional information sources may include any generalized conservation strategy, criteria, or outline that may have been developed for the species; 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 occupied by the species and 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) the prohibitions found in section 9 of the Act. 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, to the maximum extent prudent and determinable, the Secretary shall designate critical habitat at the time the species is determined to be an endangered or threatened species. 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 earlier in the document, there is currently no imminent threat of take attributed to collection or vandalism identified under Factor B for this species, and identification and mapping of critical habitat is not expected to initiate any such threat. In our SSA and proposed listing determination for the Canoe Creek clubshell, we determined that the present or threatened destruction, modification, or curtailment of habitat or range is a threat to the Canoe Creek clubshell and that those threats in some way can 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) apply 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 Canoe Creek clubshell.

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 Canoe Creek clubshell 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.''

When critical habitat is not determinable, the Act allows the Service an additional year to publish a critical habitat designation (16 U.S.C. 1533(b)(6)(C)(ii)).

We reviewed the available information pertaining to the biological needs of the species and habitat characteristics where this species is located. This and other information represent the best scientific data available and led us to conclude that the designation of critical habitat is determinable for the Canoe Creek clubshell.

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. The regulations at 50 CFR 424.02 define ''physical or biological features essential to the conservation of the species'' as the features that occur in specific areas and that are essential to support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, sites, 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.

For example, physical features essential to the conservation of the species might include gravel of a particular size required for spawning, alkaline soil for seed germination, protective cover for migration, or susceptibility to flooding or fire that maintains necessary early-successional habitat characteristics. Biological features might include prey species, forage grasses, specific kinds or ages of trees for roosting or nesting, symbiotic fungi, or a particular level of nonnative species consistent with conservation needs of the listed species. The features may also be combinations of habitat characteristics and may encompass the relationship between characteristics or the necessary amount of a characteristic essential to support the life history of the species. In considering whether features are essential to the conservation of the species, the Service may consider an appropriate quality, quantity, and spatial and temporal arrangement of habitat characteristics in the context of the life-history needs, condition, and status of the species. These characteristics include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing (or development) of offspring; and habitats that are protected from disturbance.

Canoe Creek clubshells live in freshwater rivers and streams. Clubshells, like other freshwater mussels, live in aggregations called mussel beds, which can be patchily distributed throughout an occupied river or stream reach, but together comprise a mussel population. Mussel beds are connected to one another when host fish infested by mussel larvae in one bed disperse the larvae to another bed. While adults are mostly sedentary, larval dispersal among beds causes mussel density and abundance to vary dynamically throughout an occupied reach over time. Connectivity among beds and populations is essential for maintaining resilient populations because it allows for recolonization of areas following stochastic events. Populations that do not occupy a long enough reach or have too few or sparsely distributed beds are vulnerable to extirpation.

The primary requirements for individual Canoe Creek clubshells include the following: Stable instream substrate for attaching and sheltering; clean, flowing water to keep substrates free from excess sedimentation and to facilitate host fish interactions and feeding; appropriate water quality and temperatures to meet physiological needs for survival, growth, and reproduction; food and nutrients to survive and grow; and host fish for reproduction and dispersal (see *Individual, Subpopulation, and Species Needs,* above, for more discussion of these needs).

Summary of Essential Physical or Biological Features

We derive the specific physical or biological features essential to the conservation of the Canoe Creek clubshell from studies of the species' habitat, ecology, and life history as described below. Additional information can be found in the SSA report (Service 2020, entire; available on *http://www.regulations.gov* under Docket No. FWS–R4–ES–2020–0078). We have determined that the following physical or biological features are essential to the conservation of the Canoe Creek clubshell:

(1) Suitable substrates and connected instream habitats, characterized by a geomorphically stable stream channel (a channel that maintains its lateral dimensions, longitudinal profile, and spatial pattern over time without aggrading or degrading bed elevation) and connected instream habitats (*e.g.,* stable riffle-run-pool habitats that provide flow refuges consisting of silt-free gravel and coarse sand substrates).

(2) A hydrologic flow regime (*i.e.,* the magnitude, frequency, duration, and seasonality of discharge over time) necessary to maintain benthic habitats where the species is found; to maintain connectivity of streams with the floodplain; and to provide for normal behavior, growth, and survival of all life stages of Canoe Creek clubshell mussels and their fish hosts.

(3) Water quality (including, but not limited to, temperature, conductivity, hardness, turbidity, ammonia, heavy metals, oxygen content, and other chemical characteristics) necessary to sustain natural physiological processes for normal behavior, growth, and viability of all life stages of Canoe Creek clubshell mussels and their fish hosts.

(4) Sediment quality (including, but not limited to, coarse sand and/or gravel substrates with low to moderate amounts of fine sediment, low amounts of attached filamentous algae, and other physical and chemical characteristics) necessary for normal behavior, growth, and viability of all life stages of Canoe Creek clubshell mussels and their fish hosts.

(5) The presence and abundance of known fish hosts, which may include the tricolor shiner (*Cyprinella trichroistia*), Alabama shiner (*C. callistia*), and striped shiner (*Luxilus chrysocephalus*), necessary for recruitment of the Canoe Creek clubshell mussel.

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 which are essential to the conservation of the species and which may require special management

considerations or protection. The features essential to the conservation of the Canoe Creek clubshell may require special management considerations or protections to ensure that conditions do not degrade. Examples of these threats include excessive amounts of fine sediment deposited in the channel, changes in water quality (impairment), activities that cause a destabilization of the stream channel and/or its banks, loss of riparian cover, and altered hydrology from inundation, channelization, withdrawals, or flow loss/scour resulting from other human-induced perturbations.

Management activities that could ameliorate these threats include, but are not limited to: Use of best management practices designed to reduce sedimentation, erosion, and bank-side destruction; protection of riparian corridors and retention of sufficient canopy cover along banks; exclusion of livestock and nuisance wildlife (feral hogs, exotic ungulates); moderation of surface and ground water withdrawals to maintain natural flow regimes; increased use of stormwater management and reduction of stormwater flows into the systems; use of highest water quality standards for wastewater and other return flows; and reduction of other watershed and floodplain disturbances that release sediments, pollutants, or nutrients into the water.

In summary, we find that the areas we are proposing to designate as critical habitat contain the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. Special management considerations or protection may be required of the Federal action agency to eliminate, or to reduce to negligible levels, the threats affecting the physical and biological features of each unit.

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. We are not currently proposing to designate any areas outside the geographical area occupied by the species because we have not identified any unoccupied areas that meet the definition of critical habitat. We defined ''occupied'' areas as stream channels with observations of one or more live individuals, or recent dead shell material, from 1999 to the present because Canoe Creek clubshells may be difficult to detect and some sites are not visited multiple times. Recently dead shell material at a site indicates the species is likely present in that area, given their average life span of 25 to 35 years. Using this definition, we considered portions of the Big Canoe Creek mainstem and portions of Little Canoe Creek in its eastern and western reaches as occupied by the Canoe Creek clubshell at the time of proposed listing. In 2017 and 2018, surveys confirmed occupancy of these river portions consistent with previous data collected.

The Canoe Creek clubshell has likely always been a narrow endemic within its single watershed. Therefore, the species' redundancy and representation is limited, but likely similar to that which it was historically. However, the species has an extremely limited ability to withstand stochastic events and disturbances because of its now critically low numbers. Conserving the species will therefore require increasing the species' abundance throughout its range and successful recruitment. Although conservation of the Canoe Creek clubshell will require improving the species' resiliency, we concluded that the occupied areas proposed as critical habitat are sufficient to ensure the conservation of the species. We are not currently proposing to designate any areas outside the geographical area occupied by the species because we have not identified any unoccupied areas that meet the definition of critical habitat.

Sources of data for this proposed critical habitat include multiple databases maintained by the Service, museums, universities, nongovernmental organizations (NGOs), and State agencies; scientific and agency reports; peer-reviewed journal articles; and numerous survey reports on streams throughout the species' range.

In summary, for areas within the geographic area occupied by the species at the time of proposed listing, we delineated critical habitat unit boundaries as follows: We evaluated habitat suitability of stream segments within the geographic area occupied at the time of listing, and retained those segments that contain some or all of the physical and biological features to support life-history functions essential for conservation of the species. Then, we assessed those occupied stream segments retained through the above analysis and refined the starting and ending points by evaluating the presence or absence of appropriate physical and biological features. We selected upstream and downstream cutoff points to reference existing easily recognizable landmarks, including stream confluences, highway crossings, and the Federal Energy Regulatory Commission boundary of H. Neely Henry Reservoir. Unless otherwise specified, any stream beds located directly beneath bridge crossings or other landmark features used to describe critical habitat spatially, such as stream confluences, are considered to be wholly included within the critical habitat unit. Critical habitat stream segments were then mapped using ArcGIS Pro version 2.3.3 (ESRI, Inc.), a Geographic Information Systems program.

When determining proposed critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features necessary for the Canoe Creek clubshell. 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.

We propose to designate as critical habitat lands that we have determined are occupied at the time of listing (*i.e.,* currently occupied) and contain one or more of the physical or biological features that are essential to support life-history processes of the species. Units are proposed for designation based on one or more of the physical or biological features being present to support the Canoe Creek clubshell's life-history processes. Both proposed units contain all of the identified physical or biological features and support multiple life-history processes.

The proposed critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of

this document under Proposed Regulation Promulgation. We include more detailed information on the boundaries of the proposed critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on *http://www.regulations.gov* at Docket No. FWS–R4–ES–2020–0078 and on our internet site at *https://www.fws.gov/daphne.*

Proposed Critical Habitat Designation

We are proposing to designate approximately 58.5 river kilometers (km) (36.3 river miles (mi)) in two units as critical habitat for the Canoe Creek clubshell. The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the Canoe Creek clubshell. The two units we propose as critical habitat are: (1) Little Canoe Creek East and (2) Big Canoe Creek/Little Canoe Creek West. Table 1 shows the proposed critical habitat units and the approximate area of each unit. In Alabama, all waters are held within the public trust. The Service will consult with the State to confirm the status of ownership of the river bottoms in these river segments. This information will be made available in our final rule published in the **Federal Register**.

TABLE 1—PROPOSED CRITICAL HABITAT UNITS FOR THE CANOE CREEK CLUBSHELL

[Area estimates reflect all land within critical habitat unit boundaries]

Critical habitat unit	Adjacent land ownership by type	Size of unit in kilometers (miles)	Occupied?
1. Little Canoe Creek East	Private, County	9.7 (6.0)	Yes.
2. Big Canoe Creek/Little Canoe Creek West	Private	48.8 (30.3)	Yes.
Total		58.5 (36.3)	Yes.

Note: Area sizes may not sum due to rounding.

We present brief descriptions of both units, and reasons why they meet the definition of critical habitat for the Canoe Creek clubshell, below.

Unit 1: Little Canoe Creek East

Unit 1 consists of 9.7 river km (6.0 river mi) of Little Canoe Creek East, due east of the Town of Steele, in St. Clair and Etowah Counties, Alabama. The unit consists of the Little Canoe Creek mainstem from the intersection with the Federal Energy Regulatory Commission boundary of H. Neely Henry Reservoir (at elevation 155 meters (m) (509 feet (ft)) above mean sea level and approximately 4.4 river km (2.7 river mi) upstream of its confluence with Big Canoe Creek), upstream 9.7 river km (6.0 river mi) to the U.S. Highway 11 bridge crossing.

This unit is currently occupied by the Canoe Creek clubshell. The majority of the adjacent land surrounding this unit is privately owned. A small amount of the adjacent land is publicly owned in the form of bridge crossings and easements, and portions of the eastern bank of Little Canoe Creek between U.S. Highway 11 to Interstate 59, in Etowah County, Alabama. Approximately 2.4 river km (1.5 river mi) of Little Canoe Creek borders property to the east owned by Etowah County, Alabama.

Unit 1 contains all physical or biological features essential to the conservation of the species. The channel within Unit 1 is relatively stable and provides the necessary riffle-run-pool sequences required by the Canoe Creek clubshell. A continued hydrologic flow regime with adequate water quality and limited fine sediments are present within this unit, providing habitat features that support the Canoe Creek clubshell. The unit also contains fish hosts for the clubshell. The physical and biological features in this unit may require special management considerations or protections to ensure that conditions do not further degrade. Examples of these threats include excessive amounts of fine sediment deposited in the channel, changes in water quality (impairment), activities that cause a destabilization of the stream channel and/or its banks, loss of riparian cover, and altered hydrology from either inundation, channelization, withdrawals, or flow loss/scour resulting from other human-induced perturbations (see Special Management Considerations or Protection, above).

Unit 2: Big Canoe Creek/Little Canoe Creek West

Unit 2 consists of 48.8 river km (30.3 river mi) of Big Canoe Creek and its tributary Little Canoe Creek West, which are located geographically between the cities of Springville and Ashville, St. Clair County, Alabama. The unit consists of the main channel of Big Canoe Creek from the Double Bridge Road bridge crossing near Ashville, Alabama, upstream 32.2 river km (20.0 river mi) to the Washington Valley Rd (St. Clair County Road 23) bridge crossing near Springville, Alabama; and Little Canoe Creek West from its confluence with Big Canoe Creek, upstream 16.6 river km (10.3 river mi) to the confluence of Stovall Branch. This unit is currently occupied by the Canoe Creek clubshell. The majority of this unit is adjacent to private land, except for any small amount of adjacent land that is publicly owned in the form of bridge crossings and easements.

Unit 2 contains all physical or biological features essential to the conservation of the species. The channel within Unit 2 is relatively stable and provides the necessary riffle-run-pool sequences required by the Canoe Creek Clubshell. A continued hydrologic flow regime with adequate water quality and limited fine sediments is present within this unit, providing habitat features that support the Canoe Creek clubshell. A diverse fish fauna, including fish hosts for the clubshell, are known from this unit. The physical and biological features in this unit may require special management considerations or protections to ensure that conditions do not degrade. Examples of these threats include excessive amounts of fine sediment deposited in the channel, changes in water quality (impairment), activities that cause a destabilization of the stream channel and/or its banks, loss of riparian cover, and altered hydrology from either inundation, channelization, withdrawals, or flow loss/scour resulting from other human-induced perturbations (see Special Management Considerations or Protection, above).

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 which 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 rule revising the 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 Clean Water Act (33 U.S.C. 1251 *et seq.*) 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, 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 Service 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 set forth requirements for Federal agencies to reinitiate formal consultation on previously reviewed actions. These requirements apply when the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law) and, subsequent to the previous consultation, we have listed a new species or designated critical habitat that may be affected by the Federal action, or the action has been modified in a manner that affects the species or critical habitat in a way not considered in the previous consultation. In such situations, Federal agencies sometimes may need to request reinitiation of consultation with us, but the regulations also specify some exceptions to the requirement to reinitiate consultation on specific land management plans after subsequently listing a new species or designating new critical habitat. See the regulations for a description of those exceptions.

Application of the ''Destruction or Adverse Modification'' Standard

The key factor related to the destruction or adverse modification determination is whether implementation of the proposed Federal action directly or indirectly alters the designated critical habitat in a way that appreciably diminishes the value of the critical habitat as a whole for the conservation of the listed species. As discussed above, the role of critical habitat is to support 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 the Services may, during a consultation under section 7(a)(2) of the Act, find are likely to destroy or adversely modify critical habitat include, but are not limited to:

(1) Actions that would alter the geomorphology of stream and river habitats. Such activities could include, but are not limited to, instream excavation or dredging, impoundment, channelization, sand and gravel mining, clearing riparian vegetation, and discharge of fill materials. These activities could cause aggradation or degradation of the channel bed elevation or significant bank erosion and result in entrainment or burial of this mussel, and could cause other direct or cumulative adverse effects to this species and its life cycles.

(2) Actions that would significantly alter the existing flow regime where this species occurs. Such activities could include, but are not limited to, impoundment, urban development, water diversion, and water withdrawal. These activities could eliminate or reduce the habitat necessary for growth and reproduction of this mussel and its fish hosts.

(3) Actions that would significantly alter water chemistry or water quality (for example, temperature, pH, contaminants, and excess nutrients). Such activities could include, but are not limited to, hydropower discharges, or the release of chemicals, biological pollutants, or heated effluents into surface water or connected groundwater at a point source or by dispersed release (nonpoint source). These activities could alter water conditions that are beyond the tolerances of this mussel, its fish hosts, or both, and result in direct or cumulative adverse effects to the species throughout its life cycle.

(4) Actions that would significantly alter stream bed material composition and quality by increasing sediment deposition or filamentous algal growth. Such activities could include, but are not limited to, construction projects, gravel and sand mining, oil and gas development, coal mining, livestock

grazing, timber harvest, and other watershed and floodplain disturbances that release sediments or nutrients into the water. These activities could eliminate or reduce habitats necessary for the growth and reproduction of this mussel, its fish hosts, or both, by causing excessive sedimentation and burial of the species or its habitat, or nutrification leading to excessive filamentous algal growth. Excessive filamentous algal growth can cause reduced nighttime dissolved oxygen levels through respiration, and prevent juvenile mussels from settling into stream sediments.

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 geographical 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 (DoD) lands 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 the determination to exclude a particular area, 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.

We describe below the process that we undertook for taking into consideration each category of impacts and our analyses of the relevant impacts.

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 a discretionary 4(b)(2) exclusion analysis.

For this particular 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 of critical habitat for the Canoe Creek clubshell (IEc 2019, entire). We began by conducting a screening analysis of the proposed designation of critical habitat in order to focus our analysis on the key factors that are likely to result in incremental economic impacts. The purpose of the screening analysis is to filter out particular geographic areas of critical habitat that are already subject to such protections and are, therefore, unlikely to incur 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. 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. If there are any unoccupied units in the proposed critical habitat designation, the screening analysis assesses whether any additional management or conservation efforts may incur incremental economic impacts. This screening analysis combined with the information contained in our IEM are what we consider our draft economic analysis (DEA) of the proposed critical habitat designation for the Canoe Creek clubshell; our DEA is summarized in the narrative below.

Executive Orders (E.O.s) 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 Canoe Creek clubshell, first we identified, in the IEM dated November 27, 2019, probable incremental economic impacts associated with the following categories of activities: (1)

Agriculture, (2) poultry farming, (3) grazing, (4) development, (5) recreation, (6) restoration activities, (7) flood control, (8) transportation, and (9) utilities. We considered each industry or category individually. Additionally, we considered whether their activities have any Federal involvement. Critical habitat designation generally will not affect activities that do not have any Federal involvement; under the Act, designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies. If we list the species, in areas where the Canoe Creek clubshell is present, Federal agencies would be 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, when we list the species, we also 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 Canoe Creek clubshell's critical habitat. Because the designation of critical habitat for the Canoe Creek clubshell is proposed concurrently with the listing, it has been our experience that it is more difficult to discern which conservation efforts are attributable to the species being listed and those which will result solely from the designation of critical habitat. However, the following specific circumstances in this case help to inform our evaluation: (1) The essential physical or biological features identified for 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 Canoe Creek clubshell would also likely adversely affect the essential physical or biological features of 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. This evaluation of the incremental effects has been used as the basis to evaluate the probable incremental economic impacts of this proposed designation of critical habitat.

The evaluation of incremental costs of designating critical habitat for the Canoe Creek clubshell indicates costs are relatively low. The proposed critical habitat designation for the Canoe Creek clubshell totals approximately 58.5 river kilometers (36.3 river miles) of river adjacent to private property across two currently occupied units in the Big Canoe Creek watershed. Numerous other listed species co-occur with the Canoe Creek clubshell in these areas (*e.g.,* Georgia pigtoe, finelined pocketbook (*Hamiota altilis*), and triangular kidneyshell (*Ptychobranchus greenii*)). As a result, all activities with a Federal nexus occurring in these areas are already subject to section 7 consultation requirements regardless of a critical habitat designation for the Canoe Creek clubshell. Based on historical consultation rates for co-occurring species, we anticipate approximately five or fewer section 7 consultation actions in the proposed critical habitat areas for the Canoe Creek clubshell.

In addition, any actions that may affect the Canoe Creek clubshell or its habitat in these areas 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 species. Therefore, when section 7 consultations occur, the only costs expected are those associated with the additional administrative effort needed to consider adverse modification during the consultation process. While this additional analysis would require time and resources by both the Federal action agency and the Service, we believe that in most circumstances, these costs would be predominantly administrative in nature and would not be significant.

Further, we do not expect the designation of critical habitat for the Canoe Creek clubshell to trigger additional requirements under State or local regulations or have perceptional effects on markets. We also do not predict the designation would result in additional section 7 efforts needed to conserve the species. Thus, the annual administrative burden is unlikely to reach $100 million.

In conclusion, based on our estimate of the number of consultations and their costs, which would likely be limited to those associated with administrative efforts, we estimate that the annual costs to the Service and Action agencies from designating critical habitat for the Canoe Creek clubshell would be approximately $15,200. Therefore, the designation is unlikely to meet the threshold of $100 million in a single year for an economically significant rule, with regard to costs, under E.O. 12866.

We are soliciting data and comments from the public on the DEA discussed above, as well as all aspects of this proposed rule and our required determinations. During the development of a final designation, we will consider the information presented in the DEA and any additional address information on economic impacts we receive during 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. In particular, we may exclude an area from critical habitat if we determine that the benefits of excluding the area outweigh the benefits of including the area, provided the exclusion will not result in the extinction of this species.

Consideration of National Security Impacts

Section 4(a)(3)(B)(i) of the Act may not cover all DoD lands or areas that pose potential national-security concerns (*e.g.,* a DoD installation that is in the process of revising its INRMP for a newly listed species or a species previously not covered). If a particular area is not covered under section 4(a)(3)(B)(i), national-security or homeland-security concerns are not a factor in the process of determining what areas meet the definition of ''critical habitat.'' Nevertheless, when designating critical habitat under section 4(b)(2), the Service must consider impacts on national security, including homeland security, on lands or areas not covered by section 4(a)(3)(B)(i). Accordingly, we will always consider for exclusion from the designation areas for which DoD, Department of Homeland Security (DHS), or another Federal agency has requested exclusion based on an assertion of national-security or homeland-security concerns.

We cannot, however, automatically exclude requested areas. When DoD, DHS, or another Federal agency requests exclusion from critical habitat on the basis of national-security or homeland-security impacts, it must provide a reasonably specific justification of an incremental impact on national security that would result from the designation of that specific area as critical habitat. That justification could include demonstration of probable impacts, such as impacts to ongoing border-security patrols and surveillance activities, or a delay in training or facility construction, as a result of compliance with section 7(a)(2) of the

Act. If the agency requesting the exclusion does not provide us with a reasonably specific justification, we will contact the agency to recommend that it provide a specific justification or clarification of its concerns relative to the probable incremental impact that could result from the designation. If the agency provides a reasonably specific justification, we will defer to the expert judgment of DoD, DHS, or another Federal agency as to: (1) Whether activities on its lands or waters, or its activities on other lands or waters, have national-security or homeland-security implications; (2) the importance of those implications; and (3) the degree to which the cited implications would be adversely affected in the absence of an exclusion. In that circumstance, in conducting a discretionary section 4(b)(2) exclusion analysis, we will give great weight to national-security and homeland-security concerns in analyzing the benefits of exclusion.

In preparing this proposal, we have determined that the lands within the proposed designation of critical habitat for the Canoe Creek clubshell are not owned, managed, or used by the DoD or DHS, 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 we receive 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.

Consideration of 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 discussed above. We consider a number of factors, including whether there are permitted conservation plans (such as HCPs, safe harbor agreements (SHAs), or candidate conservation agreements with assurances (CCAAs)) covering the species in the area, or whether there are non-permitted conservation agreements and partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at the existence of Tribal conservation plans and partnerships 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 Canoe Creek clubshell, and the proposed designation does not include any Tribal lands or trust resources. We anticipate no impact on Tribal lands, partnerships, or HCPs from this proposed critical habitat designation.

Exclusions

We are not considering any exclusions at this time from the proposed designation under section 4(b)(2) of the Act based on economic impacts, national security impacts, or other relevant impacts, such as partnerships, management, or protection afforded by cooperative management efforts. However, during the development of a final designation, we will consider any additional information we receive through the public comment period to determine whether any specific areas should be excluded from the final critical habitat designation under authority of the Act's section 4(b)(2) and our implementing regulations at 50 CFR 424.19.

Required Determinations

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.

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget will review all significant rules. OIRA has waived their review regarding their significance determination of this proposed rule.

Executive Order 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 proposed 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.

Under the RFA, as amended, and as understood in light of recent court decisions, Federal agencies are required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself; in other words, the RFA does not require agencies 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 would be directly regulated if we adopt the proposed critical habitat designation. There is no requirement under the RFA to evaluate the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities would be directly regulated by this rulemaking, the Service certifies that, if made final as proposed, 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 made final, the proposed critical habitat designation will not have a significant economic impact on a substantial number of small business entities. Therefore, an initial regulatory flexibility analysis is not required.

Executive Order 13771

We do not believe this proposed rule is an E.O. 13771 (''Reducing Regulation and Controlling Regulatory Costs'') (82 FR 9339, February 3, 2017) regulatory action because we believe this rule is not significant under E.O. 12866; however, the Office of Information and Regulatory Affairs has waived their review regarding their E.O. 12866 significance determination of this proposed rule.

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 this proposed critical habitat designation would significantly affect energy supplies, distribution, or use because no activities related to energy supply, distribution, or use are occurring within or adjacent to the proposed critical habitat designation. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

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 finding:

(1) This proposed rule would 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 the units do not occur within the jurisdiction of small governments. Therefore, 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 Canoe Creek clubshell 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 for the proposed designation of critical habitat for the Canoe Creek clubshell, and it concludes that, if adopted, this designation of critical habitat 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 summary impact statement 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. 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 proposed 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 proposed 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 for 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 State and local governments in long-range planning because they 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) of the Act 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 would 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, this proposed rule identifies the elements of physical or biological features essential to the conservation of the species. The proposed areas of designated critical habitat are presented on maps, and the proposed 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 information collection requirements, and a submission to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) is not required. We may not conduct or sponsor and you are 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 (NEPA; 42 U.S.C. 4321 *et seq.*) 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. We have determined that no Tribal lands fall within the boundaries of the proposed critical habitat for the Canoe Creek clubshell, so no Tribal lands would be affected by the proposed designation.

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 Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this proposed rule are the staff members of the Fish and Wildlife Service's Species Assessment Team and the Alabama Ecological Services Field Office.

Signing Authority

The Director, U.S. Fish and Wildlife Service, approved this document and authorized the undersigned to sign and submit the document to the Office of the Federal Register for publication electronically as an official document of the U.S. Fish and Wildlife Service. Aurelia Skipwith, Director, U.S. Fish and Wildlife Service, approved this document on September 30, 2020, for publication.

Dated: September 30, 2020.

Madonna Baucum,

Regulations and Policy Chief, Division of Policy, Economics, Risk Management, and Analytics, Joint Administrative Operations, U.S. Fish and Wildlife Service.

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 amend the table in paragraph (h) by adding an entry for ''Clubshell, Canoe Creek'' to the List of Endangered and Threatened Wildlife in alphabetical order under CLAMS to read as set forth below:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
*	*	*	*	*
CLAMS				
*	*	*	*	*
Clubshell, Canoe Creek	*Pleurobema athearni*	Wherever found	E	[**Federal Register** citation when published as a final rule]; 50 CFR 17.95(f).[CH]
*	*	*	*	*

■ 3. Amend § 17.95(f) by adding an entry for ''Canoe Creek Clubshell (*Pleurobema athearni*)'' immediately following the entry for ''Rabbitsfoot (*Quadrula cylindrica cylindrica*)'' to read as set forth below:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(f) *Clams and Snails.*

* * * * *

Canoe Creek Clubshell (*Pleurobema athearni*)

(1) Critical habitat units are depicted for St. Clair and Etowah Counties, Alabama, on the maps in this entry.

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

(i) Suitable substrates and connected instream habitats, characterized by a geomorphically stable stream channel (a channel that maintains its lateral dimensions, longitudinal profile, and spatial pattern over time without aggrading or degrading bed elevation) and connected instream habitats (such as stable riffle-run-pool habitats that provide flow refuges consisting of silt-free gravel and coarse sand substrates).

(ii) A hydrologic flow regime (*i.e.,* the magnitude, frequency, duration, and seasonality of discharge over time) necessary to maintain benthic habitats where the species is found; to maintain connectivity of streams with the floodplain; and to provide for normal behavior, growth, and survival of all life stages of Canoe Creek clubshell mussels and their fish hosts.

(iii) Water quality (including, but not limited to, temperature, conductivity, hardness, turbidity, ammonia, heavy metals, oxygen content, and other chemical characteristics) necessary to sustain natural physiological processes for normal behavior, growth, and viability of all life stages of Canoe Creek clubshell mussels and their fish hosts.

(iv) Sediment quality (including, but not limited to, coarse sand and/or gravel substrates with low to moderate amounts of fine sediment, low amounts of attached filamentous algae, and other physical and chemical characteristics) necessary for normal behavior, growth, and viability of all life stages of Canoe Creek clubshell mussels and their fish hosts.

(v) The presence and abundance of fish hosts, which may include the tricolor shiner (*Cyprinella trichroistia*), Alabama shiner (*C. callistia*), and striped shiner (*Luxilus chrysocephalus*), necessary for recruitment of the Canoe Creek clubshell mussel.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of the final rule.

(4) *Critical habitat map units.* Data layers defining map units were created from the National Hydrography High Resolution Dataset, and critical habit units were mapped using North American Datum (NAD) 1983 Universal Transverse Mercator (UTM) Zone 16N coordinates. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service's internet site at *https://www.fws.gov/daphne,* at *http://www.regulations.gov* at Docket No. FWS–R4–ES–2020–0078, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) *Note:* Index map follows:

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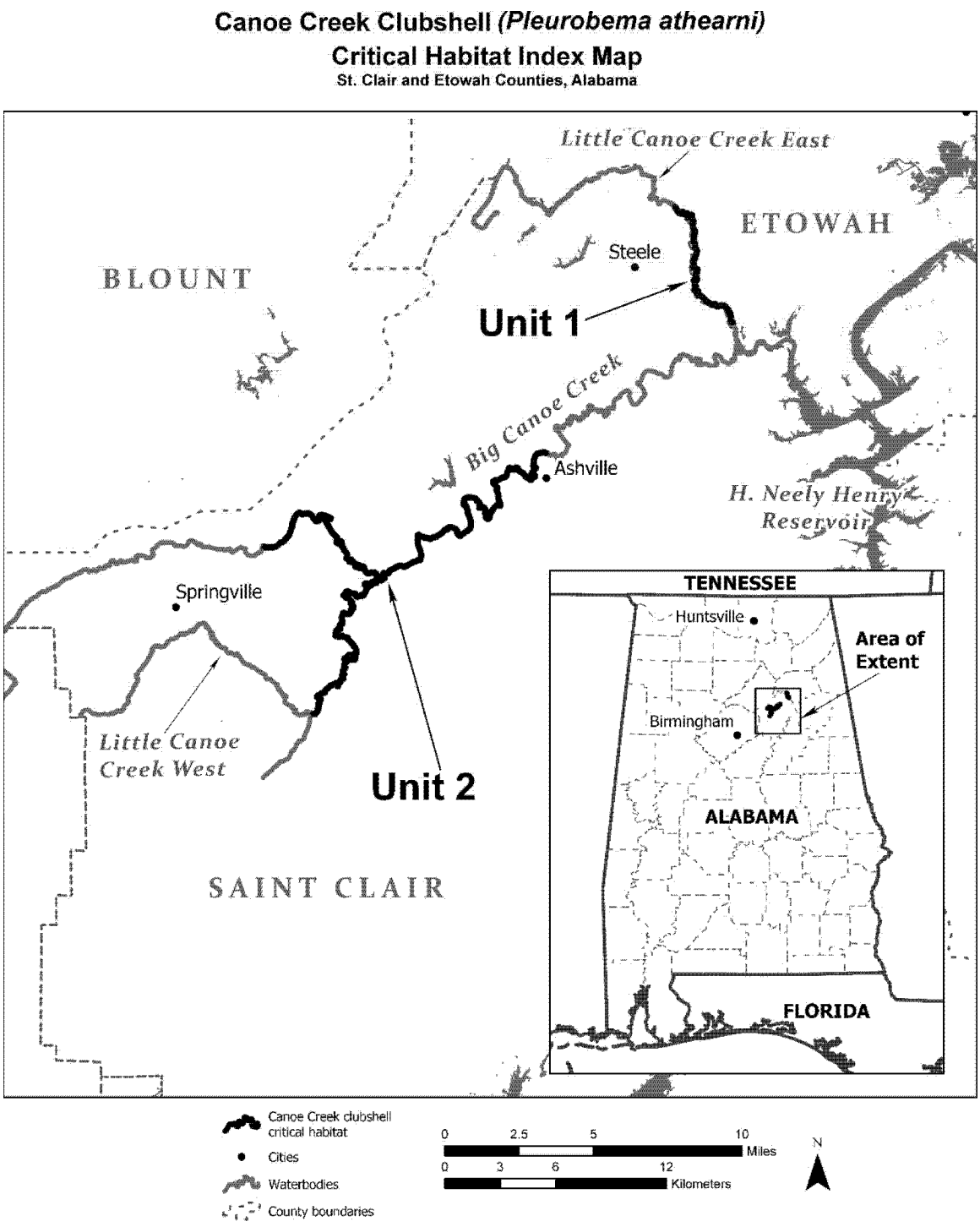
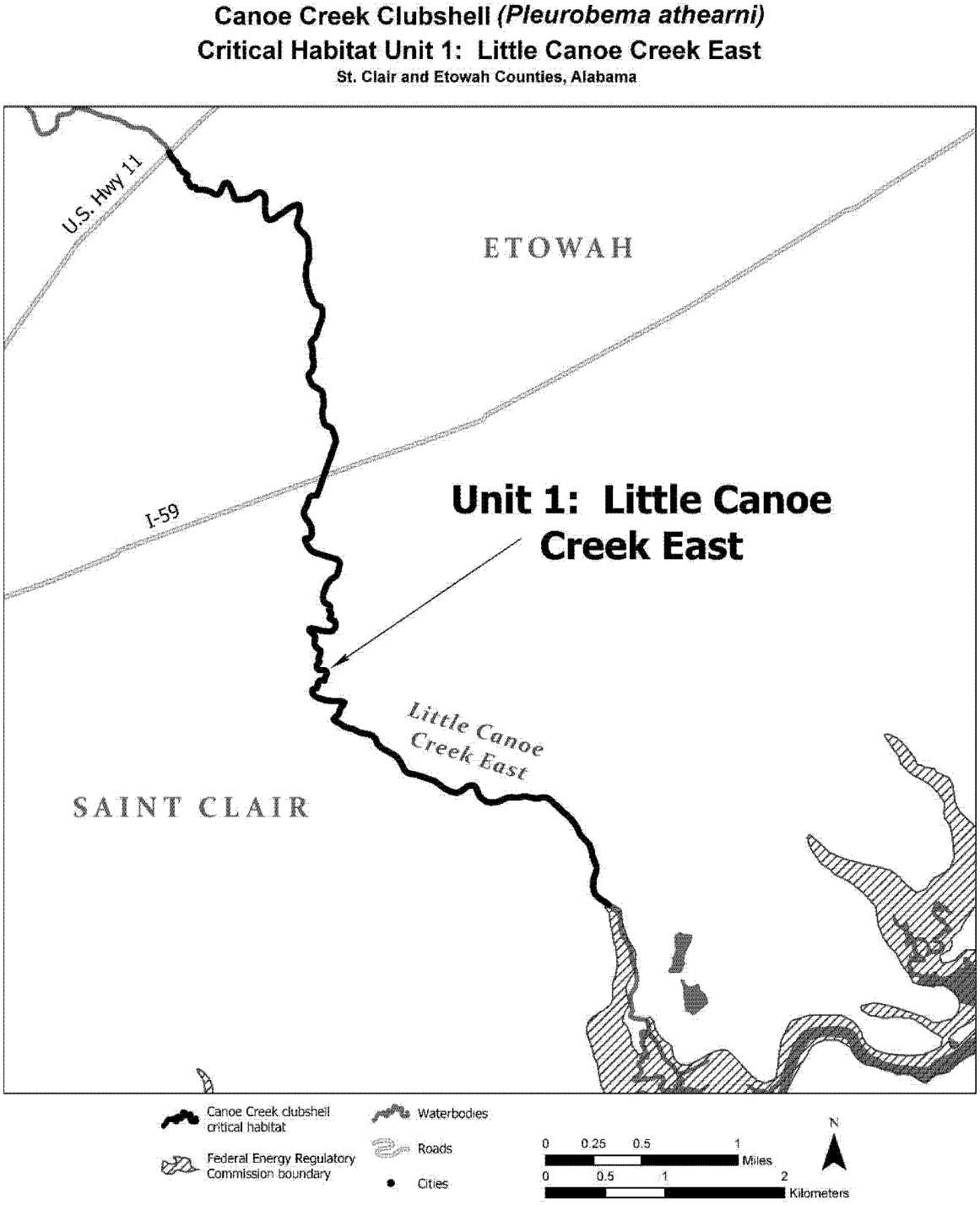


(6) Unit 1: Little Canoe Creek East, St. Clair and Etowah Counties, Alabama.

(i) *General description:* Unit 1 consists of 9.7 river km (6.0 river mi) of Little Canoe Creek East, due east of the Town of Steele, in St. Clair and Etowah Counties, Alabama. The unit consists of the Little Canoe Creek mainstem from the intersection with the Federal Energy Regulatory Commission boundary of H. Neely Henry Reservoir (at elevation 155 meters (m) (509 feet (ft)) above mean sea level and approximately 4.4 river km (2.7 river mi) upstream of its confluence with Big Canoe Creek), upstream 9.7 river km (6.0 river mi) to the U.S. Highway 11 bridge crossing. The majority of the adjacent land surrounding this unit is privately owned. A small amount of the adjacent land is publicly owned in the form of bridge crossings and easements, and portions of the eastern bank of Little Canoe Creek between U.S. Highway 11 to Interstate 59, in Etowah County, Alabama. Approximately 2.4 river km (1.5 river mi) of Little Canoe Creek borders property to the east owned by Etowah County, Alabama.

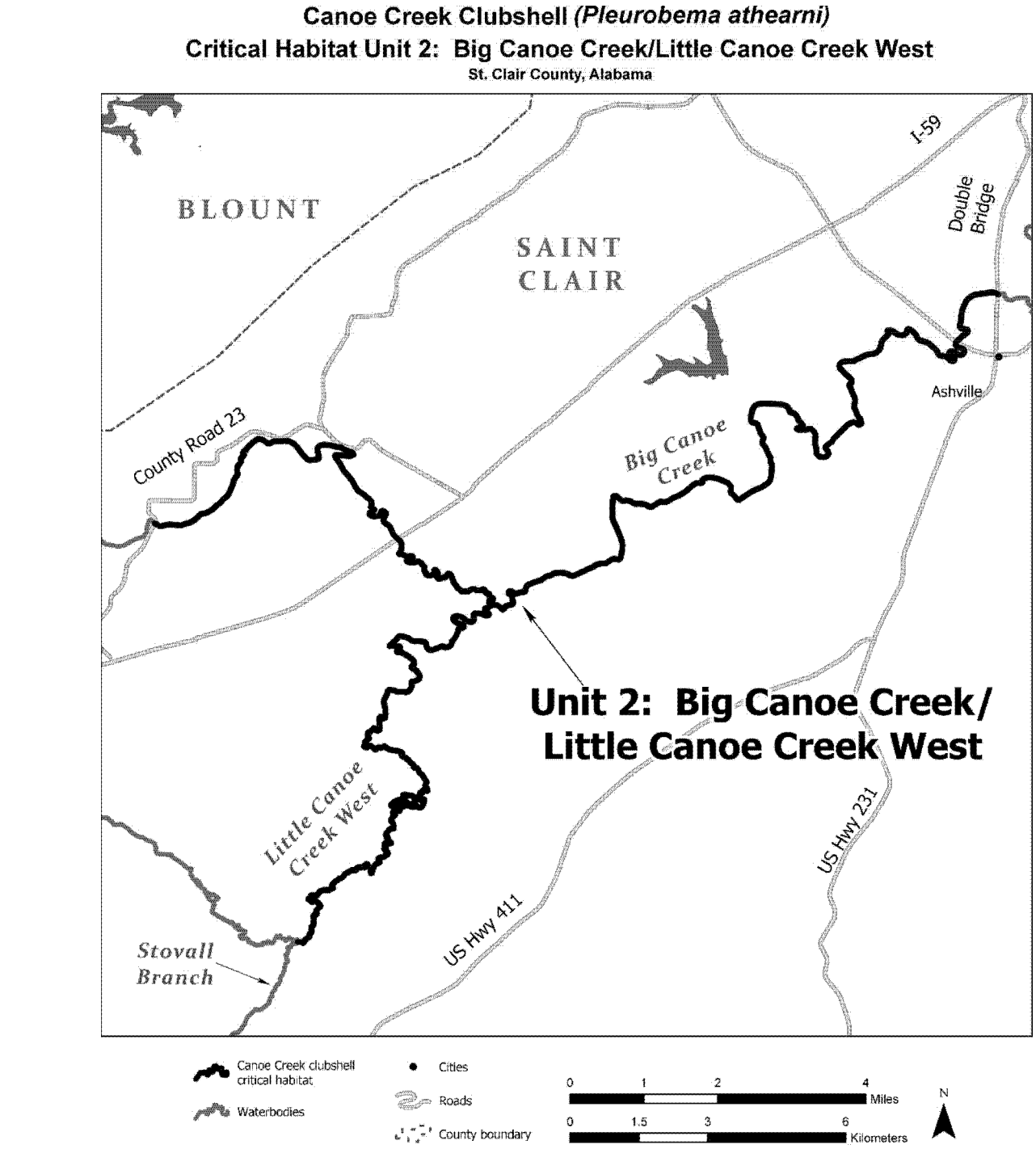
(ii) Map of Unit 1 follows:



(7) Unit 2: Big Canoe Creek/Little Canoe Creek West, St. Clair County, Alabama.

(i) *General Description:* Unit 2 consists of 48.8 river km (30.3 river mi) of Big Canoe Creek and its tributary Little Canoe Creek West, which are located geographically between the cities of Springville and Ashville, St. Clair County, Alabama. The unit consists of the main channel of Big Canoe Creek from the Double Bridge Road bridge crossing near Ashville, Alabama, upstream 32.2 river km (20.0 river mi) to the Washington Valley Rd (St. Clair County Road 23) bridge crossing near Springville, Alabama; and Little Canoe Creek West from its confluence with Big Canoe Creek, upstream 16.6 river km (10.3 river mi) to the confluence of Stovall Branch. The majority of this unit is adjacent to private land, except for any small amount of adjacent land that is publicly owned in the form of bridge crossings and easements.

(ii) Map of Unit 2 follows:



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