(c) In the case of a motor vehicle transporting passengers over a route between a place in a State and a place in another State, the person operating the motor vehicle is lawfully providing transportation of passengers over the entire route in accordance with applicable State law.

Issued under authority delegated in 49 CFR 1.87.

Robin Hutcheson,

Administrator.

[FR Doc. 2023–13081 Filed 6–20–23; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R4–ES–2022–0179; FF09E21000 FXES1111090FEDR 234]

RIN 1018–BE93

Endangered and Threatened Wildlife and Plants; Endangered Species Status for Southern Elktoe and Designation of Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to list the southern elktoe (*Alasmidonta triangulata*), a freshwater mussel species endemic to the Apalachicola-Chattahoochee-Flint Basin of Alabama, Georgia, and Florida, as an endangered species and designate critical habitat under the Endangered Species Act of 1973, as amended (Act). This determination also serves as our 12-month finding on a petition to list the southern elktoe. 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 southern elktoe as an endangered species under the Act. We also propose to designate critical habitat for the southern elktoe under the Act. In total, approximately 578 river miles (929 river kilometers) in Russell County, Alabama; Calhoun, Franklin, Gadsden, Gulf, Jackson, and Liberty Counties, Florida; and Baker, Coweta, Crawford, Decatur, Dooly, Dougherty, Fayette, Harris, Macon, Meriwether, Mitchell, Peach, Pike, Spalding, Sumter, Talbot, Taylor, and Upson Counties, Georgia, fall within the boundaries of the proposed critical habitat designation. We announce the availability of a draft economic analysis of the proposed designation of critical habitat for southern elktoe. If we finalize this rule as proposed, it would add this species to the List of Endangered and Threatened Wildlife and extend the Act's protections to the species and its critical habitat.

DATES: We will accept comments received or postmarked on or before August 21, 2023. 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 August 7, 2023.

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

(1) *Electronically:* Go to the Federal eRulemaking Portal: *https://www.regulations.gov.* In the Search box, enter FWS–R4–ES–2022–0179, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the 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.''

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn: FWS–R4–ES–2022–0179, 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 *https://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 proposed critical habitat designation, the coordinates or plot points or both from which the maps are generated are included in the decision file and are available at *https://www.regulations.gov* under Docket No. FWS–R4–ES–2022–0179. The species status assessment (SSA) report is also available in the docket on *https://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Lourdes Mena, Florida Classification and Recovery Division Manager, U.S. Fish and Wildlife Service, Florida Ecological Services Field Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256–7517; telephone 904–731–3134. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act, a species warrants listing if it meets the definition of an endangered species (in danger of extinction throughout all or a significant portion of its range) or a threatened species (likely to become endangered within the foreseeable future throughout all or a significant portion of its range). If we determine that a species warrants listing, we must list the species promptly and designate the species' critical habitat to the maximum extent prudent and determinable. We have determined that the southern elktoe meets the definition of an endangered species; therefore, we are proposing to list it as such and proposing a designation of its critical habitat. Both listing a species as an endangered or threatened species and designating critical habitat can be completed only by issuing a rule through the Administrative Procedure Act rulemaking process (5 U.S.C. 551 *et seq.*).

What this document does. We propose to list the southern elktoe as an endangered species, 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. The primary threat to the southern elktoe is habitat loss and degradation (Factor A) resulting from increased sedimentation, degraded water quality, insufficient water quantity, and loss of habitat connectivity.

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.

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 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) Specific information on:

(a) The amount and distribution of southern elktoe habitat;

(b) Any additional areas occurring within the range of the species, the Apalachicola, Chattahoochee, Flint, and Chipola river basins in Georgia, Florida, and Alabama, that should be included in the designation because they (i) are occupied at the time of listing and contain the physical or biological features that are essential to the conservation of the species and that may require special management considerations, or (ii) are unoccupied at the time of listing and are essential for the conservation of the species; and

(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) To evaluate the potential to include areas not occupied at the time of listing, we particularly seek comments regarding whether occupied areas are adequate for the conservation of the species. Additionally, please provide 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. We also seek comments or information regarding whether areas not occupied at the time of listing qualify as habitat for the species.

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

(7) 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.

(8) 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 and any additional information regarding probable economic impacts that we should consider.

(9) 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. If you think we should exclude any additional areas, please provide information supporting a benefit of exclusion.

(10) 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, do not provide substantial information necessary to support a determination. 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, and section 4(b)(2) of the Act directs that the Secretary shall designate critical habitat on the basis of the best scientific 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 *https://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 *https://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 *https://www.regulations.gov.*

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 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. For critical habitat, our final designation may not include all areas proposed, may include some additional areas that meet the definition of critical habitat, or may exclude some areas if we find the benefits of exclusion outweigh the benefits of inclusion and exclusion will not result in the extinction of the species.

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. We may hold the public hearing in person or virtually via webinar. We will announce any public hearing on our website, in addition to the **Federal Register**. The use of virtual public hearings is consistent with our regulations at 50 CFR 424.16(c)(3).

Previous Federal Actions

On April 20, 2010, we received a petition from the Center for Biological Diversity (CBD), Alabama Rivers Alliance, Clinch Coalition, Dogwood Alliance, Gulf Restoration Network, Tennessee Forests Council, and West Virginia Highlands Conservancy (referred to below as the CBD petition) to list 404 aquatic, riparian, and wetland species, including the southern elktoe, as endangered or threatened species under the Act. On September 27, 2011, we published a 90-day finding that the petition contained substantial information indicating listing may be warranted for the species (76 FR 59836). This document serves as our 12-month finding on the April 20, 2010, petition.

Peer Review

A species status assessment (SSA) team prepared an SSA report for the southern elktoe. The SSA team was composed of Service biologists, in consultation with other scientists with southern elktoe expertise. 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.

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 solicited independent scientific review of the information contained in the southern elktoe SSA report. We sent the SSA report to four independent peer reviewers and received responses from two. Results of this structured peer review process can be found at *https://regulations.gov.* In preparing this proposed rule, we incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for this proposed rule.

Summary of Peer Reviewer Comments

As discussed under Peer Review, above, we received comments from two peer reviewers on the draft SSA report. We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding the information contained in the SSA report. The peer reviewers generally concurred with our methods and conclusions, and provided additional information, clarifications, and suggestions that were incorporated into the SSA report. No substantive changes to our analysis and conclusions within the SSA report were deemed necessary, and peer reviewer comments are addressed in version 1.1 of the SSA report.

I. Proposed Listing Determination

Background

A thorough review of the taxonomy, life history, and ecology of the southern elktoe (*Alasmidonta triangulata*) is presented in the SSA report (version 1.1; Service 2022, pp. 17–25).

The southern elktoe (*Alasmidonta triangulata;* Lea 1858) is a medium-sized freshwater mussel that reaches up to 70 millimeters (mm) (2.8 inches (in)) in length. The southern elktoe has a moderately thin and somewhat triangular shell. Adults are olive brown to black in color, usually with obscured rays; juveniles are typically yellowish brown to olive, often with dark green rays. The species can be distinguished by its moderately to highly inflated shell, sharp posterior ridge, and umbo (*i.e.,* hinge area of shell which is elevated well above the hinge line of the shell) (Williams et al. 2014, p. 132).

The southern elktoe is endemic to the Apalachicola, Chattahoochee, and Flint River (ACF) basins of Alabama, Florida, and Georgia. Although surveys since 2000 have documented the species as extant in all four large river basins of the ACF Basin (Apalachicola River, Chipola River, Chattahoochee River, and the Flint River), the southern elktoe is considered very rare in distribution (Clench and Turner 1956, entire; Brim Box and Williams 2000, entire). In the ACF Basin, the southern elktoe inhabits permanently flowing creeks and rivers with natural hydrologic regimes. The species most often occurs in areas with slow current along stream margins and prefers deposition habitats consisting of mixtures of silty mud, sand, and gravel. Unlike other freshwater mussel species, the southern elktoe does not occur in dense beds (Williams 2015, p. 3).

The southern elktoe, like other freshwater mussels, has a complex life history involving an obligate parasitic larval life stage that is dependent on a suitable host fish. During 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 (glochidia) remain in the female's gill chamber until they mature and are ready to be released. This reproductive strategy requires that adult mussels of both sexes be in proximity to one another; additionally, fish host presence must overlap with brooding mussels to allow infestation. A reproductive study found that southern elktoe, like other *Alasmidonta* species (*e.g., A. arcula*), use host fish species from the sucker family, Catostomidae, as primary glochidial hosts (Fobian et al. 2018, p. 9).

Adult freshwater mussels are suspension-feeders and filter particles from the water column. Mussels may also obtain food by deposit feeding using cilia on their foot to move food particles into the shell. Mussel diets consist of a mixture of algae, bacteria, detritus, and microscopic animals.

Little is known about growth or longevity of southern elktoe; therefore, we rely on information for closely related species to help summarize characteristics of this species. Species in the tribe Andontini, which includes the southern elktoe, generally share the following traits: moderate to high growth rate, moderate life span, early maturity, and low to moderate fecundity. Typically, species of *Alasmidonta* reach maximum ages of 10–18 years and mature at 2–3 years (Haag and Rypel 2011, p. 239; Haag 2012, pp. 210–214).

Regulatory and Analytical Framework

Regulatory Framework

Section 4 of the Act (16 U.S.C. 1533) and the implementing regulations in title 50 of the Code of Federal Regulations set forth the procedures for determining whether a species is an endangered species or a threatened species, issuing protective regulations for threatened species, and designating critical habitat for endangered and threatened species. In 2019, jointly with the National Marine Fisheries Service, the Service issued a final rule that revised the regulations in 50 CFR part 424 regarding how we add, remove, and reclassify endangered and threatened

species and the criteria for designating listed species' critical habitat (84 FR 45020; August 27, 2019). On the same day, the Service also issued final regulations that, for species listed as threatened species after September 26, 2019, eliminated the Service's general protective regulations automatically applying to threatened species the prohibitions that section 9 of the Act applies to endangered species (84 FR 44753; August 27, 2019).

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 species' expected response 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 we 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 our decision on whether the species should be proposed for listing as an endangered or threatened species under the Act. However, it does 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.

To assess southern elktoe's viability, we used the three conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, pp. 306–310). Briefly, resiliency is the ability of the species to withstand environmental and demographic stochasticity (for example, wet or dry, warm or cold years), redundancy is the ability of the species to withstand catastrophic events (for example, droughts, large pollution events), and representation is the ability of the species to adapt to both near-term and long-term changes in its physical and biological environment (for example, climate conditions, pathogens). In general, species viability will increase with increases in resiliency, redundancy, and representation (Smith et al. 2018, p. 306). 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.

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–2022–0179 on *https://www.regulations.gov.*

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.

Species Needs

We assessed the best available information for the southern elktoe to identify the physical and biological needs to support individual fitness at all life stages (Service 2022, pp. 11–15). When information specific to the southern elktoe is not available, we rely on generalized freshwater mussel literature, as well as information on six other ACF Basin freshwater mussel species listed under the Act (fat threeridge (*Amblema neislerii*), shinyrayed pocketbook (*Hamiota subangulata*), Gulf moccasinshell (*Medionidus penicillatus*), oval pigtoe (*Pleurobema pyriforme*), Chipola slabshell (*Elliptio chipolaensis*), and purple bankclimber (*Elliptoideus sloatianus*); see 63 FR 12664; March 16, 1998). Note that the Ochlockonee moccasinshell (*Medionidus simpsonianus*) was also included in that rule but does not occur in the ACF Basin. In the remainder of this document, we will refer to the six species collectively as ''the listed ACF mussels.''

Important habitat components for the southern elktoe, derived from the listed ACF mussels, are permanently flowing water and geomorphologically stable stream channels. Adequate flow levels are required to deliver oxygen, enable passive reproduction, transport food items to the sedentary juvenile and adult mussels, remove wastes and fine sediments, and maintain good water quality. Further, to maintain mussel populations over time, a natural flow regime (including magnitude, frequency, duration, and seasonality of discharge) is critical for the exchange of nutrients, movement and spawning activities of fish hosts, and maintenance of instream habitats. The southern elktoe is dependent upon stable stream channels with areas with low shear stress so that sediments on the stream bottom remain stable during high flow events.

Each life stage (fertilized egg, glochidia, juvenile, and adult) has specific resource and life-history requirements that must be met to survive. The primary requirements for all life stages of the southern elktoe are flowing waters with a moderate temperature (generally, less than 32 degrees Celsius (°C)), adequate dissolved oxygen (generally, greater than 5.0 milligrams per liter (mg/L)), and good water quality. Early life stages are uniformly sensitive to many chemical compounds including ammonia, heavy metals, pharmaceuticals, and some commonly used pesticides and surfactants. In order for eggs to be fertilized, they require mature males upstream from mature females with suitable flows for fertilization to occur. Fertilized eggs require low to moderate levels of suspended solids and appropriate spawning temperatures. Glochidia require the presence of catostomid host fish and suitable water levels to permit host-glochidia interactions. Juvenile and adult needs are similar and include areas with low shear stress, substrates consisting of stable sand and gravel free from excessive silt, and the presence of adequate food availability (bacteria, algae, diatoms, detritus) in the water column.

The southern elktoe requires the presence of host fishes to complete its life cycle. In host fish trials, southern elktoe glochidia primarily metamorphosed on species of the sucker family, Catostomidae (Fobian et al. 2018, p. 9). Several species from the sucker family are found in the ACF Basin, but detailed studies on local ecology or population trends of species identified as probable host fishes for the southern elktoe, or catostomids in general, are limited. Additionally, stressors to southern elktoe such as habitat degradation, barriers to movement, and altered flow regimes also negatively affect catostomids; however, there is uncertainty regarding the extent to which host fish availability may influence southern elktoe populations.

Connectivity among populations is also important for southern elktoe viability. Although the species' capability to disperse is evident through historical occurrence of a wide range of rivers and streams, the fragmentation of populations by small and large impoundments has resulted in isolation and only remnant patches of what once was occupied contiguous river and stream habitat. Genetic exchange occurs between and among mussel beds via sperm drift, host fish movement, and movement of mussels during high flow events. For genetic exchange to occur, connectivity must be maintained, and proximity of male and female southern elktoes is essential. Most freshwater mussels, including the southern elktoe, are found in mussel beds with other species that vary in size and density, and elktoes have very sporadic occurrences within these beds. These beds are often separated by stream reaches in which mussels are absent or rare (Vaughn 2012, p. 983). Because the species is often a component of these healthy mussel assemblages within optimal mussel habitats, maintaining connectivity between these populations is necessary for the species to maintain resiliency over time.

Threats Analysis

The following discussions include evaluations of three main influences on southern elktoe viability: (1) habitat degradation or loss, (2) presence of host fish, and (3) nonnative species. Full descriptions of each of the factors and their sources, including specific examples where threats are impacting the species or its habitat, are available in chapter 5 of the SSA report (Service 2022, pp. 70–96). Potential impacts associated with other threats such as disease, parasites, predation, sea level rise, and harvest/overcollection were evaluated, but these threats were found to have minimal effects on the viability of the species based on the best available information and are not covered in detail here.

Habitat Degradation or Loss

Agriculture—The advent of intensive row crop agricultural practices has been considered as a potential factor in freshwater mussel decline and species extirpation in the eastern United States (Peacock et al. 2005, p. 550). Based on the U.S. Geological Survey's (USGS) National Land Cover Database (NLCD) 2016, approximately 20 percent of the ACF Basin is used for cropland. Agricultural influences within the ACF Basin are most apparent in the lower areas of the Chattahoochee (Alabama and Georgia), Flint (Georgia), and Chipola Basins (Alabama and Florida), and in the northern areas of the Apalachicola Basin (Florida).

Pumping groundwater for agricultural practices is contributing to decreased spring outflows and lowered stream levels in the ACF Basin. Agriculture is the largest source of water use in the ACF Basin, accounting for 35 percent of all water withdrawals in 2010 (Lawrence 2016, p. 29). In the ACF Basin, spring-fed streams and small rivers may experience 50 to 100 percent reductions in flows during droughts (Georgia Water Coalition 2017, p. 3), and the additive effect of groundwater withdrawals can exacerbate drought conditions during dry years (Albertson and Torak 2002, p. 22; Mitra et al. 2016, entire). In the lower Flint River basin, an extensive conversion to center pivot irrigation systems increased groundwater withdrawals 100 percent between 1970 and 1976 (Rugel et al. 2011, p. 2), and the Lower Flint River experiences an approximate 20 percent decrease in median flow levels because of irrigation during drought years (Singh et al. 2016, p. 279).

During periods of drought, streams may cease to flow entirely, or be reduced to isolated pools with high temperatures, low dissolved oxygen (DO), low food resources, and concentrated contaminants. Maintaining adequate water levels in streams is particularly important during the reproductive season (*e.g.,* October to March for southern elktoe), as suitable water levels are required to permit host-glochidia interactions. Within the Flint River basin, decreases in flow velocity and DO have been highly correlated to mussel mortality (Johnson et al. 2001, p. 6). Drought-related responses could affect the long-term viability of mussel populations in the lower Flint River basin by hindering reproductive processes.

Agriculture in the ACF Basin also contributes to an increase in contaminants and sediment entering streams and rivers. Contaminants from agriculture can include excess nutrients from poultry farms and livestock feedlots, and pesticides and fertilizers from row crop agriculture (Couch et al. 1996, p. 52; Frick et al. 1998, p. 2). Although moderate levels of siltation from sediment are common in many ACF Basin streams, particularly in the Piedmont, livestock grazing in riparian buffers adds excess sediment and alters stream hydrology by increasing runoff and erosion (Agouridis 2005, p. 593, Couch et al. 1996, p. 7). The concentrations of contaminants and sediment input associated with crop lands may negatively affect the viability of southern elktoe populations, especially given the large extent of agricultural activities within the southern elktoe's range (also see *Water Quality,* below).

Development—With urban development, watersheds become more impervious. Impervious surfaces result in increased and accelerated storm-water runoff, which can alter stream sediment regimes by increasing bank erosion and bed scouring (Brim Box and Mossa 1999, p. 103). Stream bank erosion and scouring contributes up to two-thirds of the total sediment yield in urbanized watersheds (Trimble 1997, p. 1443). The increased and accelerated flows and incising associated with storm-water runoff has been shown to lower mussel richness and abundance through increased shear stress and bed mobilization (Allen and Vaughn 2010, p. 390; Doyle et al. 2000, p. 177; Layzer and Madison 1995, p. 337).

Water quantity in urban areas is affected by water consumption and runoff from impervious surfaces. Impervious surfaces and other areas with reduced permeability, such as grass and barren land, can lead to high flow events from rainfall, and the reduction in ground penetration leads to reduced groundwater recharge and thus reduced baseflows during dry periods (U.S. Army Corps of Engineers (USACE) 2016, pp. 2–13). In addition, contamination of aquatic habitats by pesticides, excess nutrients, heavy metals, pharmaceuticals, and organic pollutants is widespread in urban areas and associated with point (*e.g.,* wastewater treatment plants) and nonpoint sources (Paul and Meyer 2001, pp. 341–346). The widespread and pervasive extent of non-permitted, nonpoint discharges in urban systems has been posited as a key factor in the biological degradation frequently encountered in urban aquatic environments (Duda et al. 1982, pp. 1144–1145; see *Water Quality,* below).

Development and urbanization activities that may contribute to the southern elktoe habitat degradation and loss is mostly concentrated near Atlanta, Columbus, and Albany, Georgia, with Atlanta having a larger influence than the two smaller cities. Although the Atlanta metro region occupies a relatively small portion of the Chattahoochee and Flint River headwaters, it has a large ecological footprint and substantial downstream effects.

River Regulation—The ACF Basin includes rivers and streams with both unregulated (natural) and regulated flow. The natural rivers exhibit a relatively consistent seasonal pattern, responding to precipitation and drought periods as expected with short periods of high flows and sometimes prolonged periods of low flows, respectively. Regulated streams exhibit an induced variable daily pattern, with daily variations due to hydroelectric power generation, navigation releases, lower flood peaks, and higher sustained minimum flows through dry periods as the upstream reservoirs augment low flows. The alterations in flow regimes that result from regulated rivers can have a direct impact on freshwater mussels and their host fish. The timing and rates of discharges from dams may interrupt the ability of the host fish to become infected with glochidia, and the settlement of the juvenile mussels once released.

Habitat fragmentation as a result of dam construction is one of the primary causes of loss of mussel diversity (Haag and Williams 2014, pp. 47–48). Upstream effects resulting from dams include changes from flowing water to still water habitats, increased depths and sedimentation, decreased dissolved oxygen, and changes in fish communities that can affect mussel reproductive success by separating host fish from mussel populations (Neves et al. 1997, p. 63). Effects downstream of dams include alterations in flow regime, scouring, seasonal dissolved oxygen dips, reduced water temperatures, and changes in fish community structure (Neves et al. 1997, p. 63).

Numerous small rivers and tributaries of the ACF Basin have been transformed by dams and channel alterations (Hupp 2000, entire; Light et al. 2006, pp. 29–46; Price et al. 2006, entire). Additionally, there are 16 mainstem impoundments within the basin (Brim Box and Williams 2000, p. 4).

The impacts from navigational channels within the ACF Basin may also contribute to loss of habitat for the southern elktoe and alter habitats for host fish. A navigation channel is maintained on the Apalachicola River for 172 kilometers (km) (107 miles (mi)) between the Gulf Intracoastal Waterway and Jim Woodruff Lock and Dam; 249 km (155 mi) up the Chattahoochee River to Columbus, Georgia, and Phenix City, Alabama; and 45 km (28 mi) up the Flint River to Bainbridge, Georgia. The channelization that results from these navigation channels can affect a stream's physical (*e.g.,* erosion rates, depth, habitat diversity, geomorphic stability, riparian canopy) and biological (*e.g.,* species composition and abundance, biomass, growth rates) characteristics.

Water Quality—As a group, mussels are often the first organisms to respond to water quality impacts (Haag 2012, p. 355), with mussel early life stages frequently showing the highest sensitivity to many chemical compounds (Augspurger et al. 2007, p. 2025–2026). Contamination or alteration to water chemistry can result from both point and nonpoint sources, including spills, industrial sources, municipal effluents, and runoff from agricultural and developed areas. These sources may contribute to changes in dissolved oxygen (DO), sediment loading, and the concentrations of nitrogen, phosphorus, ammonia, heavy metals, pesticides, and pharmaceuticals in the affected waterways. Although there are no current data for the tolerance levels of southern elktoe to specific pollutants, there is some general information available on the relationships and importance of these parameters to freshwater mussels and aquatic life.

Ammonia is one of the most common and widespread pollutants found in freshwaters, with nitrogen-based fertilizers and industrial and domestic wastewater among the most significant sources of ammonia in streams.

Freshwater mussels are sensitive to elevated concentrations of ammonia, especially its un-ionized form (Augspurger et al. 2003, pp. 2571–2574; Wang et al. 2007, pp. 2039–2046), and exposure to ammonia has been linked to mussel recruitment failure when present in sediments (Strayer and Malcom 2012, p. 1787). High nitrogen loads within the ACF Basin correspond to sub-watersheds with high urban and row cropland uses, including the metro Atlanta area of the far Upper Flint, and in agricultural areas of the Lower Flint and Chipola Rivers.

In 2013, the Environmental Protection Agency (EPA) adopted final national recommended ambient water quality criteria for the protection of aquatic life from effects of ammonia in freshwater (see 78 FR 52192; August 22, 2013), and in 2016, the Florida Department of Environmental Protection adopted the chronic criteria for ammonia as both the acute and chronic values, therefore improving the ammonia standard even further for the conservation of freshwater mussels Statewide (EPA 2016, entire). In 2017, Georgia also addressed ammonia toxicity in a new National Pollutant Discharge Elimination System (NPDES) Permitting Strategy to comply with the EPA's 2013 ammonia criteria (GADNR 2017, entire). The new criteria recommendations consider the latest freshwater toxicity information for ammonia, including toxicity studies for sensitive unionid mussels and gill-breathing snails (EPA 2013, entire). We do not currently have information on specific tolerance levels for southern elktoe regarding un-ionized ammonia, but EPA's new criteria represents the best general target for freshwater mussels. Still, recent work suggests that even low levels of ammonia (*e.g.,* 1.5 mg N/L (milligrams Nitrogen per Liter)), which are below thresholds set in the 2013 criteria, can be toxic to some mussel species (Wang et al. 2017, pp. 791–792).

Agricultural and developed lands are associated with high loadings of nutrients and silt and sediments in streams. Suspended sediment and total phosphorus (TP; determined by parent-rock minerals, urban land, manure from livestock, municipal wastewater, agricultural fertilizer, and phosphate mining) are both highest toward the northern extent of the ACF Basin, and areas of higher concentrations coincide with the Upper Flint and Middle Chattahoochee southern elktoe populations. For more information on the association between land use and nitrogen, phosphorus, and suspended sediment loads by within the ACF Basin, see chapter 5 of the SSA report (Service 2022, pp. 82–87).

Mussels may suffer lethal and nonlethal effects from low dissolved oxygen levels and elevated stream temperatures (Fuller 1974, pp. 240–245; Dimock and Wright 1993, pp. 188–190; Gagnon et al. 2004, p. 675), and are particularly susceptible to these conditions during their early life stages (Sparks and Strayer 1998, pp. 132–133; Pandolfo et al. 2010, p. 965; Archambault et al. 2013, p. 247). The amount of DO in water can vary due to several factors including water temperature, nutrient levels, and water velocity. Additionally, low flow levels that result from drought conditions can expose mussels to low DO concentrations and high water temperatures for extended periods (Haag and Warren 2008, pp. 1174–1176).

Heavy metal exposure can cause substantial harm to mussels. These inorganic pollutants enter aquatic systems via point and non-point sources and are frequently associated with urban land-use, mining, and industrial processes such as energy production. Many lab trials have demonstrated that mussels are among the most sensitive aquatic organisms to several metals, including nickel, copper, and zinc (Wang et al. 2017, pp. 792, 795).

Pesticides are widespread contaminants that have been implicated in mussel declines. Pesticides have been linked to freshwater mussel die-offs (Fleming et al. 1995, pp. 877–879), and lab studies show that sensitivity of mussel glochidia and juveniles to common pesticides can be high but is variable and difficult to predict (Conners and Black 2004, pp. 362–371; Bringolf et al. 2007, pp. 2089–2093; Wang et al. 2017, p. 792).

An emerging category of contaminants of concern to aquatic species is pharmaceuticals, including contraceptive medications, antidepressants, and livestock growth hormones originating from municipal, agricultural, and industrial wastewater sources. Pharmaceuticals have been shown to bioaccumulate in mussels downstream of wastewater treatment plants (De Solla et al. 2016, p. 489), and in lab studies, acute pharmaceutical exposure has caused mortality of glochidia (Gilroy et al. 2014, p. 543) and changes to mussel physiology (Bringolf et al. 2010, pp. 1315–1317) and behavior (Hazelton et al. 2014, pp. 31–32).

Although specific physical and chemical tolerance ranges are not known for the southern elktoe, numeric standards for most water quality criteria important to mussels currently adopted by the States of Alabama, Florida, and Georgia under the Clean Water Act (33 U.S.C. 1251 are sufficient to sustain elktoe. However, some standards (such as those for chloride, potassium, and nickel) are toxic to mussels at levels below the current criteria (Gibson et al. 2018, pp. 244–250; Wang et al. 2017, p. 795). In addition, standards do not exist for some mussel toxicants (for example, the surfactant sodium dodecyl sulfate) (Gibson et al. 2016, p. 32), nor do any exist for any of the pharmaceuticals listed above.

Changing Climate Conditions—Climate conditions that may influence the southern elktoe include increasing water temperatures and changes to precipitation patterns that may result in changes to hydrologic conditions, including increased flooding, prolonged droughts, reduced stream flows, and changes in salinity levels (Nobles and Zhang 2011, pp. 147–148). Climate change may affect the frequency and duration of both drought and floods, as well as alter normal temperature regimes. Drought can cause dewatering of freshwater habitats and low flows, which exacerbate water quality impairments (*e.g.,* dissolved oxygen, temperature, contaminants), whereas floods can cause excessive erosion, destabilize banks and bed materials, and lead to increases in sedimentation and suspended solids.

Long-term climate records suggest that decade-long ''mega-droughts'' have occurred periodically during the past 1,000 years in the southeastern United States, including in the ACF Basin (Stahle et al. 2007, entire). This suggests that while the recently observed droughts in 2006–2008 and 2010–2012 were exceptional based on our recent (less than 100 years) period of record, they may not be exceptional compared to historical episodes (Pederson et al. 2012, p. 2). However, projections for the ACF watershed indicate that future droughts are likely to be more intense, replicating those historical conditions more frequently (Yao and Georgakakos 2011, entire).

The Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report (AR5), published in 2014, presents recent climate findings based on a set of scenarios that use representative concentration pathways (RCPs). The recently updated flow models in the ACF Basin allow a closer look at predicted flows by river reach for a range of hydrologic variables into the future (the future time period is integrated over 2045–2075). These data indicate that streams and rivers within southern elktoe occurrence could exhibit a range of changes in flow conditions under future climates

(LaFontaine et al. 2019, entire). An analysis of conditions in the ACF Basin through 2050 under RCP 4.5 and 8.5 predicts increases in temperature (particularly summer and fall, (Neupane et al. 2018, p. 2232)), surface water runoff, and evapotranspiration, and decreases in soil moisture and groundwater discharge; all patterns are more pronounced under RCP 8.5 than RCP 4.5 (Neupane et al. 2018, p. 2236).

Despite the recognition of potential climate effects on ecosystem processes, there is uncertainty about what the exact climate future for the southeastern United States will be and how ecosystems and species in this region will respond. The greatest threat from climate change may come from synergistic effects. That is, factors associated with a changing climate may act as risk multipliers by increasing the risk and severity of more imminent threats, especially for rivers in wide floodplains where stream channels have room to migrate (Elliot et al. 2014, pp. 67–68). As a result, impacts from land use change might be exacerbated under even a mild to moderate climate future. A suite of potential hydrological impacts to waters of the southeastern United States is possible under conditions of climate change, but climate models generally predict increases in extreme rainfall events and droughts of greater duration and intensity (Carter et al. 2018, pp. 745–746).

Presence of Host Fish

Host fish for southern elktoe are in the sucker family, Catostomidae, including *Moxostoma* (Apalachicola redhorse, greater jumprock, and blacktail redhorse) and *Erimyzon* (creek chubsucker and lake chubsucker). Several species from the sucker family are found in the ACF Basin, but detailed studies on local ecology or population trends of species identified as probable host fishes for the southern elktoe, or sucker fishes in general, are more limited. As such, there is some uncertainty as to whether host fish availability is a limiting factor for southern elktoe.

The primary stressors to sucker fishes in southeastern U.S. rivers are identified as habitat degradation from urbanization and agriculture, hydropower, and barriers to dispersal (Cooke et al. 2005, p. 325), so it is important to consider that some of the same stressors acting on southern elktoe at individual and watershed levels are also acting on the host fishes. Generally, sucker fishes are large-bodied fishes that move significant distances, particularly to reach spawning locations. As a result, sucker fish species can disperse mussels farther than smaller-bodied and less mobile fishes. However, we are uncertain to the extent to which barriers may limit host fish movement or affect dispersal and colonization capabilities of southern elktoe.

Nonnative Species

The invasive Asian clam (Corbicula *fluminea*) was first detected in the eastern Gulf drainages in the early 1960s and was widespread within the ACF Basin by the mid-1970s (Heard 1975, p. 3). Asian clam life history enables fast colonization; it is hermaphroditic and can self-fertilize, grows fast, reaches maturity in 3 to 6 months, and produces large numbers of juveniles (Strayer 1999, p. 81; Haag 2012, p. 368). These traits allow the species to quickly reach densities of hundreds to thousands per square meter (Gardner et al. 1976, pp. 119–121), and to thrive in disturbed habitats (Haag 2012, p. 370).

Although the Asian clam can inhabit a wide range of flow and substrate conditions, densities are highest in areas with low flow velocity and in substrates composed of sand or mixtures of mud, sand, and gravel. Southern elktoe generally exhibits similar habitat preferences as the Asian clam; therefore, Asian clams may reach high abundances in areas inhabited by southern elktoe (Gardner et al. 1976, p. 122; McDowell and Byers 2019, p. 6). Additionally, Asian clams have one of the highest filtration rates per biomass, compared to native mussels and fingernail clams (sphaeriids) (McMahon and Bogan 2001, pp. 331–429), thereby potentially competing for food resources. Asian clams may also negatively affect mussels by ingesting mussel sperm, glochidia, or newly metamorphosed juvenile mussels (Strayer 1999, pp. 81–85; Modesto et al. 2019, pp. 159–162). Although the specific interaction between Asian clams and native mussels is not well understood, there is sufficient evidence to conclude that Asian clams can negatively affect native mussel populations (Haag 2012, p. 370).

Current Condition

There are six populations of southern elktoe, and each generally corresponds with river sub-basins where southern elktoe occur: Middle Chattahoochee, Upper Flint, Lower Flint, Ichawaynochaway, Apalachicola, and Chipola. The Middle Chattahoochee and Lower Flint sub-basins (HUC8 watersheds) were slightly modified for population-level analyses of current and future condition by extending the boundaries to align with major system barriers (dams) that are relevant to the species because they form barriers for host fishes. While no significant barriers to the southern elktoe's host fishes occur between the Lower Flint and Ichawaynochaway sub-basins, or between the Apalachicola and Chipola sub-basins, factors that influence southern elktoe populations vary among those sub-basins, making it most appropriate to analyze each separately when considering current and future condition. Below, we describe occurrence records for each of the six southern elktoe populations.

Middle Chattahoochee

Historical collection records in the Middle Chattahoochee portion of the southern elktoe's range are from the mainstem Chattahoochee River near Columbus, Georgia; the Mulberry Creek system (Mulberry and Ossahatchie Creeks), Georgia; and the Uchee Creek System (Uchee and Little Uchee Creeks), Alabama. The species is known from 12 localities (sites); however, there has been only one collection record since 2000 in this sub-basin.

Upper Flint River

The historical southern elktoe distribution in the Upper Flint River includes the Flint River from Lake Blackshear upstream to Spalding County, Georgia, and the following tributaries: Patsiliga, Potato, White Oak, Line, and Whitewater Creeks. Southern elktoe has been documented at a total of 20 locations in this sub-basin; however, since 2000, southern elktoe has been observed at only one of these locations (Patsiliga Creek).

Ichawaynochaway Creek

Southern elktoe was not known from the Ichawaynochaway sub-basin prior to 2000, so there are no historical records for this population. In 2019, one live southern elktoe was found near the confluence of Chickasawhatchee Creek and Ichawaynochaway Creek in Baker County, Georgia. This site is part of Elmodel Wildlife Management Area and is managed by the State of Georgia.

Lower Flint River

The species is known from six localities in the Lower Flint River, four of which have observations since 2000. The species is historically known from Hutchinson Ferry (1953, 1954) and U.S. Highway 27 in Bainbridge (1954, 1956); however, Woodruff Dam was completed in 1954, and these sites on the lower Flint River are now in the upper reaches of Seminole Reservoir (Lake Seminole), all in the state of Georgia. In 2011, the southern elktoe was observed at four locations in the Flint River about 10.5

km (6.5 mi) north-northeast of Bainbridge. Presently, this reach is considered to harbor the most individuals known from its current rangewide distribution. Collection records from 2011–2017 noted at least 34 individuals of various sizes, some under 30 millimeters (mm) (1.2 inches (in)) in length, indicating the presence of multiple age classes and successful recruitment (Wisniewski et al. 2014, p. 37).

Apalachicola River

Prior to 2000, the southern elktoe was documented in the Apalachicola River near Chattahoochee, Florida. Currently, southern elktoe is considered rare in the Apalachicola River; one shell was collected in 2006, and one live individual each in 2010, 2012, and 2015. The lack of collections in Apalachicola River may be due in part to limited river access points and deeper habitats.

Chipola River

The southern elktoe appears to be relatively more abundant in the Chipola River in Florida; a total 18 live individuals and one shell were observed at 10 locations during 2013–2018. A recent quantitative study examining freshwater mussel distribution in the Apalachicola and lower Chipola Rivers collected six southern elktoe from the lower Chipola (Kaeser et al. 2019, p. 662).

Resiliency, Redundancy, and Representation

To assess resilience of southern elktoe, we developed population-level metrics associated with aspects of population dynamics that characterize freshwater mussel populations that are used in existing recovery criteria for other ACF Basin listed mussel species, including persistence within watersheds over both long- and short-term time frames, evidence of stable or increasing trends, and evidence of reproduction/recruitment. Presumed average lifespan of an individual elktoe is approximately 10 years; therefore, we interpret multiple collections through time in the same watershed as persistence, which implies conditions are appropriate for recruitment, growth, and survival. Also given this presumed lifespan of southern elktoe, we are confident that the species is still present in a watershed if it has been collected since 2010. Detection of small juvenile (less than 25 mm) mussels is challenging and biased by visual sampling methods. Given mussels of this size are hard to detect, we considered observation of southern elktoe less than 50 mm as evidence of recruitment in the previous 1 to 3 years. We also evaluated trends in land use/land cover as surrogates for associated stressors from both urban and agricultural development. We then combined the demographic and habitat indices into an overall resilience index to reflect the presence and severity of habitat stressors associated with those land use types within a watershed that would likely negatively influence the viability of southern elktoe populations.

TABLE 1—OVERALL RESILIENCE SUMMARY. SEE SSA REPORT FOR DETAILS ABOUT METHODOLOGY AND CALCULATIONS

[Service 2022, pp. 50–65]

	Middle chat	Upper flint	Ichaway	Lower flint	Apalach	Chipola
Demographic	0.09	0.05	0.36	0.27	0.23	0.43
Habitat	0.1	0.2	0.29	0.42	0.08	0.23
Overall	0.09 (0)	0	0.26	0.07 (0)	0.23	0.33

During the defined current time period (since 2000), the overall resilience indices (sum of all metrics) indicate that the Middle Chattahoochee, Upper Flint River, and Lower Flint River populations have extremely low resiliency and may be at risk of extirpation (Table 1). In the Middle Chattahoochee and Upper Flint Rivers, only isolated individuals have been documented since 2000, and both populations had limited evidence of recruitment. In the Lower Flint, individuals have been collected in recent years, with evidence of recent recruitment. However, elktoe persistence in this area over a longer time period is not yet evident, and land use stressors are highest in this area; therefore, there is extremely low current resilience for this population. Resilience of the other three populations (Ichawaynochaway Creek, Chipola River, and Apalachicola River) is categorized as poor. Very few elktoes were recently observed in these populations: 4 in Ichawaynochaway, 3 in Apalachicola, and 18 in Chipola. Although natural rarity of southern elktoe does not mean the species is in danger of extinction, small population size could lead to an increased chance of extirpation due to a random event. Ultimately, the overall resilience indices for all populations reflect land use patterns and stressors affecting those areas. These stressors have not been abated and continue to act on the species currently.

Based on best available data that we reviewed and synthesized in the SSA report, the southern elktoe's current condition is characterized by very low individual numbers within a restricted range, and associated reductions in redundancy and representation from the known historical distribution of the species. Southern elktoe was documented as extant in each population during the defined current time frame of 2000–2019. However, there is little redundancy as none of the six populations is categorized above poor resilience; thus, the species is extremely susceptible to catastrophic events. To assess the current representation of southern elktoe, we used three metrics to estimate and predict representative units that reflect the subspecies' adaptive capacity: (1) river basin, (2) longitudinal gradient in the watershed (ecoregions, hydrogeology, and water source/aquifers), and (3) habitat variability (size, categories range from creek to great rivers). While the species is still extant in all four river basins, there has been a loss of representation along the longitudinal gradient, and the three populations with poor resilience are all limited to large tributaries (Ichawaynochaway Creek) and rivers (Chipola, Apalachicola), thus the species has extremely limited representation across its range.

Future Conditions

To investigate future conditions, we predicted the southern elktoe's response to plausible future scenarios reflecting different environmental conditions and conservation efforts. The future scenarios project threats into the future and then consider the impacts the threats could have on the viability of the species. Based on our review of factors currently affecting viability of southern elktoe, we focused our evaluation of

future condition on habitat degradation and loss associated with two prevalent land uses in the ACF Basin, agricultural and urban development, and their associated stressors to water quality and quantity. We interpreted projections for increases in agriculture and urban development through 2050 as surrogates for the stressors that would accompany increased water use for irrigation or municipal sources, increased surface runoff, and increases in contaminants specific to each sector (*e.g.,* nutrients and pesticides for agriculture, pollutants from urban land use). We used 2050 as our future time horizon because it is within the time frame for which climate and land use model projections exist and it encompasses at least three generations of southern elktoe, which provides confidence in predicting the species' response to threats.

We evaluated three future scenarios by modifying demographic variables according to feasible future trajectories to cover a range of possibilities from stable/increasing populations to loss of populations with the lowest number of individuals documented during our current time frame. We used land use/land cover models to forecast urban and agricultural land uses within each sub-basin, and again we combined the demographic and habitat indices into ''overall resilience'' for each population. We assessed redundancy and representation in the same manner as we did for current condition. Because we determined that the current condition of southern elktoe is consistent with an endangered species (see Determination of Southern Elktoe's Status, below), we are not presenting the results of the future scenarios in this proposed rule. Please refer to the SSA report (Service 2022, pp.103–113) for the full analysis of future conditions and descriptions of the associated scenarios.

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 current and future condition of the species. To assess the current and future condition of the species, we undertake an iterative analysis that encompasses and incorporates the threats individually and then 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.

Conservation Efforts

Multiple water resource planning and policy actions in Georgia and Florida have been enacted to increase water quality and/or decrease water consumption. The State of Georgia's regional water plans are developed in accordance with the Georgia Comprehensive State-wide Water Management Plan (State Water Plan), which was adopted by the General Assembly in January 2008. The State Water Plan requires the preparation of regional water development and conservation plans (regional water plans) to manage water resources in a sustainable manner through 2050, thus protecting instream habitat for the southern elktoe. Additionally, the Metropolitan North Georgia Water Planning District has implemented and expanded numerous conservation measures outlined in the 2017 Water Management Plan. The State has also enacted a number of laws related to water conservation, including the Water Stewardship Act of 2010, which has decreased per capita water use in the District by 30 percent since 2000 (Metropolitan North Georgia Water Planning District 2017, pp. 5–44).

In 1977, Georgia amended the Georgia Water Control Act of 1964 to regulate wastewater discharges and required permits for municipal and industrial users in excess of 100,000 gallons per day, but it did not limit the volume of withdrawals. Not until 1988, when the Georgia Water Quality Control Act (1964) and the Groundwater Use Act (1972) were amended, did farm withdrawals of surface and groundwater in excess of 100,000 gallons per day require a permit. These State laws prevent degradation of water quality, which is important to support southern elktoe.

Georgia passed the Flint River Drought Protection Act (FRDPA) in 2000 with the goal of reducing surface water withdrawals during dry periods, keeping more water in the ACF Basin, and mitigating tri-state water resource friction. The FRDPA allowed the Georgia Environmental Protection Division (GEPD) director to declare a drought in the Flint River basin and enabled the State to pay farmers not to irrigate. The process was used in 2001 and 2002; however, the GEPD concluded that the cropland users with the highest water usage continued to irrigate. This State law allows more water to remain in rivers during dry periods, thus reducing the potential stress to southern elktoe during droughts.

The Florida Water Resources Act establishes all water in Florida as a public resource that is managed by the Florida Department of Environmental Protection and five water management districts. Each district creates a regional water supply plan every 5 years. Florida establishes minimum flow limits (MFLs) to identify the limit at which withdrawals would be significantly harmful to the water resources or ecology of an area, particularly those areas where southern elktoe exist. Also, the Florida Legislature enacted the Surface Water Improvement and Management (SWIM) Act in 1987 by to improve and manage the water quality and natural systems of Florida's surface waters, which include lakes, rivers, streams, estuaries, springs, and wetlands. These laws that are intended to maintain flow and quality of the waters also support the southern elktoe.

The presence of other listed mussels within the ACF Basin resulted in designation of their critical habitat in 2007 (see 72 FR 64286; November 15, 2007). As a result, Federal agencies have been required under the Act's section 7 to coordinate with the Service to ensure actions they carry out, fund, or authorize will not jeopardize species' persistence or adversely modify critical habitat. This requirement has indirectly offered some protection to southern elktoe throughout most of its historical range; however, it is important to note that the most recent known locations of southern elktoe collections during the current time period in the Upper Flint population are not in any species' designated critical habitat and do not benefit from this collateral protection. Additionally, lands in conservation ownership in the ACF Basin include the Apalachicola National Forest in the Apalachicola, several spring habitats in the Chipola River Basin, and Elmodel Wildlife Management Area in the Ichawaynochaway. These conservation lands provide protection from development and other stressors to the southern elktoe.

Determination of Southern Elktoe'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 in danger of extinction throughout all or a

significant portion of its range, and a ''threatened species'' as a species 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 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.

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 habitat degradation and loss, including impaired water quality, decreased water quantity, and barriers to host fish movement, have reduced habitat suitability (Factor A) for the southern elktoe to such a degree that there is little resiliency of the species throughout its range. Once known from a variety of small stream to large river habitats, which supported the ability to adapt to changing riverine conditions (representation), currently the southern elktoe is restricted to larger rivers and mainstem habitats within the ACF Basin. This reduction in range represents significantly reduced representation and redundancy from historical conditions. Stressors to the southern elktoe's habitat from agricultural and urban land uses are present in all the southern populations except the Apalachicola River. The Middle Chattahoochee, Upper Flint River, and Lower Flint River populations have little resiliency and may be at risk of extirpation. Resilience of the other three populations—Ichawaynochaway Creek, Chipola River, and Apalachicola River—is currently categorized as poor (*i.e.,* has an index between 0.2–0.39, see Table 1 above and Table 4.4. in SSA report (Service 2022, p. 57).

While we anticipate that the 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 southern elktoe's vulnerability to ongoing stressors is heightened to such a degree that it is currently in danger of extinction as a result of its reduced range and critically low numbers. Thus, after assessing the best available information, we determine that southern elktoe 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 that the southern elktoe 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 the southern elktoe warrants listing as endangered throughout all of its range, our determination does not conflict with the decision in *Center for Biological Diversity* v. *Everson,* 435 F. Supp. 3d 69 (D.D.C. 2020) (*Everson*), which vacated the provision of the 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) providing that if the Service determines that a species is threatened throughout all of its range, the Service will not analyze whether the species is endangered in a significant portion of its range.

Determination of Status

Our review of the best available scientific and commercial information indicates that the southern elktoe meets the Act's definition of an endangered species. Therefore, we propose to list the southern elktoe 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 as a listed species, planning and implementation of 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, including the Service, 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 goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

The recovery planning process begins with development of a recovery outline made available to the public soon after a final listing determination. The recovery outline guides the immediate implementation of urgent recovery actions while a recovery plan is being developed. Recovery teams (composed of species experts, Federal and State agencies, nongovernmental organizations, and stakeholders) may be established to develop and implement recovery plans. The recovery planning process involves the identification of actions that are necessary to halt and reverse the species' decline by addressing the threats to its survival and recovery. The recovery plan 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. Revisions of the plan may be done to address continuing or new threats to the species, as new substantive information becomes available. The recovery outline, draft recovery plan, final recovery plan, and any revisions will be available on our website as they are completed (*https://www.fws.gov/program/endangered-species*), or from our Florida 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 States of Alabama, Georgia, and Florida would be eligible for Federal funds to implement management actions that promote the protection or recovery of the southern elktoe. Information on our grant programs that are available to aid species recovery can be found at: *https://www.fws.gov/service/financial-assistance.*

Although the southern elktoe 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.

Examples of actions that may be subject to the section 7 processes are land management or other landscape-altering activities on Federal lands administered by the Service, U.S. Forest Service, and National Park Service, as well as 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. Examples of Federal agency actions that may require consultation for the southern elktoe could include: channel dredging and maintenance, dam projects including flood control, navigation, hydropower, bridge projects, stream restoration, and Clean Water Act permitting; flow management and water storage (systemwide), slough restoration project on Apalachicola River, expansion of limestone mine on Chipola River; technical and financial assistance for projects and the U.S. Forest Service (aquatic habitat restoration, fire management plans, fire suppression, fuel reduction treatments, forest plans, mining permits); renewable and alternative energy projects; issuance of section 10 permits for enhancement of survival, habitat conservation plans, and safe harbor agreements; National Wildlife Refuge planning and refuge activities; Partners for Fish and Wildlife program projects benefiting these species or other listed species, Wildlife and Sportfish Restoration program sportfish stocking; development of water quality criteria and permitting; and future river crossings/bridge replacement and maintenance. Given the difference in triggers for conferencing and consultation, Federal agencies should coordinate with the local Service Field Office (see **FOR FURTHER INFORMATION CONTACT**) with any specific questions.

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 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. The statute also contains certain 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. At this time, we are unable to identify specific activities that would not be considered to result in a violation of section 9 of the Act because the southern elktoe occurs in several riverine habitats across its range and it is likely that site-specific conservation measures may be needed for activities that may directly or indirectly affect the species.

Based on the best available information, the following activities 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) Introduction of nonnative species that compete with or prey upon the southern elktoe;

(2) Release of biological control agents that affect any life stage of this species;

(3) Modification of the channel or water flow of any stream in which the southern elktoe is known to occur; and

(4) Discharge of chemicals or fill material into any waters in which the southern elktoe is known to occur.

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 (that is, range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (*e.g.,* migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals).

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

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation also does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the 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 likely 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).

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.

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 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 the 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 those planning efforts calls for a different outcome.

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 which 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 absence of 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, we 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.

Summary of Essential Physical or Biological Features

As described above under Summary of Biological Status and Threats, the southern elktoe is a freshwater mussel that occurs in river and streams. Occasional or regular interaction among individuals in different reaches not interrupted by a barrier likely occurs, but in general, interaction is strongly influenced by habitat fragmentation and distance between occupied river or stream reaches. Once released from their fish host, freshwater mussels are benthic, generally sedentary aquatic organisms and closely associated with appropriate habitat patches within a river or stream.

We derive the specific physical or biological features essential to the conservation of the southern elktoe from studies of these species' (or appropriate surrogate species') habitat, ecology, and life history. The primary habitat elements that influence resiliency of the southern elktoe include water quality, water quantity, substrate, habitat connectivity, and the presence of host fish species to ensure recruitment. Adequate flows ensure delivery of oxygen, enable reproduction, deliver food to filter-feeding mussels, and reduce contaminants and fine sediments from interstitial spaces. Stream velocity is not static over time, and variations may be attributed to seasonal changes (with higher flows in winter/spring and lower flows in summer/fall), extreme weather events (*e.g.,* drought or floods), or anthropogenic influence (*e.g.,* flow regulation via impoundments).These features are also described above as resource needs under Summary of Biological Status and Threats, and a full description is available in the SSA report; the individuals' needs are summarized below in Table 2.

TABLE 2—SOUTHERN ELKTOE'S RESOURCE NEEDS

Life stage	Resources needed to complete life stage [1]
All	• Flowing water. • Moderate water temperature (in general ≤32°C). • Adequate dissolved oxygen (in general ≥5.0 mg/L). • Good water quality with low concentrations of toxicants (chlorine, un-ionized ammonia, heavy metals, salts, pesticides).
Fertilized eggs (brooding Oct–Feb).	• Normal suspended solid levels. • Appropriate spawning temperatures. • Mature males upstream from mature females. • Suitable flows for fertilization to occur.
Glochidia Winter.	• Presence of catostomid host fish. • Suitable flows to permit host-glochidia interactions.
Juveniles Excystment from host fish to ~25 mm.	• Areas with low shear stress during high flows. • Appropriate substrates (stable sand/gravel free from excessive silt). • Suitable interstitial water quality, including moderate temperature and adequate dissolved oxygen, and absence of toxicants. • Adequate food availability (bacteria, algae, diatoms, detritus) in sediment. • Suitable temperatures to maximize growth (predation risk declines as size increases). • Limited predators to juveniles (*e.g.*, flatworms).
Adults Greater than ~25 mm.	• Areas with low shear stress during high flows. • Appropriate substrates (stable sand/gravel free from excessive silt). • Adequate food availability (bacteria, algae, diatoms, detritus) in water column.

[1] These resource needs are common among North American freshwater mussels; however, due to lack of species-specific research, parameters specific to the southern elktoe are unavailable.

Additional information can be found in chapter 2 of the SSA report (Service 2022, pp. 11–15), which is available on *https://www.regulations.gov* under Docket No. FWS–R4–ES–2022–0179. We have determined that the following physical or biological features are essential to the conservation of southern elktoe:

(1) Adequate flows, or a hydrologic flow regime (magnitude, timing, frequency, duration, rate of change, and overall seasonality of discharge over time), necessary to maintain benthic habitats where the species is found and to maintain stream connectivity, specifically providing for the exchange of nutrients and sediment for maintenance of the mussel and fish host's habitat and food availability, maintenance of spawning habitat for native fishes that could serve as host fish, and the ability for newly transformed juveniles to settle and become established in their habitats.

(2) Suitable substrates and connected instream habitats, characterized by geomorphically stable stream channels and banks (*i.e.,* channels that maintain lateral dimensions, longitudinal profiles, and sinuosity patterns over time without an aggrading or degrading bed elevation) with habitats that support the southern elktoe (*e.g.,* slightly depositional habitats consisting of mixtures of silty mud, sand, and gravel).

(3) Water and sediment quality necessary to sustain natural physiological processes for normal behavior, growth, and viability of all life stages. Water and sediment quality needs include appropriate thermal and dissolved oxygen regimes (temperature generally not above 90 degrees Fahrenheit (°F) (32 degrees Celsius (°C)) and dissolved oxygen generally greater than 5.0 mg/L) that are also low in ammonia (generally not above 1.5 mg N/L), heavy metals, pharmaceutical concentrations, salinity (generally not above 4 parts per million), total suspended solids, and other pollutants.

(4) The presence and abundance of fish hosts necessary for recruitment of the southern elktoe, specifically species of the sucker family, Catostomidae, including the genera *Moxostoma* (Apalachicola redhorse, greater jumprock, and blacktail redhorse) and *Erimyzon* (creek chubsucker and lake chubsucker).

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 southern elktoe may require special management considerations or protections to reduce the following threats:

(1) Alteration of the natural flow regime (modifying the natural hydrograph or seasonal flows), including (but not limited to) water withdrawals that result in flow reduction and available water quantity, or channelization that changes the natural stream flow pattern;

(2) Changes of the landscape, including (but not limited to) land conversion for urban and agricultural use, infrastructure (pipelines, roads, bridges, utilities), and water uses (ground water withdrawal, water supply reservoirs, wastewater treatment, etc.);

(3) Significant degradation of water quality and nutrient pollution from a variety of sources, such as stormwater runoff or wastewater from municipal facilities;

(4) Impacts from invasive species;

(5) Incompatible land use activities that remove large areas of forested wetlands or riparian areas or watershed/floodplain disturbances that release sediments, pollutants, or nutrients into the water;

(6) Installation or maintenance of dams, culverts, or pipes that create a barrier to movement for the southern elktoe, or its host fishes; and

(7) Changes and shifts in seasonal precipitation patterns as a result of climate change.

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 destruction; protection of riparian corridors and native woody vegetation; moderation of surface and ground water withdrawals to maintain natural flow regimes; improved stormwater management; and avoidance or minimization of other watershed and floodplain disturbances that release sediments, pollutants, or nutrients into the water.

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 proposing to designate critical habitat in areas within the geographical area occupied by the species at the time of listing. The proposed critical habitat designation includes the occupied rivers and streams within the current range that we determined contain the physical and biological features that are essential to the conservation of these species. These rivers and streams contain known populations and have retained the physical or biological features that could allow for the maintenance and expansion of existing populations.

We also are proposing to designate specific areas outside the geographical area occupied by the species because we have determined that a designation limited to occupied areas would be inadequate to ensure the conservation of the species. There are current records of southern elktoe in the Upper Flint River Complex and the Middle Chattahoochee system; however, the currently occupied reaches are significantly reduced compared to historical distribution. Designating only occupied areas in these two systems (which equates to one small stream reach in each system and thus provides little redundancy for the species) is not sufficient for the conservation of the species; therefore, unoccupied reaches that had historical observations of the species are included in the designation. The addition of these unoccupied reaches will provide areas that support the southern elktoe's life processes; thus, these unoccupied reaches are considered habitat that contains all of the physical and biological features that are essential to the conservation of the southern elktoe. Further, these unoccupied areas are reasonably certain to contribute to the conservation of the species, as they currently support other freshwater mussel species and provide habitat for fish hosts that are essential for the conservation of the southern elktoe.

Sources of data for this proposed critical habitat include information from State agencies and survey reports throughout the species' range (Service 2022, entire). We have also reviewed available information that pertains to the habitat requirements of the species. Sources of information on habitat requirements include information for the six co-occurring listed mussels and other closely related species, published peer-reviewed articles, agency reports, and data collected during monitoring efforts.

In summary, for all areas within the geographic area occupied or unoccupied by the species at the time of listing that we are proposing as critical habitat, we delineated critical habitat unit boundaries using the following criteria: the upstream boundary of a unit is the first perennial tributary confluence or first permanent barrier to fish passage (such as a dam) upstream of the upstream-most occurrence record (either current or historical). The downstream boundary of a unit is the mouth of the stream, the upstream extent of tidal influence, or the upstream extent of an impoundment, whichever comes first, downstream of the farthest downstream occurrence record. The lateral extent of each unit includes the bankfull width of the stream. We consider portions of the following rivers and streams to be appropriate for critical habitat designation: Apalachicola River, Chipola River, Lower Flint River Complex, Upper Flint River Complex, and Middle Chattahoochee (see Proposed Critical Habitat Designation, below).

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 southern elktoe. 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 that contain one or more of the physical or biological features that are essential to support life-history processes of the species. We have determined that occupied areas are inadequate to ensure the conservation of the species. Therefore, we have also identified, and propose for designation as critical habitat, unoccupied areas that are essential for the conservation of the species. Five units are proposed for designation based on one or more of the physical or biological features being present to support the southern elktoe's 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 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 *https://www.regulations.gov* at Docket No. FWS–R4–ES–2022–0179.

Proposed Critical Habitat Designation

We are proposing to designate approximately 578 river mi (929 river km) in five units as critical habitat for the southern elktoe. The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the species. Critical habitat includes only stream channels up to bankfull height, where the stream base flow is contained within the channel. The five units we propose as critical habitat are: (1) Apalachicola River, (2) Chipola River, (3) Lower Flint River Complex, (4) Upper Flint River Complex, and (5) Middle Chattahoochee. Table 3 shows the proposed critical habitat units and the approximate area of each unit.

TABLE 3—PROPOSED CRITICAL HABITAT UNITS FOR SOUTHERN ELKTOE

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

Critical habitat unit	Land ownership by type	Length of unit in river kilometers (miles)	Occupied?
1. Apalachicola River	Public and Private	142.8 (88.7)	Yes.
2. Chipola River	Public and Private	131.3 (81.6)	Yes.
3. Lower Flint River Complex	Public and Private	165.9 (103.1)	Yes.
4. Upper Flint River Complex		Total: 396.6 (246.4)	
4a: Patsiliga Creek	Private	36.2 (22.5)	Yes.
4b: Upper Flint Tributaries	Public and Private	360.4 (223.9)	No.
5. Middle Chattahoochee		Total 92.9 (57.7)	
5a: Uchee Creek	Private	36.7 (22.8)	Yes.
5b: Little Uchee Creek	Private	20.3 (12.6)	No.
5c: Mulberry Creek	Public and Private	35.9 (22.3)	No.
Total		929.5 (577.6)	

Note: Area sizes may not sum due to rounding.

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

Unit 1: Apalachicola River

Unit 1 consists of 142.8 river km (88.7 mi) of the Apalachicola River in Calhoun, Franklin, Gadsden, Gulf, Jackson, and Liberty Counties, Florida; this unit is currently occupied and contains all the physical and biological features essential to the conservation of the species. The main stem of the Apalachicola River in Unit 1 extends from near Prospect Bluff Historic Sites in Apalachicola National Forest at river mile 20 (U.S. Army Corps of Engineers Navigable Waterway Mile Markers) in Franklin County, Florida, upstream to the Jim Woodruff Lock and Dam in Gadsden and Jackson Counties, Florida (the river is the county boundary), including stream habitat up to bankfull height.

Riparian lands that border the unit include approximately 36.5 river km (22.7 mi) in public conservation and 41.9 river km (26 mi) in combined public conservation and private ownership. The Nature Conservancy's Apalachicola Bluffs and Ravines Preserve (included in private ownership) protects rare steephead and other habitats along the Apalachicola

River. General land use on adjacent riparian lands and the surrounding HUC 8-level management unit includes forested or rural lands with more limited threats than other units. Special management considerations that may be required to maintain the physical and biological features include, but are not limited to: use of best management practices designed to reduce sedimentation, erosion, and bank destruction and protection of riparian corridors and native woody vegetation.

Unit 2: Chipola River

Unit 2 consists of 131.3 river km (81.6 mi) of the Chipola River (including the reach known as Dead Lake) in Calhoun, Gulf, and Jackson Counties, Florida; this unit is currently occupied and contains all the physical and biological features essential to the conservation of the species. The main stem of the Chipola River in Unit 2 extends from its confluence with the Apalachicola River in Gulf County, Florida, upstream 131.3 km (81.6 mi) to approximately where the river flows underground in Florida Caverns State Park in Jackson County, Florida, including stream habitat up to bankfull height.

Riparian lands that border the unit include approximately 16.6 river km (10.3 mi) in public conservation and 19.3 river km (12 mi) in combined public conservation and private ownership. Water quality and quantity stressors from expansion of agricultural land use is a possible future threat in this unit. Special management considerations that may be required to maintain the physical and biological features include, but are not limited to: use of best management practices designed to reduce sedimentation, erosion, and bank destruction; protection of riparian corridors and native woody vegetation; moderation of surface and ground water withdrawals to maintain natural flow regimes; and avoidance or minimization of other watershed and floodplain disturbances that release sediments, pollutants, or nutrients into the water.

Unit 3: Lower Flint River Complex

Unit 3 consists of 165.9 river km (103.1 mi) of the mainstem of the Flint River between Lake Seminole (impounded by the Jim Woodruff Lock and Dam) and the Flint River Dam (which impounds Lake Worth), and the mainstems of two tributaries in Baker, Decatur, Dougherty, and Mitchell Counties, Georgia; this unit is currently occupied and contains all the physical and biological features essential to the conservation of the species. The mainstem of the Flint River in Unit 3 extends from 1.3 river km (0.82 mi) downstream of U.S. Highway 84 in Decatur County, Georgia (the approximate upstream extent of Lake Seminole), upstream 122.7 river km (76.3 mi) to the Flint River Dam in Dougherty County, Georgia. Unit 3 includes 26.1 river km (16.2 mi) of the mainstem of Ichawaynochaway Creek from its confluence with the Flint River upstream to its confluence with Chickasawhatchee Creek, and 15.7 river km (9.7 mi) of the mainstem of Chickasawhatchee Creek from its confluence with Ichawaynochaway Creek upstream to its confluence with Spring Creek in Baker County, Georgia, including stream habitat up to bankfull height.

Riparian lands that border the unit include approximately 17.3 river km (10.8 mi) in public conservation and 28.5 river km (17.7 mi) in combined public conservation and private ownership. Water quality and quantity stressors from expansion of agricultural land use is a future threat in this unit. Special management considerations that may be required to maintain the physical and biological features include, but are not limited to: use of best management practices designed to reduce sedimentation, erosion, and bank destruction; protection of riparian corridors and native woody vegetation; moderation of surface and ground water withdrawals to maintain natural flow regimes; and avoidance or minimization of other watershed and floodplain disturbances that release sediments, pollutants, or nutrients into the water.

Unit 4: Upper Flint River Complex

Unit 4 is comprised of two subunits; both subunits include stream habitat up to bankfull height.

Subunit 4a includes 36.2 river km (22.5 mi) of Patsiliga Creek in Taylor County, Georgia. This subunit is currently occupied by the species and contains all the physical and biological features essential to the conservation of the species.

Subunit 4b includes 360.4 river km (223.9 mi) of the mainstem Flint River and four of its tributaries upstream of Lake Blackshear in Coweta, Crawford, Dooly, Fayette, Macon, Meriwether, Peach, Pike, Spalding, Sumter, Talbot, Taylor, and Upson Counties, Georgia. This subunit is considered currently unoccupied by the species and contains all the physical and biological features essential to the conservation of the species. These unoccupied areas are essential to restore historical redundancy for the species in the Upper Flint system and provide connectivity to subunit 4a, thus enabling the southern elktoe to sustain this population over time. We are reasonably certain that the unit will contribute to the conservation of the species because it currently sustains other freshwater mussels and the fish hosts that are essential to southern elktoe viability. These unoccupied reaches are considered habitat that contains all of the physical and biological features that are essential to the conservation of the southern elktoe.

Riparian lands that border Unit 4 include approximately 12.7 river km (7.9 mi) in public conservation and 64.7 river km (40.2) in combined public conservation and private ownership. Water quality and quantity stressors from urban land use is a primary threat in this unit. Special management considerations that may be required to maintain the physical and biological features include, but are not limited to: use of best management practices designed to reduce sedimentation, erosion, and bank destruction; protection of riparian corridors and native woody vegetation; moderation of surface and ground water withdrawals to maintain natural flow regimes; improved stormwater management; and avoidance or minimization of other watershed and floodplain disturbances that release sediments, pollutants, or nutrients into the water.

Unit 5: Middle Chattahoochee

Unit 5 is comprised of three subunits:

Subunit 5a includes 36.7 river km (22.8 mi) of the mainstem of Uchee Creek from its confluence with the Chattahoochee River upstream to the confluence with Island Creek in Russell County, Alabama. This subunit is currently occupied by the species and contains all of the physical and biological features essential to the conservation of the species. Because Fort Benning, which is located within this unit, has an integrated natural resources management plan (INRMP) that provides for conservation of the southern elktoe, we have not included 4 miles of Uchee Creek in this proposed designation (see Application of Section 4(a)(3) of the Act, below).

Subunit 5b includes 20.3 river km (12.6 mi) of Little Uchee Creek in Russell County, Alabama. This subunit is considered unoccupied, although it is contiguous with the occupied habitat in Uchee Creek and contains all the physical and biological features essential to the conservation of the species.

Subunit 5c includes 35.9 river km (22.3 mi) of Mulberry Creek in Harris County, Georgia. This subunit is considered currently unoccupied and

contains all the physical and biological features essential to the conservation of the species.

Subunits 5b and 5c, the two unoccupied subunits in Unit 5, are essential to restore historical redundancy for the species in the Middle Chattahoochee system, thus enabling the southern elktoe to sustain itself in this system over time. We are reasonably certain that the unit will contribute to the conservation of the species because it currently sustains other freshwater mussels and the fish hosts that are essential to southern elktoe viability. These unoccupied reaches are considered habitat that contains all of the physical and biological features that are essential to the conservation of the southern elktoe. Riparian lands that border the unit include approximately 0.5 river km (0.3 mi) in combined public conservation and private ownership; the remainder is private. Water quality and quantity stressors from expansion of agricultural land use is a future threat in this unit. Special management considerations that may be required to maintain the physical and biological features include, but are not limited to: use of best management practices designed to reduce sedimentation, erosion, and bank destruction; protection of riparian corridors and native woody vegetation; moderation of surface and ground water withdrawals to maintain natural flow regimes; improved stormwater management; and avoidance or minimization of other watershed and floodplain disturbances that release sediments, pollutants, or nutrients into the water.

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 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 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: (a) if the amount or extent of taking specified in the incidental take statement is exceeded; (b) if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (c) if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (d) if a new species is listed or critical habitat designated that may be affected by the identified action.

In such situations, Federal agencies sometimes may need to request reinitiation of consultation with us, but Congress also enacted some exceptions in 2018 to the requirement to reinitiate consultation on certain land management plans on the basis of a new species listing or new designation of critical habitat that may be affected by the subject Federal action. See 2018 Consolidated Appropriations Act, Public Law 115–141, Div, O, 132 Stat. 1059 (2018).

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, consider likely to destroy or adversely modify critical habitat include, but are not limited to:

(1) Actions that would degrade or alter water quality. Such activities could include, but are not limited to, polluted wastewater discharge or spills from industrial, municipal, and mining facilities; or polluted stormwater runoff or infiltration from agricultural lands and urban areas. These activities could eliminate or reduce the habitat necessary for the growth and reproduction of the southern elktoe and its fish hosts.

(2) Actions that would alter flow regimes. Such activities could include, but are not limited to, groundwater pumping and surface water withdrawal or diversion, dam construction and operation, and land clearing. These activities could eliminate or reduce the habitat necessary for the growth and reproduction of the southern elktoe and its fish hosts.

(3) Actions that would destroy or alter southern elktoe habitats. Such activities could include, but are not limited to, installation or maintenance of in-stream structures (such as dams, culverts, bridges, boat ramps, retaining walls, and pipelines), dredging, impounding, channelization, or modification of stream channels or banks, and discharge of fill material. These activities could eliminate or reduce the habitat necessary for the growth and reproduction of the southern elktoe and its fish hosts.

(4) Actions that would cause silt and sediment to wash into stream channels. Such activities could include, but are not limited to, road and bridge construction, agricultural and mining activities, and commercial and residential development. These activities could eliminate or reduce the habitat necessary for the growth and reproduction of the southern elktoe and its fish hosts.

Exemptions

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

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resources management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

(1) An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;

(2) A statement of goals and priorities;

(3) A detailed description of management actions to be implemented to provide for these ecological needs; and

(4) A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management; fish and wildlife habitat enhancement or modification; wetland protection, enhancement, and restoration where necessary to support fish and wildlife; and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, 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 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.

We consult with the military on the development and implementation of INRMPs for installations with listed species. We analyzed INRMPs developed by military installations located within the range of the proposed critical habitat designation for the southern elktoe to determine if they meet the criteria for exemption from critical habitat under section 4(a)(3) of the Act. The following areas are Department of Defense (DoD) lands with completed, Service-approved INRMPs within the proposed critical habitat designation.

Approved INRMPs

U.S. Army Fort Benning, Georgia; 4 Stream Miles (6.4 km)

We have identified one area within the proposed critical habitat designation that consists of DoD lands with a completed, Service-approved INRMP. The Army Maneuver Center of Excellence Fort Benning (Fort Benning) is located in Georgia and Alabama on 182,000 acres in three counties: Muscogee and Chattahoochee Counties, Georgia, and Russell County, Alabama. Fort Benning is federally owned land that is managed by the U.S. Army and is subject to all Federal laws and regulations. The Fort Benning INRMP covers fiscal years 2021–2026, and it serves as the principal management plan governing all natural resource activities on the installation. Among the goals and objectives listed in the INRMP is habitat management for rare, threatened, and endangered species, and the southern elktoe is included in this plan. Management actions that benefit the southern elktoe include maintenance or improvement of habitat quality in a portion of Uchee Creek by mitigating (avoiding) adverse impacts of any action within the watershed that could have effects on the quality of habitat in Uchee Creek.

Four stream miles (6.4 km) of Unit 5 (Middle Chattahoochee) are located within the area covered by this INRMP. Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands and streams are subject to the Fort Benning INRMP and that conservation efforts identified in the INRMP will provide a benefit to southern elktoe. Therefore, the streams within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 4 stream miles (6.4 km) of habitat in this proposed critical habitat designation because of this exemption.

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 based on economic impacts, impacts on national security, or any other relevant impacts. Exclusion decisions are governed by the regulations at 50 CFR 424.19 and the Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (hereafter, the ''2016 Policy''; 81 FR 7226, February 11, 2016), both of which were developed jointly with the National Marine Fisheries Service (NMFS). We also refer to a 2008 Department of the Interior Solicitor's opinion entitled ''The Secretary's Authority to Exclude Areas from a Critical Habitat Designation under Section 4(b)(2) of the Endangered Species Act'' (M–37016).

In considering whether to exclude a particular area from the designation, we identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and evaluate whether the benefits of exclusion outweigh the benefits of inclusion. If the analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, the Secretary may exercise discretion to exclude the area only if such exclusion would not 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. In our final rules, we explain any decision to exclude areas, as well as decisions not to exclude, to demonstrate that the decision is reasonable. We describe below the process that we use for taking into consideration each category of impacts and any initial 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). Therefore, the baseline 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.

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. Section 3(f) of E.O. 12866 identifies four criteria when a regulation is considered a ''significant'' rulemaking, and requires additional analysis, review, and approval if met. The criterion relevant here is whether the designation of critical habitat may have an economic effect of greater than $100 million in any given year (section 3(f)(1)). Therefore, our consideration of economic impacts uses a screening analysis to assess whether a designation of critical habitat for the southern elktoe is likely to exceed the economically significant threshold.

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 southern elktoe (IEc 2021, 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 already 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. The presence of the listed species in occupied areas of critical habitat means that any destruction or adverse modification of those areas is also likely to jeopardize the continued existence of the species. Therefore, designating occupied areas as critical habitat typically causes little if any incremental impacts above and beyond the impacts of listing the species. Therefore, the screening analysis focuses on areas of unoccupied critical habitat. 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 to be our draft economic analysis (DEA) of the proposed critical habitat designation for the southern elktoe; our DEA is summarized in the narrative below.

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 southern elktoe, first we identified, in the IEM dated July 29, 2021, probable incremental economic impacts associated with the following categories of activities: (1) channel dredging and maintenance; dam projects including flood control, navigation, hydropower, bridge projects, stream restoration, and Clean Water Act permitting; flow management and water storage (systemwide); slough restoration project on Apalachicola River, and an expansion of a limestone mine on Chipola River; (2) technical and financial assistance for projects, including aquatic habitat restoration, fire management plans, fire suppression, fuel reduction treatments, forest plans, and mining permits; (3) renewable and alternative energy projects; (4) issuance of section 10 permits for enhancement

of survival, habitat conservation plans, and safe harbor agreements; (5) Federal lands management; (6) water quality permitting; (7) roadway and bridge construction; (8) natural disaster management; and (9) recreation (including sport fishing and sportfish stocking).

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 southern elktoe 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, Federal agencies would be required to consider the effects of their actions on the designated habitat, and if the Federal action may affect critical habitat, our consultations would include an evaluation of measures to avoid the destruction or adverse modification of critical habitat.

In our IEM, we attempted to clarify the distinction between the effects that would 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 southern elktoe's critical habitat. Because the designation of critical habitat for southern elktoe is being 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 likely adversely affect the essential physical or biological features of critical habitat would also likely adversely affect the species itself. 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 proposed critical habitat designation for the southern elktoe totals approximately 578 river miles (929 km), of which approximately 55 percent is currently occupied by the species. In these occupied areas, any actions that may affect the species or its habitat would also affect designated critical habitat, and it is unlikely that any additional conservation efforts would be recommended to address the adverse modification standard over and above those recommended as necessary to avoid jeopardizing the continued existence of the southern elktoe. Therefore, only administrative costs are expected in approximately 55 percent of the proposed critical habitat designation. While this additional analysis will require time and resources by both the Federal action agency and the Service, it is believed that, in most circumstances, these costs would predominantly be administrative in nature and would not be significant.

The remaining approximately 259 mi (416 km) (45 percent of the total proposed critical habitat designation) are currently unoccupied by the species but are essential for the conservation of the species. In these unoccupied areas, any conservation efforts or associated probable impacts would be considered incremental effects attributed to the critical habitat designation. Of the 259 mi (416 km) of unoccupied critical habitat, approximately 74 percent overlaps with existing designated critical habitat of other listed aquatic species. In these areas, consultations would likely occur even absent the proposed critical habitat designation for the southern elktoe.

A number of additional baseline conservation actions exist for the species, including State water conservation plans and measures, as well as best management practices for riparian activities for construction, forestry, and agricultural activities. For example, the States' Departments of Transportation report consultation road and bridge best management practices that specifically intend to benefit water quality in proposed critical habitat areas. Other conservation activities on public lands include activities on Apalachicola National Forest in Florida, tracts managed by the Northwest Florida Water Management District in Florida, and the Elmodel Wildlife Management Area managed by the State of Georgia. Conservation activity is also being conducted by nonprofit organizations that would serve to directly or indirectly benefit southern elktoe critical habitat on some private lands. Based on the substantial baseline protections afforded to the southern elktoe that are anticipated to occur in proposed critical habitat areas even absent the designation of critical habitat for the species, we do not foresee any incremental costs associated with project modifications that would involve additional conservation efforts for the species. When some incremental section 7 consultations costs are anticipated, costs are likely to be limited to the additional administrative efforts to consider adverse modification during the consultation process.

The probable incremental economic impacts of the proposed southern elktoe critical habitat designation are expected to be limited to additional administrative effort as well as minor costs of conservation efforts resulting from a small number of future section 7 consultations. This is due to two factors: (1) A significant portion of proposed critical habitat stream reaches are considered to be occupied by the species (55 percent), and incremental economic impacts of critical habitat designation, other than administrative costs, are unlikely; and (2) in proposed areas that are not occupied by southern elktoe, approximately 74 percent of the areas are already designated as critical habitat for other listed aquatic species, so many of the conservation efforts undertaken for those other listed aquatic species would also provide substantial protections to critical habitat areas for the southern elktoe even absent critical habitat designation. In the remaining 26 percent of the areas, there are predicted to be fewer than one formal and two informal consultations per year. The associated costs are estimated to be $10,000 or less per consultation. Accordingly, in order to reach the threshold of $100 million of incremental administrative impacts in a single year, critical habitat designation would have to result in more than 11,000 consultations in a single year. However, based on consultation history areas across the entirety of the proposed designation, we only anticipate one formal consultation and six informal consultations per year. Thus, the annual administrative burden is very unlikely to reach $100 million.

We are soliciting data and comments from the public on the DEA discussed above, as well as on 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 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) of the Act, our implementing regulations at 50 CFR 424.19, and the 2016 Policy. 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), then national-security or homeland-security concerns are not a factor in the process of determining what areas meet the definition of ''critical habitat.'' However, the Service must still consider impacts on national security, including homeland security, on those lands or areas not covered by section 4(a)(3)(B)(i), because section 4(b)(2) requires the Service to consider those impacts whenever it designates critical habitat. Accordingly, if DoD, Department of Homeland Security (DHS), or another Federal agency has requested exclusion based on an assertion of national-security or homeland-security concerns, or we have otherwise identified national-security or homeland-security impacts from designating particular areas as critical habitat, we generally have reason to consider excluding those areas.

However, we cannot 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, we must conduct an exclusion analysis if the Federal requester provides information, including 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 we conduct an exclusion analysis because the agency provides a reasonably specific justification or because we decide to exercise the discretion to conduct an exclusion analysis, 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 southern elktoe are not owned or managed by the DoD or DHS, and, therefore, we anticipate no impact on national security or homeland security.

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. To identify other relevant impacts that may affect the exclusion analysis, we consider a number of factors, including whether there are permitted conservation plans covering the species in the area—such as HCPs, safe harbor agreements, or candidate conservation agreements with assurances—or whether there are non-permitted conservation agreements and partnerships that may be impaired by designation of, or exclusion from, critical habitat. In addition, we look at whether Tribal conservation plans or partnerships, Tribal resources, or government-to-government relationships of the United States with Tribal entities may be affected by the designation. We also consider any State, local, social, or other impacts that might occur because of the designation.

Summary of Exclusions Considered Under 4(b)(2) of the Act

We have not identified any areas to consider for exclusion from critical habitat based on other relevant impacts. We have determined that there are currently no HCPs or other management plans for the southern elktoe, and the proposed designation does not include any Tribal lands or trust resources or any lands for which designation would have any economic or national security impacts. Therefore, we anticipate no impact on Tribal lands, partnerships, or HCPs from this proposed critical habitat designation and thus, as described above, we are not considering excluding any particular areas on the basis of the presence of conservation agreements or impacts to trust resources.

However, if through the public comment period we receive information that we determine indicates that there are potential economic, national security, or other relevant impacts from designating particular areas as critical habitat, then as part of developing the final designation of critical habitat, we will evaluate that information and may conduct a discretionary exclusion analysis to determine whether to exclude those areas under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19. If we receive a request for exclusion of a particular area and after evaluation of supporting information we do not exclude, we will fully describe our decision in the final rule for this action.

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, 13563, and 14094)

Executive Order 14094 reaffirms the principles of E.O. 12866 and E.O 13563 and states that regulatory analysis should facilitate agency efforts to develop regulations that serve the public interest, advance statutory objectives, and are consistent with E.O.

12866, E.O. 13563, and the Presidential Memorandum of January 20, 2021 (Modernizing Regulatory Review). Regulatory analysis, as practicable and appropriate, shall recognize distributive impacts and equity, to the extent permitted by law. 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 whether 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. The RFA does not require evaluation of 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 would not have a significant economic impact on a substantial number of small business entities. Therefore, an initial regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. In our economic analysis, we did not find that this proposed critical habitat designation would significantly affect energy supplies, distribution, or use. No known hydropower, oil/gas leases, power lines, or pipelines will be affected within or adjacent to proposed critical habitat areas. 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 are not likely to 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 proposed rule would significantly or uniquely affect small governments because those governments will be affected only to the extent that any programs having Federal funds, permits, or other authorized activities must ensure their actions will not adversely affect critical habitat. 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 southern elktoe 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 southern elktoe, 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 Federal 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 E.O. 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the proposed 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 physical or biological features essential to the conservation of the species. The proposed areas of 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 proposed 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.)

Regulations adopted pursuant to section 4(a) of the Act are exempt from the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) and do not require an environmental analysis under NEPA. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This includes listing, delisting, and reclassification rules, as well as critical habitat designations. In a line of cases starting with *Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), the courts have upheld this position.

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 federally recognized Tribes on a government-to-government basis. In accordance with Secretary's 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 southern elktoe, 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 *https://www.regulations.gov* and upon request from the Florida 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 Florida Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

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

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. Amend § 17.11, in paragraph (h), by adding an entry for ''Elktoe, Southern'' to the List of Endangered and Threatened Wildlife in alphabetical order under CLAMS to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

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

■ 3. Amend § 17.95, in paragraph (f), by adding an entry for ''Southern Elktoe (*Alasmidonta triangulata*)'' following the entry for ''Appalachian Elktoe (*Alasmidonta raveneliana*)'' to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(f) *Clams and Snails.*

* * * * *

Southern Elktoe (*Alasmidonta triangulata*)

(1) Critical habitat units are depicted for Russell County, Alabama; Calhoun, Franklin, Gadsden, Gulf, Jackson, and Liberty Counties, Florida; and Baker, Coweta, Crawford, Decatur, Dooly, Dougherty, Fayette, Harris, Macon, Meriwether, Mitchell, Peach, Pike, Spalding, Sumter, Talbot, Taylor, and Upson Counties, Georgia, on the maps in this entry.

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

(i) Adequate flows, or a hydrologic flow regime (magnitude, timing, frequency, duration, rate of change, and overall seasonality of discharge over time), necessary to maintain benthic habitats where the species is found and to maintain stream connectivity, specifically providing for the exchange of nutrients and sediment for maintenance of the mussel and fish host's habitat and food availability, maintenance of spawning habitat for native fishes that could serve as host fish, and the ability for newly transformed juveniles to settle and become established in their habitats.

(ii) Suitable substrates and connected instream habitats, characterized by geomorphically stable stream channels and banks (*i.e.,* channels that maintain lateral dimensions, longitudinal profiles, and sinuosity patterns over time without an aggrading or degrading bed elevation) with habitats that support the southern elktoe (*e.g.,* slightly depositional habitats consisting of mixtures of silty mud, sand, and gravel).

(iii) Water and sediment quality necessary to sustain natural physiological processes for normal behavior, growth, and viability of all life stages. Water and sediment quality needs include appropriate thermal and dissolved oxygen regimes (temperature generally not above 90 °F (32 °C) and dissolved oxygen generally greater than 5.0 milligrams per liter (mg/L)) that are also low in ammonia (generally not above 1.5 mg N/L (milligrams Nitrogen per Liter)), heavy metals, pharmaceutical concentrations, salinity (generally not above 4 parts per million), total suspended solids, and other pollutants.

(iv) The presence and abundance of fish hosts necessary for recruitment of the southern elktoe, specifically species of the sucker family, Catostomidae, including the genera *Moxostoma* (Apalachicola redhorse, greater jumprock, and blacktail redhorse) and *Erimyzon* (creek chubsucker and lake chubsucker).

(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 [EFFECTIVE DATE OF RULE].

(4) Data layers defining map units were created using ArcMap GIS, and critical habitat units were then mapped using the National Hydrography Dataset (NAD) using NAD83 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 *https://www.regulations.gov* at Docket No. FWS–R4–ES–2022–0179.

(5) Index map follows:

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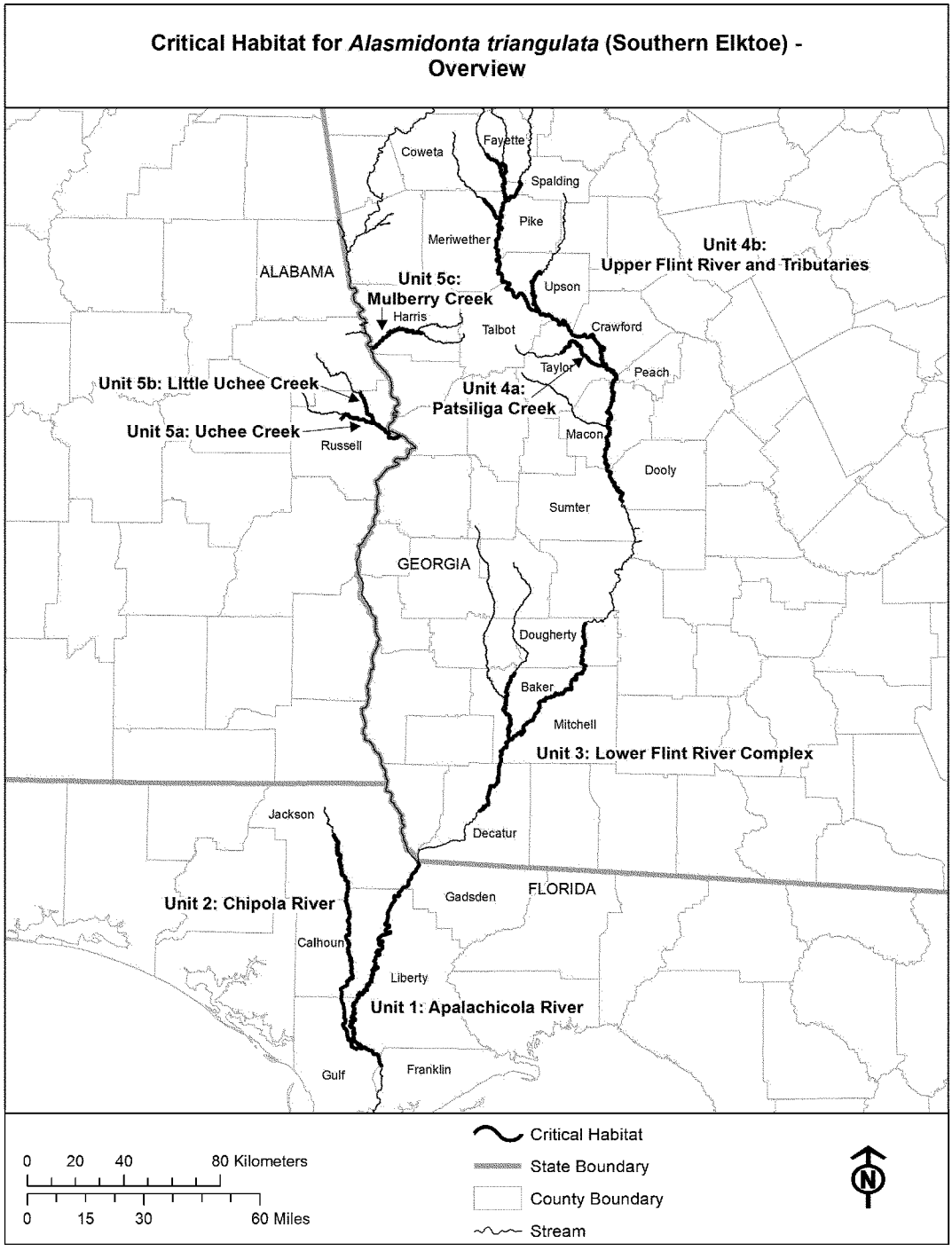
Figure 1 to Southern Elktoe (*Alasmidonta triangulata*) paragraph (5)

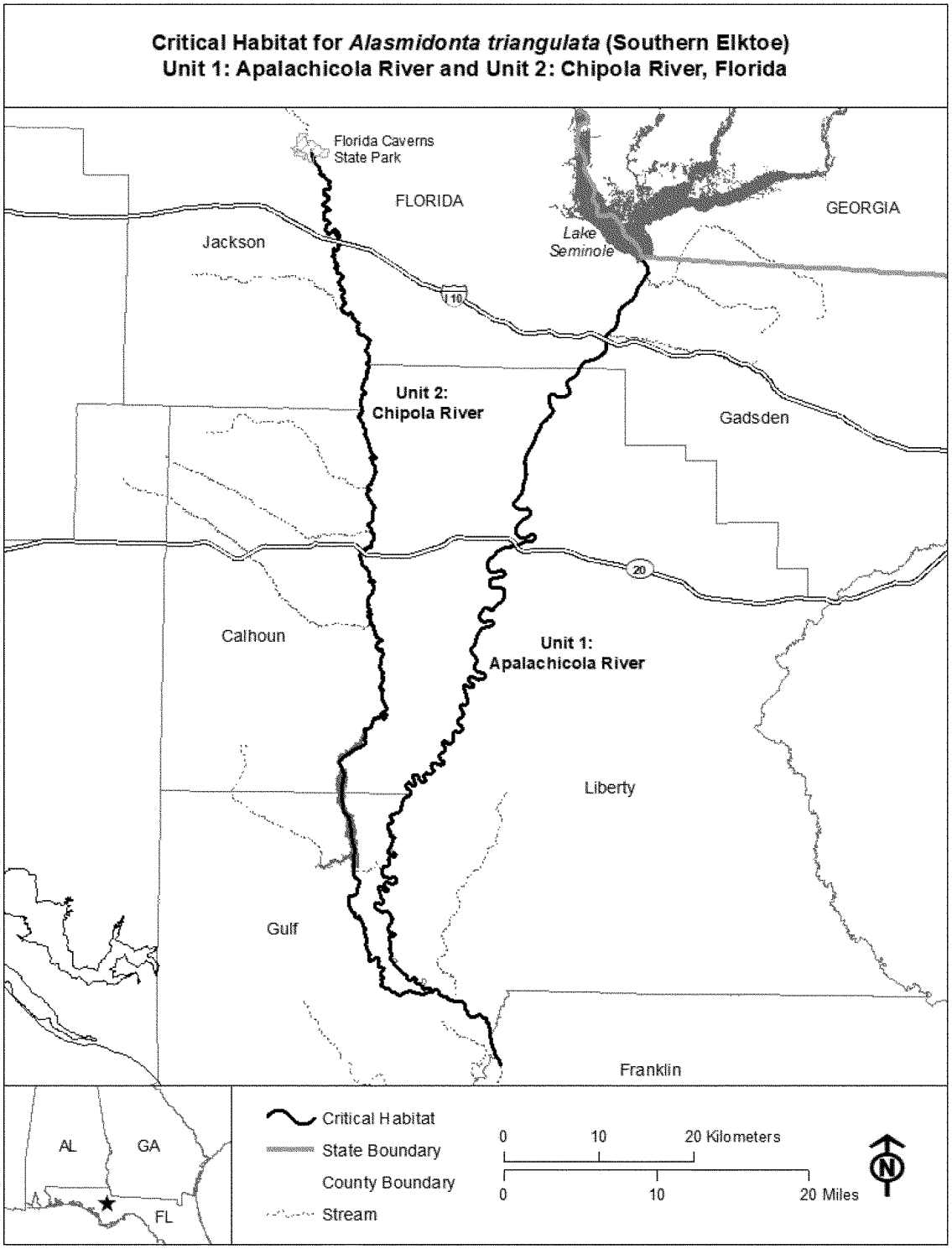


(6) Unit 1: Apalachicola River; Calhoun, Franklin, Gadsden, Gulf, Jackson, and Liberty Counties, Florida.

(i) Unit 1 consists of 142.8 river kilometers (km) (88.7 miles (mi)) of the Apalachicola River in Calhoun, Franklin, Gadsden, Gulf, Jackson, and Liberty Counties, Florida. The mainstem of the Apalachicola River in Unit 1 extends from near Prospect Bluff Historic Sites in Apalachicola National Forest at river mile 20 (U.S. Army Corps of Engineers Navigable Waterway Mile Markers) in Franklin County, Florida, upstream to the Jim Woodruff Lock and Dam in Gadsden and Jackson Counties, Florida (the river is the county boundary). Unit 1 includes stream habitat up to bankfull height.

(ii) Map of Units 1 and 2 follows:

Figure 2 to Southern Elktoe (*Alasmidonta triangulata*) paragraph (6)(ii)



(7) Unit 2: Chipola River; Calhoun, Gulf, and Jackson Counties, Florida.

(i) Unit 2 consists of 131.3 river km (81.6 mi) of the Chipola River (including the reach known as Dead Lake) in Calhoun, Gulf, and Jackson Counties, Florida. The mainstem of the Chipola River in Unit 2 extends from its confluence with the Apalachicola River in Gulf County, Florida, upstream 131.3 km (81.6 mi) to approximately where the river flows underground in Florida Caverns State Park in Jackson County, Florida. Unit 2 includes stream habitat up to bankfull height.

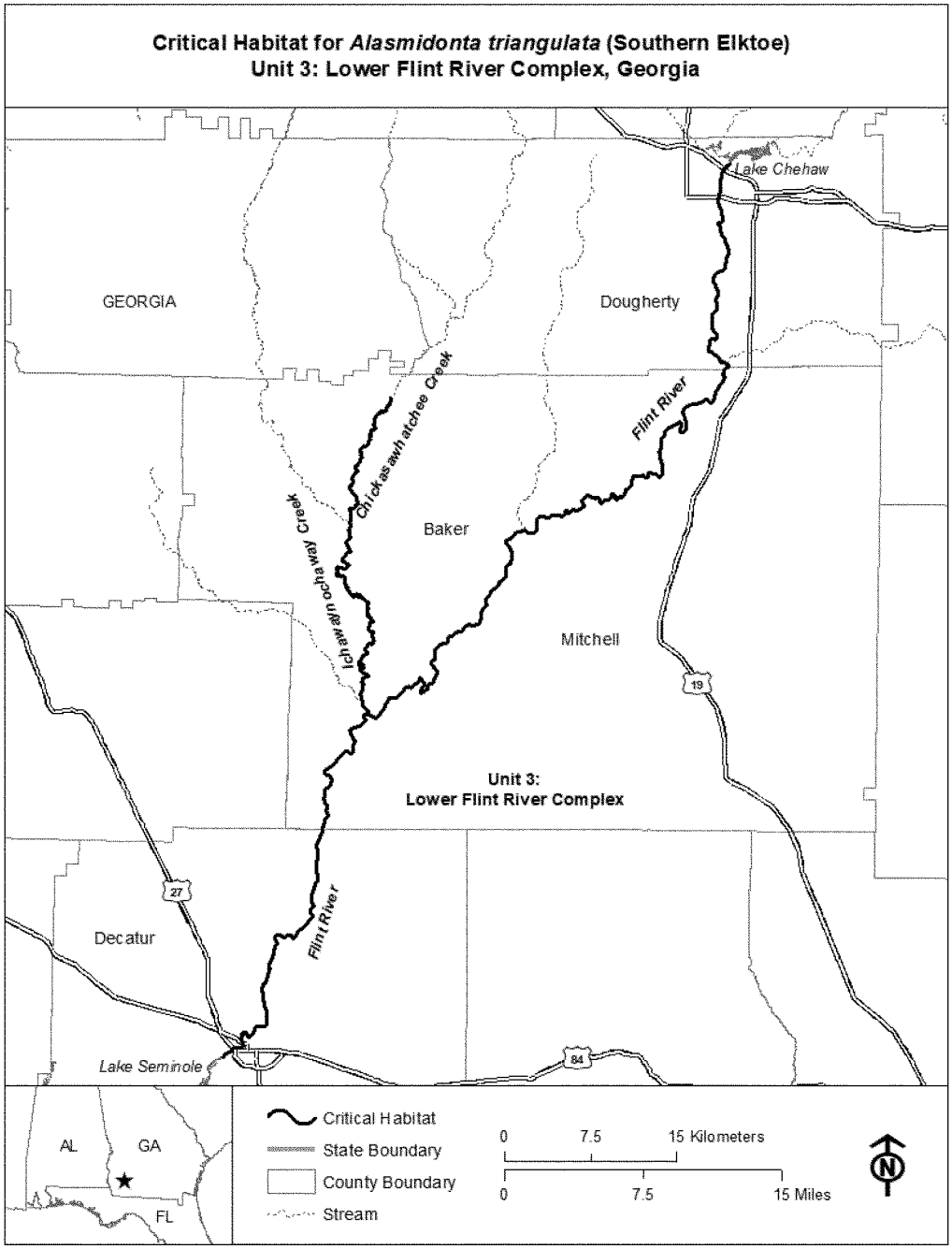
(ii) Map of Unit 2 is provided at paragraph (6)(ii) of this entry.

(8) Unit 3: Lower Flint River Complex; Baker, Decatur, Dougherty, and Mitchell Counties, Georgia.

(i) Unit 3 consists of 165.9 river km (103.1 mi) of the mainstem of the Flint River between Lake Seminole (impounded by the Jim Woodruff Lock and Dam) and the Flint River Dam (which impounds Lake Worth), and the mainstems of two tributaries in Baker, Decatur, Dougherty, and Mitchell Counties, Georgia. The mainstem of the Flint River in Unit 3 extends from 1.3 river km (0.82 mi) downstream of U.S. Highway 84 in Decatur County, Georgia (the approximate upstream extent of Lake Seminole), upstream 122.7 river km (76.3 mi) to the Flint River Dam in Dougherty County, Georgia. Unit 3 includes 26.1 river km (16.2 mi) of the mainstem of Ichawaynochaway Creek from its confluence with the Flint River upstream to its confluence with Chickasawhatchee Creek, and 15.7 river km (9.7 mi) of the mainstem of Chickasawhatchee Creek from its confluence with Ichawaynochaway Creek upstream to its confluence with Spring Creek in Baker County, Georgia. Unit 3 includes stream habitat up to bankfull height.

(ii) Map of Unit 3 follows:

Figure 3 to Southern Elktoe (*Alasmidonta triangulata*) paragraph (8)(ii)



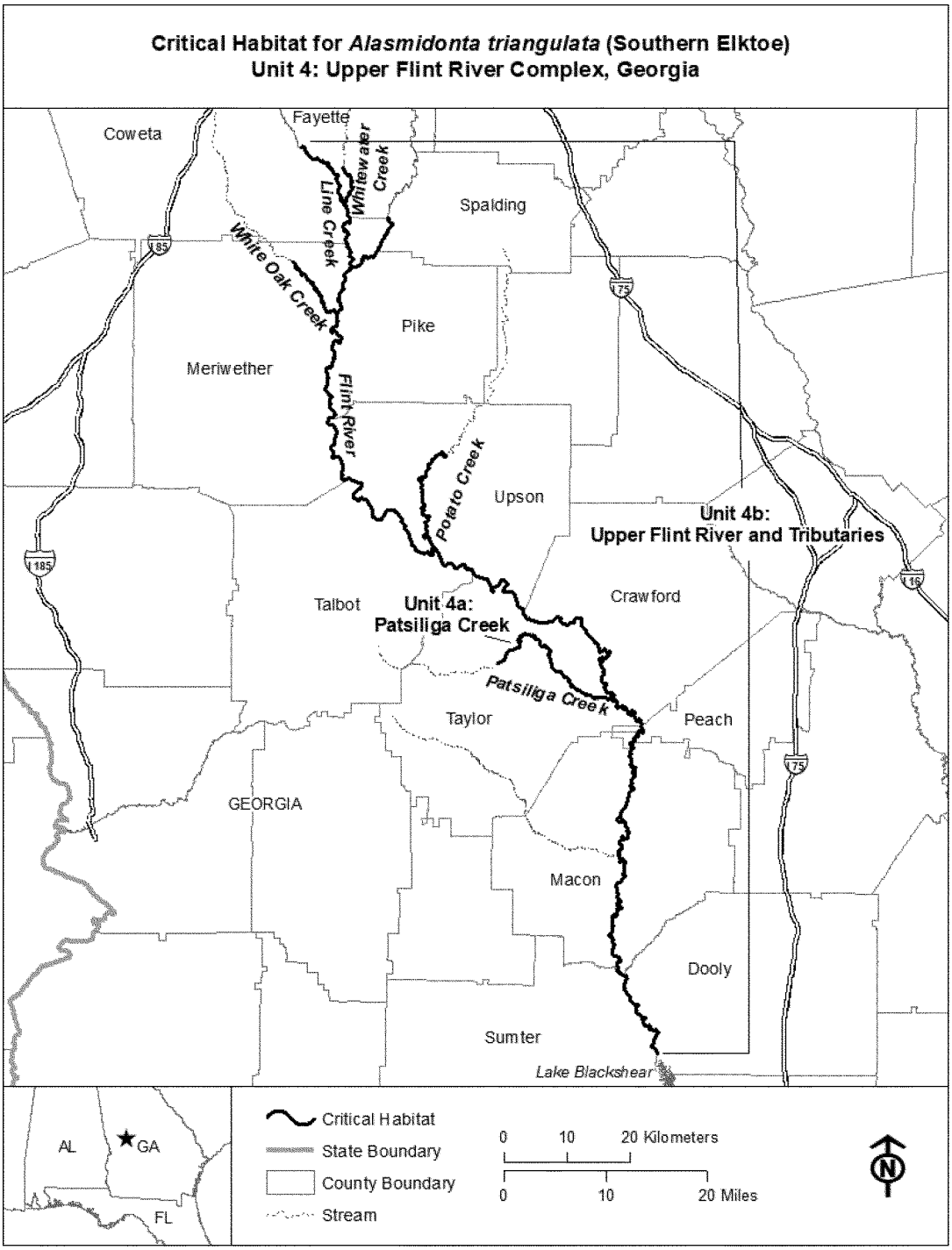
(9) Unit 4: Upper Flint River Complex; Coweta, Crawford, Dooly, Fayette, Macon, Meriwether, Peach, Pike, Spalding, Sumter, Talbot, Taylor, and Upson Counties, Georgia.

(i) Unit 4 is comprised of two subunits:

(A) Subunit 4a includes 36.2 river km (22.5 mi) of Patsiliga Creek in Taylor County, Georgia.

(B) Subunit 4b includes 360.4 river km (223.9 mi) of the mainstem of the Flint River and four of its tributaries upstream of Lake Blackshear in Coweta, Crawford, Dooly, Fayette, Macon, Meriwether, Peach, Pike, Spalding, Sumter, Talbot, Taylor, and Upson Counties, Georgia.

(ii) Map of Unit 4 follows:



(10) Unit 5: Middle Chattahoochee; Russell County, Alabama, and Harris County, Georgia.

(i) Unit 5 includes stream habitat up to bankfull height and is comprised of three subunits:

(A) Subunit 5a includes 36.7 river km (22.8 mi) of the mainstem of Uchee Creek from its confluence with the Chattahoochee River upstream to the confluence with Island Creek in Russell County, Alabama.

Figure 4 to Southern Elktoe (*Alasmidonta triangulata*) paragraph (9)(ii)

(B) Subunit 5b includes 20.3 river km (12.6 mi) of Little Uchee Creek in Russell County, Alabama.

(C) Subunit 5c includes 35.9 river km (22.3 mi) of Mulberry Creek in Harris County, Georgia.

(ii) Map of Unit 5 follows:

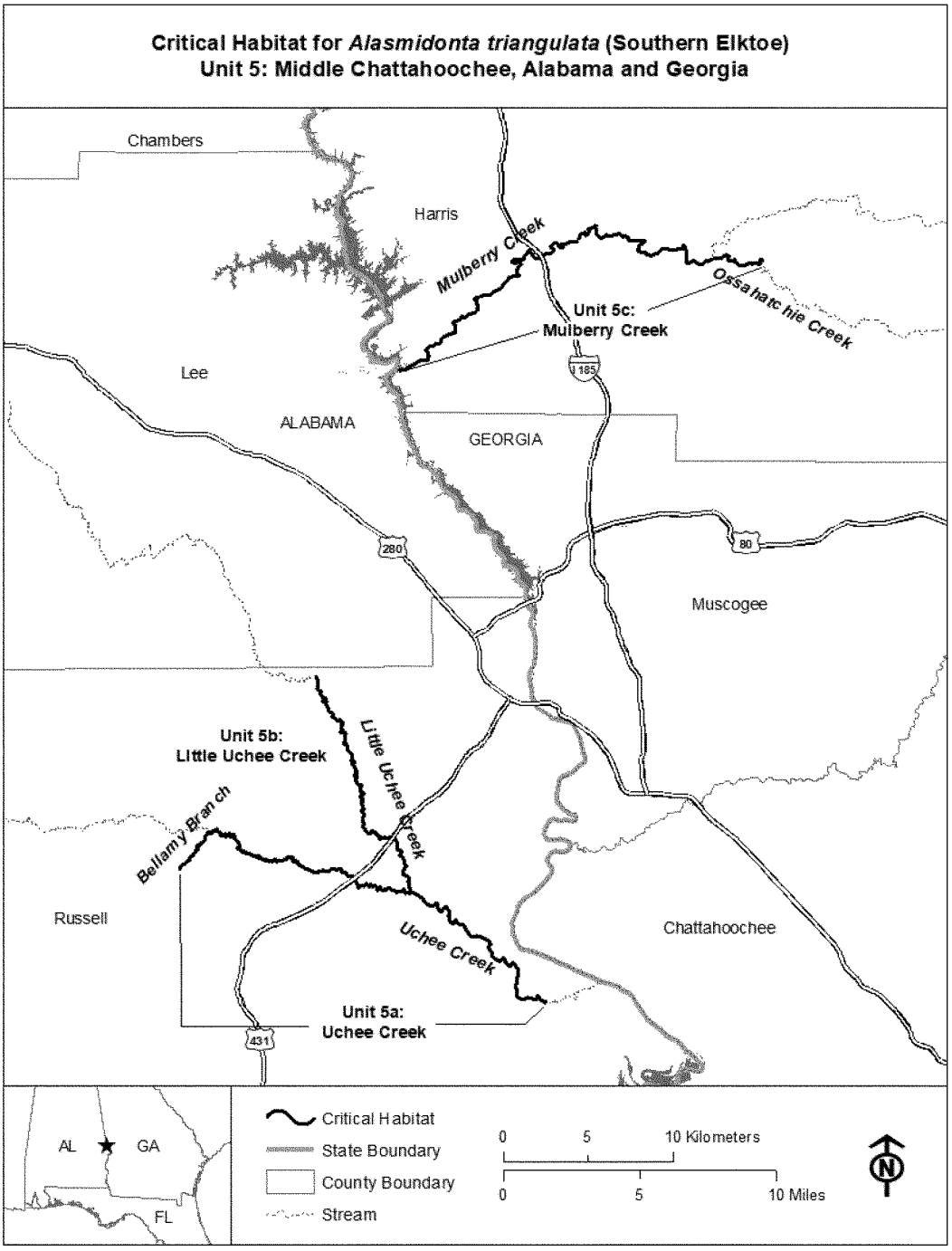


Figure 5 to Southern Elktoe (*Alasmidonta triangulata*) paragraph (10)(ii)

* * * * *

Wendi Weber,

Acting Director, U.S. Fish and Wildlife Service.

[FR Doc. 2023–12315 Filed 6–20–23; 8:45 am]

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