



## **DEPARTMENT OF THE INTERIOR**

### **Fish and Wildlife Service**

#### **50 CFR Part 17**

**[Docket No. FWS–R5–ES–2017–0056; 4500030113]**

**RIN 1018–BC44**

### **Endangered and Threatened Wildlife and Plants; Proposed Threatened Species Status for the Candy Darter**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule; 12-month finding.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list the candy darter (*Etheostoma osburni*) as a threatened or endangered species under the Endangered Species Act, as amended (Act), and to designate critical habitat. After review of the best available scientific and commercial information, we find that listing the candy darter is warranted. Accordingly, we propose to list the candy darter (*Etheostoma osburni*), a freshwater fish species from Virginia and

West Virginia, as a threatened species under Act. If we finalize this rule as proposed, it would extend the Act's protections to this species. The effect of this regulation will be to add this species to the List of Endangered and Threatened Wildlife.

**DATES:** We will accept comments received or postmarked on or before [**INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES** below) must be received by 11:59 p.m. Eastern Time on the closing date.

We must receive requests for public hearings, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by [**INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

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

(1) *Electronically:* Go to the Federal eRulemaking Portal:

<http://www.regulations.gov>. In the Search box, enter FWS-R5-ES-2017-0056, which is the docket number for this rulemaking. Then, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on "Comment Now!"

(2) *By hard copy:* Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS-R5-ES-2017-0056; U.S. Fish and Wildlife Service Headquarters, MS: BPHC, 5275 Leesburg Pike, Falls Church, VA 22041-3803.

We request that you send comments **only** by the methods described above. We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see *Public Comments* below for more information).

**FOR FURTHER INFORMATION CONTACT:** John Schmidt, Project Leader, West Virginia Ecological Services Field Office, 694 Beverly Pike, Elkins, WV 26241-9475; by telephone 304-636-6586 or by facsimile 304-636-7824. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800-877-8339.

#### **SUPPLEMENTARY INFORMATION:**

##### **Executive Summary**

Why we need to publish a rule. *Under the Act, if a species is determined to be an endangered or threatened species* throughout all or a significant portion of its range, we are required to promptly publish a proposal in the Federal Register and make a determination on our proposal within 1 year. Critical habitat shall be designated, to the maximum extent prudent and determinable, for any species determined to be an endangered or threatened species under the Act. Listing a species as an endangered or threatened species and designations and revisions of critical habitat can be completed only by issuing a rule.

This rule proposes adding the candy darter (*Etheostoma osburni*) as a threatened species to the List of Endangered and Threatened Wildlife in title 50 of the Code of

Federal Regulations (50 CFR 17.11(h)).

*The basis for our action.* Under the Act, we can determine that a species is an endangered or threatened species based on any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) Overutilization for commercial, recreational, scientific, or educational purposes; (C) Disease or predation; (D) The inadequacy of existing regulatory mechanisms; or (E) Other natural or manmade factors affecting its continued existence. We have determined that hybridization (Factor E) with the variegate darter (*Etheostoma variatum*) is the primary threat to the candy darter.

*Peer review.* A team of Service biologists prepared a Species Status Assessment Report (SSA Report) for the candy darter. The SSA Report represents a compilation and assessment of the best scientific and commercial information available concerning the status of the candy darter, including the past, present, and future factors influencing the species. We solicited independent peer review of the SSA Report by six individuals with expertise in darters; fisheries, population, or landscape ecology; genetics and conservation genetics; and/or speciation and conservation biology; we received comments from four of the six peer reviewers. The SSA Report can be found in <http://www.regulations.gov> under the FWS–R5–ES–2017–0056 docket; on the Southwest Virginia Ecological Services Field Office website at: <https://www.fws.gov/northeast/virginiafield/svfo/southwesternvirginia.html>; and on the West Virginia Ecological Services Field Office website at: <https://www.fws.gov/westvirginiafieldoffice/endangeredspecies.html>.

## **Information Requested**

### *Public Comments*

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 the public, other concerned governmental agencies, Native American tribes, the scientific community, industry, or any other interested parties concerning this proposed rule. We particularly seek new information not already included in the SSA Report concerning:

(1) The candy darter's 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) The historical and current status, range, distribution, and population size of this species, including the locations of any additional populations of this species.

(5) The occurrence of variegate darters within the range of candy darters and evidence of further hybridization between the two species.

(6) The potential for, and timeframe associated with, additional introductions of the variegate darter into unaffected watersheds.

(7) Specific prohibitions and exceptions to those prohibitions that may be necessary and advisable for the candy darter's conservation. We intend to publish, as appropriate, a more tailored proposed rule with provisions set forth under section 4(d) of the Act for public review and comment in the future. Activities we are considering for potential exemption under a section 4(d) rule include, but are not necessarily limited to, exceptions for:

(a) specific instream and bank habitat restoration activities that will benefit the candy darter, including revegetation of riparian corridors, natural stream channel design, and redesigning and removal of stream crossing structures;

(b) water quality improvement actions such as stream liming;

(c) genetic and population monitoring;

(d) captive propagation in conjunction with a Service-approved Captive Propagation Plan;

(e) sustainable forestry practices that primarily occur adjacent to, or upslope from, but do not occur within streams occupied or likely to be occupied by the candy darter and that are implemented according to well-defined and enforceable best management practices (e.g., Sustainable Forestry Initiative, Forest Stewardship Council); and

(f) other activities that do not:

(i) facilitate the spread of candy darter/variegate darter hybridization;

(ii) increase sedimentation that negatively affects feeding, breeding, sheltering, or dispersal; and

(iii) cause a change in water temperature that negatively affects feeding, breeding, sheltering, or dispersal.

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

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

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

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

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on

*http://www.regulations.gov*, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, West Virginia Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

*Public Hearing*

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

*Peer Review*

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), we sought the expert opinions of six appropriate and independent specialists regarding the SSA Report that supports this proposed rule and received comments from four of the six peer reviewers. These peer reviewers have expertise in freshwater fisheries, aquatic ecology, and genetics. The purpose of peer review is to ensure that our listing determinations and critical habitat designations are based on scientifically sound data, assumptions, and analyses. See the **Executive Summary—Peer Review** section above.

## **Previous Federal Action**

We identified the candy darter as a Category 2 candidate species in the December 30, 1982, Review of Vertebrate Wildlife; Notice of Review (50 FR 58454). Category 2 candidates were defined as species for which we had information that proposed listing was possibly appropriate, but conclusive data on biological vulnerability and threats were not available to support a proposed rule at that time. The species remained so designated in subsequent annual Candidate Notices of Review (CNOR) (50 FR 37958, September 18, 1985; 54 FR 554, January 6, 1989; 56 FR 58804, November 21, 1991; and 59 FR 58982, November 15, 1994). In the February 28, 1996, CNOR (61 FR 7596), we discontinued the designation of Category 2 species as candidates; therefore, the candy darter was no longer a candidate species.

In 2010, the Center for Biological Diversity (CBD) petitioned the Service to list 404 aquatic, riparian, and wetland species from the Southeastern United States under the Act. The candy darter was among these 404 species. On September 27, 2011, the Service published a substantial 90-day finding for 374 of the 404 species, including the candy darter, soliciting information about, and initiating status reviews for, those species (76 FR 59836). In 2015, CBD filed a complaint against the Service for failure to complete a 12-month finding for the candy darter within the statutory timeframe. The Service entered into a settlement agreement with CBD to address the complaint; the court-approved settlement agreement specified that a 12-month finding for the candy darter would be delivered to the *Federal Register* by September 30, 2017.

We will also be providing a proposal to designate critical habitat for the candy darter under the Act in the near future.

## Background

A thorough review of the taxonomy, life history, and ecology of the candy darter (*Etheostoma osburni*) is presented in the species status assessment (U.S. Fish & Wildlife Service 2017, entire; available <http://www.regulations.gov> under the FWS–R5–ES–2017–0056 docket). The candy darter is recognized by the American Fisheries Society (Page *et al.* 2013, p. 139) as a valid taxon and is listed as such in the Integrated Taxonomic Information System (ITIS) database (<http://www.itis.gov>, 2016). We have no information to suggest there is scientific disagreement about the candy darter's taxonomy; therefore, we accept that the candy darter is a valid taxon based upon its recognition by the American Fisheries Society and its ITIS designation.

The candy darter is a small, freshwater fish endemic to second order and larger streams and rivers within portions of the upper Kanawha River basin, which is synonymous with the Gauley and greater New River watersheds in Virginia and West Virginia. The species is described as a habitat specialist, being most often associated with faster flowing stream segments with coarse bottom substrate (e.g., gravel, cobble, rocks, and boulders), which provides shelter for individual darters and breeding habitat (see below). Candy darters are intolerant of excessive sedimentation and stream bottom embeddedness (the degree to which gravel, cobble, rocks, and boulders are surrounded by, or covered with, fine sediment particles).

The available candy darter occurrence data, all of which were collected after the aquatic habitat in the region was degraded in the late 1800s by widespread forest clearing, indicate that the species prefers cool or cold water temperatures, but that warm

water conditions may also be tolerated. The fish are opportunistic feeders, eating mostly benthic macroinvertebrates such as mayflies and caddisflies. In streams maintaining favorable habitat conditions, candy darters can be abundant throughout the stream continuum.

Candy darters are sexually mature at 2 years of age and live to a maximum age of 3 years. They are classified as brood-hiding, benthic spawners. In this reproductive strategy, the female deposits her eggs in the pebble and gravel substrate between larger cobbles and boulders, and an attendant male simultaneously fertilizes the eggs as they are released. During spawning, males become aggressively territorial, and in all observed instances of spawning aggression, the larger male prevailed and fertilized the female's eggs. Female candy darters produce a relatively low number of eggs (average 170 per individual) as compared to other fish, with no significant deviation from 1:1 sex ratios.

We are uncertain whether individual candy darters complete their lifecycle within single riffles or riffle complexes spanning just a few hundred meters or are capable of longer, seasonally mediated movements within suitable habitat. While data are sparse regarding the minimum habitat size and degree of genetic connectivity required for candy darter population viability, the historical distribution of the species and the fundamentals of conservation biology suggest these factors are important to the species.

### **Summary of Biological Status and Threats**

The Act directs us to determine whether any species is an endangered species or a threatened species because of any factors affecting its continued existence. We completed a comprehensive assessment of the biological status of the candy darter and

prepared a report of the assessment (SSA Report), which provides a thorough account of the species' overall viability using the conservation biology principles of resiliency, redundancy, and representation (collectively, the "3Rs"). We have used the SSA Report's assessment of the candy darter's current and potential future status, based on the factors influencing the species, framed in the context of the 3Rs, to inform our determination of whether the candy darter meets the definition of a threatened or an endangered species (see the **Determination** section below).

Because we have included information below about the candy darter's 3Rs, we further define those terms here. Resiliency means having sufficiently large populations for the species to withstand stochastic events (arising from random factors). We can measure resiliency based on metrics of population health; for example, birth versus death rates and population size, if that information exists. Resilient populations are better able to withstand disturbances such as random fluctuations in birth rates (demographic stochasticity), variations in rainfall (environmental stochasticity), or the effects of human activities. Redundancy means having a sufficient number of populations for the species to withstand catastrophic events (such as a rare destructive natural event or episode involving many populations). Redundancy is about spreading the risk and can be measured through the duplication and distribution of populations across the range of the species. Generally, the greater the number of populations a species has distributed over a larger landscape, the better it can withstand catastrophic events. Representation means having the breadth of genetic makeup of the species to adapt to changing environmental conditions. Representation can be measured through the genetic diversity within and among populations and the ecological diversity (also called environmental variation or

diversity) of populations across the species' range. The more representation, or diversity, a species has, the more it is capable of adapting to changes (natural or human caused) in its environment.

In the absence of species-specific genetic and ecological diversity information, we evaluate representation based on the extent and variability of habitat characteristics within the geographical range. We define viability here as the ability of the species to persist in the wild over time and, conversely, to avoid extinction.

In this section, we summarize the conclusions of that assessment, which can be accessed at Docket FWS-R5-ES-201X-0056 on <http://www.regulations.gov>, at <https://www.fws.gov/westvirginiafieldoffice/endangeredspecies.html>, and at <https://www.fws.gov/northeast/virginiafield/svfo/southwesternvirginia.html>. The SSA Report documents the results of our comprehensive biological status review for the candy darter, including an assessment of the factors influencing its continued existence. The SSA report does not represent a decision by the Service on whether the candy darter should be proposed for listing as an endangered or threatened species under the Act. Rather, the SSA Report provides the scientific basis that informs our regulatory decision, which involves the further application of standards within the Act and its implementing regulations and policies. The Act directs us to determine whether any species is an endangered species or a threatened species because of any factors affecting its continued existence (i.e., whether it meets the definition of a threatened or an endangered species). In this section, we review the biological condition of the species and its resources and the factors influencing the species and resources to assess the species' overall viability and the risks to that viability.

### *Summary of Current Condition*

Historically, the candy darter occurred in 35 populations distributed across 7 metapopulations located in the Bluestone, Lower New River, Upper Gauley, Lower Gauley, and Middle New watersheds in the Appalachian Plateaus physiographic province and the Upper New River and Greenbrier watersheds in the Valley and Ridge physiographic province.

Within these two physiographic provinces, the candy darter has been extirpated from almost half of its historical range; (17 (49 percent) of 35 known populations and 2 (29 percent) of 7 known metapopulations), with the extirpations representing a complete loss of resiliency in those populations (or metapopulations). We qualitatively assessed the remaining (extant) populations, placing them in “low,” “moderate,” or “high” categories that represent the populations’ potential to bounce back after stochastic events. These categories were based on a combination of physical habitat metrics, nonnative competition metrics, and candy darter demographic metrics (see Service 2017, pp. 45, B1–B16). Of the 18 extant populations, 6 (33 percent) have a current score of high resiliency, 6 (33 percent) have moderate resiliency, and 6 (33 percent) have low or moderate to low resiliency. The six populations with high resiliency occur in two metapopulations (the Upper Gauley in the Appalachian Plateaus physiographic province and the Greenbrier in the Valley and Ridge physiographic province); the remaining three extant metapopulations (the Lower Gauley and Middle New in the Appalachian Plateaus physiographic province and the Upper New River in the Valley and Ridge physiographic province) maintain populations with moderate or low resiliency. Therefore, we conclude

the candy darter's populations currently have moderate to low resiliency because the majority of metapopulations fall into those categories.

This loss of candy darter populations and the areas they represented within the species' historical range, as well as the fragmentation of extant populations, has compromised the species' ability to repatriate those areas or avoid species-level effects of a catastrophic event. Based on the species' current distribution across its historical range and the species' distribution and condition within each of the seven historical metapopulations (one with moderate to high internal redundancy, one with moderate internal redundancy, one with low internal redundancy, two with no internal redundancy, and two that have been extirpated), we conclude that the candy darter's current redundancy is moderate to low (Service 2017, pp. 27–28, 43–49).

While the candy darter currently maintains representation in both the Appalachian Plateaus and Valley and Ridge physiographic provinces, only a single metapopulation in each province has a moderate to high resiliency score. As related to the species' occupation in a diversity of environmental settings, candy darters have lost representation from lower mainstem rivers and tributaries. Researchers have noted differences in the genetic, physical, behavioral, or developmental characteristics of some stream fish species based on the species' longitudinal position in the watershed (e.g., stream size) (Neville *et al.* 2006, pp. 911–913), but we have no data indicating candy darters exhibit similar differences based on their particular environmental setting. Although the candy darter retains representation in both the Appalachian Plateaus and Valley and Ridge physiographic provinces, the species has a different distribution than it had historically (e.g., its presence or absence in headwater vs. tributary streams), and likely a different

ability to respond to stochastic and catastrophic events, thereby putting the species at increased risk of extinction from any such events. Therefore, we conclude that the species' representation is currently moderate to low (Service 2017, pp. 27–28, 43–49).

The candy darter is currently distributed in five of the historical seven metapopulations. The populations within those metapopulations generally have moderate to low resiliency and redundancy scores. While the candy darter is present in the two physiographic provinces from which it is historically known, the species is absent from some ecological settings in which it once existed. This fact leads us to conclude the candy darter's representation is also moderate to low. Therefore, our analysis under the 3Rs leads us to conclude that the condition of the candy darter is currently moderate to low.

#### *Risk Factors for the Candy Darter*

Based on the candy darter's life history and habitat needs, and in consultation with species' experts from Virginia and West Virginia State and Federal agencies and academic institutions, we identified the potential stressors (negative influences), the contributing sources of those stressors, and conservation measures to address those stressors that are likely to affect the species' current condition and viability (Service 2017, pp. 31–43). We evaluated how these stressors may be currently affecting the species and whether, and to what extent, they would affect the species in the future (Service 2017, pp. 50–65). Water temperature, excessive sedimentation, habitat fragmentation, water chemistry, water flow, and nonnative competition likely influenced the species in the past and contributed to its current condition, and may continue to affect some individual populations in the future. Hybridization with the closely related

variegate darter (*Etheostoma variatum*) appears to be having, and will continue to have, the greatest influence on candy darter populations and its overall viability within the next 25 years (Service 2017, pp. 50–65). While we acknowledge there is uncertainty regarding some of the scientific data and assumptions used to assess the biological condition of the candy darter, the species' experts generally agreed with the overall methodology and confirmed that the results were reflective of their observations of the candy darter and its habitat.

As mentioned above, the primary stressor to the candy darter is hybridization with the variegate darter (Service 2017, pp. 31–36, 50), a species that is native to the Kanawha River basin below the Kanawha Falls in Fayette County, West Virginia. The Kanawha Falls serve as a natural barrier to fish dispersal from the lower Kanawha River basin (and greater Ohio River basin) upstream into the range of the candy darter in the upper Kanawha River basin. However, in the late 20th century, the variegate darter was introduced into the upper Kanawha basin, likely by “bait bucket transfer.” Since their introduction in 1982 and 2002, variegate darters have expanded approximately 3 to 9 stream miles per year over the course of the last 20 or more years within the range of the candy darter. Genetic studies have demonstrated that where variegate and candy darter ranges now overlap, the two species will hybridize, quickly resulting in “genetic swamping” (the homogenization or replacement of native genotypes) of the endemic candy darter population and eventually its complete replacement by variegate darters or hybrids (Service 2017, pp. 31–36).

*Summary of Future Conditions Analysis*

We modeled a total of five scenarios to assess the potential viability of the candy darter at a point up to 25 years in the future (Service 2017, pp. 50–65). Two scenarios were focused on habitat change (one positive and the other negative), and three scenarios were focused on variegate darter invasion. However, the habitat change scenarios, by themselves, are not plausible scenarios because variegate darter hybridization is ongoing and likely to continue (see Chapter 4 and Appendix B of the SSA Report for additional information). We chose to model all scenarios out to 25 years because we have data to reasonably predict potential habitat and variegate darter changes and their effects on the candy darter within this timeframe.

Under the three most plausible scenarios, the predicted rate of variegate darter expansion and hybridization remains the same, and at the end of 25 years, the candy darter will likely occur in four isolated populations and maintain little resilience, redundancy, or representation. The effects of significant positive or negative habitat changes do not alter this outcome; although it is possible that, because variegate darters may be more tolerant of a wider range of habitat conditions, negative habitat changes could selectively benefit variegate darters and therefore increase the rate at which candy darters are extirpated.

The candy darter SSA Report contains a more detailed discussion of our evaluation of the biological status of the candy darter and the influences that may affect its continued existence. Our conclusions are based upon the best available scientific and commercial data, including the expert opinion of the species' experts (fishery biologists, aquatic ecologists, and geneticists from State and Federal agencies and academic

institutions). Please see the SSA report for a complete list of the species experts and peer reviewers and their affiliations).

## **Determination**

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations at 50 CFR part 424, set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a)(1) of the Act, we may list a species based on: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) Overutilization for commercial, recreational, scientific, or educational purposes; (C) Disease or predation; (D) The inadequacy of existing regulatory mechanisms; or (E) Other natural or manmade factors affecting its continued existence.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the candy darter. Our analysis of this information indicates that, at the species level, hybridization with variegate darters (Factor E) is the most influential factor affecting the candy darter now and into the future. Excessive sedimentation and increased water temperatures degraded once-suitable habitat (Factor A) and likely caused historical declines of the candy darter; these factors continue to affect some of the remaining populations despite regulatory mechanisms (Factor D) to reduce or eliminate sedimentation. There may be additional infrastructure projects (e.g. roads, pipeline, etc.) that increase sediment loading within the range of the candy darter as a result of forest clearing for permanent rights of way and stream crossings. Additionally, the current level of habitat fragmentation (Factor A) isolates some

populations, which reduces gene flow and limits the potential for the species to colonize or recolonize streams if habitat conditions change. Other factors such as flow alterations and water quality degradation that affect habitat (Factor A), and the stocking of nonnative species that can eat (Factor C) or outcompete (Factor E) candy darter are not expected to cause species-level effects. In addition, we have no evidence that overutilization (Factor B) or disease (Factor C) is affecting individuals or populations of candy darters.

Hybridization with variegate darters has occurred or is currently occurring in multiple streams within the Lower New, Lower Gauley, and Greenbrier River watersheds in West Virginia (Service 2017, p. 34). Variegate darters have not yet been detected in the remainder of the candy darter's range (i.e., the Upper Gauley watershed in West Virginia and the Middle New and Upper New watersheds in Virginia). However, the risk is moderately high that the variegate darter will eventually be introduced into these watersheds and ultimately replace most candy darter populations throughout the candy darter's range.

The Act defines an endangered species as any species that is "in danger of extinction throughout all or a significant portion of its range." We find that an endangered species status is not appropriate for the candy darter because the species still occurs throughout approximately half of its historical range and the risk is low that the species would not persist in the near term; in other words, the risk of the candy darter significantly declining in the near term is low given that it has persisted despite historical levels of habitat loss. Further, variegate darters are not known to be present in the Virginia areas of the species' range, thus the risk of significant declines in the near term due to hybridization is low in those areas. The persistence of occupied habitat within the

species' range provides redundancy, resiliency, and representation levels that are likely sufficient to sustain the species beyond the near term. Therefore, we conclude that the current risk of extinction of the candy darter is sufficiently low that it does not meet the definition of an endangered species under the Act.

The Act defines a threatened species as any species that is "likely to become endangered throughout all or a significant portion of its range within the foreseeable future." We find that the status of the candy darter meets the definition of a threatened species. Because the risk is high that hybridization between the candy darter and the variegate darter will continue to occur, we can reasonably predict that within 20 years hybridization between the two species is likely to increase within the range of the candy darter to an extent causing the species to become in danger of extinction (see table 6 and Chapter 4 in the SSA report). We cannot precisely predict the timing of introduction of the variegate darter into additional areas within the candy darter's range, the rate of hybridization once introduction occurs, and the time at which candy darters will be replaced by variegate darters or hybrids; however, the time period over which the variegate darter has spread into the candy darter's range in the past and the documented effects of hybridization between the two species give us reasonable confidence in our determination that the candy darter is likely to experience additional effects of hybridization within 20 years to an extent that will cause the species to become in danger of extinction. Therefore, on the basis of the best available scientific and commercial information, we propose listing the candy darter as threatened in accordance with sections 3(6) and 4(a)(1) of the Act.

Under the Act and our implementing regulations, a species may warrant listing if it is endangered or threatened throughout all or a significant portion of its range. Because we have determined that the candy darter is threatened throughout all of its range, no portion of its range can be “significant” for purposes of the definitions of “endangered species” and “threatened species.” See 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 37577, July 1, 2014). While it is the Service’s position under the SPR Policy that undertaking no further analysis of “significant portion of its range” in this circumstance is consistent with the language of the Act, we recognize that the Policy is currently under judicial review, so we also took the additional step of considering whether there could be any significant portions of the species’ range where the species is in danger of extinction. We evaluated whether there is substantial information indicating that there are any portions of the species’ range: (1) that may be “significant,” and (2) where the species may be in danger of extinction. In practice, a key part of identifying portions appropriate for further analysis is whether the threats are geographically concentrated. The threats affecting the species are throughout its entire range; therefore, there is not a meaningful geographical concentration of threats. As a result, even if we were to undertake a detailed SPR analysis, there would not be any portions of the species’ range where the threats are harming the species to a greater degree such that it is in danger of extinction in that portion.

#### *Available Conservation Measures*

Conservation measures provided to species listed as endangered or threatened species under the Act include recognition, recovery actions, requirements for Federal

protection, and prohibitions against certain practices. Recognition through listing results in public awareness, and conservation by Federal, state, tribal, and local agencies, private organizations, and individuals. The Act encourages cooperation with the States and other countries and calls for recovery actions to be carried out for listed species. The protection required by Federal agencies and the prohibitions against certain activities are discussed, in part, below.

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

Recovery planning includes the development of a recovery outline shortly after a species is listed and preparation of a draft and final recovery plan. The recovery outline guides the immediate implementation of urgent recovery actions and describes the process to be used to develop the recovery plan. A recovery team (composed of species experts, Federal and state agencies, nongovernmental organizations, and stakeholders) is sometimes established to develop the recovery plan. The recovery plan identifies recovery criteria that indicate when a species may be ready for downlisting or delisting, actions necessary to achieve recovery and their estimated costs, and methods for

monitoring recovery progress. The recovery plan may be revised to address continuing or new threats to the species, as new substantive information becomes available. When completed, the recovery outline, draft recovery plan, and final recovery plan will be available on our website (<http://www.fws.gov/endangered>), or from our West Virginia 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 Virginia and West Virginia would be eligible for Federal funds to implement management actions that promote the protection or recovery of the candy darter. Information on our grant programs that are available to aid species recovery can be found at: <http://www.fws.gov/grants>.

Although the candy darter is only proposed for listing under the Act at this time, please let us know if you are interested in participating in recovery efforts for this species. Additionally, we invite you to submit any new information on this species

whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as an endangered or threatened species and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402.

Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions within the species' habitat that may require conference or consultation or both as described in the preceding paragraph include, but are not limited to, management and any other landscape-altering activities on lands administered by the U.S. Forest Service, National Park Service, and the U.S. Army Corps of Engineers (ACOE); issuance of section 404 Clean Water Act permits by the ACOE; issuance or oversight of coal mining permits by the Office of Surface Mining; and construction and maintenance of roads, bridges, or highways by the Federal Highway Administration.

Under section 4(d) of the Act, the Service has discretion to issue regulations that we find necessary and advisable to provide for the conservation of threatened species.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to threatened wildlife. The prohibitions of section 9(a)(1) of the Act, as applied to threatened wildlife and codified at 50 CFR 17.31, 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) threatened 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 listed 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 threatened wildlife under certain circumstances. Regulations governing permits are codified at 50 CFR 17.32. With regard to threatened wildlife, a permit may be issued for the following purposes: for scientific purposes, to enhance the propagation or survival of the species, and for incidental take in connection with otherwise lawful activities. There are also certain statutory exemptions from the prohibitions, which are found in sections 9 and 10 of the Act.

For the candy darter, we are considering developing a rule under section 4(d) of the Act that is tailored to the specific threats and conservation needs of this species. Please see the **Information Requested**—*Public Comments* section above for a list of activities we are considering exempting under a section 4(d) rule in the future. If

appropriate, we will develop and then announce the availability of a proposed tailored section 4(d) rule for public review and comment.

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

- Normal agricultural practices, including herbicide and pesticide use, which are carried out in accordance with any existing regulations, permit and label requirements, and best management practices.

Based on the best available information, the following activities may potentially result in a violation of section 9 of the Act; this list is not comprehensive:

- (1) Introduction of variegate darters into suitable candy darter habitat.
- (2) Stocking of nonnatives into suitable candy darter habitat.
- (3) Unlawful destruction or alteration of the habitat of the candy darter (e.g., unpermitted instream dredging, impoundment, water diversion or withdrawal, channelization, discharge of fill material) that impairs essential behaviors such as breeding, feeding, or sheltering, or results in killing or injuring a candy darter.
- (4) Unauthorized discharges or dumping of toxic chemicals or other pollutants into waters supporting the candy darter that kills or injures individuals, or otherwise

impairs essential life-sustaining behaviors such as breeding, feeding, or finding shelter.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the appropriate office:

- Southwestern Virginia Ecological Services Field Office, 330 Cummings Street, Abingdon, VA 24210; telephone (276) 623–1233; facsimile (276) 623–1185.

- West Virginia Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

### **Critical Habitat for the Candy Darter**

#### *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.

Conservation, as defined under section 3 of the Act, means to use all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific

resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

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

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.

#### *Prudency Determination*

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12), require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)(1)) state that the designation of critical habitat is not prudent when one or both of the following situations exist: (1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

There is currently no imminent threat of take attributed to collection or vandalism under Factor B for the candy darter, and identification and mapping of critical habitat is not likely to increase any such threat. In the absence of finding that the designation of critical habitat would increase threats to a species, if there are any benefits to a critical habitat designation, then a prudent finding is warranted. The potential benefits of designation include: (1) Triggering consultation under section 7 of the Act in new areas for actions in which there may be a Federal nexus where it would not otherwise occur because, for example, it is or has become unoccupied or the occupancy is in question; (2) focusing conservation activities on the most essential features and areas; (3) providing

educational benefits to State or county governments or private entities; and (4) preventing people from causing inadvertent harm to the species. Therefore, because we have determined that the designation of critical habitat will not likely increase the degree of threat to these species and may provide some measure of benefit, we find that designation of critical habitat is prudent for the candy darter.

#### *Critical Habitat Determinability*

Having determined that designation is prudent, under section 4(a)(3) of the Act we must find whether critical habitat for the species is determinable. Our regulations at 50 CFR 424.12(a)(2) state that critical habitat is not determinable when one or both of the following situations exist: (i) Information sufficient to perform required analyses of the impacts of the designation is lacking, or (ii) The biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat.

As discussed above, we have reviewed the available information pertaining to the biological needs of the candy darter and habitat characteristics where the species is located. Because we are seeking, through this document, additional information regarding updated candy darter occurrence records, updated documentation of variegate darter presence and risk for additional variegate darter introductions, and other analyses, we conclude that the designation of critical habitat is not determinable for the candy darter at this time. We will make a determination on critical habitat no later than 1 year following any final listing determination.

## **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.

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

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), need not be prepared in connection with listing a species as an endangered or threatened species under the Endangered Species Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244).

## **References Cited**

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

## **Authors**

The primary authors of this proposed rule are the staff members of the Northeast Regional Office.

## **List of Subjects in 50 CFR Part 17**

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

## **Proposed Regulation Promulgation**

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

### **PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS**

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

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

2. In § 17.11(h), add an entry for “Darter, candy” in alphabetical order under FISHES to read as set forth below:

**§ 17.11 Endangered and threatened wildlife.**

\* \* \* \* \*

(h) \* \* \*

Common name	Scientific name	Where Listed	Status	Listing Citations and Applicable Rules
* * * * *				
FISHES				
* * * * *				
Darter, candy	<i>Etheostoma osburni</i>	Wherever found	T	[ <i>Federal Register</i> citation when published as a final rule]
* * * * *				

Dated: September 7, 2017.

Signed: James W. Kurth

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

Billing Code 4333-15

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