to certain threats than other portions of the range. When evaluating whether or how a portion of the range contributes to resiliency of the species, we evaluate the historical value of the portion and how frequently the portion is used by the species, if possible. In addition, the portion may contribute to resiliency for other reasons—for instance, it may contain an important concentration of certain types of habitat that are necessary for the species to carry out its life-history functions, such as breeding, feeding, migration, dispersal, or wintering.

Redundancy of populations may be needed to provide a margin of safety for the species to withstand catastrophic events. This does not mean that any portion that provides redundancy is necessarily a significant portion of the range of a species. The idea is to conserve enough areas of the range such that random perturbations in the system act on only a few populations. Therefore, each area must be examined based on whether that area provides an increment of redundancy that is important to the conservation of the species.

Adequate representation ensures that the species' adaptive capabilities are conserved. Specifically, the portion should be evaluated to see how it contributes to the genetic diversity of the species. The loss of genetically based diversity may substantially reduce the ability of the species to respond and adapt to future environmental changes. A peripheral population may contribute meaningfully to representation if there is evidence that it provides genetic diversity due to its location on the margin of the species' habitat requirements.

SPR Evaluation for black-tailed prairie dog

We evaluated the black-tailed prairie dog's current range in the context of the primary stressors affecting the species (plague, inadequate regulatory mechanisms, and poisoning) to determine if there is any apparent geographic concentration of these stressors. If effects to the species from all of these stressors are not disproportionate in any portion of the species' range, no portion is likely to warrant further consideration; and a determination of significance based upon resiliency, redundancy, or representation is not necessary.

Plague – We regard sylvatic plague as the most substantial impact on the black-tailed prairie dog at the present. However, with the spread of plague into South Dakota, the disease now is present in portions of every State within the species' range, and the effects of plague are presumably no longer geographically concentrated in the western portion of the range. The current status of the black-tailed prairie dog, as indicated by increasing trends in the species' occupied habitat in every State, since the early 1960s, indicates that plague is not a limiting factor for the species in any State. These increasing trends are evident even in States with a long history of plague. Plague does not appear to result in disproportionate impacts to the black-tailed prairie dog in any portion of its range. Therefore, a determination of significance based upon resiliency, redundancy, or representation is not necessary.

Inadequate regulatory mechanisms – We evaluated the differences in management between States. All States within the historical range of the black-tailed prairie dog demonstrate both positive and negative management practices with regard to the species. Some States are more engaged than others; however, all have had stable to increasing black-tailed prairie dog populations since 1961. Additionally, there is no evident correlation between the status of the species' population in a particular State and the extent to which a State is engaged in proactive management. Differences in management and the adequacy of regulatory mechanisms do not appear to result in disproportionate impacts to the black-tailed prairie dog in any portion of its range. Therefore, a determination of significance based upon resiliency, redundancy, or representation is not necessary.

Poisoning – The most complete information with regard to the extent of poisoning is probably available for Arizona, South Dakota, Kansas, North Dakota, Oklahoma, and Texas. Only partial estimates are available for Colorado, Nebraska, and Wyoming. Little or no information is available for Montana and New Mexico. However, black-tailed prairie dog populations have been stable to increasing in all States. Some of the most intensive poisoning we are aware of has occurred in South Dakota, which is also the State with the largest percentage increase in the species' population. Poisoning does not appear to result in disproportionate impacts to the black-tailed prairie dog in any portion of its range. Therefore, a determination of significance based upon resiliency, redundancy, or representation is not necessary.

We do not find that the black-tailed prairie dog is in danger of extinction now, nor is it likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Therefore, listing the black-tailed prairie dog as threatened or endangered under the Act is not warranted at this time.

We request that you submit any new information concerning the status of, or threats to, this species to our South Dakota Ecological Services Office (see **ADDRESSES** section) whenever it becomes available. New information will help us monitor this species and encourage its conservation. If an emergency situation develops for this species or any other species, we will act to provide immediate protection.

References Cited

A complete list of all cited references is available on the Internet at *http://www.regulations.gov* and on request from the South Dakota Ecological Services Office (see **ADDRESSES** section).

Author

The primary authors of this document are the staff members of the U.S. Fish and Wildlife Service, South Dakota Ecological Services Office (see **ADDRESSES**).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: November 18, 2009.

Sam D. Hamilton,

Director, U.S. Fish and Wildlife Service.

[FR Doc. E9–28852 Filed 12–2–09; 8:45 am]

BILLING CODE 4310–55–S

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

FWS-R4-ES-2009-0079 92210–1117–0000–B4

[RIN 1018-AW52]

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Vermilion Darter

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service, propose to designate critical habitat for the vermilion darter (*Etheostoma chermocki*) under the Endangered Species Act of 1973, as amended. We propose to designate as critical habitat approximately 21.0 kilometers (13.0 stream miles) in 5 units. The proposed critical habitat is

located within the Turkey Creek watershed in Jefferson County, Alabama.

DATES: We will accept comments from all interested parties until February 1, 2010. We must receive requests for public hearings, in writing, at the address shown in the **FOR FURTHER INFORMATION CONTACT** section by January 19, 2010.

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

- Federal eRulemaking Portal: *http://www.regulations.gov*. Follow the instructions for submitting comments.
- U.S. mail or hand delivery: Public Comments Processing, Attn: [FWS-R4-ES-2009-0079]; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will not accept e-mail or faxes. We will post all comments on *http://www.regulations.gov* This generally means that we will post any personal information you provide us (see the **PUBLIC COMMENTS** section below for more information).

FOR FURTHER INFORMATION CONTACT: Cary Norquist, Deputy Field Supervisor, U.S. Fish and Wildlife Service, Mississippi Fish and Wildlife Office, 6578 Dogwood View Parkway, Jackson, Mississippi, 39213; telephone: 601-321-1127; facsimile: 601-965-4340. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

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 governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule. We particularly seek comments concerning:

(1) The reasons why we should or should not designate habitat as ''critical habitat'' under section 4 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*), including whether there are threats to the species from human activity, the degree of which can be expected to increase due to the designation, and whether the benefit of designation would be outweighed by threats to the species caused by the designation, such that the designation of critical habitat is not prudent.

(2) Comments or information that may assist us in identifying or clarifying the primary constituent elements.

(3) Specific information on:

- The amount and distribution of vermilion darter habitat,
- What areas occupied at the time of listing and that contain features essential to the conservation of the species which may require special management considerations or protections we should include in the designation and why, and
- What areas not occupied at the time of listing are essential for the conservation of the species and why.

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

(5) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation. We are particularly interested in any impacts on small entities (e.g., small businesses or small governments) or families, and the benefits of including or excluding areas that exhibit these impacts.

(6) Whether any specific areas we are proposing as critical habitat should be excluded under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any particular area outweigh the benefits of including that area under section 4(b)(2) of the Act.

(7) Information on any quantifiable economic costs or benefits of the proposed designation of critical habitat.

(8) 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 concern and comments.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section. We will not accept comments sent by e-mail or fax or to an address not listed in the **ADDRESSES** section.

We will post your entire comment—including your personal identifying information—on *http://www.regulations.gov*. If your written comments provide 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.

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, Mississippi Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Background

It is our intent to discuss only those topics directly relevant to the designation of critical habitat in this proposed rule. For more information on the vermilion darter, refer to the final listing rule published in the **Federal Register** on November 28, 2001 (66 FR 59367) and the Vermilion Darter Recovery Plan, available on the Internet at *http://ecos.fws.gov/docs/recovery_plan/070802.pdf*. See also the discussion of habitat in the Physical and Biological Features section below.

The vermilion darter is a narrowly endemic fish species, occurring in sparse, fragmented, and isolated populations. The species is only known in parts of the upper mainstem reach of Turkey Creek and four tributaries in Pinson, Jefferson County, Alabama (Boschung and Mayden 2004, p. 520). Suitable streams have pools of moderate current alternating with riffles of moderately swift current, and low water turbidity.

The vermilion darter was listed as endangered (66 FR 59367, November 28, 2001) because of ongoing threats to the species and its habitat from urbanization within the Turkey Creek watershed. The primary threats to the species and its habitat are degradation of water quality and substrate components due to sedimentation and other pollutants, and altered flow regimes from activities such as construction and maintenance activities; impoundments (five within the Turkey Creek and Dry Creek system); instream gravel extractions; off-road vehicle usage; road, culvert, bridge, gas, and water easement construction; and stormwater management (Drennen personal observation 1999-2009; Blanco and Mayden 1999, pp.18-20). These activities lead to water quality degradation and the production of pollutants (sediments, nutrients from sewage, pesticides, fertilizers, and industrial and stormwater effluents), stream channel instability, fragmentation, and reduced connectivity of the habitat by altering the stream banks and bottoms; degrading the riffles, runs, and pools; and producing changes in water quantity and flow necessary for spawning, feeding, resting, and other life history functions of the species.

Previous Federal Actions

The vermilion darter (*Etheostoma chermocki*) was listed as endangered under the Act on November 28, 2001 (66 FR 59367). The Service found that designation of critical habitat was prudent at the time of listing. However, due to budgetary constraints, we did not designate critical habitat at that time. We approved final recovery plan for the vermilion darter on June 20, 2007 (U.S. Fish and Wildlife Service 2007) and made it available to the public through a notice published in the **Federal Register** on August 2, 2007 (72 FR 42426).

On November 27, 2007, the Center for Biological Diversity filed a lawsuit against the Secretary of Interior for our failure to timely designate critical habitat for the vermilion darter (*Center for Biological Diversity* v. *Kempthorne* (07-CV-2928)). In a court-approved settlement agreement, the Service agreed to submit to the **Federal Register** a new prudency determination, and if the designation was found to be prudent, a proposed designation of critical habitat, by November 30, 2009, and a final designation by November 30, 2010.

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.

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 under 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(a)(2) of the Act through the prohibition against Federal agencies carrying out, funding, or authorizing the destruction or adverse modification of critical habitat. Section 7(a)(2) requires consultation on Federal actions that may affect 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 seeks or 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) would apply, but even in the event of a destruction or adverse modification finding, the Federal action agency's and the landowner's obligation landowneris not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

To be considered for inclusion in a critical habitat designation, habitat within the geographical area occupied by the species at the time it was listed must contain the physical or biological features that are essential to the conservation of the species. Areas supporting the essential physical or biological features are identified, to the extent known using the best scientific data available, as the habitat areas that provide essential life cycle needs of the species; (i.e., areas on which are found the primary constituent elements laid out in the appropriate quantity and spatial arrangement essential to the conservation of the species). Habitat within the geographical area occupied by the species at the time of listing that contains features essential to the conservation of the species meets the definition of critical habitat only if these features may require special management consideration or protection. Under the Act and regulations at 50 CFR 424.12, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed only when we determine that the best available scientific data demonstrate that the designation of those areas is 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 and commercial 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 we should designate as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. In particular, we recognize that climate change may cause changes in the arrangement of occupied habitat stream reaches. Climate change may lead to increased frequency and duration of severe storms and droughts (Golladay *et al.* 2004, p. 504; McLaughlin *et al.* 2002, p. 6074; Cook *et al.* 2004, p. 1015). From 2006 to 2007, drought conditions greatly reduced the habitat of the vermilion darter in Jefferson County (Drennen, pers. obs. 2007). Flucker *et al.* (2007, p. 10) and Drennen (pers. obs. 2007) reported that ongoing drought conditions, coupled with rapid urbanization within watersheds containing imperiled darters, render the populations vulnerable to anthropomorphic disturbances such as water extraction, vehicles within Turkey Creek and its tributaries, and increased clearing or draining of vulnerable wetlands and spring seeps; especially during the breeding season when the darters concentrate in specific habitat areas of Turkey Creek and its tributaries.

The information currently available on the effects of global climate change and increasing temperatures does not

make sufficiently precise estimates of the location and magnitude of the effects. Nor are we currently aware of any climate change information specific to the habitat of the vermilion darter that would indicate what areas may become important to the species in the future. Therefore, we are unable to determine what additional areas, if any, may be appropriate to include in the proposed critical habitat for this species; however, we specifically request information from the public on the currently predicted effects of climate change on the vermilion darter and its habitat. Additionally, 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 critical habitat area is unimportant or may not be required for recovery of the species.

Areas that are important to the conservation of the species, but are outside the critical habitat designation, will continue to be subject to conservation actions we implement under section 7(a)(1) of the Act. They are also subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined based on the best available scientific information at the time of the agency action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. 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), section 7 consultations, or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

Prudency Determination

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations at 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 activity and the identification of critical habitat can be expected to increase the degree of threat to the species; or (2) the designation of critical habitat would not be beneficial to the species.

There is no documentation that the vermilion darter is threatened by taking or other human activity. In the absence of finding that the designation of critical habitat would increase threats to the species, if there are any benefits to a critical habitat designation, then a prudent finding is warranted. The potential benefits include: (1) Triggering consultation, under section 7 of the Act, in new areas for action 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) identifying the physical and biological features essential to the conservation of the vermilion darter and focusing conservation activities on these essential features and areas; (3) providing educational benefits to State or county governments or private entities engaged in activities or long-range planning in areas essential to the conservation of the species; and (4) preventing people from causing inadvertent harm to the species. Conservation of the vermilion darter and the essential features of the habitat will require habitat protection and restoration, which will be facilitated by knowledge of habitat locations and the physical and biological features of those habitats.

Therefore, since we have determined that the designation of critical habitat will not likely increase the degree of threat to the species and may provide some measure of benefit, we find that the designation of critical habitat for the vermilion darter is prudent.

Critical Habitat Determinability

As stated above, section 4(a)(3) of the Act requires the designation of critical habitat concurrently with the species' listing ''to the maximum extent prudent and 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:

(1) Information sufficient to perform required analyses of the impacts of the designation is lacking, or

(2) The biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat.

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

We reviewed the available information pertaining to the biological needs of the vermilion darter, the historical distribution of the vermilion darter, and the habitat characteristics where they currently survive. This and other information represent the best scientific and commercial data available and led us to conclude that the designation of critical habitat is determinable for the vermilion darter.

Methods

As required by section 4(b) of the Act, we used the best scientific and commercial data available in determining which areas within the geographical area occupied by the species at the time of listing contain the features essential to the conservation of the vermilion darter that may require special management considerations or protections, and which areas outside of the geographical area occupied at the time of listing are essential for the conservation of the species.

We reviewed the available information pertaining to historical and current distributions, life histories, and habitat requirements of this species. Our sources included peer-reviewed scientific publications; unpublished survey reports; unpublished field observations by Service, State, and other experienced biologists; notes and communications from qualified biologists or experts; and Service publications such as the final listing rule for the vermilion darter and the Recovery Plan for the Vermilion Darter.

Physical and Biological Features

In accordance with sections 3(5)(A)(i) and 4(b)(1)(A) of the Act and the regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied at the time of listing to propose as critical habitat, we consider the physical and biological features that are essential to the conservation of the species which may require special management considerations or protection. These include, but are not limited to:

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

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

(3) Cover or shelter;

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

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

We consider the specific physical and biological features to be the primary constituent elements (PCEs) laid out in the appropriate quantity and spatial

arrangement for the conservation of the species. The PCEs required for the vermilion darter are derived from biological needs of the species as described in the Background section of this proposed rule and in the final listing rule (66 FR 59367). Unfortunately, little is known of the specific habitat requirements for this species other than that the species requires adequate water quality, water quantity, water flow, and a stable stream channel. To identify the physical and biological needs of the vermilion darter, we have relied on current conditions at locations where the species survives, the limited information available on this species and its close relatives, and factors associated with the decline and extirpation of fish species within the Mobile River Basin (U.S. Fish and Wildlife Service 2000, pp.6-13) and other similar watersheds.

Space for Individual and Population Growth and for Normal Behavior

Little is known about the specific space requirements of the vermilion darter within the Turkey Creek system; however, in general, darters depend on space from geomorphically stable streams with varying water quantities and flow. Vermilion darters are found in the transition zone between a riffle (shallow, fast water) or run (deeper, fast water) and a pool (deep, slow water) (Blanco and Mayden 1999, pp.18-20), usually at the head and foot of the riffles and downstream of the run habitat. Construction of impoundments in the Turkey Creek watershed has altered stream banks and bottoms; degraded the riffles, runs, and pools; and altered the natural water quantity and flow of the stream. A stable stream maintains its horizontal dimension and vertical profile (stream banks and bottoms), thereby conserving the physical characteristics of a stream, including bottom features such as riffles, runs, and pools and the transition zones between these features. The riffles, runs, and pools not only provide space for the vermilion darter, but also provide cover and shelter for breeding, reproduction, and growth of offspring.

In addition, the current range of the vermilion darter is reduced to localized sites due to fragmentation, separation, and destruction of vermilion darter populations. There are both natural (waterfall) and manmade (impoundments) dispersal barriers that not only contribute to the separation and isolation of vermilion darter populations, but also affect water quality. Fragmentation of the species' habitat has subjected these small isolated populations within the Turkey Creek system to genetic isolation and reduction of space for rearing and reproduction, population maintenance and reduction of adaptive capabilities, and increased likelihood of local extinctions (Hallerman 2003, pp. 363-364; Burkhead *et al.* 1997, pp 397-399). Genetic variation and diversity within a species are essential for recovery, adaptation to environmental changes, and long-term viability (capability to live, reproduce, and develop) (Noss and Cooperrider 1994, pp. 282-297; Harris 1984, pp. 93-107). Long-term viability is founded on numerous interbreeding, local populations throughout the range (Harris 1984, pp.93-107). Continuity of water flow between suitable habitats is essential in preventing further fragmentation of the species' habitat and populations; conserving the essential riffles, runs, and pools needed by vermilion darters; and promoting genetic flow throughout the populations. Continuity of habitat will maintain spawning, foraging, and resting sites, as well as provide heterozygosity or gene flow throughout the population. Connectivity of habitats, as a whole, also permits improvement in water quality and water quantity by allowing an unobstructed water flow throughout the connected habitats.

Based on the biological information and needs discussed above, it is essential to protect riffles, runs, and pools, and the continuity of these structures, to accommodate feeding, spawning, growth, and other normal behaviors of the vermilion darter and to promote genetic flow within the species.

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

Water Quantity and Flow

Much of the cool, clean water provided to the Turkey Creek main stem comes from consistent and steady groundwater sources (springs) that contribute to the flow and water quantity in the tributaries (Beaver Creek, Dry Creek, Dry Branch, and the unnamed tributary to Beaver Creek). Flowing water provides a means for transporting nutrients and food items, moderating water temperatures and dissolved oxygen levels, and diluting non-point and point source pollution. Impoundments within Turkey and Dry creeks not only serve as dispersal barriers but have also altered stream flows from natural conditions. Without clean water sources, water quality and water quantity would be considerably lower and would significantly impair the normal life stages and behavior of the vermilion darter.

Favorable water quantity is an average daily discharge of over 50 cubic feet per second within the Turkey Creek main stem (U.S. Geological Survey 2009, compiled from average annual statistics). Along with this average daily discharge, both minimum and flushing flows are necessary within the tributaries to maintain all life stages and to remove fine sediments and dilute other pollutants (Drennen personal observation, February 2009a; Instream Flow Council 2004, pp.103-104, 375; Gilbert *et al.* eds. 1994, pp. 505-522; Moffett and Moser 1978, pp. 20-21). These flows are supplemented by groundwater and contribute to the overall stream cleansing effect by adding to the total flow of high-quality water. This, in turn, helps in maintenance of stream banks and bottoms, essential for normal life stages and behavior of the vermilion darter.

Water Quality

Factors that can potentially alter water quality are decreases in water quantity through droughts and periods of low seasonal flow, precipitation events, non-point source runoff, human activities within the watershed, random spills, and unregulated discharge events (Instream Flow Council 2004, pp.29-50). These factors are particularly harmful during drought conditions when flows are depressed and pollutants are concentrated. Impoundments also affect water quality by reducing water flow, altering temperatures, and concentrating pollutants (Blanco and Mayden 1999, pp. 5-6, 36). Nonpoint-source pollution and alteration of flow regimes are primary threats to the vermilion darter in the Turkey Creek watershed.

Aquatic life, including fish, require acceptable levels of dissolved oxygen. The type of organism and its life stage determine the level of oxygen required. Generally, among fish, cold water species and young life forms are the most sensitive. The amount of dissolved oxygen that is present in the water (the saturation level) depends upon water temperature. As the water temperature increases, the saturated dissolved oxygen level decreases. The more oxygen there is in the water, the greater the assimilative capacity (ability to consume organic wastes with minimal impact) of that water; lower water flows have a reduced assimilative capacity (Pitt 2000, pp. 6-7). Low-flow conditions affect the chemical environment occupied by the fish, and extended low-flow conditions coupled with higher pollutant levels would likely result in behavior changes within all life stages, but could be particularly detrimental to

early life stages (e.g., eggs, larvae, and juveniles).

Optimal water quality lacks harmful levels of pollutants, such as inorganic contaminants like copper, arsenic, mercury, and cadmium; organic contaminants such as human and animal waste products; endocrine-disrupting chemicals; pesticides; nitrogen, potassium, and phosphorous fertilizers; and petroleum distillates. Sediment is the most abundant pollutant produced in the Mobile River Basin (Alabama Department of Environmental Management 1996, pp.13-15). Siltation (excess sediments suspended or deposited in a stream) contributes to turbidity of the water and has been shown to suffocate aquatic insects, smother fish eggs, clog fish gills, and fill in essential interstitial spaces (spaces between stream substrates) used by aquatic organisms for spawning and foraging; therefore, siltation negatively impacts fish growth, physiology, behavior, reproduction, and survival. Nutrification (excessive nutrients present, such as nitrogen and phosphorous) promotes heavy algal growth that covers and eliminates clean rock or gravel habitats necessary for vermilion darter feeding and spawning. High conductivity values are an indicator of hardness and alkalinity and may denote water nitrification (Hackney *et al.* 1999, pp.99-103). Generally, early life stages of fishes are less tolerant of environmental contamination than adults or juveniles (Little *et al.* 1993, pp. 67).

Appropriate water quality and quantity are necessary to dilute impacts from storm water and other non-natural effluents. Harmful levels of pollutants impair critical behavior functions in fish and are reflected in population-level responses (reduced population size, biomass, year class success, etc.). Adequate water quantity and flow and good to optimal water quality are essential for normal behavior, growth, and viability during all life stages.

The vermilion darter requires relatively clean, cool flowing water within the Turkey Creek main stem and tributaries. The Clean Water Act (33 U.S.C. 1251 *et seq.*), Water Quality Act (Pub. L. 100-4) and Alabama Water Pollution Control Act (Ala. Code § 22-22-1) establish guidelines for water usage and standards of quality for the State's waters necessary to preserve and protect aquatic life. Essential water quality attributes for darters and other fish species in fast to middle water flow streams include: dissolved oxygen levels greater than 6 parts per million (ppm), temperatures between 7 ° and 26.7 °Celsius (C) (45 ° and 80 °Fahrenheit (F)) with spring egg incubation temperatures from 12.2 ° to 18.3 °C (54 ° to 65 °F), a specific conductance (ability of water to conduct an electric current, based on dissolved solids in the water) of less than approximately 225 micro Siemens per centimeter at 26.7 °C (80 °F), and low concentrations of free or suspended solids (organic and inorganic sediments) less than 10 Nephelometric Turbidity Units (NTU; units used to measure sediment discharge) and 15 mg/L Total Suspended Solids (TSS; measured as mg/L of sediment in water) (Teels *et al.* 1975, pp. 8-9; Ultschet *et al.* 1978, pp. 99-101; Ingersoll *et al.* 1984, pp. 131-138; Kundell and Rasmussen 1995, pp. 211-212; Henley *et al.* 2000, pp. 125-139; Meyer and Sutherland 2005, pp. 43-64).

Food

The vermilion darter is a benthic (bottom) insectivore consuming larval chironomids (midges), tipulids (crane flies), and hydropsychids (caddisflies), along with occasional microcrustaceans (Boschung and Mayden 2004, p. 520; Khudamrongsawat *et al.* 2005, p.472). Caddisflies and crane flies are pollution sensitive organisms found in good to fair water quality (Auburn University 1993, p.53). Variation in instream flow maintains the stream bottom where food for the vermilion darter is found, transports these organisms, and provides oxygen and other attributes to various invertebrate life stages. Sedimentation has been shown to wear away and suffocate periphyton (organisms that live attached to objects underwater) and disrupt aquatic insect communities (Waters 1995, pp. 53-86; Knight and Welch 2001, pp. 132-135). In addition, nutrification promotes heavy algal growth that covers and eliminates the clean rock or gravel habitats necessary for vermilion darter feeding and spawning. A decrease in water quality and instream flow will correspondingly decrease the major food species for the vermilion darter. Thus, food availability for the vermilion darter is affected by instream flow and water quality.

Based on the biological information and needs discussed above, we believe it is essential that vermilion darter habitat consist of unaltered, connected, stable streams to maintain flow, prevent sedimentation, and promote good water quality absent harmful pollutants.

Cover or Shelter (Sites for Breeding, Reproduction or Rearing)

Vermilion darters depend on specific bottom substrates for normal and robust life processes such as spawning, rearing, protection of young during life stages, protection of adults when threatened, foraging, and feeding. These bottom substrates are dominated by fine gravel, along with some sand, coarse gravel, cobble, and bedrock (Blanco and Mayden 1999, pp. 24-26; Drennen personal observation, February 2009b). The vermilion darter prefers small-sized gravel for spawning substrates (Blanchard and Stiles 2005, pp.1-12). Occasionally, there are also small sticks and limbs on the bottom substrate and within the water column (Stiles pers. comm., September 1999; Drennen personal observation, May 2007).

Excessive fine sediments of small sands, silt, and clay may embed in the larger substrates, filling in interstitial spaces between these structures. Loss of these interstitial areas removes spawning and rearing areas, foraging and feeding sites, and escape and protection localities (Sylte and Fischenich 2002, pp. 1-25). In addition, dense, filamentous algae growth on the substrates may restrict or eliminate the usefulness of the interstitial spaces by the vermilion darter.

Geomorphic instability within the streambed and along the banks results in scouring and erosion of these areas, leading to sedimentation and loss of shelter and cover for vermilion darters, their eggs, and their young. This fine sediment deposition also reduces the area available for food sources, such as macroinvertebrates and periphyton (Tullos 2005, pp. 80-81).

Thus, based on the biological information and needs above, essential vermilion darter habitat consists of stable streams with a stream flow sufficient to remove sediment and eliminate the filling in of interstitial spaces and substrate to accommodate spawning, rearing, protection of young, protection of adults when threatened, foraging, and feeding.

Primary Constituent Elements for Vermilion Darter

Under the Act and its implementing regulations, we are required to identify the physical and biological features essential to the conservation of vermilion darter. The physical and biological features are the primary constituent elements (PCEs) laid out in the appropriate quantity and spatial arrangement essential to the conservation of the species. Areas designated as critical habitat for vermilion darter contain only occupied areas within the species' historical geographic range, and contain sufficient PCEs to support at least one life history function.

Based on our current knowledge of the life history, biology, and ecology of vermilion darter and the requirements of the habitat to sustain the essential life history functions of the species, we determined that the PCEs specific to vermilion darter are:

(1) Geomorphically stable stream bottoms and banks (stable horizontal dimension and vertical profile) in order to maintain t bottom features (riffles, runs, and pools) and transition zones between bottom features , to continue appropriate habitat to maintain essential riffles, runs, and pools, to promote connectivity between spawning, foraging and resting sites, and to maintain gene flow throughout the population.

(2) Instream flow regime with an average daily discharge over 50 cubic feet per second, inclusive of both surface runoff and groundwater sources (springs and seepages).

(3) Water quality with temperature not exceeding 26.7 °C (80 °F), dissolved oxygen 6.0 milligrams or greater per liter, turbidity of an average monthly reading of 10 Nephelometric Turbidity Units (NTU; units used to measure sediment discharge) and 15mg/l Total Suspended Solids (TSS; measured as mg/l of sediment in water) or less; and a specific conductance (ability of water to conduct an electric current, based on dissolved solids in the water) of no greater than 225 micro Siemens per centimeter at 26.7 ° C (80 °F).

(4) Bottom substrates consisting of fine gravel with coarse gravel or cobble, or bedrock with sand and gravel, with low amounts of fine sand and sediments within the interstitial spaces of the substrates.

With this proposed designation of critical habitat, we intend to conserve the physical and biological features essential to the conservation of the species, through the identification of the appropriate quantity and spatial arrangement of the PCEs sufficient to support the life history functions of the species. Each of the areas proposed as critical habitat in this rule contains sufficient PCEs to provide for one or more of the life history functions of the vermilion darter.

Special Management Considerations or Protections

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain the physical and biological features that are essential to the conservation of the species and whether those features may require special management considerations or protection.

The five units we are proposing for designation as critical habitat will require some level of management to address the current and future threats to the physical and biological features essential to the conservation of the species. None of the proposed critical habitat units are presently under special management or protection provided by a legally operative plan or agreement for the conservation of the vermilion darter. Various activities in or adjacent to the critical habitat units described in this proposed rule may affect one or more of the PCEs. For example, features in the proposed critical habitat designation may require special management due to threats posed by urbanization activities (such as stream channel modification for flood control or gravel extraction) that could cause an increase in bank erosion; by significant changes in the existing flow regime within the streams due to water diversion or withdrawal; by significant alteration of water quality; by significant alteration in the quantity of groundwater and alteration of spring discharge sites; by significant changes in stream bed material composition and quality due to construction projects and maintenance activities; by off-road vehicle use; by gas and water easements; by bridge construction; by culvert installation; by stormwater management; and by other watershed and floodplain disturbances that release sediments or nutrients into the water. Other activities that may affect PCEs in the proposed critical habitat units include those listed in the ''Effects of Critical Habitat'' section below.

As stated above, designation of critical habitat does not imply that lands outside of critical habitat do not play an important role in the conservation of the vermilion darter. Activities with a Federal nexus that may affect areas outside of critical habitat, such as development; road construction and maintenance; oil, gas, and utility easements; and effluent discharges, are still subject to review under section 7 of the Act if they may affect the vermilion darter, because Federal agencies must consider both effects to the species and effects to critical habitat independently. The Service should be consulted for disturbances to areas both within the proposed critical habitat unist as well as upstream of those areas known to support vermilion darter, including springs and seeps that contribute to the instream flow in the tributaries, especially during times when stream flows are abnormally low (i.e., during droughts). The prohibitions of section 9 of the Act against the take of listed species also continue to apply both inside and outside of designated critical habitat.

Criteria Used to Identify Proposed Critical Habitat

Using the best scientific and commercial data available, as required by section 4(b)(1)(A) of the Act, we identified those areas to propose for designation as critical habitat that, within the geographical area occupied by the species at the time of listing, possess those physical and biological features essential to the conservation of the vermilion darter which may require special management considerations or protection. We also considered the area outside the geographical area occupied by the species at the time of listing for any areas that are essential for the conservation of the vermilion darter.

We used information from surveys and reports prepared by the Alabama Department of Conservation and Natural Resources, Alabama Geological Survey, Samford University, University of Alabama, and the Service to identify the specific locations occupied by the vermilion darter. Currently, occupied habitat for the species is limited and isolated. The species is currently located within the upper mainstem reaches of Turkey Creek and four tributaries: unnamed tributary to Beaver Creek, Beaver Creek, Dry Creek, and Dry Branch in Pinson, Jefferson County, Alabama (Blanco and Mayden 1999, pp.18-20; Drennen pers. observ. March 2008).

Following the identification of the specific locations occupied by the vermilion darter, we determined the appropriate length of stream segments by identifying the upstream and downstream limits of these occupied sections necessary for the conservation of the vermilion darter. Because populations of vermilion darters are isolated due to dispersal barriers, to set the upstream and downstream limits of each critical habitat unit, we identified landmarks (bridges, confluences, road crossings, and dams) above and below the upper and lowermost reported locations of the vermilion darter in each stream reach to ensure incorporation of all potential sites of occurrence. These stream reaches were then digitized using 7.5' topographic maps and ARCGIS to produce the critical habitat map.

We are proposing to designate as critical habitat all stream reaches in occupied habitat. We have defined ''occupied habitat'' as those stream reaches occupied at the time of listing and still known to be occupied by the vermilion darter ; these stream reaches comprise the entire known range of the

vermilion darter. We are not proposing to designate any areas outside the known range of the species because the historical range of the vermilion darter, beyond currently occupied areas, is unknown and dispersal beyond the current range is not likely due to dispersal barriers.

The five proposed units contain one or more of the PCEs in the appropriate quantity and spatial arrangement essential to the conservation of this species and support multiple life processes for the vermilion darter.

When identifying proposed critical habitat boundaries, we make every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands usually lack PCEs for endangered or threatened species. Areas proposed for critical habitat for the vermilion darter below include only stream channels within the ordinary high water line and do not contain any developed areas or structures.

Proposed Critical Habitat Designation

We are proposing to designate 5 units, totaling approximately 21.0 km (13.0 mi), as critical habitat for the vermilion darter. The critical habitat units described below constitute our best assessment of areas that currently meet the definition of critical habitat for the vermilion darter. Table 1 identifies the proposed units for the species; shows the occupancy of the units; the approximate extent proposed as critical habitat for the vermilion darter; and ownership of the proposed designated areas.

TABLE 1—OCCUPANCY AND OWNERSHIP OF PROPOSED CRITICAL HABITAT UNITS FOR THE VERMILION DARTER.

Unit	Location	Occupied	Private Ownership Stream Kilometers (Miles)	State, County, City Ownership Stream Kilometers (Miles)	Total
1	Turkey Creek	Yes	14.9 (9.2)	0.3 (0.2)	15.2 (9.4)
2	Dry Branch	Yes	0.7 (0.4)	-	0.7 (0.4)
3	Beaver Creek	Yes	0.9 (0.6)	0.1 (< 0.1)	1.0 (0.6)
4	Dry Creek	Yes	0.6 (0.4)	-	0.6 (0.4)
5	Unnamed Tributary to Beaver Creek	Yes	3.3 (2.0)	0.4 (0.2)	3.7 (2.2)
	TOTAL		20.4 (12.6)	0.8 (0.5)	21.2 (13.1)

We present brief descriptions of each unit and reasons why they meet the definition of critical habitat below. The proposed critical habitat units include the stream channels of the creek and tributaries within the ordinary high water line. As defined in 33 CFR 329.11, the ordinary high water line on nontidal rivers is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural water line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas. In Alabama, the riparian landowner owns the stream to the middle of the channel.

For each stream reach proposed as a critical habitat, the upstream and downstream boundaries are described generally below; more precise descriptions are provided in the Regulation Promulgation at the end of this proposed rule.

Unit 1: Turkey Creek, Jefferson County, Alabama

Unit 1 includes 15.2 km (9.4 mi) in Turkey Creek from Shadow Lake Dam downstream to the Section 13/14 (T15S, R2W) line, as taken from the U.S. Geological Survey 7.5 topographical map (Pinson quadrangle).

Approximately 14.9 km (9.2 mi), or 98 percent of this area is privately owned. The remaining 0.3 km (0.2 mi), or 2 percent is publicly owned by the City of Pinson or Jefferson County in the form of bridge crossings and road easements.

Turkey Creek supports the most abundant and robust populations of the vermilion darter in the watershed. Populations of vermilion darters are small and isolated within specific habitat sites of Turkey Creek from Shadow Lake dam downstream to the old strip mine pools (13/14 S T15S R2W section line, as taken from the U.S. Geological Survey 7.5 topographical map (Pinson quadrangle)). We consider the entire reach of Turkey Creek that composes Unit 1 to be occupied.

One of the three known spawning sites for the species is located within the confluence of Turkey Creek and Tapawingo Spring run (PCE 4). In addition, Turkey Creek provides the most darter habitat for the vermilion darters with an abundance of pools, riffles, and runs (PCE 1). These geomorphic structures provide the species with spawning, foraging, and resting areas (PCEs 1 and 4), along with good water quality, quantity, and flow, which support the normal life stages and behavior of the vermilion darter and the species' prey sources (PCEs 2 and 3).

There are five impoundments in Turkey Creek (Blanco and Mayden 1999, pp. 5-6, 36, 63) limiting the connectivity of the range and expansion of the species into other units and posing a risk of extinction to the species due to changes in flow regime, habitat, water quality, water quantity, and stochastic events such as drought. These impoundments accumulate nutrients and undesirable fish species that could propose threats to vermilion darters and the species' habitat. Other threats to the

vermilion darter and its habitat in Turkey Creek that may require special management and protection of PCEs include the potential of: urbanization activities (such as channel modification for flood control or gravel extraction) that could result in increased bank erosion; significant changes in the existing flow regime due to water diversion or withdrawal; significant alteration of water quality; and significant changes in stream bed material composition and quality as a result of construction projects and maintenance activities, off-road vehicle use, gas and water easements, bridge construction, culvert installation, stormwater management, and other watershed and floodplain disturbances that release sediments or nutrients into the water.

Unit 2: Dry Branch, Jefferson County, Alabama

Unit 2 includes 0.7 km (0.4 mi) of Dry Branch from the bridge at Glenbrook Road downstream to the confluence with Beaver Creek.

Almost all of the 0.7 km (0.4 mi) or close to 100 percent of this area is privately owned. Less than 1 percent of the area is publicly owned by the City of Pinson or Jefferson County in the form of bridge crossings and road easements.

Dry Branch provides supplemental water quantity to Turkey Creek proper (Unit 1) and provides connectivity to additional bottom substrate habitat and possible spawning sites (PCEs 1, 3, and 4). One of the three known spawning sites for the species is located within the confluence of this reach (PCE 1 and 4) and Beaver Creek.

Threats to the vermilion darter and its habitat at Dry Branch that may require special management and protection of PCEs 1, 3, and 4 include the potential of: urbanization activities (such as channel modification for flood control, impoundments, gravel extraction) that could result in increased bank erosion; significant changes in the existing flow regime due to construction of impoundments, water diversion, or water withdrawal; significant alteration of water quality; and significant changes in stream bed material composition and quality as a result of construction projects and maintenance activities, off-road vehicle use, gas and water easements, bridge construction, culvert installation, stormwater management, and other watershed and floodplain disturbances that release sediments or nutrients into the water.

Unit 3: Beaver Creek, Jefferson County, Alabama

Unit 3 includes 1.0 km (0.6 mi) of Beaver Creek from the confluence with the unnamed tributary to Beaver Creek downstream to the confluence with Turkey Creek.

Almost 0.9 km (0.6 mi), or 94 percent of this area is privately owned. The remaining 0.1 km (< 0.1 mi), or 6 percent is publicly owned by the City of Pinson or Jefferson County in the form of bridge crossings and road easements.

Beaver Creek supports populations of vermilion darters, and provides supplemental water quantity to Turkey Creek proper (PCEs 1 and 2). The reach also contains adequate bottom substrate for vermilion darters to use in spawning, foraging, and other life processes (PCE 4). Beaver Creek makes available additional habitat and spawning sites, and offers connectivity with other vermilion darter populations within Turkey Creek, Dry Branch, and the unnamed tributary to Beaver Creek (PCEs 1 and 4).

Threats to the vermilion darter and its habitat at Beaver Creek that may require special management of PCEs 1, 2, and 4 include the potential of: urbanization activities (such as channel modification for flood control, impoundments, gravel extraction) that could result in increased bank erosion; significant changes in the existing flow regime, water diversion, or water withdrawal; significant alteration of water quality; and significant changes in stream bed material composition and quality as a result of construction projects and maintenance activities, off-road vehicle use, gas and water easements, bridge construction, culvert installation, stormwater management, and other watershed and floodplain disturbances that release sediments or nutrients into the water.

Unit 4: Dry Creek, Jefferson County, Alabama

Unit 4 includes 0.6 km (0.4 mi) of Dry Creek from Innsbrook Road downstream to the confluence with Turkey Creek.

Almost 0.6 km (0.4 mi), or 100 percent of this area is privately owned.

Dry Creek supports populations of vermilion darters and provides supplemental water quantity to Turkey Creek proper (PCEs 1 and 2). The reach also contains adequate bottom substrate for vermilion darters to use in spawning, foraging, and other life processes (PCE 4). Dry Creek makes available additional habitat and spawning sites, and offers connectivity with vermilion darter populations in Turkey Creek (PCE 1).

There are two impoundments in Dry Creek (Blanco and Mayden 1999, pp. 56, 62) which limit the range and expansion of the species within the unit and increases the risk of extinction due to changes in flow regime, habitat or water quality, water quantity, and stochastic events such as drought. These impoundments amass nutrients and undesirable fish species that could propose threats to vermilion darters and to its habitat. Threats that may require special management and protection of PCEs include: urbanization activities (such as channel modification for flood control and gravel extraction) that could result in increased bank erosion; significant changes in the existing flow regime due to future impoundment construction, water diversion, or water withdrawal; significant alteration of water quality; and significant changes in stream bed material composition and quality as a result of construction projects and maintenance activities, off-road vehicle use, gas and water easements, bridge construction, culvert installation, stormwater management, and other watershed and floodplain disturbances that release sediments or nutrients into the water.

Unit 5: Unnamed Tributary to Beaver Creek, Jefferson County, Alabama

Unit 5 includes 3.7 km (2.3 mi) of the unnamed tributary of Beaver Creek from the Section 12/11 (T16S, R2W) line, as taken from the U.S. Geological Survey 7.5 topographical map (Pinson quadrangle), downstream to its confluence with Beaver Creek.

Almost 3.3 km (2.1 mi), or 89 percent of this area is privately owned. The remaining 0.4 km (0.2 mi), or 11 percent is publicly owned by the City of Pinson or Jefferson County in the form of bridge crossings and road easements.

The unnamed tributary to Beaver Creek supports populations of vermilion darters and provides supplemental water quantity to Turkey Creek proper (PCEs 1 and 2). The unnamed tributary to Beaver Creek has been intensely geomorphically changed by man over the last 100 years. The majority of this reach has been modified for flood control, as it runs parallel to Highway 79. There are several bridge crossings, and the reach has a history of industrial uses along the bank. However, owing to the groundwater effluent that constantly supplies this reach with clean and flowing water (PCEs 2 and 3), the reach has been able to cleanse itself and maintain a population of vermilion darters at several locations. One of the three known spawning sites for the species is located within this reach (PCE 4).

The headwaters of the unnamed tributary to Beaver Creek is

characterized by natural flows that are attributed to an abundance of spring groundwater discharges contributing adequate water quality, water quantity, and substrates (PCEs 1, 2, and 3). Increasing the connectivity of the vermilion darter populations (PCE 1) into the upper reaches of this tributary is an essential conservation requirement as it would expand the range and decrease the vulnerability of these populations to stochastic threats.

Threats to the vermilion darter and its habitat that may require special management and protection of PCEs are: urbanization activities (such as channel modification for flood control, and gravel extraction) that could result in increased bank erosion; significant changes in the existing flow regime due to future impoundment construction, water diversion, or water withdrawal; significant alteration of water quality; and significant changes in stream bed material composition and quality as a result of construction projects and maintenance activities, off-road vehicle use, gas and water easements, bridge construction, culvert installation, stormwater management, and other watershed and floodplain disturbances that release sediments 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 actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. Decisions by the Fifth and Ninth Circuits Courts of Appeals have invalidated our definition of ''destruction or adverse modification'' (50 CFR 402.02) (see *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service*, 378 F.3d 1059 (9th Cir. 2004) and *Sierra Club* v. *U.S. Fish and Wildlife Service*, 245 F.3d 434, 442 (5th Cir. 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain the current ability for the PCEs to be functionally established) to serve its intended conservation role for the species.

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. Conference reports provide conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. We may issue a formal conference report if requested by a Federal agency. Formal conference reports on proposed critical habitat contain an opinion that is prepared according to 50 CFR 402.14, as if critical habitat were designated. We may adopt the formal conference report as the biological opinion when the critical habitat is designated, if no substantial new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)). The conservation recommendations in a conference report or opinion are strictly advisory.

If a species is listed or critical habitat is designated, 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 to destroy or adversely modify its critical habitat. 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. As a result of this consultation, we document compliance with the requirements of section 7(a)(2) 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 or destroy or adversely modify critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. We define ''reasonable and prudent alternatives'' at 50 CFR 402.02 as alternative actions identified during consultation that:

- Can be implemented in a manner consistent with the intended purpose of the action,
- Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,
- Are economically and technologically feasible, and
- Would, in the Director's opinion, avoid jeopardizing the continued existence of the listed species or destroying or adversely modifying critical habitat.

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

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

Federal activities that may affect the vermilion darter or its designated critical habitat will require section 7 consultation under the Act. Activities on State, Tribal, local, or private lands requiring 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 us under section 10 of the Act or involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency)) are subject to the section 7 consultation process. 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 permitted, do not require section 7 consultation.

Application of the ''Adverse Modification'' Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species, or would retain its current ability for the PCEs to be functionally established. Activities that may destroy or adversely modify critical habitat are those that alter the PCEs to an extent that appreciably reduces the conservation value of critical habitat for the vermilion darter.

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 destroy or adversely modify such habitat, or that may be affected by such designation.

Activities that, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and therefore result in consultation for the vermilion darter include, but are not limited to:

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

(2) Actions that would significantly alter the existing flow regime. Such activities could include, but are not limited to, impoundment, water diversion, water withdrawal, and hydropower generation. These activities could eliminate or reduce the habitat necessary for growth and reproduction of the vermilion darter.

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

(4) Actions that would significantly alter stream bed material composition and quality by increasing sediment deposition or filamentous algal growth. Such activities could include, but are not limited to, construction projects; road and bridge maintenance activities; livestock grazing; timber harvest; off-road vehicle use; underground gas, water, and electric lines; and other watershed and floodplain disturbances that release sediments or nutrients into the water. These activities could eliminate or reduce habitats necessary for the growth and reproduction of the species by causing excessive sedimentation and burial of the species or their habitats, or nutrification leading to excessive filamentous algal growth. Excessive filamentous algal growth can cause extreme decreases in nighttime dissolved oxygen levels through vegetation respiration, and cover the bottom substrates and the interstitial spaces between cobble and gravel.

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 resource 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:

- An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;
- A statement of goals and priorities;
- A detailed description of management actions to be implemented to provide for these ecological needs; and
- 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)) now provides: ''The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.''

There are no Department of Defense lands with a completed INRMP within the proposed critical habitat designation.

Exclusions

Application of Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate or make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned. In making that determination, the legislative history is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we are preparing an analysis of the economic impacts of the proposed critical habitat designation and related factors.

We will announce the availability of the draft economic analysis as soon as it is completed, at which time we will seek public review and comment. At that time, copies of the draft economic analysis will be available for downloading from the Internet at the *Federal eRulemaking Portal*: *http://www.regulations.gov*, or by contacting the Mississippi Fish and Wildlife Office directly (see **FOR FURTHER INFORMATION CONTACT**). During the development of a final designation, we will consider economic impacts, public comments, and other new information, and we may exclude areas may be excluded from the final critical habitat designation under section 4(b)(2) of the Act and our implementing regulations at 50 CFR 424.19.

National Security Impacts

Under section 4(b)(2) of the Act, we consider whether there are lands owned or managed by the Department of Defense (DOD) where a national security impact might exist. In preparing this proposal, we have determined that the lands within the proposed designation of critical habitat for the vermilion darter are not owned or managed by the DOD, and we therefore anticipate no impact to national security. There are no areas proposed for exclusion based on impacts to national security.

Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in

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

In preparing this proposed rule, we have determined that there are currently no conservation plans or other management plans for the species, and the proposed designation does not include any Tribal lands or trust resources. We anticipate no impact to Tribal lands, partnerships, or management plans from this proposed critical habitat designation. There are no areas proposed for exclusion from this proposed designation based on other relevant impacts.

Notwithstanding these decisions, as stated under the **Public Comments** section above, we are seeking specific comments on whether we should exclude any areas proposed for designation under section 4(b)(2) of the Act.

Peer Review

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

We will consider all comments and information we receive during this comment period on this proposed rule during our preparation of a final determination. Accordingly, our final decision may differ from this proposal.

Public Hearings

The Act provides for one or more public hearings on this proposal, if we receive any requests for hearings. We must receive your request for a public hearing by the date listed in the **DATES** section of this rule. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings in the **Federal Register** and local newspapers at least 15 days before the first hearing.

Required Determinations

Regulatory Planning and Review — Executive Order 12866

The Office of Management and Budget (OMB) has determined that this rule is not significant under Executive Order 12866 (E.O. 12866). OMB bases its determination upon the following four criteria:

(a) Whether the rule will have an annual effect of $100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

(b) Whether the rule will create inconsistencies with other Federal agencies' actions.

(c) Whether the rule will materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

(d) Whether the rule raises novel legal or policy issues.

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 (SBREFA) of 1996), whenever an agency must 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 (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 RFA to require Federal agencies to provide a statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

At this time, we lack the specific information necessary to provide an adequate factual basis for determining the potential incremental regulatory effects of the designation of critical habitat for the vermilion darter to either develop the required RFA finding or provide the necessary certification statement that the designation will not have a significant impact on a substantial number of small business entities. On the basis of the development of our proposal, we have identified certain sectors and activities that may potentially be affected by a designation of critical habitat for the vermilion darter. These sectors include industrial development and urbanization along with the accompanying infrastructure associated with such projects such as road, stormwater drainage, bridge and culvert construction and maintenance. We recognize that not all of these sectors may qualify as small business entities. However, while recognizing that these sectors and activities may be affected by this designation, we are collecting information and initiating our analysis to determine (1) which of these sectors or activities are or involve small business entities and (2) what extent the effects are related to the vermilion darter being listed as an endangered species under the Act (baseline effects) or whether the effects are attributable to the designation of critical habitat (incremental). We believe that the potential incremental effects resulting from a designation will be small. As a consequence, following an initial evaluation of the information available to us, we do not believe that there will be a significant impact on a substantial number of small business entities resulting from this designation of critical habitat for the vermilion darter. However, we will be conducting a thorough analysis to determine if this may in fact be the case. As such, we are requesting any specific economic information related to small business entities that may be affected by this designation and how the designation may impact their business. Therefore, we defer our RFA finding on this proposal designation until completion of the draft economic analysis prepared under section 4(b)(2) of the Act and E.O. 12866.

As discussed above, this draft economic analysis will provide the required factual basis for the RFA finding. Upon completion of the draft economic analysis, we will announce availability of the draft economic analysis of the proposed designation in the **Federal Register** and reopen the public comment period for the proposed designation. We will include with this announcement, as appropriate, an initial regulatory flexibility analysis or a certification that the rule will not have a significant economic impact on a substantial number of small entities accompanied by the factual basis for that determination. We have concluded that deferring the RFA finding until completion of the draft economic analysis is necessary to meet the purposes and requirements of the RFA. Deferring the RFA finding in this

manner will ensure that we make a sufficiently informed determination based on adequate economic information and provide the necessary opportunity for public comment.

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

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

(a) This 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, 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; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not jeopardize the continued existence of the species, or destroy or adversely modify critical habitat under section 7 of the Act. 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 listing these species or designating critical habitat shift the costs of the large entitlement programs listed above on to State governments.

(b) We do not believe that this rule would significantly or uniquely affect small governments because the vermilion darter primarily occurs in privately owned stream channels. As such, a Small Government Agency Plan is not required. We will, however, further evaluate this issue as we conduct our economic analysis and revise this assessment if appropriate.

Takings—Executive Order 12630

In accordance with E. O. 12630 (''Government Actions and Interference with Constitutionally Protected Private Property Rights''), we have analyzed the potential takings implications of designating critical habitat for the vermilion darter in a takings implications assessment. The takings implications assessment concludes that this designation of critical habitat for the vermilion darter does not pose significant takings implications.

Federalism—Executive Order 13132

In accordance with E. O. 13132 (Federalism), the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this proposed critical habitat designation with appropriate State resource agencies in Alabama. The critical habitat designation may have some benefit to this government in that the areas that contain the features essential to the conservation of the species are more clearly defined, and the PCEs of the habitat necessary to the conservation of the species are specifically identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist these local governments in long-range planning (rather than waiting 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 rule does not unduly burden the judicial system and 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. This proposed rule uses standard property descriptions and identifies the physical and biological features within the designated areas to assist the public in understanding the habitat needs of the vermilion darter.

Paperwork Reduction Act of 1995

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

National Environmental Policy Act (NEPA)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses as defined by NEPA (42 U.S.C. 4321 *et seq.*) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

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:

(a) Be logically organized;

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

(c) Use clear language rather than jargon;

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

(e) 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 the **ADDRESSES** section. 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.

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), E. O. 13175, and the Department of Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 ''American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act'', we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes.

We have determined that there are no tribal lands occupied at the time of listing that contain the features essential for the conservation and no tribal lands that are unoccupied areas that are essential for the conservation of the vermilion darter. Therefore, we have not proposed designation of critical habitat for the vermilion darter on Tribal lands.

Energy Supply, Distribution, or Use—Executive Order 13211

On May 18, 2001, the President issued an Executive Order (E.O. 13211; Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) on regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. We do not expect this rule to significantly affect energy supplies, distribution, or use. Although two of the proposed units are below hydropower reservoirs, current and proposed operating regimes have been deemed adequate for the species, and therefore their operations will not be affected by the proposed designation of critical habitat. All other proposed units are remote from energy supply, distribution, or use activities. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required. However, we will further evaluate this issue as we conduct our economic analysis, and review and revise this assessment as warranted.

References Cited

A complete list of all references cited in this rulemaking is available on the Internet at *http://www.regulations.gov* and upon request from the Field Supervisor, Mississippi Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** section).

Author(s)

The primary authors of this package are staff members of the Mississippi Fish and Wildlife 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—[AMENDED]

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

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

2.In § 17.11(h), revise the entry for ''Darter, vermilion'' under FISHES in the List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*	*	
FISHES							
*	*	*	*	*	*	*	
Darter, vermilion	*Etheostoma chermocki*	U.S.A. (AL)	Entire	E	715	17.95(e)	NA

* * * * *

3. In § 17.95(e), add an entry for ''Vermilion Darter (*Etheostoma chermocki*),'' in the same alphabetical order as the species appears in the table at §17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife

* * * * *

(e) Fishes

* * * * *

Vermilion Darter *(Etheostoma chermocki)*

(1) The critical habitat units are depicted for Jefferson County, Alabama, on the map below.

(2) The primary constituent elements (PCEs) of critical habitat for the vermilion darter are the habitat components that provide:

(i) Geomorphically stable stream bottoms and banks (stable horizontal dimension and vertical profile) in order to maintain bottom features (riffles, runs, and pools) and transition zones between bottom features, to continue appropriate habitat to maintain essential riffles, runs, and pools, to promote connectivity between spawning, foraging, and resting sites, and to maintain gene flow throughout the population.

(ii) Instream flow regime with an average daily discharge over 50 cubic feet per second inclusive of both surface runoff and groundwater sources (springs and seepages).

(iii) Water quality with temperature not exceeding 26.7 °C (80 °F), dissolved oxygen 6.0 milligrams or greater per liter, turbidity of an average monthly reading of 10 NTU and 15mg/l (Nephelometric Turbidity Units; units used to measure sediment discharge; Total Suspended Solids measured as mg/l of sediment in water) or less; and a specific conductance (ability of water to conduct an electric current, based on dissolved solids in the water) of no greater than 225 micro Siemens per centimeter at 26.7 °C (80 °F).

(iv) Bottom substrates consisting of fine gravel with coarse gravel or cobble, or bedrock with sand and gravel, with low amounts of fine sand and sediments within the interstitial spaces of the substrates.

(3) Critical habitat does not include manmade structures existing on the effective date of this rule and not containing one or more of the PCEs, such as buildings, bridges, aqueducts, airports, and roads, and the land on which such structures are located.

(4) Critical habitat unit map. The map was developed from USGS 7.5' quadrangles. Critical habitat unit upstream and downstream limits were then identified by longitude and latitude using decimal degrees.

(5) *Note*: Index map of critical habitat units for the vermilion darter follows:

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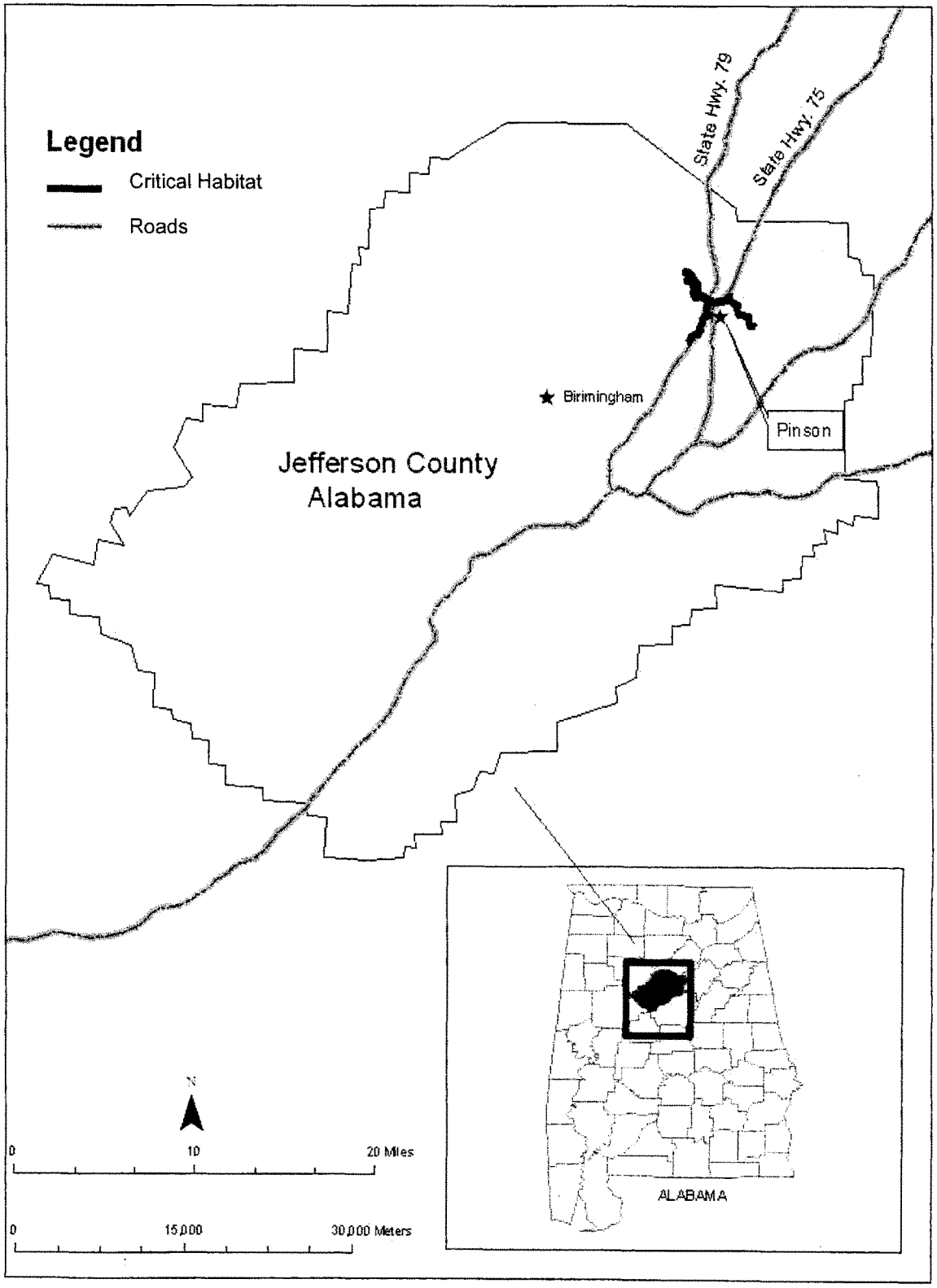
Index Map: Critical Habitat for the Vermilion Darter



(6) Unit 1: Turkey Creek, Jefferson County, Alabama.

(i) Unit 1 includes the channel in Turkey Creek from Shadow Lake Dam (086° 38' 22.50'' W long., 033° 40' 44.78'' N lat.) downstream to the Section 13/14 (T15S, R2W) line (086° 42' 31.81'' W long., 033° 43' 23.61'' N lat.).

(ii) Map of Unit 1 is provided at paragraph (10)(ii) of this entry.

(7) Unit 2: Dry Branch, Jefferson County, Alabama.

(i) Unit 2 includes the channel in Dry Branch from the bridge at Glenbrook Road (086° 41' 6.05'' W long., 033° 41' 10.65'' N lat) downstream to the confluence with Beaver Creek (86° 41' 17.39'' W long., 033° 41' 26.94'' N lat.).

(ii) Map of Unit 2 is provided at paragraph (10)(ii) of this entry.

(8) Unit 3: Beaver Creek, Jefferson County, Alabama.

(i) Unit 3 includes the channel of Beaver Creek from the confluence with the unnamed tributary to Beaver Creek (086° 41' 17.54'' W long., 033° 41' 26.94'' N lat.) downstream to its confluence with Turkey Creek (086° 41' 9.16'' W long., 033° 41' 55.86 N lat.).

(ii) Map of Unit 3 is provided at paragraph (10)(ii) of this entry.

(9) Unit 4: Dry Creek, Jefferson County, Alabama.

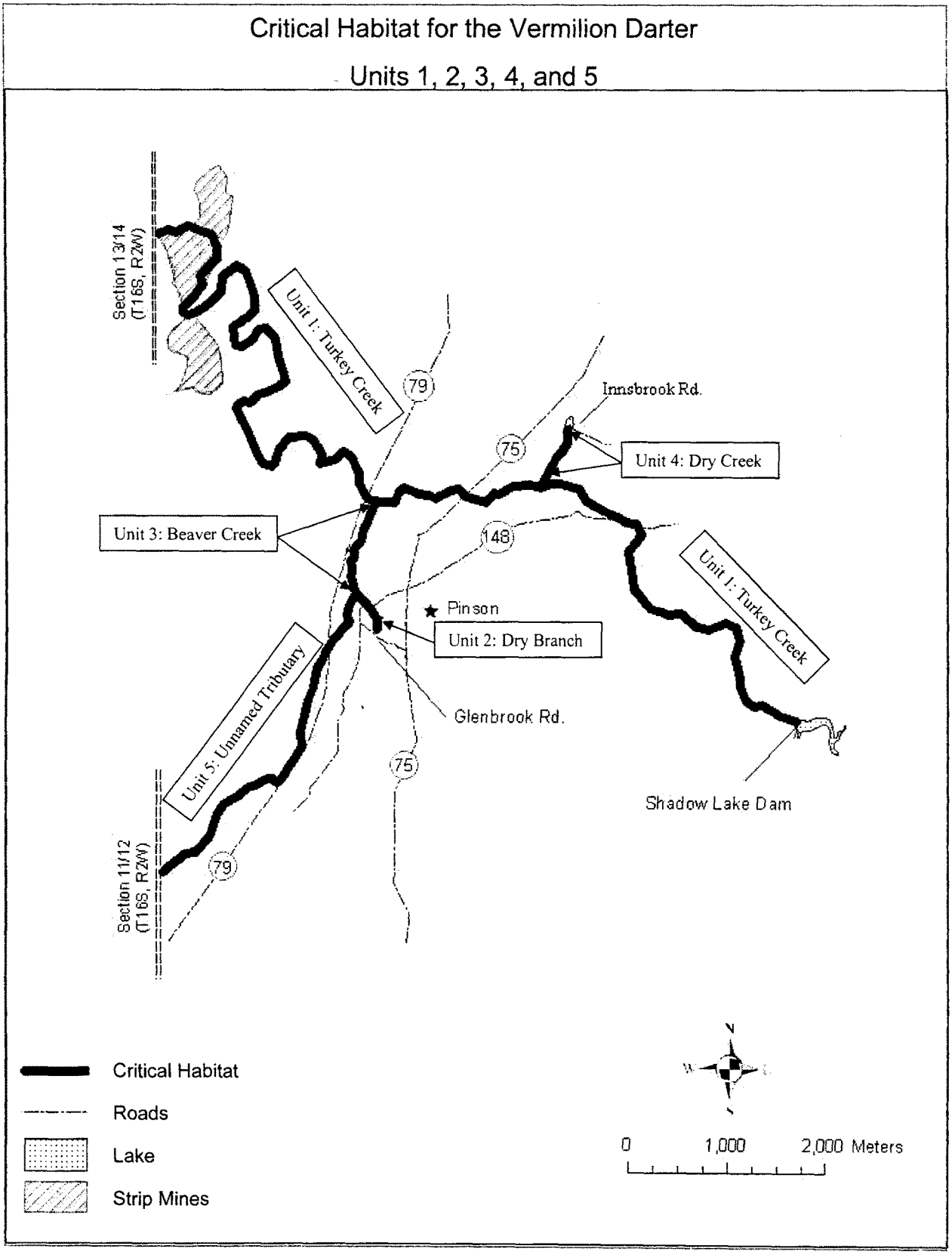
(i) Unit 4 includes the channel of Dry Creek, from Innsbrook Road (086° 39' 53.78'' W long., 033° 42' 19.11'' N lat) downstream to the confluence with Turkey Creek (086° 40' 3.72'' W long., 033° 42' 1.39'' N lat).

(ii) Map of Unit 4 is provided at paragraph (10)(ii) of this entry.

(10) Unit 5: Unnamed Tributary to Beaver Creek, Jefferson County, Alabama.

(i) Unit 5 includes the channel of the Unnamed Tributary from its confluence with Beaver Creek (086° 41' 17.54'' W long., 033° 41' 26.94'' N lat.), upstream to the 12/11 (T16S, R2W) section line (086° 42' 31.70'' W long., 033° 39' 54.15'' N lat.)

(ii) Map of Units 1, 2, 3, 4, and 5 (Map 2) follows:


Critical Habitat for the Vermilion Darter
Units 1, 2, 3, 4, and 5
Section 13/14 (T16S, R2W)
Unit 1: Turkey Creek
79
Innsbrook Rd.
75
Unit 4: Dry Creek
Unit 3: Beaver Creek
148
Unit 1: Turkey Creek
Pinson
Unit 2: Dry Branch
Unit 5: Unnamed Tributary
Glenbrook Rd.
75
Shadow Lake Dam
Section 11/12 (T16S, R2W)
79
Critical Habitat
Roads
Lake
Strip Mines
N
W
E
S
0
1,000
2,000 Meters

* * * * *

Dated: November 16, 2009.

Tom Strickland,

Assistant Secretary for Fish and Wildlife and Parks.

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