

term (e.g., one year, 10 years, and 30 years)? Please provide suggestions about how HHS/CDC could reduce or avoid the impact on small entities, and how those changes would affect the potential effectiveness of the rules.

#### References

1. Regulations on the importation of dogs and cats (42 CFR 71.51): [http://a257.g.akamaitech.net/7/257/2422/05dec20031700/edocket.access.gpo.gov/cfr\\_2003/octqtr/42cfr71.51.htm](http://a257.g.akamaitech.net/7/257/2422/05dec20031700/edocket.access.gpo.gov/cfr_2003/octqtr/42cfr71.51.htm).

2. Other animal-importation regulations (42 CFR 71.56) and orders:

a. <http://edocket.access.gpo.gov/2003/03-27557.htm>

b. <http://www.cdc.gov/ncidod/monkeypox/animals.htm>

c. <http://www.cdc.gov/flu/avian/outbreaks/embargo.htm>

d. <http://www.cdc.gov/ncidod/sars/civetembargo.htm>

Dated: April 16, 2007.

**Michael Leavitt,**

Secretary.

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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

RIN 1018-AV25

#### Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Devils River Minnow

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

**ACTION:** Proposed rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), propose to designate critical habitat for the Devils River minnow (*Dionda diaboli*) under the Endangered Species Act of 1973, as amended (Act). In total, approximately 73.5 stream kilometers (km) (45.7 stream miles (mi)) are within the boundaries of the proposed critical habitat designation. The proposed critical habitat is located along streams in Val Verde and Kinney Counties, Texas.

**DATES:** We will accept comments from all interested parties until October 1, 2007. We must receive requests for public hearings, in writing, at the address shown in the **ADDRESSES** section by September 14, 2007.

**ADDRESSES:** If you wish to comment on the proposed rule, you may submit your

comments and materials by any one of several methods:

1. You may mail or hand-deliver written comments and information to Adam Zerrenner, Field Supervisor, U.S. Fish and Wildlife Service, Austin Ecological Services Field Office, 10711 Burnet Road, Suite 200, Austin, TX 78758.

2. You may send comments by electronic mail (e-mail) to [fw2\\_drm@fws.gov](mailto:fw2_drm@fws.gov). Please see the Public Comments Solicited section below for file format and other information about electronic filing.

3. You may fax your comments to the attention of Adam Zerrenner at 512-490-0974.

4. You may go to the Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.

Comments and materials received, as well as supporting documentation used in the preparation of this proposed rule, will be available for public inspection, by appointment, during normal business hours at the Austin Ecological Services Field Office, 10711 Burnet Road, Suite 200, Austin, TX 78758; telephone 512-490-0057.

#### FOR FURTHER INFORMATION CONTACT:

Adam Zerrenner, Field Supervisor, Austin Ecological Services Field Office, 10711 Burnet Road, Suite 200, Austin, TX 78758; telephone 512-490-0057; facsimile 512-490-0974. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800-877-8339, 7 days a week and 24 hours a day.

#### SUPPLEMENTARY INFORMATION:

##### Public Comments Solicited

We intend that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) The reasons habitat should or should not be designated as critical habitat under section 4 of the Act (16 U.S.C. 1531 *et seq.*), including whether the benefit of designation would outweigh any threats to the species caused by designation such that the designation of critical habitat is prudent;

(2) Specific information on the amount and distribution of Devils River minnow habitat, what areas should be

included in the designation that were occupied at the time of listing that contain the features that are essential for the conservation of the species and why, and what areas that were not occupied at the listing are essential to the conservation of the species and why;

(3) Information on the status of the Devils River minnow in Sycamore Creek and Las Moras Creek watersheds and information that indicates whether or not these areas should be considered essential to the conservation of the species;

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

(5) Any foreseeable economic, national security, or other potential impacts resulting from the proposed designation and, in particular, any impacts on small entities and information about the benefits of including or excluding any areas that exhibit those impacts; and

(6) Whether our approach to designating critical habitat could be improved or modified in any way to provide for greater public participation and understanding, or to assist us in accommodating public concerns and comments.

You may submit comments and materials concerning this proposal by one of several methods (see **ADDRESSES**). Please include "Attn: Devils River minnow" in your e-mail subject header and your name and return address in the body of your message. If you do not receive a confirmation from the system that we have received your message, contact us directly by calling our Austin Ecological Services Field Office at 512-490-0057. Please note that comments must be received by the date specified in the **DATES** section in order to be considered and that the e-mail address [fw2\\_drm@fws.gov](mailto:fw2_drm@fws.gov) will be closed out at the termination of the public comment period.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

#### 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 Devils River minnow, refer to the final listing rule published in the **Federal Register** on October 20, 1999 (64 FR 56596) or the 2005 Devils River Minnow Recovery Plan available online at <http://www.fws.gov/angered/>. More detailed information on Devils River minnow biology and ecology that is directly relevant to designation of critical habitat is discussed under the Primary Constituent Elements section below.

#### *Description and Taxonomy*

The Devils River minnow (*Dionda diaboli* Hubbs and Brown) is a small fish first collected in 1951 (Hubbs and Brown 1956, p. 70). The Devils River minnow is recognized as a distinct species by the American Fisheries Society (Nelson *et al.* 2004, p. 70). Taxonomic validity is based on morphology (Hubbs and Brown 1956, p. 69), genetic markers (Mayden *et al.* 1992, p. 722), and chromosome differences (Gold *et al.* 1992, p. 221).

Adult Devils River minnows reach sizes of 25–53 millimeters (mm) (1.0–2.1 inches (in)) standard length. The fish has a wedge-shaped spot near the tail and a pronounced lateral stripe extending through the eye to the snout but without reaching the lower lip. The species has a narrow head and prominent dark markings on the scale pockets of the body above the lateral line, producing a crosshatched appearance when viewed from above (Hubbs and Brown 1956, pp. 69–70). The species occurs with other minnows, such as the closely related manantial roundnose minnow (*Dionda argentosa*).

#### *Distribution and Habitat*

The Devils River minnow is limited to short stretches of spring-fed stream tributaries of the Rio Grande in southwestern Texas and northeastern Mexico (Garrett *et al.* 1992, p. 259). In the United States, the fish has never been found outside of five streams in Val Verde and Kinney Counties, Texas. The Devils River minnow currently occurs in stretches of the Devils River, San Felipe Creek, and Pinto Creek. It has been extirpated from Las Moras Creek and has not been collected from Sycamore Creek since 1989 (Garrett *et al.* 1992, pp. 261–267; Garrett *et al.* 2004, p. 435). There is little information available on the status of the Devils River minnow in Mexico. Historically, it was known to occur in the Río San Carlos and several streams in the Río Salado Drainage, in the State of Coahuila. Regulations at 50 CFR 424.12(h) state that critical habitat shall not be designated within foreign countries or in other areas outside of

United States jurisdiction. As such, geographical areas supporting the Devils River minnow in Mexico are not included in the proposed critical habitat designation.

The Devils River minnow is found only in spring-fed streams (Brune 1981, pp. 274–275, 450–454; Garrett *et al.* 1992, p. 259) with shallow to moderate depths and slow to moderate water velocity over gravel substrates. Within these streams, Devils River minnows are most often found within or nearby emergent aquatic plants (Garrett *et al.* 2004, p. 437) or near similar structures created by stream bank vegetation that extends into the water (Lopez-Fernandez and Winemiller 2005, p. 249).

#### **Previous Federal Actions**

The Devils River minnow was listed as threatened on October 20, 1999 (64 FR 56596). Critical habitat was not designated for this species at the time of listing (64 FR 56606). On October 5, 2005, the Forest Guardians, Center for Biological Diversity, and Save Our Springs Alliance filed suit against the Service for failure to designate critical habitat for this species (*Forest Guardians et al. v. Hall* 2005). On June 28, 2006, a settlement was reached that requires the Service to re-evaluate our original prudent determination. The settlement stipulated that, if prudent, a proposed rule would be submitted to the **Federal Register** for publication on or before July 31, 2007, and a final rule by July 31, 2008. This proposed rule complies with the settlement agreement and with section 4(b)(2) of the Act. For more information on previous Federal actions concerning the Devils River minnow, refer to the final listing rule published in the **Federal Register** on October 20, 1999 (64 FR 56598).

#### **Critical Habitat**

Critical habitat is defined in section 3 of the Act as (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a 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 any endangered species or threatened species to the point at which the

measures provided pursuant to the Act are no longer necessary.

Critical habitat receives protection under section 7(a)(2) of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 of the Act 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 government or public access to private lands. Section 7(a)(2) of the Act is a purely protective measure and does not require implementation of restoration, recovery, or enhancement measures.

To be included in a critical habitat designation, the habitat within the geographical area occupied by the species must first have features that are essential to the conservation of the species. Critical habitat designations identify, to the extent known using the best scientific data available, habitat areas that provide essential life cycle needs of the species (i.e., areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)).

Occupied habitat that contains the features essential to the conservation of the species meets the definition of critical habitat only if the essential features thereon may require special management considerations or protection. Thus, we do not include areas where existing management is sufficient to conserve the species. (As discussed below, such areas may also be excluded from critical habitat pursuant to section 4(b)(2) of the Act.) Unoccupied areas can be designated as critical habitat. However, when the best available scientific data do not demonstrate that the conservation needs of the species require additional areas, we will not designate critical habitat in areas outside the geographical area occupied by 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, the Service's Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), and Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (P.L. 106–554; H.R. 5658), and the associated Information Quality Guidelines issued by the Service, provide criteria, establish procedures, and provide guidance to ensure that

decisions made by the Service represent the best scientific data available. They require Service 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 determining which areas are critical habitat, a primary source of information is generally the listing package for the species. Additional information sources 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. All information is used in accordance with the provisions of Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (P.L. 106–554; H.R. 5658) and the associated Information Quality Guidelines issued by the Service.

Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species. For these reasons, critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery.

Areas that support populations, but are outside the critical habitat designation, will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available information at the time of the 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, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

#### Methods

As required by section 4(b) of the Act, we use the best scientific data available in determining areas occupied at the time of listing that contain the features essential to the conservation of the

Devils River minnow, and areas unoccupied at the time of listing that are essential to the conservation of the Devils River minnow, or both. In designating critical habitat for the Devils River minnow, we reviewed the relevant information available, including peer-reviewed journal articles, unpublished reports, the Devils River Minnow Recovery Plan, the final listing rule, and unpublished materials (such as expert opinions). In February 2006, we sent information requests to a large number of experts and stakeholders (such as private landowners, Texas state government agencies, other Federal agencies, local governments, and nongovernmental organizations).

We have also reviewed available information that pertains to the habitat requirements of this species. We used a wide variety of sources of information, such as material included in reports submitted during section 7 consultations; research published in peer-reviewed articles and presented in academic theses; research proposals and correspondence from technical experts; data and reports from other State and Federal agencies; unpublished data such as field notes and personal observations from field biologists; and regional Geographic Information System (GIS) coverages, including geodatabases provided by partner organizations, such as the City of Del Rio and The Nature Conservancy.

We are proposing to designate critical habitat for the Devils River minnow in areas that were occupied at the time of listing, and that contain the physical and biological features essential to the conservation of the species arranged in the quantity and spatial characteristics necessary for conservation (see “Criteria Used to Identify Critical Habitat” section below). We are also proposing to designate critical habitat in areas unoccupied at the time of listing and determined to be essential to the conservation of the Devils River minnow.

#### Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to propose as critical habitat, we consider those physical and biological features (primary constituent elements) that are essential to the conservation of the species, and within areas occupied by the species at the time of listing, that may require special management considerations and protection. These include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or

physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing (or development) of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

The specific physical and biological features essential to the conservation of the Devils River minnow, primary constituent elements (PCEs), are derived from the biological needs of the species as understood from studies of its biology and ecology, including but not limited to, Edwards *et al.* (2004), Garrett *et al.* (1992), Garrett *et al.* (2004), Gibson *et al.* (2004), Harrell (1978), Hubbs (2001), Hubbs and Garrett (1990), Lopez-Fernandez and Winemiller (2005), Valdes Cantu and Winemiller (1997), and Winemiller (2003).

#### *Space for Individual and Population Growth, Normal Behavior, and Cover*

The Devils River minnow is a fish that occurs only in aquatic environments of small to mid-sized streams that are tributaries to the Rio Grande. The species spends its full life cycle within streams. The stream environment provides all of the space necessary to allow for individual and population growth, food, cover, and normal behaviors of the species. Quantitative studies of the specific micro-habitats used by any life stages of Devils River minnow in the wild have not been conducted. Studies of fish habitat within its range have found too few individuals of Devils River minnow to analyze specific habitat associations (Garrett *et al.* 1992, p. 266; Valdes Cantu and Winemiller 1997, p. 268; Robertson and Winemiller 2003, p. 119). However, observational studies have been conducted throughout its limited range that qualitatively defined stream conditions where Devils River minnows have been collected.

General habitat descriptions of areas where Devils River minnow have been found include the following: “the area where spring runs enter the river” (Hubbs and Garrett 1990, p. 448); “channels of fast-flowing water over gravel bottoms” (Garrett *et al.* 1992, p. 259); “associated with water willow (*Justicia americana*) and other aquatic macrophytes over a gravel-cobble substrate” (Garrett *et al.* 2004, p. 437) (macrophytes are plants large enough to be seen without a microscope); and “stream seeps” at sites that “had abundant riparian vegetation overhanging the banks” (Lopez-Fernandez and Winemiller 2005, p. 249). We based our determinations of the PCEs on the physical and biological features that have been measured in

streams where Devils River minnow occur.

a. Water Depth and Velocity. Flowing water within streams is critical to provide living space for the Devils River minnow. All of the streams where the Devils River minnow is found are supported by springs that derive their discharge from underground aquifers, either the Edwards-Trinity Aquifer or the Edwards-Trinity Aquifer (Brune 1981, pp. 274–277, 449–456; Edwards *et al.* 2004, p. 256; Garrett *et al.* 1992, p. 261; Garrett *et al.* 2004, p. 439; Hubbs and Garrett 1990, p. 448; Lopez-Fernandez and Winemiller 2005, p. 249). The Devils River minnow has been associated within the stream channel with areas with slow to moderate velocities between 10 and 40 centimeters (cm)/second (4 and 16 inches (in)/second) (Winemiller 2003, p. 13). The Devils River minnow is usually found in areas with shallow to moderate water depths between about 10 cm (4 in) and 1.5 meters (4.9 feet (ft)) (Garrett *et al.* 2004, p. 436). Appropriate water depths and velocities are required physical features for Devils River minnows to complete all life history functions.

b. Cover. The presence of vegetative structure appears to be particularly important for the Devils River minnow. Garrett *et al.* (2004, p. 437) states that the species is most often found associated with emergent or submerged vegetation. Lopez-Fernandez and Winemiller (2005, p. 249) also found the Devils River minnow associated with stream banks having riparian vegetation that overhangs into the water column, presumably providing similar structure for the fish to use as cover. The structure provided by vegetation likely serves as cover for predator avoidance by the Devils River minnow and as a source of food where algae and other microorganisms may be attached. In controlled experiments in an artificial stream setting, minnows in the *Dionda* genus (the experiment did not distinguish between the Devils River minnow and the closely related manantial roundnose minnow) were found consistently associated with plants, and, in the presence of a predator, sought shelter in plant substrate habitat (Thomas 2001, p. 8). Also, laboratory observations by Gibson *et al.* (2004, p. 42) suggested that spawning only occurred when structure was provided in aquaria. Instream vegetative structure is an important biological feature for the Devils River minnow to avoid predation and complete other normal behaviors, such as feeding and spawning.

c. Substrates. The Devils River minnow is most often associated with substrates (stream bottom) described as gravel and cobble (Garrett *et al.* 2004, p. 436). Lopez-Fernandez and Winemiller (2005, p. 248) found the Devils River minnow associated with areas where the amounts of fine sediment on stream bottoms were low (less than 65 percent stream bottom coverage) (Winemiller 2003, p. 13) and where there was low or moderate amounts of substrate embeddedness. The term embeddedness is defined by Sylte and Fischenich (2003, p. 1) as the degree to which fine sediments surround coarse substrates on the surface of a streambed. Low levels of substrate embeddedness and low amounts of fine sediment are physical stream features that provide interstitial spaces where microorganisms grow. These microorganisms are a component of the diet of the Devils River minnow (Lopez-Fernandez and Winemiller 2005, p. 250). We estimate substrate sizes for gravel-cobble between 2 and 10 cm (0.8 and 4 in) in diameter (Cummins 1962, p. 495) are important for supporting food sources for the Devils River minnow.

d. Stream Channel. The Devils River minnow occurs in the waters of stream channels that flow out of the Edwards Plateau of Texas. The streams contain a variety of mesohabitats for fish that are temporally and spatially dynamic (Harrell 1978, p. 60–61; Robertson and Winemiller 2003, p. 115). Mesohabitat types are stream conditions with different combinations of depth, velocity, and substrate, such as pools (stream reaches with low velocity and deep water), riffles (stream reaches with moderate velocity and shallow depths and some turbulence due to high gradient), runs (stream reaches with moderate depths and moderate velocities and a uniformly, flat stream bottom), and backwaters (areas in streams with little or no velocities along stream margins) (Parasiewicz 2001, p. 7). These physical conditions in stream channels are mainly formed by large flood events that shape the banks and alter stream beds. Healthy stream ecosystems require intact natural stream banks (composed of sediments, rocks, and native vegetation) and stream beds (dynamically fluctuating from silt, sand, gravel, cobble, and bedrock). These physical features allow natural ecological processes in stream ecosystems to maintain habitat for Devils River minnow behaviors of feeding, breeding, and seeking shelter.

Devils River minnow may move up and downstream to use diverse mesohabitats during different seasons and life stages, which could partially

explain the highly variable sampling results assessing abundance of the fish (Garrett *et al.* 2002, p. 478). However, it is unknown to what extent Devils River minnow may move within occupied stream segments because no research on movement has been conducted. Linear movement (upstream or downstream) within streams may be important to allow fishes to complete life history functions and adjust to resource abundance, but this linear movement may often be underestimated due to limited biological studies (Fausch *et al.* 2002, p. 490). The Devils River minnow occurs in relatively short stream segments and, therefore, needs to be able to move within the stream unimpeded to prevent population fragmentation.

#### Food

The Devils River minnow, like other minnows in the *Dionda* genus, has a long coiled gut for digesting algae and plants. Lopez-Fernandez and Winemiller (2005, p. 250) noted that Devils River minnow graze on algae attached to stream substrates (such as gravel, rocks, submerged plants, woody debris) and associated microorganisms. Thomas (2001, p. 13) observed minnows in the *Dionda* genus (the experiment did not distinguish between Devils River minnow and the closely related manantial roundnose minnow) feeding extensively on filamentous algae growing on rocks and plants in an artificial stream experiment. The specific components of the Devils River minnow diet have not been investigated, but a study is underway to identify stomach contents of the Devils River minnow in San Felipe Creek (Texas Parks and Wildlife Department (TPWD) 2006, p. 1). An abundant aquatic food base is an essential biological feature for conservation of Devils River minnow.

#### Water Quality

The Devils River minnow occurs in spring-fed streams originating from groundwater. The aquifers that support these streams are of high quality, free of pollution and most human-caused impacts (Plateau Water Planning Group (PWPG) 2006, p. 5–9). This region of Texas has limited human development that would compromise water quality of the streams where Devils River minnows occur (San Felipe Creek may be an exception, see “Special Management Considerations or Protection” below). The watersheds are largely rural and have been altered to some extent by livestock grazing (cattle, sheep, and goats) for many decades (Brune 1981, p. 449). As part of state-wide water planning efforts, the TPWD

proposed that all five streams within the range of the Devils River minnow (Devils River, San Felipe Creek, Sycamore Creek, Pinto Creek, and Las Moras Creek) be considered “ecologically significant stream segments” for their biological function, hydrological function, exceptional aquatic life, and high aesthetic value (El-Hage and Moulton 2001, pp. 28–36, 45–49).

No specific studies have been conducted to determine water quality preferences or tolerances for Devils River minnow. However, because the species now occurs in only three streams, observations of water quality conditions in these streams are used to evaluate the needed water quality parameters for critical habitat. In addition, laboratory studies by Gibson *et al.* (2004, pp. 44–46) and Gibson and Fries (2005, pp. 299–303) have also provided useful information for the water quality conditions in captivity for Devils River minnow.

a. Water temperature. Water temperatures from groundwater discharge at these springs are considered constant (Hubbs 2001, p. 324). However, water temperatures downstream from springs vary daily and seasonally (Hubbs 2001, p. 324). Water temperatures have been measured in these stream segments to range from about 17 °C (degrees Celsius) to 29 °C (63 °F (degrees Fahrenheit) to 85 °F). Temperatures in the Devils River ranged from 17 °C to 27 °C (63 °F to 81 °F) (Lopez-Fernandez and Winemiller 2005, p. 248; Hubbs 2001, p. 312). Measurements in San Felipe Creek have ranged from 19 °C to 24 °C (66 °F to 75 °F) (Hubbs 2001, p. 311; Winemiller 2003, p. 13). Gibson and Fries (2005, p. 296) had successful spawning by Devils River minnows at temperatures from about 18 °C to 24 °C (64 °F to 75 °F). Higher water temperatures are rare in Devils River minnow habitat, but temperatures up to 29 °C (84 °F) were recorded in Pinto Creek (Garrett *et al.* 2004, p. 437). This stream segment has the lowest flow of those known to contain the Devils River minnow, resulting in higher temperatures. Maintaining water temperatures within an acceptable range in small streams is an essential physical feature for the Devils River minnow to allow for survival and reproduction.

b. Water chemistry. Researchers have noted the need for high-quality water in habitats supporting the Devils River minnow (Garrett 2003, p. 155). Field studies at sites where Devils River minnow have been collected in conjunction with water quality measurements have documented that

habitats contain the following water chemistry: dissolved oxygen levels are greater than 5.0 mg/l (milligrams per liter) (Hubbs 2001, p. 312; Winemiller 2003, p. 13; Gibson *et al.* 2004, p. 44); pH ranges between 7.0 and 8.2 (Garrett *et al.* 2004, p. 440; Hubbs 2001, p. 312; Winemiller 2003, p. 13); conductivity is less than 0.7 mS/cm (microseimens per centimeter) and salinity is less than 1 ppt (part per thousand) (Hubbs 2001, p. 312; Winemiller 2003, p. 13; Garrett *et al.* 2004, p. 440; Gibson *et al.* 2004, p. 45); and ammonia levels are less than 0.4 mg/l (Hubbs 2001, p. 312; Garrett *et al.* 2004, p. 440). Streams with water chemistry within the observed ranges are essential physical features to provide habitat for normal behaviors of Devils River minnow.

Garrett *et al.* (2004, pp. 439–440) highlighted the conservation implications of water quality when describing the distribution of Devils River minnow in Pinto Creek. The species is abundant in upstream portions of the creek and is abruptly absent at and downstream from the Highway 90 Bridge crossing. A different aquifer (Austin Chalk) feeds the lower portion of the creek (Ashworth and Stein 2005, p. 19), which results in changes in water quality (lower measurements of water temperature, pH, ammonia, and salinity). Garrett *et al.* (2004, p. 439) found that the change in water quality also coincided with the occurrence of different fish species that were more tolerant of lower values for these water quality parameters.

c. Pollution. The Devils River minnow occurs only in habitats that are generally free of human-caused pollution. Garrett *et al.* (1992, pp. 266–267) suspected that the addition of chlorine to Las Moras Creek for the maintenance of a recreational swimming pool may have played a role in the extirpation of Devils River minnow from that system. Unnatural addition of pollutants such as copper, arsenic, mercury, and cadmium; human and animal waste products; pesticides; suspended sediments; petroleum compounds and gasoline or diesel fuels will alter habitat functions and threaten the continued existence of Devils River minnow. Fish, particularly herbivores and bottom-feeders, such as the Devils River minnow, are susceptible to the detrimental effects of aquatic pollutants (Buzan 1997, p. 4). Areas with waters free of pollution are essential physical features to allow normal behaviors and growth of the Devils River minnow and to maintain healthy populations of its food sources.

#### *Sites for Breeding, Reproduction, and Rearing of Offspring*

The specific sites and habitat associated with Devils River minnow breeding and reproduction have not been documented in the wild. However, Gibson *et al.* (2004) studied preferred conditions for spawning by Devils River minnow in a laboratory setting. Gibson *et al.* (2004, pp. 45–46) documented that the species is a broadcast spawner (they release eggs and sperm into the open water), over unprepared substrates (they don't build nests), and males display some territorial behavior. Broadcast spawning is the most common reproductive method in minnows (Johnston 1999, p. 22; Johnston and Page 1992, p. 604). Fertilized eggs of Devils River minnow were slightly adhesive (or became more adhesive with time) and tended to stick to gravels just below the surface of the substrate (Gibson *et al.* 2004, p. 46). The eggs can hatch less than one week after deposition (Gibson 2007, p. 1). There was little seasonality in spawning periods observed (Gibson *et al.* 2004, p. 45–46), which is consistent with a species that lives in a relatively stable temperature environment, such as spring-fed streams with low seasonal temperature variations. Based on this information, it is likely the species can spawn during most of the year. This is supported by Garrett *et al.* (2004, p. 437), who observed distinct breeding coloration of Devils River minnow (blue sheen on the head and yellow tint on body) in Pinto Creek in December 2001, and Winemiller (2003, p. 16), who found juveniles from early spring to late fall in San Felipe Creek.

a. Substrate. Gibson and Fries (2005, p. 299) found that Devils River minnow preferred gravel for spawning substrate, with size ranging mostly from 2 to 3 cm in diameter (0.8 to 1.2 in). Gravel and rock substrates are required physical features for spawning (depositing, incubating, and hatching) of Devils River minnow eggs.

b. Cover. In laboratory experiments, Devils River minnow spawned in tanks with live potted plants (*Vallisneria* spp. and *Justicia* spp.); however, eggs were never found on the plants or other parts of the tank (Gibson *et al.* 2004, pp. 42, 43, 46). The plants apparently served as cover for the fish and allowed favorable conditions for spawning to occur. This condition is supported by observations in the wild that associate Devils River minnow with aquatic habitats where vegetative structure is present. This vegetative structure is a biological feature that is important for reproduction of Devils River minnow.

*Habitat Protected From Disturbance or Representative of the Historic Geographical and Ecological Distribution of a Species*

a. Nonnative species. The introduction and spread of nonnative species have been identified as major factors in the continuing decline of native fishes throughout North America (Moyle *et al.* 1986, pp. 415–416) and particularly in the southwestern United States (Miller 1961, p. 397; Miller 1977, pp. 376–377). Williams *et al.* (1989, p. 1) concluded that nonnative species were a causal factor in 68 percent of the fish extinctions in North America in the last 100 years. For 70 percent of those fish still extant, but considered to be endangered or threatened, introduced nonnative species are a primary cause of the decline (Lassuy 1995, p. 392). Nonnative species have been referenced as a cause of decline in native Texas fishes as well (Anderson *et al.* 1995, p. 319; Hubbs 1990, p. 89; Hubbs *et al.* 1991, p. 2).

Aquatic nonnative species are introduced and spread into new areas through a variety of mechanisms, intentional and accidental, authorized and unauthorized. Mechanisms for nonnative fish dispersal in Texas include sport fish stocking (intentional and inadvertent, non-target species), aquaculture escapes, aquarium releases, and bait bucket releases (release of fish used as bait by anglers) (Howells 2001, p. 1).

Within the range of the Devils River minnow, nonnative aquatic species of potential concern include: armored (or suckermouth) catfish (*Hypostomus* sp.) in San Felipe Creek (Lopez-Fernandez and Winemiller 2005, pp. 246–251); smallmouth bass (*Micropterus dolomieu*) in the Devils River (Thomas 2001, p. 1); African cichlid (*Oreochromis aureus*) in San Felipe Creek (Lopez-Fernandez and Winemiller 2005, p. 249) and Devils River (Garrett *et al.* 1992, p. 266); Asian snail (*Melanoides tuberculata*) and associated parasites (McDermott 2000, pp. 13–14); and Asian bivalve mollusk (*Corbicula* sp.) (Winemiller 2003, p. 25) in San Felipe Creek. Effects from nonnative species can include predation, competition for resources, altering of habitat, changing of fish assemblages (combinations of species), or transmission of harmful diseases or parasites (Aquatic Nuisance Species Task Force 1994, pp. 51–59; Baxter *et al.* 2004, p. 2656; Howells 2001, pp. 17–18; Light and Marchetti 2007, pp. 442–444; Moyle *et al.* 1986, pp. 416–418). Studies have found effects from the armored catfish in San Felipe Creek, most likely

due to competition for food (Lopez-Fernandez and Winemiller 2005, p. 250). The persistence of Devils River minnow in its natural range of habitats is dependent on areas that are devoid of harmful nonnative aquatic species or where nonnative aquatic species are at levels that allow healthy populations of the Devils River minnow. The absence of harmful nonnative species is an essential biological feature for conservation of the Devils River minnow.

b. Hydrology. Natural stream flow regimes (both quantity and timing) are vital components to maintain ecological integrity in stream ecosystems (Poff *et al.* 1997, p. 769; Resh *et al.* 1988, pp. 443–444). Aquatic organisms, like the Devils River minnow, have specific adaptations to use the environmental conditions provided by natural flowing systems and the highly variable stream flow patterns (Lytle and Poff 2004, p. 94). As with other streams in the arid southwestern United States, streams where the Devils River minnow occurs can have large fluctuations in stream flow levels. In Texas, streams are characterized by high variation between large flood flows and extended period of low flows (Jones 1991, p. 513). Base flows in streams containing Devils River minnow are generally maintained by constant spring flows (Ashworth and Stein 2005, p. 4), but in periods of drought, especially in combination with groundwater withdrawals, portions of stream segments can be periodically dewatered. The occurrence of intermittent stream segments within the range of the Devils River minnow is most common in Pinto Creek (Ashworth and Stein 2005, Figure 13; Uliana 2005, p. 4; Allan 2006, p. 1).

Although portions of stream segments included in this proposed designation may experience short periods of low or no flows (causing dry sections of stream), they are still important because the Devils River minnow is adapted to stream systems with some fluctuating water levels. Fish cannot persist in dewatered areas (Hubbs 1990, p. 89). However, Devils River minnows will use dewatered areas that are subsequently wetted as connective corridors between occupied or seasonally occupied habitat. Fausch *et al.* (2002, p. 490) notes in a review of movement of fishes related to metapopulation dynamics that, “Even small fishes may move long distances to repopulate rewetted habitats.” Preventing habitat fragmentation of fish populations is important in reducing extinction risks in rare species (Fagan 2002, p. 3255). Areas within stream courses that may be periodically

dewatered but that serve as connective corridors between occupied or seasonally occupied habitat and through which the species may move when the habitat is wetted are important physical features of Devils River minnow habitat.

Flooding is also a large part of the natural hydrology of streams within the range of Devils River minnow. Large floods have been shown to alter fish community structure and fish habitat use in the Devils River (Harrell 1978, p. 67) and in San Felipe Creek (Garrett and Edwards 2003, p. 787; Winemiller 2003, p. 12). Pearsons *et al.* (1992, p. 427) states that “Flooding is one of the most important abiotic factors that structure biotic assemblages in streams.” Floods provide flushing flows that remove fine sediments from gravel and provide spawning substrates for species like the Devils River minnow (Instream Flow Council 2002, p. 103; Poff *et al.* 1997, p. 775). Flooding is the physical mechanism that shapes stream channels by a process known as scour and fill, where some areas are scoured of fine sediments while fine sediments are redeposited in other areas (Gordon *et al.* 1992, pp. 304–305; Poff *et al.* 1997, pp. 771–772). This dynamic process is fundamental to maintaining habitat diversity in streams that ensure healthy ecosystem function (Lytle and Poff 2004, pp. 96–99; Poff *et al.* 1997, pp. 774–777). Allowing natural stream flows, particularly during flood events, is an essential physical feature to maintain stream habitats for Devils River minnow.

*Primary Constituent Elements for the Devils River Minnow*

Under the Act and its implementing regulations, we are required to identify the physical and biological features (PCEs) within the geographical area occupied by the species, which may require special management considerations or protections.

Based on the above needs and our current knowledge of the life history, biology, and ecology of the species, we have determined that the Devils River minnow’s PCEs are:

1. Streams characterized by:
  - a. Areas with slow to moderate water velocities between 10 and 40 cm/second (4 and 16 in/second) in shallow to moderate water depths between approximately 10 cm (4 in) and 1.5 m (4.9 ft), near vegetative structure, such as emergent or submerged vegetation or stream bank riparian vegetation that overhangs into the water column;
  - b. Gravel and cobble substrates ranging in size between 2 and 10 cm (0.8 and 4 in) with low or moderate amounts of fine sediment (less than 65

percent stream bottom coverage) and low or moderate amounts of substrate embeddedness; and

c. Pool, riffle, run, and backwater components free of artificial instream structures that would prevent movement of fish upstream or downstream.

2. High-quality water provided by permanent, natural flows from groundwater spring and seeps characterized by:

a. Temperature ranging between 17 °C and 29 °C (63 °F and 84 °F);

b. Dissolved oxygen levels greater than 5.0 mg/l;

c. Neutral pH ranging between 7.0 and 8.2;

d. Conductivity less than 0.7 mS/cm and salinity less than 1 ppt;

e. Ammonia levels less than 0.4 mg/l; and

f. No or minimal pollutant levels for copper, arsenic, mercury, and cadmium; human and animal waste products; pesticides; fertilizers; suspended sediments; petroleum compounds and gasoline or diesel fuels.

3. Abundant aquatic food base consisting of algae attached to stream substrates and other associated microorganisms.

4. Aquatic stream habitat either devoid of nonnative aquatic species (including fish, plants, and invertebrates) or in which such nonnative aquatic species are at levels that allow for healthy populations of Devils River minnows.

5. Areas within stream courses that may be periodically dewatered for short time periods, during seasonal droughts, but otherwise serve as connective corridors between occupied or seasonally occupied areas through which the species moves when the area is wetted.

This proposed designation is designed for the conservation of PCEs necessary to support the life history functions that were the basis for the proposal and the areas containing those PCEs. Because not all life history functions require all the PCEs, not all proposed critical habitat will contain all the PCEs.

### Special Management Considerations or Protections

When designating critical habitat, we assess whether the occupied areas contain the features essential to the conservation of the species that may require special management considerations or protections. We provide a summary discussion below of the special management needs for the stream segments we have identified as occupied at the time of listing (Devils River and San Felipe Creek) and the

area considered to be essential for the conservation of the Devils River minnow (Pinto Creek). For additional information regarding the threats to the Devils River minnow and the needed management strategies to address those threats, see the Devils River Minnow Recovery Plan (Service 2005, pp. 1.7–1—1.7–7; 1.8–1—1.8–4; 2.5–1—2.5–5).

The following special management needs apply to all three stream segments, Devils River, San Felipe Creek, and Pinto Creek, and will be further discussed for each stream segment in the Proposed Critical Habitat Designation below.

a. Groundwater management. The waters that produce all three stream segments issue from springs that are supported by underground aquifers, generally some portion of the Edwards Trinity Aquifer (Ashworth and Stein 2005, pp. 16–33; Barker and Ardis 1996, pp. B5–B6; Brune 1981, pp. 274–277, 449–456; Green *et al.* 2006, pp. 28–29; LBG-Guyton Associates 2001, pp. 5–6; PWPG 2006, pp. 3–5, 3–6, 3–30). Regional groundwater flow in this area is generally from north to south (Ashworth and Stein 2005, Figure 8). This aquifer is currently pumped to provide water for human uses including agricultural, municipal, and industrial (Ashworth and Stein 2005, p. 1; Green *et al.* 2006, pp. 28–29; LBG-Guyton Associates 2001, pp. 22–27; PWPG 2006, pp. 3–14, 3–15). Some parts of this aquifer have already experienced large water level declines due to a combination of pumping withdrawals and regional drought (Barker and Ardis 1996, p. B50). There are a number of preliminary project plans to significantly increase the amount of groundwater pumped in this area to export it to other metropolitan centers (HDR Engineering Inc. 2001, p. 1–1; Khorzad 2002, p. 19; PWPG 2006, pp. 4–54). If the aquifers are pumped beyond their ability to sustain levels that support spring flows, these streams will no longer provide habitat for the Devils River minnow (Ashworth and Stein 2005, p. 34; Edwards *et al.* 2004, p. 256; Garrett *et al.* 2004, pp. 439–440). Flow reductions can have indirect effects on fishes by impacting thermal regimes because higher water flow buffers against temperature oscillations (Hubbs 1990, p. 89).

Groundwater pumping that could affect stream flows within the Devils River minnow's range is subject to limited management control. State agencies do not control groundwater. Groundwater resources in Texas are under the "Rule of Capture," and groundwater use is not regulated by any State agency (Holladay 2006, p. 2; Potter

2004, p. 9). The rule of capture essentially provides that groundwater is a privately owned resource and, absent malice or willful waste, landowners have the right to take all the water they can capture under their land without liability to neighboring landowners, even if in so doing they deprive their neighbors of the water's use (Holladay 2006, p. 2; Potter 2004, p. 1).

Local groundwater conservation districts are the method for groundwater management in Texas (Caroom and Maxwell 2004, pp. 41–42; Holladay 2006, p. 3). Most districts are created by action of the Texas Legislature (Lesikar *et al.* 2002, p. 13). The regulations adopted by local groundwater conservation districts vary across the State and often reflect local decisions based on regional preferences, geologic limitations, and the needs of citizens (Holladay 2006, p. 3). The Kinney County Groundwater Conservation District is a local authority with some regulatory control over the pumping and use of groundwater resources in Kinney County (Brock and Sanger 2003, p. 42–44). Currently, there is no groundwater district in Val Verde County. It is not known whether groundwater districts, such as the one in Kinney County, will limit groundwater use and exportation to allow for conservation of surface water flows for environmental needs (Brock and Sanger 2003, p. 42–44; Caroom and Maxwell 2004, p. 47–48; Marbury and Kelly 2005, p. 9). The regional water plan for this area recognizes that groundwater needs to be managed for the benefit of spring flows (PWPG 2006, p. 3–30) and that groundwater use should be limited so that "base flows of rivers and streams are not significantly affected beyond a level that would be anticipated due to naturally occurring conditions" (Ashworth and Stein 2005, p. 34; PWPG 2006, p. 3–8). Special management efforts are needed across the range of the Devils River minnow to ensure that aquifers are used in a manner that will sustain spring flows and provide water as an essential physical feature for the species.

b. Nonnative species. Controlling existing nonnative species and preventing the release of new nonnative species are special management actions needed across the range of the Devils River minnow. The best tool for preventing new releases is education of the public on the problems associated with nonnative species (Aquatic Nuisance Species Task Force 1994, pp. 16–17). Current nonnative species issues have been cited for possible impacts to the Devils River (smallmouth bass) and San Felipe Creek (armored

catfish) (Lopez-Fernandez and Winemiller 2005, p. 247; Thomas 2001, p. 1; Robertson and Winemiller 2001, p. 220). The armored catfish may already be impacting Devils River minnows in San Felipe Creek through competition for common food resources of attached algae and associated microorganisms (Lopez-Fernandez and Winemiller 2005, p. 250). Hoover *et al.* (2004, pp. 6–7) suggest that nonnative catfishes in the family Loricaridae, like armored catfish, will impact stream systems and native fishes by competing for food with other herbivores, changing plant communities, bank erosion due to burrowing in stream banks for spawning, and incidentally ingesting fish eggs. Problem nonnative species have not been documented in Pinto Creek. Please see the above discussion in “Habitat Protected From Disturbance or Representative of the Historic Geographical and Ecological Distribution of a Species” for additional discussion of nonnative species.

c. Pollution. Special management actions are needed to prevent point and nonpoint sources of pollution entering in the stream systems where the Devils River minnow occurs. Devils River and Pinto Creek are generally free of threats from obvious sources of pollution. San Felipe Creek is in an urban environment where threats from human-caused pollution are substantial. Potential for spill or discharge of toxic materials is an inherent threat in urban environments. In addition, there are little to few current controls in the City of Del Rio to minimize the pollutants that will run off into the creek during rainfall events from streets, parking lots, roof tops, and maintained lawns from private yards and the golf course (Winemiller 2003, p. 27). All of these surfaces will contribute pollutants (for example, fertilizers, pesticides, herbicides, petroleum products) to the creek and potentially impact biological functions of the Devils River minnow. In addition, trash is often dumped into or near the creek and can be a source of pollutants. Special management by the City of Del Rio is needed (City of Del Rio 2006, p. 13) to institute best management practices for controlling pollution sources that enter the creek and maintain the water quality at a level necessary to support Devils River minnow.

d. Stream channel alterations. The stream channels in the three streams where Devils River minnow occurs should be maintained in natural conditions, free of instream obstructions to fish movement and with intact stream banks of native vegetation. Devils River and Pinto Creek are generally free of stream channel alterations; however,

San Felipe Creek has been altered by diversion dams, bridges, and armoring of stream banks (replacing native vegetation and soils with rock or concrete). Special management is needed in all three occupied streams to protect the integrity of the stream channels for the conservation of Devils River minnow habitat.

#### Criteria Used To Identify Critical Habitat

We are proposing to designate critical habitat for the Devils River minnow in areas that were occupied at the time of listing and contain sufficient PCEs to support life history functions essential for the conservation of the species, which may require special management considerations or protection. Critical habitat is also being proposed for areas not considered occupied at the time of listing, but subsequently discovered to be occupied and essential for the conservation of the Devils River minnow.

Critical habitat is designated based on sufficient PCEs being present to support the life processes of the species. Some areas contain all PCEs and support multiple life processes. Some areas contain only a portion of the PCEs necessary to support the particular use of that habitat.

a. Range. We evaluated the geographical range of the Devils River minnow, as described in the Recovery Plan (Service 2005, p. 1.4.1.1.4.5). There are five stream segments in the United States (all in Texas) that have ever been known to have been occupied by the Devils River minnow: (1) The Devils River (Val Verde County) from Beaver Lake downstream to near the confluence with the Rio Grande; (2) San Felipe Creek (Val Verde County) from the headsprings on the Lowe Ranch to downstream of the City of Del Rio; (3) Sycamore Creek (Val Verde/Kinney county boundary), only documented from the Highway 277 Bridge crossing; (4) Pinto Creek (Kinney County) from Pinto Springs downstream to 0.5 stream km (0.3 stream mi) upstream of the Highway 90 Bridge crossing; and (5) Las Moras Creek (Kinney County), only documented from the Las Moras Spring in the City of Brackettville.

Each of these five stream segments has (or formerly had) isolated populations of Devils River minnow separated by long distances, unsuitable habitat, and/or large dams that prevent fish movements. Although each of these streams is a tributary to the Rio Grande, we do not expect any contemporary exchange of individuals between these stream segments. The Devils River minnow is generally associated with

upstream reaches of these streams, and connectivity would require movement through downstream reaches, through the Rio Grande, and back upstream through uninhabited reaches. The Devils River minnow has not been documented in the Rio Grande, or any other of its tributaries in the United States in modern times (Contreras-Balderas *et al.* 2002, pp. 228–240; Edwards *et al.* 2002, p. 123; Garrett *et al.* 1992, pp. 261–265; Hoagstrom 2003, p. 95; Hubbs 1957, p. 93; Hubbs 1990, p. 90; Hubbs *et al.* 1991, p. 18; Treviño-Robinson 1959, p. 255). These stream reaches are considered unsuitable habitat (Garrett *et al.* 1992, p. 261) because the aquatic habitat is very different (larger volume, higher suspended sediments, different suite of native fishes) than the streams where the Devils River minnow is found. The presence of Amistad Reservoir and Dam has further isolated the Devils River stream segment from the other stream segments. While some exchange of individuals could have occurred across a geologic time scale, any natural exchange of individual Devils River minnows between currently occupied stream segments in modern times is unlikely because of habitat changes in the Rio Grande, nonnative species, and potential instream barriers.

Lack of access to private property can limit opportunities to sample for the presence of Devils River minnow (such as occurred on Pinto Creek, see Garrett *et al.* (2004), p. 436) and may limit our ability to accurately determine the full range of the species. However, we do not expect any additional streams outside of the geographical range of the species to be occupied. There could be additional stream segments within the known range that may be found to be occupied during future surveys, but the best available information at this time supports only these five stream segments known to be or to have been occupied by Devils River minnow in the United States.

b. Occupancy. For the purpose of this critical habitat designation, we consider a stream segment to be occupied if Devils River minnow has been found to be present by species experts within the last 10 years, or where the stream segment is directly connected to a segment with documented occupancy within the last 10 years (see Proposed Critical Habitat Designation for additional occupancy information). The life expectancy of Devils River minnow is assumed to be about 3 years, although individuals have lived 5 years in captivity (Gibson 2006, p. 1). Ten years is estimated to represent a time period that provides for at least three



generations and should allow for an adequate time to detect occupancy. Most stream segments have not been surveyed with a high degree of frequency, and this species can be difficult to detect, as even multiple samples within a short time in the same location by the same researcher can yield different results (Garrett *et al.* 2002, p. 478). We have assessed the occupancy of stream segments based on the best survey information available.

c. Areas occupied at the time of listing. At the time the Devils River minnow was listed as a threatened species, it was only confirmed to occur at two sites on the Devils River (small tributaries) and in San Felipe Creek in Del Rio, Texas (64 FR 56597). This species is reasonably expected to move throughout connected stream reaches, based on past and recent collection records from these streams (Garrett *et al.* 2002, p. 478). Therefore, we determine there are two stream segments that were occupied at the time of listing: (1) Devils River from Pecan Springs to downstream of Dolan Falls (Garrett 2006a, p. 4; Garrett 2007, p. 1); and (2) San Felipe Creek from the Head Spring to downstream through the City of Del Rio (Garrett 2006b, p. 1; Garrett 2007, p.1). The full extent of both stream segments is considered occupied, as surveys in the last 10 years have confirmed the species presence in the streams and the unit consists of contiguous habitat that allows fish movement throughout the stream.

d. Primary constituent elements. We are proposing to designate the stream segments that were occupied at the time of listing and contain sufficient PCEs to support life history functions essential for the conservation of the species. Both of the stream segments occupied at the time of listing (Devils River and San Felipe Creek) contain sufficient PCEs to support life history functions essential for the conservation of the Devils River minnow.

e. Areas not occupied at time of listing. Section 3(5)(A)(ii) of the Act allows for critical habitat to be designated in areas outside the geographical area occupied by the species at the time it is listed if those areas are essential for the conservation of the species. Three stream segments historically occupied by Devils River minnow but not considered occupied at the time of listing include Sycamore Creek, Pinto Creek, and Las Moras Creek.

Sycamore Creek and Las Moras Creek are not currently occupied by the Devils River minnow. The last known occurrence of the species in these stream segments was 1989 for Sycamore

Creek (Garrett *et al.* 1992, p. 265) and 1955 for Las Moras Creek (Garrett *et al.* 1992, p. 266; Hubbs and Brown 1956, pp. 70–71). Although recent publications continue to list Sycamore Creek as a stream where Devils River minnow may still occur (Garrett *et al.* 2004, p. 435; Lopez-Fernandez and Winemiller, p. 247), we have a high degree of uncertainty as to the status of the fish in Sycamore Creek. Collections in 1999 and 2002 from the area of last known occurrence (in 1989) did not yield Devils River minnow (G. Garrett, TPWD, unpublished data 2002). In addition, Garrett *et al.* (1992) surveyed portions of Mud Creek (a tributary to Sycamore Creek) in 1989 but found no Devils River minnow. Additional surveys are needed to determine the current status of the fish in the Sycamore Creek watershed. Devils River minnow has not been collected from Las Moras Creek since the 1950s and is believed to be extirpated from the Las Moras Creek drainage. This conclusion is based on the absence of the species in sampling efforts from the late 1970s to 2002 (Smith and Miller 1986; Hubbs *et al.* 1991; Garrett *et al.* 1992; G. Garrett, unpublished data 2002).

Restoring Devils River minnow to Sycamore Creek and Las Moras Creek may be important to achieve recovery goals for the species and optimize the chances of long-term species conservation (Service 2005, pp. 2.1–1—2.2–3). Recovery criteria for Devils River minnow include having stable or increasing populations in both Sycamore Creek and Las Moras Creek, if reestablishment in Las Moras Creek is scientifically feasible. However, the feasibility of restoring populations in these areas is uncertain and the recovery plan advises additional assessment and landowner willingness will be necessary in both areas before restoration could occur. Therefore, based on the lack of information regarding the species status in Sycamore Creek, uncertainty of the potential for restoration in either stream segment, and the absence of data to demonstrate that the streams possess the PCEs, for the purposes of critical habitat designation, we have not included Sycamore Creek and Las Moras Creek in the proposed critical habitat designation.

Due to the importance of these stream segments to the recovery of Devils River minnow, we solicit additional information and comments from interested parties on the distribution of Devils River minnow, specifically in the Sycamore Creek and Las Moras Creek watersheds. Information received, as well as supporting documentation will be used in the consideration of

Sycamore Creek and Las Moras Creek's inclusion in the final critical habitat designation. We may consider including Sycamore Creek and Las Moras Creek in our critical habitat designation if we receive additional information during the public comment period that leads to a determination that these stream segments are essential to the conservation of Devils River minnow.

At the time of listing in 1999, previous fish surveys in Pinto Creek were limited to the locations of public access at highway bridge crossings and did not find the species present (Garrett *et al.* 1992, p. 260). In 2001, fish surveys in upstream areas of Pinto Creek discovered the previously unknown population of Devils River minnow (Garrett *et al.* 2004, p. 436–439). The species has been confirmed to occur from just upstream of the Highway 90 Bridge crossing upstream to the origin of Pinto Creek at Pinto Springs (Garrett *et al.* 2004, p. 438–439). Since this stream segment is isolated from other occupied areas, this stream segment was likely occupied at the time of listing, but appropriate surveys had not been conducted to verify it. We find that the Pinto Creek stream segment is essential to the conservation of the Devils River minnow because preliminary analysis have shown significant genetic variation between Devils River minnow populations in Pinto Creek and the Devils River (Service 2006, p. 15). Also Pinto Creek provides the best source of Devils River minnows (due to proximity and habitat similarity) to implement possible future recovery actions if reestablishing the species into nearby Las Moras Creek proves feasible (Garrett *et al.* 2004, p. 440).

f. Lateral Extent. The areas designated as critical habitat are designed to provide sufficient areas for breeding, non-breeding adults and rearing of juvenile Devils River minnow. In general, the PCEs of critical habitat for Devils River minnow include the spring heads and the wetted channel during average flow conditions of the stream segments. The Devils River minnow evolved in streams maintained by consistent flows from groundwater springs that varied little seasonally. Episodic floods, sometimes very large floods, are important for maintenance of the natural stream channel and fish communities (Harrell 1978, p. 67; Valdes Cantu and Winemiller 1997, pp. 276–277); however, the streams do not have a regular seasonal pattern of flooding. As a result, the life history of the Devils River minnow is not dependent on high flow events and the inundation of overbank areas. Therefore, the floodplain is not known to contain

the features essential for the species' conservation and is not included in the proposed critical habitat designation.

We propose that this critical habitat designation include a lateral extent that is limited to the normal wetted channel of the streams proposed for inclusion. For the purposes of this proposal, the wetted channel is considered the width of the stream channel at bankfull stage. Bankfull stage is the height when stream flows just fill the stream to its banks before water spills out onto the adjacent floodplain (Gordon *et al.* 1992, pp. 305–307). The stream discharge that reaches bankfull stage occurs 1 or 2 days each year and has a recurrence interval that averages 1.5 years (Leopold 1994, pp. 129–141). This lateral extent will encompass the immediate streamside vegetation that can extend into the water column and provide vegetative structure, one of the PCEs.

**Summary.** We are proposing to designate critical habitat in areas that we have determined were occupied at the time of listing, and that contain sufficient PCEs to support life history functions essential for the conservation of the species. Stream segments are proposed for designation based on sufficient PCEs being present to support the life processes of the species. Some stream segments contain all PCEs and support multiple life processes. Some stream segments contain only a portion of the PCEs necessary to support the particular use of that habitat. For stream segments that were not occupied at the time of listing, we evaluated whether those areas were essential to the conservation of the Devils River minnow.

We find that two stream segments were occupied at the time of listing and contain sufficient PCEs to support life history functions essential for the conservation of the species: (1) Devils River from Pecan Springs to downstream of Dolan Falls, including short stretches of two tributaries, Phillips Creek and Dolan Creek, and (2) San Felipe Creek from the headsprings downstream through the City of Del Rio, include the outflow channels of East and West Sandia springs. We find that a third stream segment, Pinto Creek from Pinto Springs downstream to the Highway 90 Bridge crossing, was not known to be occupied at the time of listing, but was subsequently discovered to be occupied and is now considered to be essential for the conservation of the Devils River minnow for the reasons discussed above.

Within this proposed rule, the critical habitat boundary is limited to bankfull width of the stream segments proposed for inclusion, at the height in which

stream flows just fill the stream to its banks before water spills out onto the adjacent floodplain. The scale of the critical habitat maps prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of developed areas such as buildings, paved areas, and other structures that lack PCEs for the Devils River minnow. Any such structures and the land under them inside critical habitat boundaries shown on the maps of this proposed rule are not proposed for designation as critical habitat. Therefore, Federal actions limited to these areas would not trigger section 7 consultation, unless they affect the species or PCEs in adjacent critical habitat.

**Proposed Critical Habitat Designation**

We are proposing three units as critical habitat for the Devils River minnow. The three units are: (1) Devils River Unit; (2) San Felipe Creek Unit; and (3) Pinto Creek Unit. All three areas are currently occupied by the Devils River minnow and constitute our best assessment of areas that meet the definition of critical habitat for the species.

The proposed critical habitat areas include the stream channels up to bankfull width within the identified stream reaches. The stream beds of perennial streams and navigable waters (stream beds of at least 30 ft wide) in Texas are generally owned by the State, in trust for the public, while the lands alongside the streams can be privately owned (Riddell 1997, p. 7). We presume that the stream beds for all three stream segments being proposed for critical habitat are considered public.

All distances reported in this proposal are estimated stream lengths calculated using geographic information system computer software (ArcGIS) approximating the stream channel (reported in stream km and stream mi). Stream channel lines were based on the National Hydrography Dataset and 7.5' topographic quadrangle maps obtained from the U.S. Geological Survey. We made some minor adjustments using the 2004 National Agriculture Imagery Program digital orthophotos obtained from the Texas Natural Resources Information System. The approximate length of each stream segment for each proposed critical habitat unit is shown in Table 1.

TABLE 1.—PROPOSED CRITICAL HABITAT UNITS FOR THE DEVILS RIVER MINNOW

Critical habitat unit *	Total stream km (stream mi)
1. Devils River Unit (includes Phillips and Dolan creeks)	47.0 (29.2)
2. San Felipe Creek Unit (includes outflow of East and West springs) .....	9.0 (5.6)
3. Pinto Creek Unit .....	17.5 (10.9)
Total .....	73.5 (45.7)

\*The stream beds of all three units being proposed for critical habitat are considered public, and owned by the state of Texas.

The proposed critical habitat designation for Devils River minnow includes a total of 73.5 stream km (45.7 stream mi). Below, we provide brief descriptions of the three units, and reasons why each meets the definition of critical habitat for the Devils River minnow.

*Unit 1: Devils River Unit*

Proposed Unit 1 consists of approximately 43.6 stream km (27.1 stream mi) of the Devils River; 1.1 stream km (0.7 stream mi) of Phillips Creek; and 2.3 stream km (1.4 stream mi) of Dolan Creek. Phillips Creek and Dolan Creek are small tributaries to the Devils River that contain PCEs and are occupied by the Devils River minnow. The proposed upstream boundary on the Devils River is at Pecan Springs. The proposed downstream boundary on the Devils River is 3.6 stream km (2.2 stream mi) below Dolan Falls. Phillips Creek is included from the confluence with the Devils River to a point 1.1 stream km (0.7 stream mi) upstream. Dolan Creek is included from the confluence with the Devils River 2.3 stream km (1.4 stream mi) upstream to Dolan Springs. Including all three streams, the total distance in the proposed critical habitat in the Devils River Unit is approximately 47.0 stream km (29.2 stream mi). For specific coordinates of the boundaries for proposed critical habitat designation, please reference the unit descriptions in the Proposed Regulation Promulgation section below.

The Devils River minnow was originally described from this unit in the 1950s (Hubbs and Brown 1956, p. 70) and it has been continually occupied ever since (Harrell 1978, pp. 64, 67; Garrett *et al.* 1992, p. 261, Service 2005, Appendix A). The Devils River minnow occupied this unit at the time of listing, though at only a few locations. Subsequent surveys by TPWD

have established current occupancy of this entire unit (Service 2005, Appendix A). The proposed upstream boundary of critical habitat represents the beginning of the permanent flow of the river (De La Cruz 2004, p. 1). The proposed downstream boundary, 3.6 stream km (2.2 stream mi) downstream of Dolan Falls, represents the downstream extent of collections of the Devils River minnow by TPWD (Garrett 2007, p. 1).

The Devils River Unit contains one or more of the PCEs essential for conservation of the Devils River minnow. Special management in the Devils River Unit may be needed to control groundwater pumping to ensure spring flows are maintained and to prevent the introduction of nonnative species. See additional discussion above in the Special Management Considerations or Protections section.

Areas proposed as critical habitat for Devils River minnow do not include lands adjacent to the stream channels. However, land ownership adjacent to the streams in the Devils River Unit is primarily private. Private ownership of the area includes The Nature Conservancy's 1,943-ha (4,800-ac) Dolan Falls Preserve, which also includes river frontage on the Devils River and Dolan Creek. The Nature Conservancy has owned this area since 1991 (The Nature Conservancy 2004, 9). The Nature Conservancy also holds conservation easements on about 66,800 ha (about 165,000 ac) of private land along the Devils River or in the Devils River watershed (McWilliams 2006, p. 1). The only public land adjacent to the streams of this unit is the State-owned Devils River State Natural Area (DRSNA) managed by the TPWD. Proposed critical habitat within the DRSNA includes about 1.6 stream km (1.0 stream mi) along the east bank of the Devils River and about 1.9 stream km (1.17 stream mi) along both banks of a portion of Dolan Creek. Yet, these adjacent public lands are not included in the proposed critical habitat designation.

#### Unit 2: San Felipe Creek Unit

Proposed Unit 2 consists of approximately 7.9 stream km (4.9 stream mi) on San Felipe Creek; 0.8 stream km (0.5 stream mi) of the outflow of San Felipe Springs West; and 0.3 stream km (0.2 stream mi) of the outflow of San Felipe Springs East. The proposed upstream boundary on San Felipe Creek is the Head Springs located about 1.1 stream km (0.7 stream mi) upstream of the Jap Lowe Bridge crossing. The proposed downstream boundary on San Felipe Creek is in the City of Del Rio 0.8 stream km (0.5

stream mi) downstream of the Academy Street Bridge crossing. The proposed unit includes the outflow channels of two springs San Felipe Springs West and San Felipe Springs East. These channels are included in the proposed critical habitat from their spring origin downstream to the confluence with San Felipe Creek. Including all three streams, the total distance in the proposed critical habitat in the San Felipe Creek Unit is approximately 9.0 stream km (5.6 stream mi). For specific coordinates of the boundaries for proposed critical habitat designation, please reference the unit descriptions in the Proposed Regulation Promulgation section below.

San Felipe Creek was occupied by the Devils River minnow at the time of listing and is still occupied (Hubbs and Brown 1956, p. 70; Garrett *et al.* 1992, pp. 261, 265; Service 2005, Appendix A; Lopez-Fernandez and Winemiller 2005, p. 249). Although limited survey data is available, we consider the entire unit occupied as the habitat is contiguous, allowing fish to move throughout the unit (Garrett 2006b, p. 1). The proposed boundaries of critical habitat include all areas where TPWD has collected Devils River minnow within the San Felipe Creek Unit (Garrett 2007, p. 1).

The San Felipe Creek Unit contains one or more of the PCEs essential for conservation of the Devils River minnow. There are several unnatural barriers to fish movement that may currently segment the reaches within the City of Del Rio. Portions of the stream banks in the City have been significantly altered by arming with concrete and the invasion of an exotic cane (*Arundo donax*). However, much of the riparian area remains a functional part of the stream ecosystem, contributing to the physical and biological features of Devils River minnow habitat. Water quality in San Felipe Creek has been a concern due to the urban environment through which much of the creek flows. Potential for spill or discharge of toxic materials is an inherent threat in urban environments (City of Del Rio 2006, p. 13). The threats to the San Felipe Creek Unit that require special management include the potential for large-scale groundwater withdrawal and exportation that would impact spring flows, pollution from urban runoff, nonnative vegetation on stream banks, other nonnative species (such as the armored catfish), and potential new nonnative species introductions into the stream.

Land ownership adjacent to the streams banks being proposed as critical habitat within the San Felipe Creek Unit includes private ranch lands from the

Head Springs downstream to the City of Del Rio. Within the city limits, the City owns various tracts of land along the stream. Some of these areas are developed as public use parks and others have been recently obtained through a buyout program from the Federal Emergency Management Agency following damages from the 1998 flood (City of Del Rio 2006, pp. 5–6). Most of the City-owned property along the river appears to be on the east bank of the creek, while the west bank is primarily private-owned residences. The San Felipe Springs East and West and their immediate outflow channels are on a golf course, privately owned by the San Felipe Country Club. In all, we estimate that the City of Del Rio owns about 1.1 stream km (0.7 stream mi) along both banks of the creek and spring outflow channels, mainly located downstream of the Highway 90 Bridge. Through the remainder of the City, we estimated the City owns about 2.2 stream km (1.4 stream mi) along the east bank of San Felipe Creek in parcels fragmented by private holdings. These private and city-owned lands are not included in the proposed critical habitat designation.

#### Unit 3: Pinto Creek Unit

Proposed Unit 3 consists of approximately 17.5 stream km (10.9 stream mi) on Pinto Creek. The proposed upstream boundary is Pinto Springs. The proposed downstream boundary is 100 m (330 ft) upstream of the Highway 90 Bridge crossing of Pinto Creek. For specific coordinates of the boundaries for proposed critical habitat designation, please reference the unit descriptions in the Proposed Regulation Promulgation section below.

Pinto Creek was not considered occupied by Devils River minnow at the time of listing; however, Devils River minnows were documented in 2001 in upstream reaches of the creek where fish surveys had not been previously conducted (Garrett *et al.* 2004, p. 437). The Pinto Creek Unit is essential for the conservation of the Devils River minnow because fish from this stream show significant genetic variation from other populations (Service 2006, p. 15). Because of its proximity to Las Moras Creek and the genetic variation from the more western population, fish from Pinto Creek would be the likely source population for possible future reintroduction into formerly occupied areas (Garrett *et al.* 2004, p. 440). The proposed boundaries of critical habitat represent all the areas within Pinto Creek where Devils River minnow has been collected (Garrett *et al.* 2004, p. 437–438).

Further, the Pinto Creek Unit contains one or more of the PCEs essential for conservation of the Devils River minnow. The main threat to the Pinto Creek Unit that requires special management is the potential for large-scale groundwater withdrawal and exportation that would significantly impact spring flows. While nonnative species are not currently known to be a problem in Pinto Creek, preventing nonnative species from being introduced into the stream is an additional threat needing special management. Land ownership adjacent to the Pinto Creek unit is all private ranches; however, these private lands are not included in the proposed critical habitat designation.

### 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 5th and 9th Circuit Court 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 et al.*, 245 F.3d 434, 442F (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 current national policy and the statutory provisions of the Act, we determine destruction or adverse modification is determined 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. This is a procedural requirement only, as any conservation recommendations in a conference report or opinion are strictly advisory. However, once a species proposed for listing becomes listed, or proposed critical habitat is designated as final, the full prohibitions of section 7(a)(2) apply to any discretionary Federal action.

The primary utility of the conference procedures is to allow a Federal agency to maximize its opportunity to adequately consider species proposed for listing and proposed critical habitat and to avoid potential delays in implementing their proposed action because of the section 7(a)(2) compliance process, should we list those species or designate critical habitat. We may conduct conferences either informally or formally. We typically use informal conferences as a means of providing advisory conservation recommendations to assist the agency in eliminating conflicts that the proposed action may cause. We typically use formal conferences when we or the Federal agency believes the proposed action is likely to jeopardize the continued existence of the species proposed for listing or adversely modify proposed critical habitat.

We generally provide the results of an informal conference in a conference report, while we provide the results of a formal conference in a conference opinion. We typically prepare conference opinions on proposed species or critical habitat in accordance with procedures contained at 50 CFR 402.14, as if the proposed species were already listed or the proposed critical habitat was already designated. We may adopt the conference opinion as the biological opinion when the species is listed or 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)).

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. "Reasonable and prudent alternatives" are defined 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, that can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that 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, some Federal agencies may request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions may affect subsequently listed species or designated critical habitat.

Federal activities that may affect the Devils River minnow 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 under section 10(a)(1)(B) of the Act from the Service) or involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency) are also 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 consultations.

There are no Federal lands in the areas being proposed for critical habitat for Devils River minnow. Laughlin Air Force Base is located east of the City of Del Rio and obtains its municipal water from the City (which ultimately is withdrawn from the two San Felipe Springs). The Amistad National

Recreation Area, located around Amistad Reservoir, is owned by the National Park Service and includes the downstream portions of the Devils River, but is not included in the proposed critical habitat designation.

Since the Devils River minnow was listed in 1999, two section 7 consultations have occurred, both of which were associated with San Felipe Creek. One informal consultation was completed in 2001 with the Environmental Protection Agency for funding through the Texas Water Development Board to the City of Del Rio to upgrade the City's water treatment and distribution facilities. The other (formal) consultation was completed in 2006 with the Federal Highway Administration, through the Texas Department of Transportation, to replace the Beddell Avenue Bridge over San Felipe Creek. Based on this consultation history, we anticipate few future Federal actions within the area proposed for critical habitat for Devils River minnow.

*Application of the "Adverse Modification" Standard for Actions Involving Effects to the Critical Habitat of the Devils River Minnow*

For the reasons described in the Director's December 9, 2004 memorandum, 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 Devils River minnow is appreciably reduced.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, those 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 would result in consultation for the Devils River minnow include, but are not limited to:

(1) Actions that would alter the natural flow regime, particularly the reduction of spring flows. These activities could include, but are not limited to, excessive groundwater pumping (significantly greater than

current levels), water diversions from streams, and stream impoundments. These activities could reduce the amount of available habitat and space for normal behaviors of Devils River minnow, alter water quality as an indirect effect of reduced flows, alter the mesohabitat (pools, riffles, and runs) conditions necessary for Devils River minnow life history functions, and alter fish community dynamics to unnaturally favor species other than the Devils River minnow.

(2) Actions that would reduce native aquatic vegetation or native vegetation along stream banks. These activities could include, but are not limited to, channelization of the stream, armoring stream banks (replacing native vegetation and soils with rock or concrete), dredging the stream bottom, introducing nonnative plants that would replace native vegetation, or introducing herbivorous nonnative species. Loss of aquatic vegetation would eliminate an important structural component of Devils River minnow habitat and could reduce the amount of available habitat for reproduction, growth, and feeding.

(3) Actions that would significantly alter water quality or introduce pollutants into streams. Such activities could include, but are not limited to, release of chemicals, biological pollutants, or heated effluents (liquid waste products) into the surface water or connected groundwater at a point source or by dispersed release (non-point source). Sources of pollutants also include, but are not limited to, storm water runoff from urban development without adequate storm water controls; spill of hazardous chemicals into the creek or groundwater; or groundwater contamination by improperly drilled or maintained oil or gas wells. These activities could alter water conditions that are beyond the tolerances of the Devils River minnow or their food source and could result in direct or cumulative adverse effects to these individuals and their life cycles.

(4) Actions that would significantly increase sediment deposition within the stream channel. Such activities could include, but are not limited to, excessive sedimentation from livestock grazing, road construction, channel alteration, brush clearing, off-road vehicle use, and other watershed and floodplain disturbances. These activities could eliminate or reduce the habitat necessary for the reproduction of Devils River minnow and could reduce the availability of food sources by affecting light penetration into the water column, filling in of stream beds with silt, or increasing the embeddedness of stream bottoms that reduces algae availability.

(5) Actions that would significantly alter channel shape or geometry. Such activities could include, but are not limited to, channelization, impoundment, armoring stream banks, road and bridge construction, mining, dredging, and destruction of riparian vegetation. These activities may alter the natural pattern of available mesohabitats (pools, riffles, and runs). These actions can reduce the amount of habitat available for Devils River minnow to complete its normal life cycle and can give other species, especially nonnative species, competitive advantages. These actions can also lead to increased sedimentation and degradation in water quality to levels that are beyond the tolerances of the fish or their food sources.

**Exclusions**

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

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

Under section 4(b)(2) of the Act, in considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and then determine whether the benefits of exclusion outweigh the benefits of inclusion. If an exclusion is contemplated, then we must determine whether excluding the area would result in the extinction of the species. In the following sections, we address a number of general issues that are relevant to the exclusions we considered. In addition, the Service is conducting an economic analysis of the impacts of the proposed critical habitat designation and related factors, which will be available for public review and comment when it is complete. Based on public comment on that document, the

proposed designation itself, and the information in the final economic analysis, additional areas beyond those identified in this assessment may be excluded from critical habitat by the Secretary under the provisions of section 4(b)(2) of the Act. This is provided for in the Act and in our implementing regulations at 50 CFR 424.19.

Under section 4(b)(2) of the Act, we must consider all relevant impacts, including economic ones. The Service considers a number of factors in its section 4(b)(2) analysis. For example, the Service considers whether there are lands owned or managed by the Department of Defense (DOD) where there might be a national security impact. We also consider whether the landowners have developed any conservation plans for the area, or whether there are conservation partnerships that would be encouraged by an area being designated as, or excluded from critical habitat. 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 or economic impacts that might occur because of the designation. In this instance, we have determined that the lands within the proposed designation of critical habitat for Devils River minnow are not owned or managed by the Department of Defense, and the proposed designation does not include any Tribal lands or trust resources.

At this time, we are not proposing any areas for exclusion from the final critical habitat designation under section 4(b)(2) of the Act; however, there are several ongoing conservation efforts related to habitat maintenance for the Devils River minnow (for example, see Garrett 2003, pp. 155–158; Karges 2003, pp. 147–148). Discussed below are conservation efforts and management plans that we may consider in our analysis of the benefits of inclusion and benefits of exclusion for certain proposed units from the final designation of critical habitat.

#### *Ongoing Conservation Efforts for Consideration Under Section 4(b)(2) of the Act*

(1) Conservation Area Plan and Conservation Easements by The Nature Conservancy in the Devils River watershed. The Nature Conservancy has a very active conservation program in the Devils River watershed (Karges 2003, pp. 147–148). The Nature Conservancy has developed a Conservation Area Plan for the Devils River with goals of the plan including balancing the relative abundance of native and nonnative fish species and

maintaining or enhancing the condition and beauty of riparian gallery woodlands (The Nature Conservancy 2004, p. 6). Rivers, streams, and springs are recognized as viable conservation elements whose function can likely be sustained within natural variations, as long as large-scale groundwater mining does not occur (The Nature Conservancy 2004, pp. 18–19). The Nature Conservancy owns about 1,943 ha (4,800 ac) and holds conservation easements on about 66,800 ha (about 165,000 ac) of private land in the Devils River watershed (McWilliams 2006, p. 1).

(2) Management plans by the City of Del Rio and the San Felipe Creek Country Club. In 2003, the City of Del Rio and the San Felipe Creek Country Club each signed management plans for the protection of San Felipe Creek (Service 2005, Appendix C). The mission of the City's plan is to "preserve and conserve the natural and cultural resources of the San Felipe Creek for the use and enjoyment of the present and future generations of Del Rio citizens and visitors." Proposed actions include: converting lands obtained along the creek following the 1998 flood into passive parks; minimizing use of pesticides and fertilizers on City-owned lands along the creek; discouraging commercial development along the creek; preserving the natural water flow to the greatest extent possible; preserving stream banks in a natural state with buffer zones of native vegetation; public education; litter removal; and removal of nonnative plants, such as the river cane. The City has recently drafted a San Felipe Creek Master Plan (City of Del Rio, 2006, p.1) and intends to complete development of the plan in 2007.

The Management Plan for San Felipe Country Club in Del Rio included objectives "to use environmentally sensitive techniques for managing and maintaining a high quality golf course for the benefit of users while also promoting natural diversity, and to protect and enhance the quality of San Felipe Creek and San Felipe Springs for the benefit of the Devils River minnow and the entire creek and riparian ecosystem." Management actions included establishing no-mow buffer zones, using environmentally sensitive pest management solutions through an Integrated Pest Management Program, using fertilizers judiciously; removing noxious vegetation, maintaining out of play areas as native habitat, using irrigation water wisely, and retaining runoff from parking lots.

(3) Kinney County Groundwater Conservation District. The Kinney

County Groundwater Conservation District exists for the management of groundwater resources in Kinney County. This District passed its initial rules in 2002 (and modified them in 2003) and is continuing to support groundwater research to determine aquifer boundaries and groundwater availability in Kinney County.

(4) Watershed management planning. TPWD has initiated development of a stakeholder-lead watershed management plan for the range of the Devils River minnow in Val Verde and Kinney Counties. The intent of the plan is to protect, enhance, or restore essential habitat throughout the range of the federally threatened Devils River minnow and other species of concern in this area, and will define actions that will result in maintaining or increasing populations of these fishes. The plan has not yet been completed.

#### **Economics**

An analysis of the economic impacts of proposing critical habitat for the Devils River minnow is being prepared. 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 <http://www.fws.gov/southwest/es/Library/>, or by contacting the Austin Ecological Services Field Office directly (see **ADDRESSES**).

#### **Peer Review**

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

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

## Public Hearings

The Act provides for one or more public hearings on this proposal, if requested. Under section 4(b)(5)(e) of the Act, requests for public hearings must be made in writing at least 45 days following the publication of the proposed 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 prior to the first hearing.

Persons needing reasonable accommodations to attend and participate in the public hearings should contact Adam Zerrenner, Field Supervisor, Austin Ecological Services Field Office at (512) 490-0057 as soon as possible. To allow sufficient time to process requests, please call no later than one week before the hearing date. Information regarding the proposal is available in alternative formats upon request.

## Clarity of the Rule

Executive Order 12866 (Regulatory Planning and Review) requires each agency to write regulations and notices that are easy to understand. We invite your comments on how to make this proposed rule easier to understand, including answers to questions such as the following: (1) Are the requirements in the proposed rule clearly stated? (2) Does the proposed rule contain technical jargon that interferes with the clarity? (3) Does the format of the proposed rule (grouping and order of the sections, use of headings, paragraphing, and so forth) aid or reduce its clarity? (4) Is the description of the notice in the **SUPPLEMENTARY INFORMATION** section of the preamble helpful in understanding the proposed rule? (5) What else could we do to make this proposed rule easier to understand?

Send a copy of any comments on how we could make this proposed rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street, NW., Washington, DC 20240. You may e-mail your comments to this address: [Exsec@ios.doi.gov](mailto:Exsec@ios.doi.gov).

## Required Determinations

### *Regulatory Planning and Review*

In accordance with Executive Order 12866, this document is a significant rule in that it may raise novel legal and policy issues, but it is not anticipated to have an annual effect on the economy of \$100 million or more or affect the economy in a material way. Due to the tight timeline for publication in the

**Federal Register**, the Office of Management and Budget (OMB) has not formally reviewed this rule. We are preparing a draft economic analysis of this proposed action, which will be available for public comment, to determine the economic consequences of designating the specific area as critical habitat. This economic analysis also will be used to determine compliance with Executive Order 12866, Regulatory Flexibility Act, Small Business Regulatory Enforcement Fairness Act, Executive Order 12630, Executive Order 13211, and Executive Order 12875.

Further, Executive Order 12866 directs Federal Agencies promulgating regulations to evaluate regulatory alternatives (Office of Management and Budget, Circular A-4, September 17, 2003). Pursuant to Circular A-4, once it has been determined that the Federal regulatory action is appropriate, then the agency will need to consider alternative regulatory approaches. Since the determination of critical habitat is a statutory requirement under the Act, we must then evaluate alternative regulatory approaches, where feasible, when promulgating a designation of critical habitat.

In developing our designations of critical habitat, we consider economic impacts, impacts to national security, and other relevant impacts under section 4(b)(2) of the Act. Based on the discretion allowable under this provision, we may exclude any particular area from the designation of critical habitat provided that the benefits of such exclusion outweigh the benefits of specifying the area as critical habitat and that such exclusion would not result in the extinction of the species. As such, we believe that the evaluation of the inclusion or exclusion of particular areas, or combination thereof, in a designation constitutes our regulatory alternative analysis.

The availability of the draft economic analysis will be announced in the **Federal Register** and in local newspapers so that it is available for public review and comments. The draft economic analysis can be obtained from our Web site at <http://www.fws.gov/southwest/es/Library/>, or by contacting the Austin Ecological Services Field Office directly (see **ADDRESSES**).

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

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any

proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the Regulatory Flexibility Act (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, the Service lacks the available economic information necessary to provide an adequate factual basis for the required RFA finding. Therefore, the RFA finding is deferred until we complete the draft economic analysis under section 4(b)(2) of the Act and Executive Order 12866. This draft economic analysis will provide the required factual basis for the RFA finding. Upon completion of the draft economic analysis, the Service will publish a notice of availability of the draft economic analysis of the proposed designation and reopen the public comment period for the proposed designation. The Service will include with the notice of availability, 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. The Service has 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 the Service makes a sufficiently informed determination based on adequate economic information and provides 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), the Service makes 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, or Tribal governments, or the private sector and includes both "Federal intergovernmental mandates" and

“Federal private sector mandates.” These terms are defined in 2 U.S.C. 658(5)–(7). “Federal intergovernmental mandate” includes a regulation that “would impose an enforceable duty upon State, local, or tribal governments” with two exceptions. It excludes “a condition of Federal assistance.” It also excludes “a duty arising from participation in a voluntary Federal program,” unless the regulation “relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,” if the provision would “increase the stringency of conditions of assistance” or “place caps upon, or otherwise decrease, the Federal Government’s responsibility to provide funding,” and the State, local, or Tribal governments “lack authority” to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; 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 destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above on to State governments.

(b) We do not believe that this rule would significantly or uniquely affect small governments because it would not produce a Federal mandate of \$100

million or greater in any year; that is, it is not a “significant regulatory action” under the Unfunded Mandates Reform Act. We do not anticipate that the designation of critical habitat will impose obligations on State or local governments. As such, a Small Government Agency Plan is not required. However, we will further evaluate this issue as we conduct our economic analysis and revise this assessment if appropriate.

#### *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. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. While this proposed rule to designate critical habitat for the Devils River minnow is a significant regulatory action under Executive Order 12866, it is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

#### *Takings*

In accordance with Executive Order 12630 (“Government Actions and Interference with Constitutionally Protected Private Property Rights”), we have analyzed the potential takings implications of designating critical habitat for the Devils River minnow in a takings implications assessment. The takings implications assessment concludes that this designation of critical habitat for the Devils River minnow would not pose significant takings implications.

#### *Federalism*

In accordance with Executive Order 13132 (Federalism), the rule would 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 Texas. The designation of critical habitat in areas currently occupied by the Devils River minnow imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments 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 have these governments wait for case-by-case section 7 consultations to occur).

#### *Civil Justice Reform*

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and 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 PCEs within the designated areas to assist the public in understanding the habitat needs of the Devils River minnow.

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

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act. 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*

It is our position that, outside the Tenth Circuit, we do not need to prepare environmental analyses as defined by the NEPA 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 assertion was upheld in the courts of the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (1996)).

#### *Government-to-Government Relationship With Tribes*

In accordance with the President’s memorandum of April 29, 1994, “Government-to-Government Relations with Native American Tribal Governments” (59 FR 22951), Executive Order 13175, 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. We have determined that there are no tribal lands occupied at the time of listing that contain the features essential for the conservation of Devils River minnow, and no Tribal lands that are unoccupied areas that are essential for the conservation of the Devils River minnow. Therefore, we are not proposing to designate critical habitat for the Devils River minnow on Tribal lands.

**References Cited**

A complete list of all references cited in this rulemaking is available upon

request from the Field Supervisor, Austin Ecological Services Field Office (see **ADDRESSES**).

**Author(s)**

The primary author of this package is the Austin Ecological Services Field Office.

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

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

**Proposed Regulation Promulgation**

Accordingly, we propose to amend part 17, subchapter B of chapter I, title

50 of the Code of Federal Regulations, as set forth below:

**PART 17—[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 “Minnow, Devils River” under “FISHES” 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 range
Common name	Scientific name						
* FISHES	*	*	*	*	*		*
* Minnow, Devils River	* <i>Dionda diaboli</i> .....	* U.S.A., TX, Mexico	* Entire .....	* T	* 669	* 17.95(e)	* NA
*	*	*	*	*	*		*

3. In § 17.95(e), add an entry for “Devils River Minnow (*Dionda diaboli*)” in the same alphabetical order that the species appears in the table at § 17.11(h) to read as follows:

**§ 17.95 Critical habitat—fish and wildlife.**

\* \* \* \* \*  
(e) Fishes.  
\* \* \* \* \*

**Devils River Minnow (*Dionda diaboli*)**

(1) Critical habitat units are depicted for Val Verde County and Kinney County, Texas, on the maps below.

(2) The primary constituent elements of critical habitat for the Devils River minnow are the following habitat components:

- (i) Streams characterized by:
  - (A) Areas with slow to moderate water velocities between 10 and 40 cm/second (4 and 16 in/second) in shallow to moderate water depths between approximately 10 cm (4 in) and 1.5 m (4.9 ft), near vegetative structure, such as emergent or submerged vegetation or stream bank riparian vegetation that overhangs into the water column;
  - (B) Gravel and cobble substrates ranging in size between 2 and 10 cm (0.8 and 4 in) with low or moderate amounts of fine sediment (less than 65 percent stream bottom coverage) and low or moderate amounts of substrate embeddedness; and

(C) Pool, riffle, run, and backwater components free of artificial instream structures that would prevent movement of fish upstream or downstream.

(ii) High-quality water provided by permanent, natural flows from groundwater spring and seeps characterized by:

- (A) Temperature ranging between 17 °C and 29 °C (63 °F and 84 °F);
- (B) Dissolved oxygen levels greater than 5.0 mg/l;
- (C) Neutral pH ranging between 7.0 and 8.2;
- (D) Conductivity less than 0.7 mS/cm and salinity less than 1 ppt;
- (E) Ammonia levels less than 0.4 mg/l; and
- (F) No or minimal pollutant levels for copper, arsenic, mercury, and cadmium; human and animal waste products; pesticides; fertilizers; suspended sediments; petroleum compounds and gasoline or diesel fuels.

(iii) An abundant aquatic food base consisting of algae attached to stream substrates and other associated microorganisms.

(iv) An aquatic stream habitat either devoid of nonnative aquatic species (including fish, plants, and invertebrates) or in which such nonnative aquatic species are at levels that allow for healthy populations of Devils River minnows.

(v) Areas within stream courses that may be periodically dewatered for short time periods, during seasonal droughts, but otherwise as connective corridors between occupied or seasonally occupied areas through which the species moves when the area is wetted.

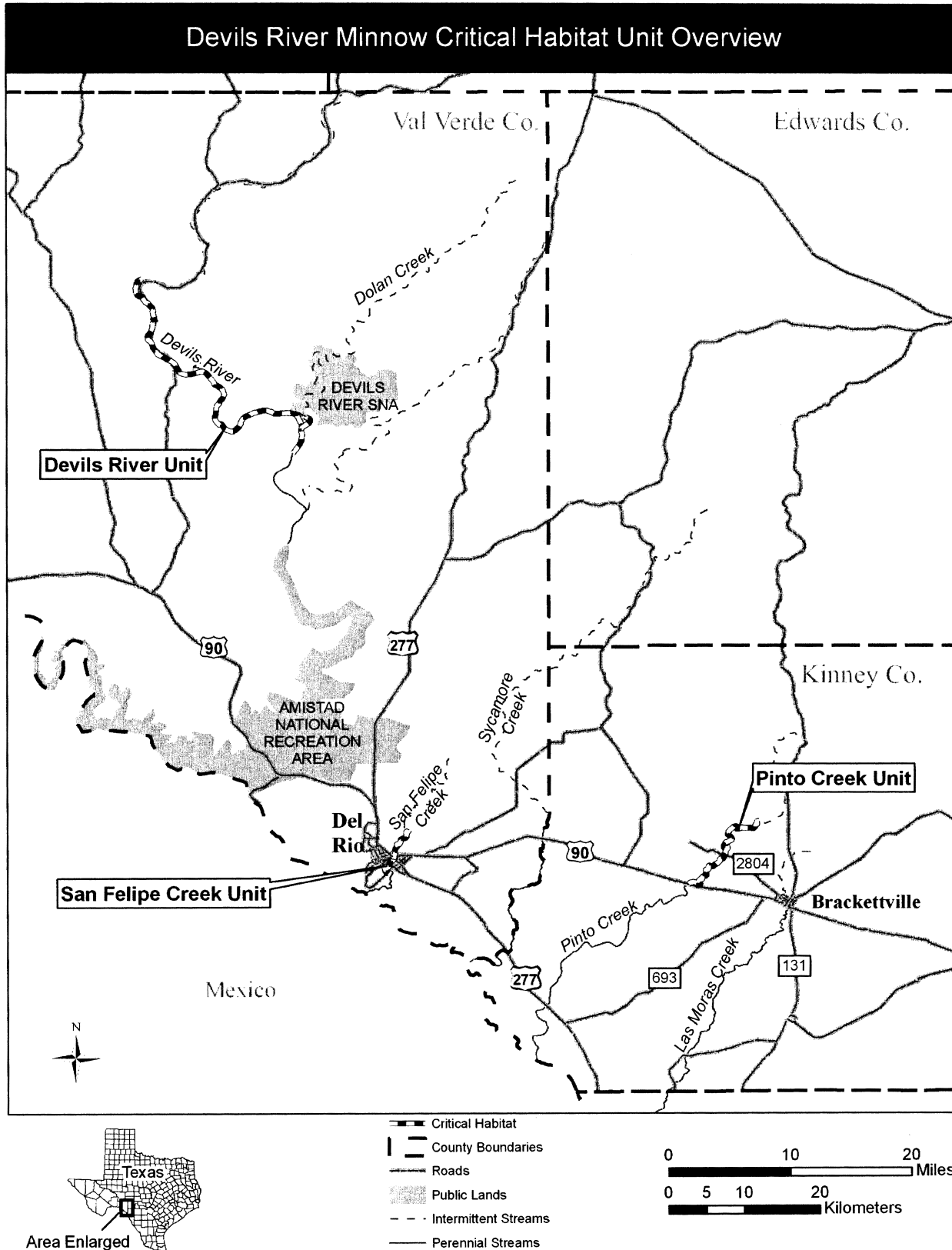
(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, roads, and other paved areas) and the land on which they are located existing on the effective date of this rule and not containing one or more of the primary constituent elements.

(4) *Critical habitat map units.* Data layers defining map units were created in ArcGIS using the National Hydrography Dataset and 7.5’ topographic quadrangle maps obtained from U.S. Geological Survey to approximate stream channels and calculate distances (stream km and stream mi). We made some minor adjustments to stream channels using the 2004 National Agriculture Imagery Program digital orthophotos obtained from the Texas Natural Resources Information System. For each critical habitat unit, the upstream and downstream boundaries are described as paired geographic coordinates X, Y (meters E, meters N, UTM Zone 14, referenced to North American Horizontal Datum 1983). Additionally, critical habitat areas include the stream

channels within the identified stream reaches and areas within these reaches up to the bankfull width.

(5) Note: Overview of critical habitat units for the Devils River minnow (Map 1) follows:

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(6) Unit 1: Devils River Unit, Val Verde County, Texas.

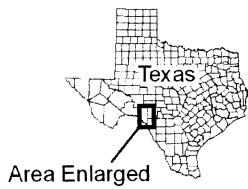
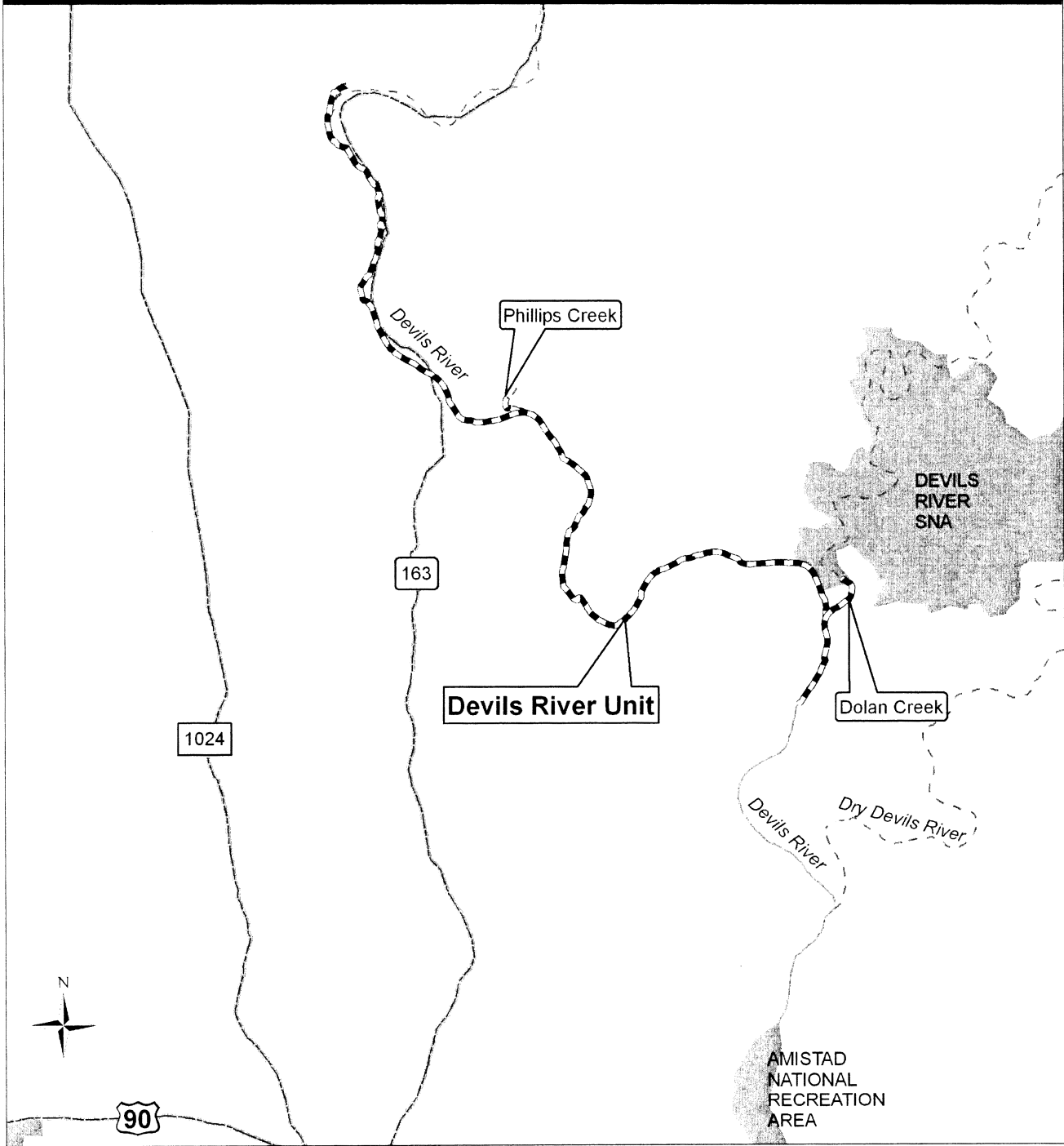
(i) Unit 1 consists of approximately 43.6 stream km (27.1 stream mi) of the Devils River; 1.1 stream km (0.7 stream mi) of Phillips Creek; and 2.3 stream km (1.4 stream mi) of Dolan Creek. The upstream boundary on the Devils River is at Pecan Springs (UTM 289432E,






3327875W). The downstream boundary on the Devils River is 3.6 stream km (2.2 stream mi) below Dolan Falls (UTM 306454E, 3304426N). Phillips Creek is included from the confluence with the Devils River to a point 1.1 stream km (0.7 stream mi) upstream (UTM 295544E, 3316112N). Dolan Creek is included from the confluence with the

Devils River to a point 2.3 stream km (1.4 stream mi) upstream to Dolan Springs (UTM 308084E, 3309223N). Including all three streams, the total distance in Unit 1 is approximately 47.0 stream km (29.2 stream mi).

(ii) Note: Map of Unit 1, Devils River Unit, (Map 2) follows:

# Devils River Minnow Critical Habitat - Devils River Unit



-  Critical Habitat
-  Roads
-  Intermittent Stream
-  Perennial Stream
-  Public Land



(7) Unit 2: San Felipe Creek Unit, Val Verde County, Texas.

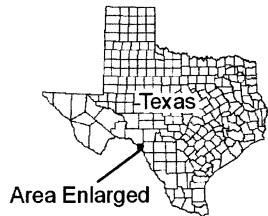
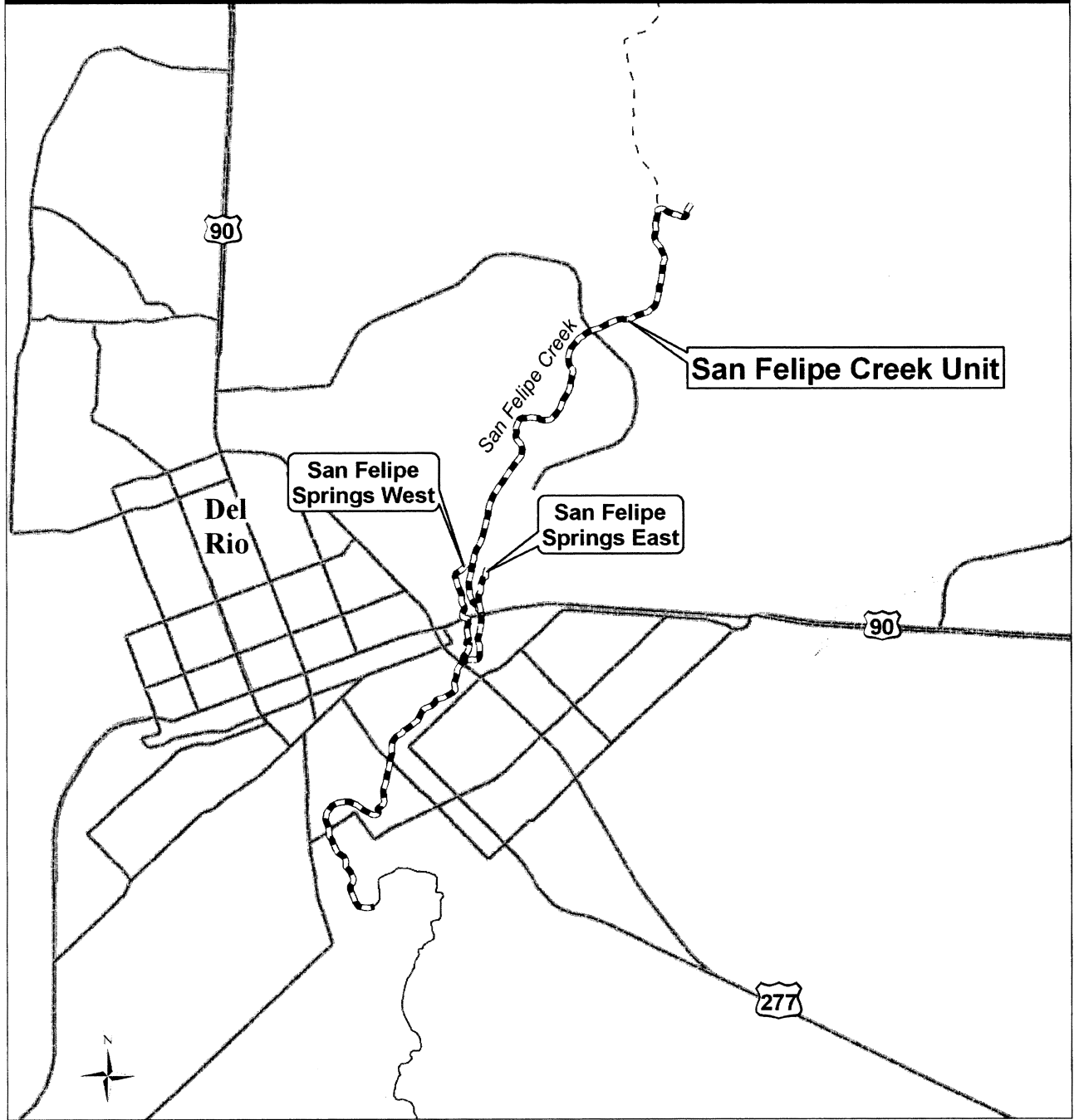
(i) Unit 2 consists of approximately 7.9 stream km (4.9 stream mi) on San Felipe Creek; 0.8 stream km (0.5 stream mi) of the outflow of San Felipe Springs West; and 0.3 stream km (0.2 stream mi) of the outflow of San Felipe Springs East. The upstream boundary on San Felipe Creek is the Head Springs (UTM





318813E, 3253702N) located about 1.1 stream km (0.7 stream mi) upstream of the Jap Lowe Bridge crossing. The downstream boundary on San Felipe Creek is in the City of Del Rio 0.8 stream km (0.5 stream mi) downstream of the Academy Street Bridge crossing (UTM 316317E, 3248147N). This unit includes the outflow channels from the origin of the two springs, San Felipe Springs

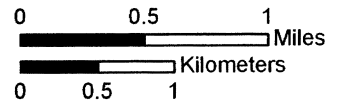
West (UTM 317039E, 3250850N) and San Felipe Springs East (UTM 317212E, 250825N), downstream to the confluence with San Felipe Creek. Including all three streams, the total distance in Unit 2 is approximately 9.0 stream km (5.6 stream mi).

(ii) Note: Map of Unit 2, San Felipe Creek Unit, (Map 3) follows:

### Devils River Minnow Critical Habitat - San Felipe Creek Unit



-  Critical Habitat
-  Roads
-  Intermittent Streams
-  Perennial Streams



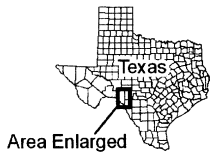
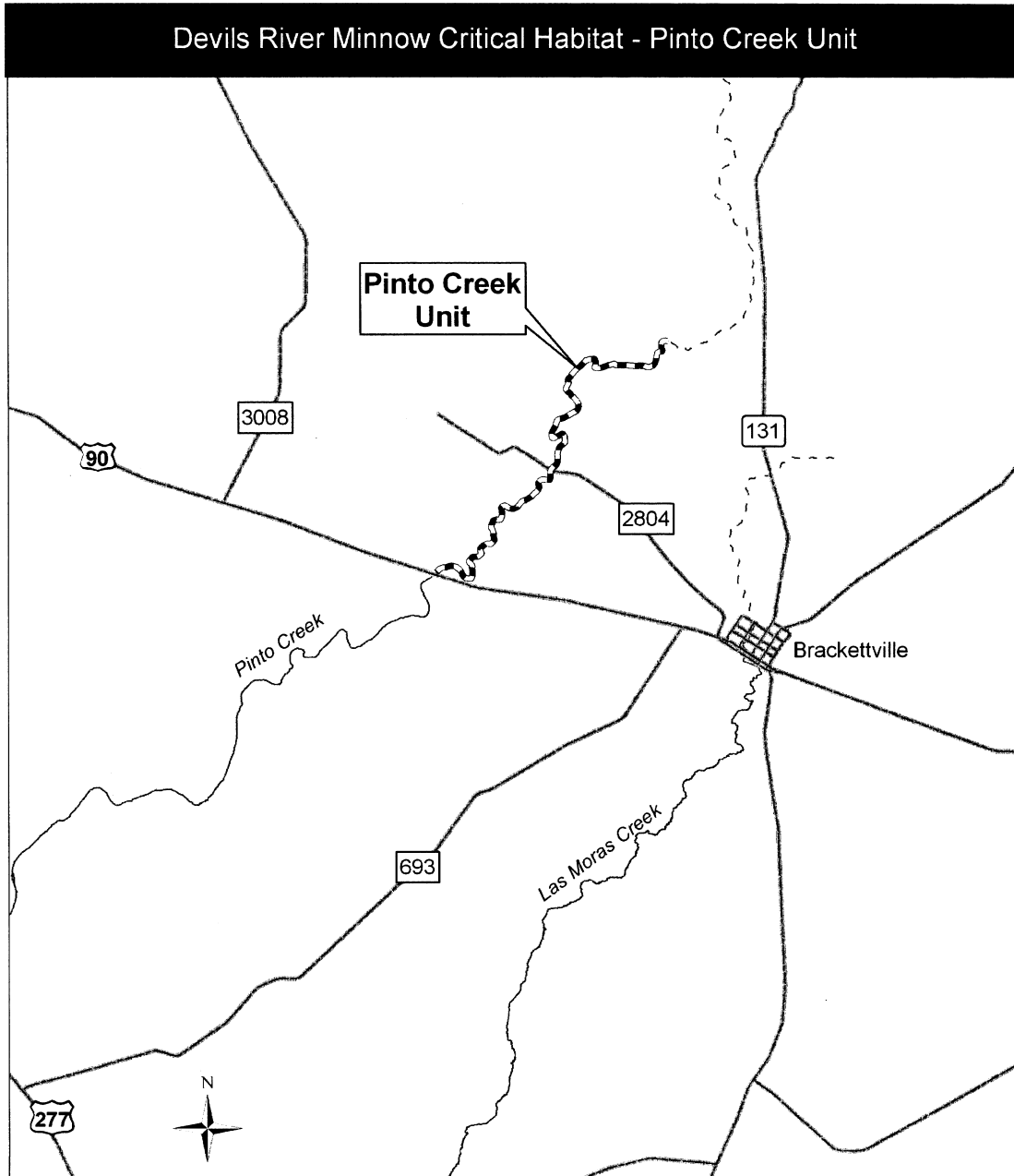
(8) Unit 3: Pinto Creek Unit, Kinney County, Texas.

(i) Unit 3 consists of approximately 17.5 stream km (10.9 stream mi) on

Pinto Creek. The upstream boundary is Pinto Springs (UTM 359372E, 3254422N). The downstream boundary is 100 m (330 ft) upstream of the

Highway 90 Bridge crossing of Pinto Creek (UTM 351163E, 3246179N).

(ii) Note: Map of Unit 3, Pinto Creek Unit, (Map 4) follows:



- Critical Habitat
- Roads
- Intermittent Streams
- Perennial Streams



\* \* \* \* \*

Dated: July 19, 2007.  
**Todd Willens,**  
*Acting Assistant Secretary for Fish and  
Wildlife and Parks.*  
[FR Doc. 07-3678 Filed 7-30-07; 8:45 am]  
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