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Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Peck's Cave Amphipod, Comal Springs Dryopid Beetle, and Comal Springs Riffle Beetle; Proposed Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

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RIN 1018–AU75

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Peck's Cave Amphipod, Comal Springs Dryopid Beetle, and Comal Springs Riffle Beetle

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to designate areas of occupied, spring-related aquatic habitat in Texas as critical habitat for the Peck's cave amphipod (*Stygobromus pecki*), Comal Springs dryopid beetle (*Stygoparnus comalensis*), and Comal Springs riffle beetle (*Heterelmis comalensis*) under the Endangered Species Act of 1973, as amended (Act). The three listed species are known only from four spring systems in central Texas: Comal Springs and Hueco Springs in Comal County, and Fern Bank Springs and San Marcos Springs in Hays County. The total area proposed as critical habitat for the amphipod is about 38.5 ac (acres) (15.6 hectares (ha)), for the dryopid beetle is about 39.5 ac (16.0 ha), and for the riffle beetle is approximately 30.3 ac (12.3 ha).

DATES: We will accept comments from all interested parties until September 15, 2006. We must receive requests for public hearings in writing at the address shown in the **ADDRESSES** section by August 31, 2006.

ADDRESSES: If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods:

1. You may submit written comments and information by mail or hand-delivery to Robert T. Pine, Supervisor, U.S. Fish and Wildlife Service, Austin Ecological Services Office, 10711 Burnet Road, Suite 200, Austin, Texas 78758.
2. You may send your comments by electronic mail (e-mail) to *FW2CSICHComments@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 512/490–0974.
4. You may submit comments via 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 Office at the above address.

FOR FURTHER INFORMATION CONTACT: Robert T. Pine, Supervisor, Austin Ecological Services Office (telephone 512/490–0057; facsimile 512/490–0974).

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, we solicit comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule. Comments particularly are sought concerning:

(1) The reasons any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act (16 U.S.C. 1531 *et seq.*), including whether it is prudent to designate critical habitat;

(2) Specific information on the distribution and abundance of Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle and their habitats. Are there additional areas occupied at the time of listing that should be included in the designations and why? Are there areas that are not occupied but which are essential to the conservation of the species?;

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

(4) Any foreseeable economic, national security, or other potential impacts resulting from the proposed designation and, in particular, any impacts on small entities;

(5) 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;

(6) Are there data supporting the need for subsurface vegetation (*e.g.*, roots that can penetrate into the aquifer) for sheltering, breeding, or feeding habitat for any or all of the listed invertebrates? If so, does the 50-foot (ft) distance appropriately define the lateral extent of critical habitat to provide for the PCEs related to the surface vegetation that produces the subsurface vegetation (*e.g.*, roots)?;

(7) Whether populations of Comal Springs riffle beetles may exist elsewhere in Spring Lake such as spring outlets;

(8) Whether there are data supporting the premise that any or all of the beetles are detritivores (detritus-feeding animals) in spring-influenced riparian zones;

(9) Whether there are any data documenting the need of subsurface areas for breeding, feeding, or sheltering, or documenting the presence of any or all of the beetles in the subsurface areas; and

(10) Whether the benefit of exclusion of any particular area outweighs the benefits of inclusion under section 4(b)(2) of the Act.

If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods (see **ADDRESSES** section above). Please submit e-mail comments to *FW2CSICHComments@fws.gov* in ASCII file format and avoid the use of special characters or any form of encryption. Please include ''Attn: Comal Springs invertebrates'' 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 e-mail message, please contact us directly by calling our Austin Ecological Services Office at 512/490–0057. Please note that the e-mail address, *FW2CSICHComments@fws.gov*, will be closed at the termination of the public comment period.

Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. We will not consider anonymous comments, and we will make all comments available for public inspection in their entirety. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

Role of Critical Habitat in Actual Practice of Administering and Implementing the Act

Attention to, and protection of, habitat can be essential to successful conservation actions. The role that designation of critical habitat plays in protecting habitat of listed species, however, is often misunderstood. As discussed in more detail below in the discussion of exclusions under section 4(b)(2) of the Act, there are significant limitations on the regulatory effect of designation under section 7(a)(2) of the Act. In brief, (1) designation provides additional protection to habitat only where there is a Federal nexus; (2) the protection is relevant only when, in the absence of designation, destruction or adverse modification of the critical

habitat would in fact take place (in other words, other statutory or regulatory protections, policies, or other factors relevant to agency decision-making would not prevent the destruction or adverse modification); and (3) designation of critical habitat triggers the prohibition of destruction or adverse modification of that habitat, but it does not require specific actions to restore or improve habitat.

Currently, 475 species, or 36 percent, of the 1,311 listed species in the United States under the jurisdiction of the Service have designated critical habitat. We address the habitat needs of all 1,311 listed species through conservation mechanisms such as listing, section 7 consultations, the section 4 recovery planning process, the section 9 protective prohibitions of unauthorized take, section 6 funding to the States, the section 10 incidental take permit process, and cooperative, non-regulatory efforts with private landowners. The Service believes that these measures may make the difference between extinction and survival for many species.

In considering exclusions of areas proposed for designation, we evaluated the benefits of designation in light of *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service*, 378 F. 3d 1059 (9th Cir 2004) (hereinafter *Gifford Pinchot*). In that case, the Ninth Circuit invalidated the Service's regulation defining ''destruction or adverse modification of critical habitat.'' In response, on December 9, 2004, the Director issued guidance to be considered in making section 7 adverse modification determinations. This proposed critical habitat designation does not use the invalidated regulation in our consideration of the benefits of including areas in this proposed designation. The Service will carefully manage future consultations that analyze impacts to designated critical habitat, particularly those that appear to be resulting in an adverse modification determination. Such consultations will be reviewed by the Regional Office prior to completion to ensure that an adequate analysis has been conducted that is informed by the Director's guidance.

On the other hand, to the extent that designation of critical habitat provides protection, that protection can come at significant social and economic cost. The mere administrative process of designation of critical habitat is expensive, time-consuming, and controversial. The current statutory framework of critical habitat, combined with past judicial interpretations of the statute, make critical habitat the subject of excessive litigation. As a result, critical habitat designations are driven by litigation and courts rather than biology, and are made at a time and under a time frame that limits our ability to obtain and evaluate the scientific and other information required to make the designation most meaningful.

In light of these circumstances, the Service believes that additional agency discretion would allow our focus to return to those actions that provide the greatest benefit to the species most in need of protection.

Procedural and Resource Difficulties in Designating Critical Habitat

We have been inundated with lawsuits for our failure to designate critical habitat, and we face a growing number of lawsuits challenging critical habitat determinations once they are made. These lawsuits have subjected the Service to an increasing series of court orders and court-approved settlement agreements that now consume nearly the entire listing program budget. This leaves the Service with little ability to prioritize its activities to direct scarce listing resources to the listing program actions with the most biologically urgent species conservation needs.

The consequence of the critical habitat litigation activity is that limited listing funds are used to defend active lawsuits, to respond to Notices of Intent (NOIs) to sue relative to critical habitat, and to comply with the growing number of adverse court orders. As a result, listing petition responses, the Service's own proposals to list critically imperiled species, and final listing determinations on existing proposals are all significantly delayed.

The accelerated schedules of court-ordered designations have left the Service with limited ability to provide for public participation or to ensure a defect-free rulemaking process before making decisions on listing and critical habitat proposals, due to the risks associated with noncompliance with judicially imposed deadlines. This, in turn, fosters a second round of litigation in which those who fear adverse impacts from critical habitat designations challenge those designations. The cycle of litigation appears endless and is very expensive, thus diverting resources from conservation actions that may provide relatively more benefit to imperiled species.

The costs resulting from the designation include legal costs, the cost of preparation and publication of the designation, the analysis of the economic effects and the cost of requesting and responding to public comment, and in some cases the costs of compliance with the National Environmental Policy Act (NEPA; 42 U.S.C. 4371 *et seq.*). These costs, which are not required for many other conservation actions, directly reduce the funds available for direct and tangible conservation actions.

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 these species, refer to the final rule listing the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle that published in the **Federal Register** on December 18, 1997 (62 FR 66295).

All three of the listed species proposed for critical habitat designation are freshwater invertebrates. The Peck's cave amphipod is an eyeless, subterranean (below ground) arthropod that has been found in Comal Springs and Hueco Springs (also spelled Waco Springs). Both spring systems are located in Comal County, Texas. The Comal Springs dryopid beetle is a subterranean insect with vestigial (poorly developed, non-functional) eyes. The species has been found in two spring systems (Comal Springs and Fern Bank Springs) that are located in Comal and Hays counties, respectively. The Comal Springs riffle beetle is an aquatic insect that is primarily restricted to surface water associated with Comal Springs in Comal County and with San Marcos Springs in Hays County.

The four spring systems (Comal, Fern Bank, Hueco, and San Marcos) proposed as critical habitat units are produced by discharge of aquifer spring water along the Balcones fault zone at the edge of the Edwards Plateau in central Texas. The source of water flows for Comal Springs and San Marcos Springs is the San Antonio segment of the Edwards aquifer. This aquifer is characterized by highly varied, below ground spaces that have been hollowed out within limestone bedrock through dissolution by rainwater. Groundwater is held and conveyed within these hollowed-out spaces, which range in size from honeycomb-like pores to large caverns. The San Antonio segment of the aquifer occurs in a crescent-shaped section over a distance of 176 mi (miles) (283 kilometers (km)) from the town of Brackettville in Kinney County on the segment's west side over to the town of Kyle in Hays County at the segment's northeast side. Groundwater generally moves from recharge areas in the southwest part of the San Antonio

segment and travels toward discharge areas in the northeast part of the segment, which includes Comal Springs and San Marcos Springs. The area that recharges groundwater coming to Comal Springs may occur as much as 62 mi (100 km) away from the springs (Brune 1981, p. 130). Hueco Springs is recharged locally from the local watershed basin and possibly by the San Antonio segment of the Edwards aquifer (Guyton and Associates 1979, p. 2). The source of water for Fern Bank Springs has not been determined. Fern Bank Springs discharges water from the upper member of the Glen Rose Formation, and its flow could originate primarily from that unit; however, water discharged from the springs could also be (1) drainage from the nearby Edwards aquifer recharge zone, (2) water lost from the Blanco River, or (3) a combination of all three sources (Veni 2006, p. 1).

Comal Springs and San Marcos Springs are the two largest spring systems in Texas with respective mean annual flows of 284 and 170 cubic feet per second (8 and 5 cubic meters per second) (Fahlquist and Slattery 1997, p. 1; Slattery and Fahlquist 1997, p. 1). Both spring systems emerge as a series of spring outlets along the Balcones fault that follows the edge of the Edwards Plateau in Texas. Fern Bank Springs and Hueco Springs have considerably smaller flows and consist of one main spring with several satellite springs or seep areas.

The four spring systems proposed for critical habitat are characterized by high water quality and relatively constant water flows with temperatures that range from 68 to 75 °F (Fahrenheit) (20 to 24 °C (Celsius)). Due to the underlying limestone aquifer, discharged water from these springs has a carbonate chemistry (Ogden *et al.* 1986, p. 103). Although flows from San Marcos Springs can vary according to fluctuations in the source aquifer, records indicate that this spring system has never ceased flowing. San Marcos Springs has been monitored since 1894, and has exhibited the greatest flow dependability of any major spring system in central Texas (Puente 1976, p. 27). Comal Springs has a flow record nearly comparable to that of San Marcos Springs; however, Comal Springs ceased flowing from June 13 to November 3, 1956, during a severe drought (U.S. Army Corps of Engineers 1965, p. 59). Water pumping from the aquifer contributed to cessation of flow at Comal Springs during the drought period (U.S. Army Corps of Engineers 1965, p. 59). Hueco Springs has gone dry a number of times in the past during drought periods (Puente 1976, p. 27; Guyton and Associates 1979, p. 46). Although flow records are unavailable for Fern Bank Springs, the spring system is considered to be perennial (Barr 1993, p. 39).

Each of the four spring systems typically provides adequate resources to sustain life cycle functions for resident populations of the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle. However, a primary threat to the three invertebrate species is the potential failure of spring flow due to drought or excessive groundwater pumping, which could result in loss of aquatic habitat for the species. Although these invertebrate species persisted at Comal Springs in the 1950s despite drought conditions, all three species are aquatic and require water to complete their individual life cycles.

Bowles *et al.* (2003, p. 379) pointed out that the mechanism by which the Comal Springs riffle beetle survived the drought and the extent to which its population was negatively impacted are uncertain. Bowles *et al.* (2003, p. 379) speculated that the riffle beetle may be able to retreat back into spring openings or burrow down to wet areas below the surface of the streambed.

Barr (1993, p. 55) found Comal Springs dryopid beetles in spring flows with low volume discharge as well as high volume discharge and suggested that presence of the species did not necessarily depend on a high spring flow. However, Barr (1993, p. 61) noted that effects on both subterranean species (dryopid beetle and amphipod) from extended loss of spring flow and low aquifer levels could not be predicted due to limited knowledge about their life cycles.

Previous Federal Actions

The final rule to list Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle as endangered was published in the **Federal Register** on December 18, 1997 (62 FR 66295). Critical habitat was not designated at the time of listing due to the determination by the Service that designation for the three invertebrate species would not provide benefits to the species beyond listing and any evaluation of activities required under section 7 of the Act. There is no recovery plan for these species. The lack of designated critical habitat for these species was subsequently challenged by the Center for Biological Diversity in the U.S. District Court for the District of Columbia, and this proposed rule to designate critical habitat is part of a stipulated settlement agreement between the plaintiff and the Service (see *Center for Biological Diversity* v. *Gale Norton, Secretary of the Interior* Civil Action No. 03–2402 (JDB)).

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 where the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 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 requires consultation on Federal actions that are likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow government or public access to private lands. Section 7 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 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 (PCEs), as defined at 50 CFR 424.12(b)).

Habitat occupied at the time of listing may be included in critical habitat only if the essential features thereon may require special management 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 under section 4(b)(2) of the Act.) Accordingly, 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 at the time of listing. An area currently occupied by the species but not known to be occupied at the time of listing will likely, but not always, be essential to the conservation of the species and, therefore, will typically be included in the critical habitat designation.

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 (Pub. 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 scientific information contained in 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 (Pub. L. 106–554; H.R. 5658) and the associated Information Quality Guidelines issued by the Service.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. 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. 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)(2) of the Act, we use the best scientific data available in determining areas that contain the features that are essential to the conservation of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. We do not propose to designate any areas outside the geographical areas presently occupied by these species.

We reviewed available information that pertains to the presence and habitat requirements of these three invertebrate species such as research published in peer-reviewed articles, data in reports submitted during section 7 consultations, contracted surveys, agency reports and databases, and aerial photographs. Information that has been reviewed includes, but is not limited to, Holsinger (1967), Bosse *et al.* (1988), Barr and Spangler (1992), Arsuffi (1993), Barr (1993), Bio-West (2001, 2002a, 2002b, 2003, 2004), Bowles *et al.* (2003), Fries *et al.* (2004), and Krejca (2005). As part of the process, we also reviewed the overall approach to conservation of these species undertaken by local, State, and Federal agencies, and private and non-governmental organizations operating within the species' range since their listing in 1997.

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 considered the geographical areas occupied by these species at the time they were listed, on which are found those physical and biological features (known as primary constituent elements or PCEs) that are essential to the conservation of the species and that may require special management considerations or protection. These features include, but are not limited to, the following:

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

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

(3) Cover or shelter;

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

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

Primary Constituent Elements for the Peck's Cave Amphipod, Comal Springs Dryopid Beetle, and Comal Springs Riffle Beetle

During our determination of PCEs to be proposed for critical habitat of these listed invertebrates, we have reviewed a number of studies relevant to habitat needs of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. The specific PCEs required for the three listed invertebrates are derived from the biological needs of the species as described in the ''Background'' section of this proposal and in the December 18, 1997, final rule listing these species (62 FR 66295). The proposed critical habitat constitutes our best assessment of areas that (1) are within the geographical range occupied by at least one of the three invertebrate species, (2) were occupied at the time of listing or have subsequently been discovered to be occupied, (3) are considered to contain features essential to the conservation of these species, and (4) that may require special management for conservation of these species. Based on our current knowledge of the life history, biology, and ecology of the species, and the habitat requirements for sustaining the essential life history functions of the species, we have determined that the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle require the PCEs described below.

The PCEs apply to all three species unless otherwise noted.

PCE 1. High-quality water with pollutant levels of soaps, detergents, heavy metals, pesticides, fertilizer nutrients, petroleum hydrocarbons, and semi-volatile compounds such as industrial cleaning agents no greater than those documented to currently exist (Brown 1987, p. 261) and including:

(a) Low salinity with total dissolved solids that generally range from about 307 to 368 milligrams per liter (mg/L); and

(b) Low turbidity that generally is less than 5 nephelometric (measurement of turbidity in a water sample by passing light through the sample and measuring the amount of the light that is deflected) turbidity units (NTUs).

These spring-adapted aquatic species live in high quality unpolluted groundwater and spring outflows that have low levels of salinity and turbidity. High-quality discharge water from springs and adjacent subterranean areas also help sustain habitat components, such as riparian vegetation that are essential to the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. The two beetle species are thought to require water with adequate levels of dissolved oxygen for respiration (Brown 1987, p. 260; Arsuffi 1993, p. 18). Amphipods generally require relatively high concentrations of oxygen and may serve as an indicator of good water quality (Arsuffi 1993, p. 15). While definitive studies on the limits of tolerance and preference for these aquatic invertebrates have not been completed, they are exclusively found in aquatic habitats with constant temperature, low salinity, low turbidity, and extremely low levels of pollutants. In particular, respiration in the riffle beetle may be inhibited by pollutants such as soaps and detergents that can affect its respiratory mechanism (Brown 1987, p. 261). The dryopid beetle may also be affected by these particular pollutants since this species shares a similar respiratory structure (Arsuffi 1993, p. 18). However, biological tolerances for this species are not understood due to its existence within a subterranean habitat.

Based on available literature, we propose that the PCE for high water quality in proposed critical habitat for these species should have an approximate range of salinity of about 307 to 368 mg/L and a turbidity of less than 5 NTUs. Fahlquist and Slattery (1997, p. 3) reported a low salinity (as measured by total dissolved solids) as low as 307 mg/L at Comal Springs, and Slattery and Fahlquist (1997, p. 4) found that San Marcos Springs had a low salinity of 328 mg/L. The two springs also have a low turbidity of less than 5 NTUs (Fahlquist and Slattery 1997, p. 3; Slattery and Fahlquist 1997, p. 4). Brune (1975, p. 94) reported a salinity for Hueco Springs of 322 mg/L. The highest salinity (as determined by analysis of total dissolved solids) that we have found associated with any of these invertebrates was 368 mg/L, which was reported from Fern Bank Springs on April 28, 2005 (Texas Water Development Board 2006, p. 1).

PCE 2. Aquifer water temperatures that range approximately from 68 to 75 °F (20 to 24 °C).

The three listed invertebrate species complete their life cycle functions within a relatively narrow temperature range; water temperatures outside of this range could be harmful to these invertebrates. The temperature of spring water emerging from the Edwards aquifer at Comal Springs and San Marcos Springs ordinarily occurs within a narrow range of approximately 72 to 75 °F (22 to 24 °C) (Fahlquist and Slattery 1997, pp. 3–4; Groeger et al. 1997, pp. 282–283). Hueco Springs and Fern Bank Springs have temperature records of 68 to 71 °F (20 to 22 °C) (George 1952, p. 52; Brune 1975, p. 94; Texas Water Development Board 2006, p. 1).

PCE 3. A hydrologic regime that provides adequate levels of dissolved oxygen in the approximate range of 4.0 to 10.0 mg/L for respiration of the Comal Springs riffle beetle and Comal Springs dryopid beetle.

Respiration in most beetle species belonging to the family Elmidae (which includes the Comal Springs riffle beetle) typically requires flowing waters highly saturated with dissolved oxygen (Brown 1987, p. 260). As a consequence, riffle beetles are most commonly associated with flowing water that has shallow riffles (small waves) or rapids (Brown 1987, p. 253). Riffle beetles are restricted to waters with high dissolved oxygen due to their reliance on a plastron (a thin sheet of air) that is held next to the underside of the body surface by a mass of minute, hydrophobic (tending to repel and not absorb water) hairs. The plastron functions as a gill by allowing oxygen to diffuse passively from water into the plastron and replace oxygen absorbed during respiration (Brown 1987, p. 260). Beetle species in the Elmidae family are generally limited to well-aerated water environments since gaseous exchange with a plastron can actually be reversed in oxygen-depleted waters (Brown 1987, p. 260; Ward 1992, p. 130). The Comal Springs dryopid beetle also relies on a plastron for respiration, and this beetle species may also be affected by changes in oxygen levels caused by habitat modification (Arsuffi 1993, pp. 17–18).

PCE 4. Food supply for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle that includes, but is not limited to, detritus (decomposed materials), leaf litter, and decaying roots.

Although specific food requirements of the three invertebrate species are unknown, the Peck's cave amphipod and dryopid beetle are most commonly found in areas where plant roots are inundated or otherwise influenced by aquifer water. Potential food sources for all three species in these areas include detritus (decomposed materials), leaf litter, and decaying roots; however, it is possible that these species feed on bacteria and fungi associated with decaying plant material. Both beetle species may be detritivores (detritus-feeding animals) that consume detrital materials in spring-influenced riparian zones (Gibson 2005, p. 1). The best information available indicates the Peck's cave amphipod is an omnivore (a species capable of consuming both animals and plants), which would enable the amphipod to exist as a scavenger or predator inside the aquifer in addition to using detritus in areas near spring outlets where plant roots interface with spring water (Gibson 2005, p. 1).

Trees and shrubs in riparian areas adjacent to the spring system may provide plant growth necessary to maintain food sources such as decaying material for these invertebrates. Roots from trees and shrubs in proximity to spring outlets are most likely to penetrate underground down to the water pools where these roots can serve as habitat for the amphipod and dryopid beetle. We believe relatively intact riparian areas with trees and shrubs may provide an important function within areas proposed for critical habitat of the two subterranean species. According to patterns of plant canopies as determined from aerial photographs, trees and shrubs (and their root systems) are generally within 50 feet (ft) (15.2 meters (m)) of the edge of water in these spring systems.

PCE 5. Bottom substrate in surface water habitat of the Comal Springs riffle beetle that is composed of sediment-free gravel and cobble ranging in size between 0.3 to 5.0 inches (in) (8–128 millimeters (mm)).

Although Comal Springs riffle beetles occur in conjunction with a variety of bottom substrates in surface water habitat, Bowles *et al.* (2003, p. 372) found that these beetles mainly occurred in areas with gravel and cobble

ranging between 0.3 to 5.0 in (8–128 mm) and did not occur in areas dominated by silt, sand, and small gravel. Collection efforts in areas of high sedimentation generally do not yield riffle beetles (Bowles *et al.* 2003, p. 376).

The purpose of this proposed designation is the conservation of PCEs necessary to support the life history functions of these three species. Because not all life history functions require all of the PCEs, not all of the proposed critical habitat may contain all the PCEs. Each of the areas proposed in this rule have been determined to contain sufficient PCEs to provide for one or more of the life history functions of the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Spring riffle beetle. In some cases, the PCEs may exist as a result of ongoing Federal actions. As a result, ongoing Federal actions at the time of designation will be included in the baseline in any consultation conducted subsequent to designation.

Criteria for Defining Critical Habitat

As required by section 4(b)(1)(A) of the Act, we use the best scientific data available in determining areas that contain the features that are essential to the conservation of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle, as discussed in the Methods section above. The proposed critical habitat areas described below constitute our best assessment of areas that (1) are within the geographical range occupied by at least one of the three invertebrate species, (2) were occupied at the time of listing or have subsequently been discovered to be occupied, (3) are considered to contain features essential to the conservation of these species (as explained above in the section on PCEs), and (4) that may require special management for conservation of these species. We are proposing critical habitat designation where these four items overlap. This does not imply that unoccupied areas outside of the proposed critical habitat areas do not need special management in order to maintain the habitat and PCEs within the designation. Due to the nature of this aquatic system, habitat of listed species can be affected by activities such as water withdrawals, construction, etc., that take place outside of occupied habitat. Such activities can affect the quantity and quality of water flowing into the occupied habitat of these listed invertebrates.

Peck's cave amphipod—The Peck's cave amphipod has been found in Comal Springs and Hueco Springs, which are both located in Comal County. While limited data have been collected on the extent to which this subterranean species exists below ground away from outlets of spring systems, other species within the genus *Stygobromus* are known to be widely distributed in groundwaters and cave systems (Holsinger 1972, p. 65). Although this species could possibly range throughout the 4 mi (8 km) distance between the two habitat spring systems through the ''honeycomb'' pores and conduits of the Edwards aquifer, it is not known whether below ground connections between Comal Springs and Hueco Springs exist in the aquifer. Hueco Springs itself is fed by surface water from the Guadalupe River basin and may only have a secondary connection to the Edwards aquifer (Guyton and Associates 1979, p. 2). The only specific location information we have for this species regarding its distribution in the aquifer, aside from the spring openings, is an observation of Peck's cave amphipods at the bottom of a well (Panther Canyon well) that is located approximately 360 ft (110 m) away from the head outlet of Spring Run No. 1 (as designated in Barr and Spangler 1992, Fig. 1 on p. 42) in the Comal Springs complex (Krejca 2005, p. 83). We propose to designate critical habitat for the species in aquatic habitat of both Comal Springs and Hueco Springs. To include amphipod food sources in root/water interfaces around spring outlets, we also propose an area consisting of a 50 ft (15.2 m) distance from spring outlets of both Comal Springs and Hueco Springs (including several satellite springs that are located between the main outlet of Hueco Springs and the Guadalupe River). We believe that this 50 ft distance defines the lateral extent of critical habitat that contains PCEs necessary to provide for life functions of the Peck's cave amphipod with respect to roots that can penetrate into the aquifer. Based on the 50 ft (15.2 m) distance, the areas proposed for the amphipod critical habitat are about 38.1 ac (15.4 ha) at Comal Springs and 0.4 ac (0.2 ha) at Hueco Springs. The acreages were calculated with a computer-based Geographical Information System (GIS).

Comal Springs dryopid beetle—The Comal Springs dryopid beetle has been found in only two spring systems (Comal Springs and Fern Bank Springs) located in Comal and Hays counties, respectively. The subterranean species is primarily collected near spring outlets (Barr and Spangler 1992, p. 41). While the extent to which the dryopid beetle inhabits subterranean areas away from spring outlets is unknown, this species does not swim and may be limited to relatively short ranges within the aquifer. In addition, immature stages of the species are thought to be terrestrial and require access to spring outlets (Barr 1993, p. 56). Barr and Spangler (1992, p. 41) collected larvae of the dryopid beetle near spring outlets of Comal Springs and believed that the larvae were associated with ceilings of spring orifices. Extension of the dryopid beetle into the aquifer may also be limited by the lack of food materials associated with decaying plant roots that occur near spring orifices.

For critical habitat of the Comal Springs dryopid beetle, we propose aquatic habitat and a 50 ft (15.2 m) distance from spring outlets of Comal Springs and Fern Bank Springs. The 50 ft distance (15.2 m) is based on evaluations of aerial photographs showing tree and shrub canopies occurring in proximity to spring outlets at both spring systems. These plant canopies reflect approximate distances where plant root systems interface with water flows of the two spring systems. Based on the 50 ft (15.2 m) distance, the area proposed for dryopid beetle critical habitat at Comal Springs is about 38.1 ac (15.4 ha) and 1.4 ac (0.6 ha) at Fern Bank Springs. These acreages include areas believed to be occupied and that contain PCEs necessary to provide for life history functions of the Comal Springs dryopid beetle. The acreages were calculated with GIS.

Comal Springs riffle beetle—For the Comal Springs riffle beetle, habitat is primarily restricted to surface water in two impounded spring systems that are located within Comal and Hays counties in central Texas. In Comal County, the aquatic beetle species is found in various spring outlets of Comal Springs that occur within Landa Lake over a linear distance of about 0.9 mi (1.4 km). The species has also been found in outlets of San Marcos Springs in the upstream portion of Spring Lake in Hays County. However, populations of Comal Springs riffle beetles may exist elsewhere in Spring Lake since spring systems within the lake are interconnected and sampling to date for the species within the lake has been limited. Therefore, we propose designating an area that encompasses all of the spring outlets that are found within the same relatively small lake (excluding a slough (slack water) portion that lacks spring outlets). Apart from the slough portion, the approximate linear distance of Spring Lake at its greatest length is 0.2 mi (0.3 km). We propose about 19.8 ac (8.0 ha) of aquatic habitat in Landa Lake and

about 10.5 ac (4.3 ha) of aquatic habitat in Spring Lake to be designated for critical habitat. These areas contain PCEs necessary to provide for life-history functions of the Comal Springs riffle beetle. The acreages were estimated by calculating the cross-hatched polygon area in two map figures of these lakes using GIS.

When determining proposed critical habitat boundaries, we attempted to avoid including developed areas such as buildings, paved areas, and other structures that lack PCEs for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. However, the scale of the maps prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed areas. Any such structures and the surface under them are excluded by text in the proposed rule and are not proposed for designation as critical habitat. Where lakes are proposed, critical habitat does not include the lake bottom beyond 50 feet from the spring outlet. Therefore, Federal actions limited to these areas would not trigger section 7 consultation, unless they affect the species or PCEs of the critical habitat.

We are proposing to designate critical habitat in areas that we have determined were occupied at the time of listing, contain sufficient PCEs to support life-history functions essential for the conservation of the species, and require special management or protection. The proposed units of Comal Springs, Fern Bank Springs, Hueco Springs, and San Marcos Springs are proposed for designation based on all PCEs being present to support at least one life process for the Peck's cave amphipod, Comal Springs dryopid beetle, and/or Comal Springs riffle beetle.

Section 10(a)(1)(B) of the Act authorizes us to issue permits for the take of listed species incidental to otherwise lawful activities. An incidental take permit application must be supported by a habitat conservation plan (HCP) that identifies conservation measures that the permittee agrees to implement for the species to minimize and mitigate the impacts of the requested incidental take. We often exclude non-Federal public lands and private lands that are covered by an existing operative HCP and executed implementation agreement under section 10(a)(1)(B) of the Act from designated critical habitat because the benefits of exclusion outweigh the benefits of inclusion as discussed in section 4(b)(2) of the Act. There are no non-Federal lands or private lands covered under an HCP within the areas considered for critical habitat; therefore, none have been excluded.

Special Management Considerations or Protections

When designating critical habitat, we assess whether the areas determined to be occupied at the time of listing and containing the PCEs may require special management considerations or protections. As we undertake the process of designating critical habitat for a species, we first evaluate lands defined by those physical and biological features essential to the conservation of the species for inclusion in the designation under section 3(5)(A) of the Act. Secondly, we evaluate lands defined by those features to assess whether they may require special management considerations or protection.

Primary threats to the spring systems proposed for designation as critical habitat for the three invertebrate species that may require special management are summarized in Table 2 below. The threats for individual springs vary according to the degree of urbanization and availability of aquifer source water, but possible threats generally include prolonged cessation of spring flows (in 1956, Comal Springs at New Braunfels did not flow from mid-June to November (U.S. Army Corps of Engineers 1965)) as a result of the loss of hydrological connectivity within the aquifer (e.g., groundwater pumping, excavation, concrete filling), pollutants (e.g., stormwater drainage, pesticide use), and non-native species (e.g., biological control, sport fish stocking). To address the threats affecting these three invertebrate species, certain special management actions may be required, for example, maintenance of sustainable groundwater use and subsurface flows, use of adequate buffers, selection of appropriate pesticides, and implementation of integrated pest management plans.

Proposed Critical Habitat Designation

We are proposing four units as critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. The critical habitat areas described below constitute our best assessment at this time of areas occupied at the time of listing that contain the PCEs and may require special management or protection for conservation of these species. The four spring systems proposed to be designated as critical habitat are (1) the Comal Springs Unit, (2) the Fern Bank Springs Unit, (3) the Hueco Springs Unit, and (4) the San Marcos Springs Unit. Table 1 below provides approximate areas (ac/ha) of these spring units that have been determined to meet the definition of critical habitat for the three listed invertebrates.

TABLE 1.—SPRING SYSTEM UNITS, DISTANCES FROM SPRING OUTLETS, AND ACREAGES OF AQUATIC HABITAT PROPOSED FOR CRITICAL HABITAT OF PECK'S CAVE AMPHIPOD, COMAL SPRINGS DRYOPID BEETLE, AND COMAL SPRINGS RIFFLE BEETLE IN COMAL AND HAYS COUNTIES, TEXAS

Species	Spring systems proposed for critical habitat areas	Distance from spring outlets for proposed critical habitat ft (m)	Proposed critical habitat acreage ac (ha)
Peck's cave amphipod	Comal Springs Unit	50 (15.2)	38.1 (15.4)
	Hueco Springs Unit	50 (15.2)	0.4 (0.2)
Comal Springs dryopid beetle	Comal Springs Unit	50 (15.2)	38.1 (15.4)
	Fern Bank Springs Unit	50 (15.2)	1.4 (0.6)
Comal Springs riffle beetle	Comal Springs Unit	Not applicable	19.8 (8.0)
	San Marcos Springs Unit	Not applicable	10.5 (4.3)

Table 2 below summarizes land ownership and threats for the four spring systems proposed for critical habitat. Land ownership for these spring systems involves only the State of Texas, municipalities, and private landowners and does not involve Federal or Tribal holdings. Comal Springs and San Marcos Springs are surrounded, respectively, by the cities of New Braunfels and San Marcos. Both Comal Springs and San Marcos Springs

have been impounded with dams to form Landa Lake and Spring Lake, respectively. Possible threats to these urban spring systems include, but are not limited to, water withdrawals, pesticide use, and stormwater runoff of pollutants that have accumulated on impervious cover (paved driveways, parking lots, sidewalks, etc.) in urban areas. A thorough threats discussion is found in the December 18, 1997, final rule listing these species (62 FR 66295).

TABLE 2.—OWNERSHIP AND THREATS TO SPRINGS OR LISTED SPECIES FOR PROPOSED CRITICAL HABITAT UNITS

Proposed critical habitat units	Ownership of proposed critical habitat by listed species ac (ha)	Threats to spring system or listed species
Comal Springs Unit, Comal County.	Peck's cave amphipod ..... State: 19.8 (8.0) ..... Municipal: 7.3 (3.0) ..... Private: 11.0 (4.5) ..... Comal Springs dryopid beetle. State: 19.8 (8.0) ..... Municipal: 7.3 (3.0) ..... Private: 11.0 (4.5). Comal Springs riffle beetle State: 19.8 (8.0).	Water withdrawals, hazardous materials spills, pesticide use, excavation/construction, stormwater pollutants, invasive species, and well entrainment.
Fern Bank Springs Unit, Hays County.	Comal Springs dryopid beetle. Private: 1.4 (0.6)	Water withdrawals, excavation/construction, and pesticide use.
Hueco Springs Unit, Comal County.	Peck's cave amphipod ..... Private: 0.4 (0.2)	Water withdrawals, hazardous materials spills, pesticide use, excavation/construction, stormwater pollutants, and well entrainment
San Marcos Springs Unit, Hays County..	Comal Springs riffle beetle State: 10.5 (4.3)	Water withdrawals, hazardous materials spills, pesticide use, excavation/construction, stormwater pollutants, and invasive species.

Fern Bank Springs and Hueco Springs occur in rural areas and are relatively unaffected by current urban activities in the vicinity of the springs. The satellite springs of Hueco Springs that lie between the main outlet and the Blanco River are located within a privately owned campground that has developed campsites occurring among these satellite springs. As compared to the other two spring systems, threats to Fern Bank Springs and Hueco Springs from surrounding land surface uses are currently minimal, as noted above in Table 2.

We present brief descriptions of all units and reasons why they meet the definition of critical habitat for Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle below. Maps of the proposed critical habitat units are provided in the Proposed Regulation Promulgation section of this proposed rule.

Comal Springs Unit—Comal County, Texas

The Comal Springs system provides habitat for all three listed invertebrate species along with a federally listed fish, the endangered fountain darter (*Etheostoma fonticola*). No other critical habitat has been designated at this spring system. Comal Springs provides all of the PCEs necessary for conservation of the three invertebrate species. The spring system primarily occurs as a series of spring outlets that lie along the west shoreline of Landa Lake and within the lake itself. This nearly L-shaped lake is surrounded by the City of New Braunfels. Practically all of the spring outlets and spring runs associated with Comal Springs occur within the upper part of the lake above the confluence of Spring Run No. 1 with the lake. The land ownership of Comal Springs consists of private, municipal, and State holdings. The surface water and bottom of Landa Lake are State-owned. The City of New Braunfels owns approximately 40 percent of the land surface adjacent to the lake, and private landowners own approximately 60 percent. Approximate acreages of surface land ownership within the proposed critical habitat unit and threats to the unit are shown above in Table 2.

We propose to designate critical habitat for the three listed invertebrate species in the Comal Springs Unit as follows:

(1) Landa Lake—(Comal Springs riffle beetle only)—aquatic habitat within the lake and outlying spring runs that occur from the confluence of Blieders Creek at the top of Landa Lake down to the lake's lowermost point of confluence with Spring Run No. 1. The part of Landa Lake that lies below the confluence with Spring Run No. 1 down to the impounding dams at the bottom of the lake is not included.

(2) Aquatic habitat and shoreline areas of Landa Lake—(Peck's cave amphipod and Comal Springs dryopid beetle only)—aquatic habitat within the lake and outlying spring runs that occur from the confluence of Blieders Creek at the top of Landa Lake down to the lake's lowermost point of confluence with Spring Run No. 1. The part of Landa Lake that lies below the confluence with Spring Run No. 1 down to the impounding dams at the bottom of the lake is not included. Land areas along the shoreline of Landa Lake and on small islands inside the lake that are within a 50 ft (15.2 m) distance from habitat spring outlets are also included. The critical habitat proposed for the Peck's cave amphipod and Comal Springs dryopid beetle includes areas where PCEs exist for these two species and does not include areas where these features do not occur, such as buildings, lawns, or paved areas. Where lakes are proposed, critical habitat does not include the lake bottom where springs are absent.

Fern Bank Springs Unit—Hays County, Texas

The Fern Bank Springs system provides habitat for only the Comal Springs dryopid beetle. No other critical habitat has been proposed for designation at this spring system. Fern Bank Springs provides all of the PCEs necessary for conservation of this species. The spring system is located approximately 0.2 mi (0.4 km) east of the junction of Sycamore Creek with the Blanco River in Hays County. The spring system consists of a main outlet and a number of seep springs that occur at the base of a high bluff overlooking the Blanco River. This spring system is located entirely on land that is privately

owned. Approximate acreages of land ownership encompassed within the proposed critical habitat unit and threats to the unit are shown above in Table 2.

We propose to designate critical habitat for the Comal Springs dryopid beetle in the Fern Bank Springs Unit as follows:

(1) Fern Bank Springs—aquatic habitat and land areas that are within a 50 ft (15.2 m) distance from spring outlets including the main outlet of Fern Bank Springs and its associated seep springs. The critical habitat proposed for the Comal Springs dryopid beetle includes only areas where PCEs exist for this species and does not include areas where these features do not occur, such as buildings, lawns, or paved areas. Where lakes are proposed, critical habitat does not include the lake bottom where springs are absent.

Hueco Springs Unit—Comal County, Texas

The Hueco Springs system provides habitat for only the Peck's cave amphipod. No other critical habitat has been proposed for designation at this spring system. Hueco Springs provides all of the PCEs necessary for conservation of this species. The spring system has a main outlet that is located approximately 0.1 mi (0.2 km) south of the junction of Elm Creek with the Guadalupe River in Comal County. The main outlet itself lies approximately 500 ft (152 m) from the west bank of the Guadalupe River. Several satellite springs lie further south between the main outlet and the river. This spring system is located entirely on private land. The main outlet of Hueco Springs is located on undeveloped land, but the satellite springs occur within undeveloped areas of a privately owned campground. Approximate acreages of land ownership encompassed within the proposed critical habitat unit and threats to the unit are indicated above in Table 2.

We propose to designate critical habitat for the Peck's cave amphipod within the Hueco Springs Unit as follows:

(1) Hueco Springs—aquatic habitat and land areas that are within 50 ft (15.2 m) from habitat spring outlets including the main outlet of Hueco Springs and its associated satellite springs. The critical habitat proposed for the Peck's cave amphipod includes only aquatic habitat areas where PCEs exist for this species.

San Marcos Springs Unit—Hays County, Texas

The San Marcos Springs system provides habitat for the only Comal Springs riffle beetle. However, the San Marcos Springs system provides habitat for five other federally listed species: (1) The endangered fountain darter, (2) the endangered San Marcos gambusia (*Gambusia georgei*), (3) the threatened San Marcos salamander (*Eurycea nana*), (4) the endangered Texas blind salamander (*Eurycea* (formerly *Typhlomolge) rathbuni*), and (5) the endangered Texas wild-rice (*Zizania texana*). However, the San Marcos gambusia has not been found in surveys during recent years and is presumed to be extinct (Edwards 1999, p. 3). Critical habitat has been designated for the fountain darter, San Marcos gambusia, San Marcos salamander, and Texas wild-rice within Spring Lake and portions of the San Marcos River that lie downstream from Spring Lake. The San Marcos Springs unit provides all of the PCEs necessary for conservation of the Comal Springs riffle beetle. The spring system primarily occurs as a series of spring outlets that lie at the bottom of Spring Lake and along its shoreline. The lake is surrounded by the City of San Marcos in Hays County. The spring outlets associated with San Marcos Springs occur within the main part of the lake excluding the slough portion that exists as an arm of the lake. The land ownership involving San Marcos Springs consists entirely of State holdings. The surface water and bottom of Spring Lake are State-owned; the State-affiliated Texas State University owns the adjacent land surface. Approximate acreages of surface land ownership in the proposed critical habitat unit and threats to the unit are shown above in Table 2.

We propose to designate critical habitat for the Comal Springs riffle beetle in the San Marcos Springs unit as: Spring Lake—aquatic habitat areas within the lake upstream of Spring Lake dam with the exception of the slough portion of the lake upstream of its confluence with the main body.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7 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. In our regulations at 50 CFR 402.02, we define destruction or adverse modification as ''a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.'' However, recent decisions by the 5th and 9th Circuit Courts of Appeal have invalidated this definition (see *Gifford Pinchot* and *Sierra Club* v. *U.S. Fish and Wildlife Service et al.*, 245 F.3d 434, 442F (5th Cir 2001)). Pursuant to current national policy and the statutory provisions of the Act, 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 the intended conservation role for the species.

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

Section 7(a)(4) of the Act requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. This is a procedural requirement only. However, once proposed species becomes listed, or proposed critical habitat is designated as final, the full prohibitions of section 7(a)(2) apply to any Federal action. The primary utility of the conference procedures is to maximize the opportunity for a Federal agency to adequately consider proposed species and critical habitat and avoid potential delays in implementing their proposed action as a result of the section 7(a)(2) compliance process, should those species be listed or the critical habitat designated.

Under conference procedures, the Service may provide advisory conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The Service may conduct either informal or formal conferences. Informal conferences are typically used if the proposed action is not likely to have any adverse effects to the proposed species or proposed critical habitat. Formal conferences are typically used when the Federal agency or the Service believes the proposed action is likely to cause adverse effects to proposed species or critical habitat, inclusive of those that may cause jeopardy or adverse modification.

The results of an informal conference are typically transmitted in a conference report; the results of a formal conference are typically transmitted in a conference opinion. Conference opinions on proposed critical habitat are typically prepared according to 50 CFR 402.14, as if the proposed critical habitat were designated. We may adopt the conference opinion as the biological opinion when the critical habitat is designated, if no substantial new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)). As noted above, any conservation recommendations in a conference report or opinion are strictly advisory.

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a 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, compliance with the requirements of section 7(a)(2) will be documented through the Service's 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, but are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to result in jeopardy to a listed species or the destruction or adverse modification of 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 are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that the Director believes would avoid jeopardy to the listed species or destruction or adverse modification of 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 a new species is listed or critical habitat is subsequently designated that may be affected and the Federal agency has retained discretionary involvement or control over the action or such 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 or adversely modify or destroy proposed critical habitat.

Federal activities that may affect the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle or their 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 or a permit under section 10(a)(1)(B) of the Act from the Service) or involving some other Federal action (funding from the Federal Highway Administration, Federal Aviation Administration, or Federal Emergency Management Agency) will also be subject to the section 7 consultation process. Federal actions requiring section 7 consultation also include pumping of Edwards aquifer water by Federal agencies, such as the Department of Defense or Service. 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.

Application of the Jeopardy and Adverse Modification Standards for Actions Involving Effects to the Peck's Cave Amphipod, Comal Springs Dryopid Beetle, and Comal Springs Riffle Beetle and Their Critical Habitat

Jeopardy Standard

Prior to designation of critical habitat, the Service has applied an analytical framework for jeopardy analyses of Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle that relies heavily on the importance of core area populations to the survival and recovery of these species. The section 7(a)(2) analysis is focused not only on these populations but also on the habitat conditions necessary to support them.

The jeopardy analysis usually expresses the survival and recovery needs of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle in a qualitative fashion without making distinctions between what is necessary for survival and what is necessary for recovery. Generally, if a proposed Federal action is incompatible with the viability of the affected core area population(s), inclusive of associated habitat conditions, a jeopardy finding is considered to be warranted, because of the relationship of each core area population to the survival and recovery of the species as a whole.

Adverse Modification Standard

The analytical framework described in the Director's December 9, 2004, memorandum would be used to complete section 7(a)(2) analyses for Federal actions affecting critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. The key factor related to the adverse modification determination is 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 the intended conservation role for the species. Generally, the conservation role of critical habitat units for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle is to have each unit support viable populations.

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 may destroy or adversely modify critical habitat may also jeopardize the continued existence of the species.

Activities that may destroy or adversely modify critical habitat are those that alter the PCEs to an extent that the conservation value of critical habitat for Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle is appreciably reduced. Activities that, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and therefore result in consultation for these listed species include, but are not limited to:

(1) Actions that can negatively affect the PCEs of the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle;

(2) Activities that would significantly and detrimentally alter the water quality in any of the spring systems listed above

and would thereby destroy or adversely modify the critical habitat for any of theses species. These activities include, but are not limited to, sedimentation from construction or release of chemical or biological pollutants into the surface water or connected groundwater at a point source or by dispersed release (non-point source); such activities could also alter water conditions to a point that negatively affects these invertebrate species;

(3) Actions that change the existing and historic flow regimes and would thereby significantly and detrimentally alter the PCEs necessary for conservation of these species. Such activities could include, but are not limited to, water withdrawal, impoundment, and water diversions. These activities could eliminate or reduce the habitat necessary for the growth, reproduction, or survival of these invertebrate species; and

(4) Actions that remove hydraulic connectivity of the aquifer and the spring areas where it exists and would thereby negatively affect the PCEs of the proposed critical habitat of these species and the population dynamics of the species. Alteration of subsurface water flows through destruction of geologic features (for example, excavation) or creation of impediments to flow (for example, concrete filling), especially in proximity to spring outlets, could negatively alter the hydraulic connectivity necessary to sustain these species. It is necessary for subsurface habitat to remain intact with sufficient hydraulic connectivity of flow paths and conduits to ensure that PCEs (water quality, water quantity, and food supply) for the proposed critical habitat remain adequate for all three listed invertebrates.

Due in large part to the nature of the aquifer and spring systems, ongoing human activities that occur outside the proposed critical habitat are unlikely to threaten the physical and biological features of the proposed critical habitat. However, future activities outside of the critical habitat may affect PCEs. Federal activities outside of critical habitat (such as groundwater pumping, pollution, etc.) are subject to review under section 7 of the Act if they may affect these species or adversely affect their critical habitat.

We consider all of the units proposed as critical habitat to contain features essential to the conservation of the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle. All units are within the geographic range of the species, all were occupied by the species at the time of listing (based on observations made within the last 9 years), and are likely to be used by these listed invertebrates. Federal agencies already consult with us on activities in areas currently occupied by these listed invertebrates, or if the species may be affected by the action, to ensure that their actions do not jeopardize the continued existence of the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle.

Exclusions Under 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 of the Interior may exclude an area from critical habitat if (s)he determines that the benefits of exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless (s)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 Secretary is afforded broad discretion and the Congressional record is clear that in making a determination under this section, the Secretary has discretion as to which factors and how much weight will be given to any factor.

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. Based on public comment on that document, the proposed designation itself, and the information in the final economic analysis, one or more areas 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.

Pursuant to section 4(b)(2) of the Act, we must consider relevant impacts in addition to economic ones. The lands within the proposed designation of critical habitat for Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle are not owned or managed by the Department of Defense; there are currently no HCPs for these listed species; and the proposed designation does not include any Tribal lands or trust resources. We anticipate no impact to national security, Tribal lands, partnerships, or HCPs from this proposed critical habitat designation. A number of programs exist at the State and local levels (e.g., Edwards Aquifer Authority and Texas Commission for Environmental Quality) to protect the Edwards aquifer and manage spring flows.

As a result of a ruling in a 1991 Court case (*Sierra Club* v. *Secretary of the Interior, No. MO–91–CA–069*), the Service identified minimum spring flows from Comal and San Marcos Springs likely to cause take and jeopardy for other listed aquatic species. The Edwards Aquifer Authority and other Edwards Aquifer water users are positively influencing water quantity and temperature that relate to PCEs. As a result of the Sierra Club lawsuit, the State legislature created the Edwards Aquifer Authority (EAA) through Senate Bill 1477 to regulate groundwater withdrawals. The EAA has issued withdrawal permits and created drought response plans that help protect the PCEs related to water quantity and temperature. The EAA has prepared a draft Habitat Conservation Plan to provide for water quantity in the aquifer and protect spring dependent species. When finalized, the plan is expected to help protect the aquifer. Other programs that provide some aquifer protection are Edwards Aquifer Rules and Phase I optional water quality measures of the Texas Commission on Environmental Quality (TCEQ). The Edwards Aquifer Rules provide protection for drinking water, and the Phase I measures provide protection for fountain darter, Texas wild-rice, San Marcos salamander, and San Marcos gambusia. The Edwards Aquifer Rules protect water quality by reducing pollutant loading through the implementation of best management practices that can help prevent degradation of groundwater. The Phase I optional water quality measures include enhanced best management practices that protect sensitive karst features. These measures also contain other protective actions that can be applied to many types of new projects. The Edward Aquifer Rules and Phase I optional measures provide protections for the three Comal Springs invertebrates. In addition, the Phase I optional measures are not mandated for every project.

Based on the best available information, we believe that all of these units contain the features essential to the species. As such, we have considered excluding, but have not proposed to exclude any lands from this proposed designation based on the potential impacts from these factors.

Economic Analysis

An analysis of the economic impacts of proposing critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle 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 by contacting the Austin Ecological Services Office (see **ADDRESSES** section).

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 (see **DATES** section). 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. 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. Requests for public hearings must be made in writing at least 15 days prior to the close of the public comment period. 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.

Clarity of the Rule

Executive Order 12866 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.*

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 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, and Executive Order 12630.

The types of Federal actions or authorized activities that may destroy or adversely modify proposed critical habitat, or that may be affected by such designation are listed above in the ''Effects of Critical Habitat Designation'' section. 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 comment. The draft economic analysis can be obtained by contacting the Austin Ecological Services Office (see **ADDRESSES** section).

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 (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the 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 completion of the draft economic analysis prepared pursuant to section 4(b)(2) of the Act and E.O. 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 on the proposed designation for an additional 60 days. 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.

Executive Order 13211

On May 18, 2001, the President issued an Executive Order (E.O. 13211) 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. This proposed rule to designate critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle is a significant rule under Executive Order 12866 in that it may raise novel legal or policy issues, but it is not expected to significantly affect energy supplies, distribution, or use since there are no pipelines, distribution facilities, power

grid stations, etc., within the boundaries of proposed critical habitat. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required. We will, however, further evaluate this issue as we conduct our economic analysis and review and revise this assessment as warranted.

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 will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, tribal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding,'' and the State, local, or tribal governments ''lack authority'' to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not 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) Due to current public knowledge of these three species' protection, the prohibition against take of these three species both within and outside of the proposed critical habitat areas, and the fact that critical habitat provides no incremental restrictions, we do not anticipate that this rule will significantly or uniquely affect small governments. As such, a Small Government Agency Plan is not required. We will, however, further evaluate this issue as we conduct our economic analysis and revise this assessment if appropriate.

Takings

In accordance with Executive Order 12630 (''Government Actions and Interference with Constitutionally Protected Private Property Rights''), this rule is not anticipated to have significant takings implications. A takings implication assessment is not required. As discussed above, the designation of critical habitat affects only Federal actions. Although private parties that receive Federal funding, assistance, or 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. Due to current public knowledge of these three species protections and the prohibition against take of these three species both within and outside of the proposed areas, we do not anticipate that property values will be affected by the critical habitat designation. However, we have not yet completed the economic analysis for this proposed rule. Once the economic analysis is available, we will review and revise this preliminary assessment as warranted.

Federalism

In accordance with Executive Order 13132, the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this proposed critical habitat designation with appropriate State resource agencies in Texas. The proposed designation of critical habitat in areas currently occupied by the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The proposed 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 necessary to the conservation of these three species are specifically identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist these local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

Civil Justice Reform

In accordance with Executive Order 12988, 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 propose designating critical habitat in accordance with the provisions of the Act. This proposed rule uses standard property descriptions and identifies the PCEs within the proposed designated areas to assist the public in understanding the habitat needs of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle.

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 Endangered Species Act of 1973, as amended. 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 the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. Therefore, critical habitat for these species has not been proposed for designation on Tribal lands.

References Cited

A complete list of all references cited in this rulemaking is available upon request from the Supervisor, Austin Ecological Services Office (see **ADDRESSES** section above).

Author(s)

The primary authors of this proposed rule are staff of the Ecological Services Office in Austin, Texas (see **ADDRESSES** section above).

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. Amend § 17.11(h), the List of Endangered and Threatened Wildlife, as follows:

a. Under ''INSECTS,'' revise the entries for ''Beetle, Comal Springs dryopid'' and ''Beetle, Comal Springs riffle'' to read as set forth below; and

b. Under ''CRUSTACEANS,'' revise the entry for ''Amphipod, Peck's cave'' to read as set forth below.

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
INSECTS							
Beetle, Comal Springs dryopid	*Stygoparnus comalensis.*	U.S.A.(TX)	NA	E	629	17.95(i)	NA
Beetle, Comal Springs riffle	*Heterelmis comalensis.*	U.S.A.(TX)	NA	E	629	17.95(i)	NA
CRUSTACEANS							
*	*	*	*	*	*		*
Amphipod, Peck's cave	Stygobromus (=*Stygonectes*) pecki.	U.S.A.(TX)	NA	E	629	17.95(h)	NA
*	*	*	*	*	*		*

3. Amend § 17.95 as follows:

a. In paragraph (h), add an entry for ''Peck's cave amphipod (*Stygobromus pecki*)'', in the same alphabetical order in which the species appears in the table at 50 CFR 17.11(h), to read as set forth below; and

b. In paragraph (i), add entries for ''Comal Springs dryopid beetle (*Stygoparnus comalensis*)'' and ''Comal Springs riffle beetle (*Heterelmis comalensis*)'', in the same alphabetical order in which these species appear in the table at 50 CFR 17.11(h), to read as set forth below.

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(h) *Crustaceans.*

* * * * *

Peck's cave amphipod (*Stygobromus pecki*)

(1) Critical habitat units are depicted for Comal County, Texas, on the maps below.

(2) The primary constituent elements of critical habitat for Peck's cave amphipod are the habitat components that provide:

(i) High-quality water with pollutant levels of soaps, detergents, heavy metals, pesticides, fertilizer nutrients, petroleum hydrocarbons, and semi-volatile compounds such as industrial cleaning agents no greater than those documented to currently exist and including:

(A) Low salinity with total dissolved solids that generally range from 307 to 368 mg/L; and

(B) Low turbidity that generally is less than 5 NTUs;

(C) Aquifer water temperatures that range from approximately 68 to 75 °F (20 to 24 °C); and

(ii) Food supply for the Peck's cave amphipod that includes, but is not limited to, detritus (decomposed materials), leaf litter, and decaying roots.

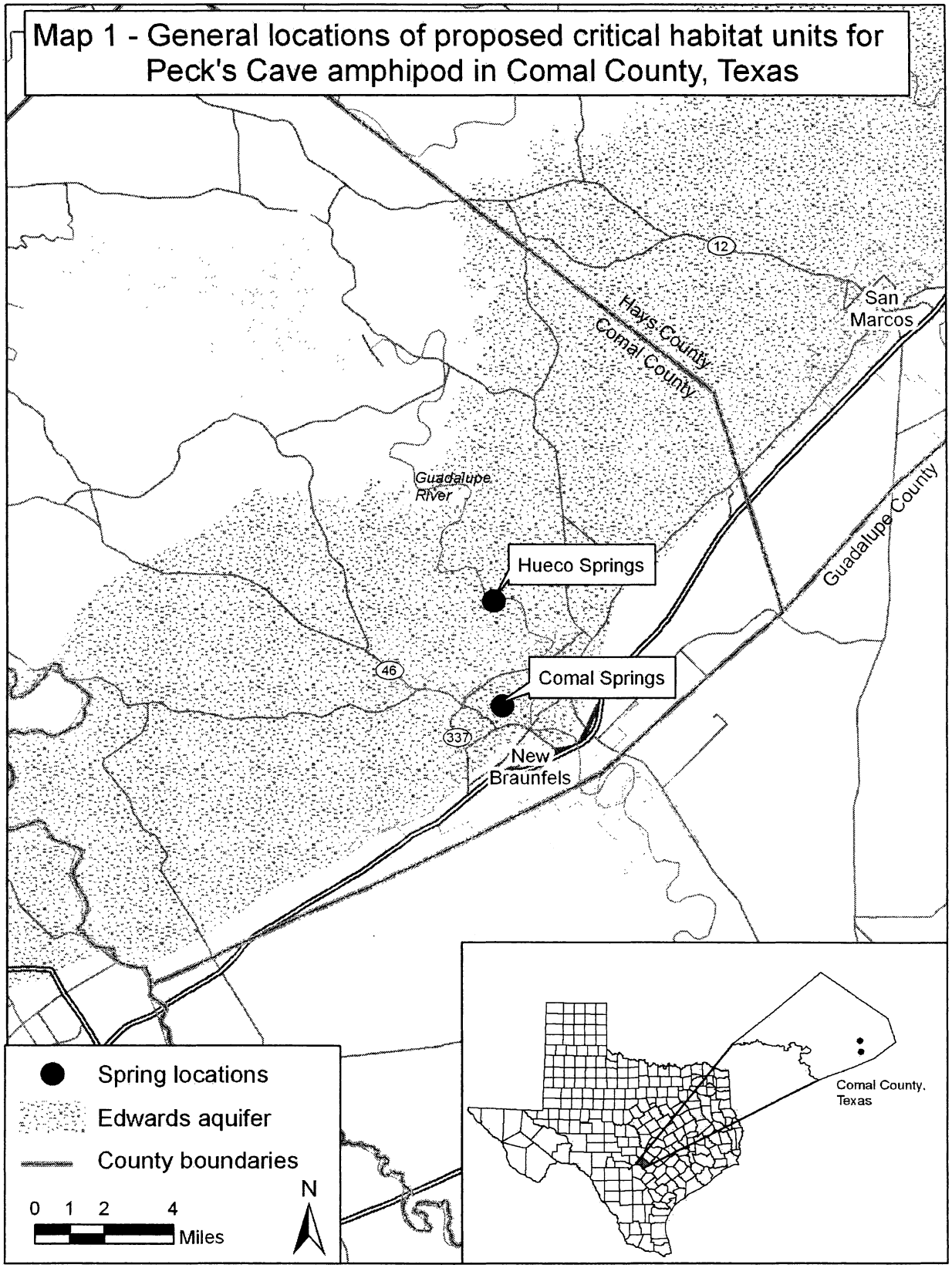
(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, and roads) and the surface

on which they are located that exist on the effective date of this rule and do not contain one or more of the primary constituent elements. Where lakes are proposed, critical habitat does not include the lake bottom beyond 50 feet from the spring outlet.

(4) *Critical habitat map units.* Data layers defining map units were created by using ArcGIS. All coordinates are UTM zone 14 coordinate pairs, referenced to North American Horizontal Datum 1983. Coordinates were derived from 2004 digital orthophotographs. All acreage and mileage calculations were performed using GIS.

(5) **Note:** Index map (Map 1) follows:

BILLING CODE 4310–55–P

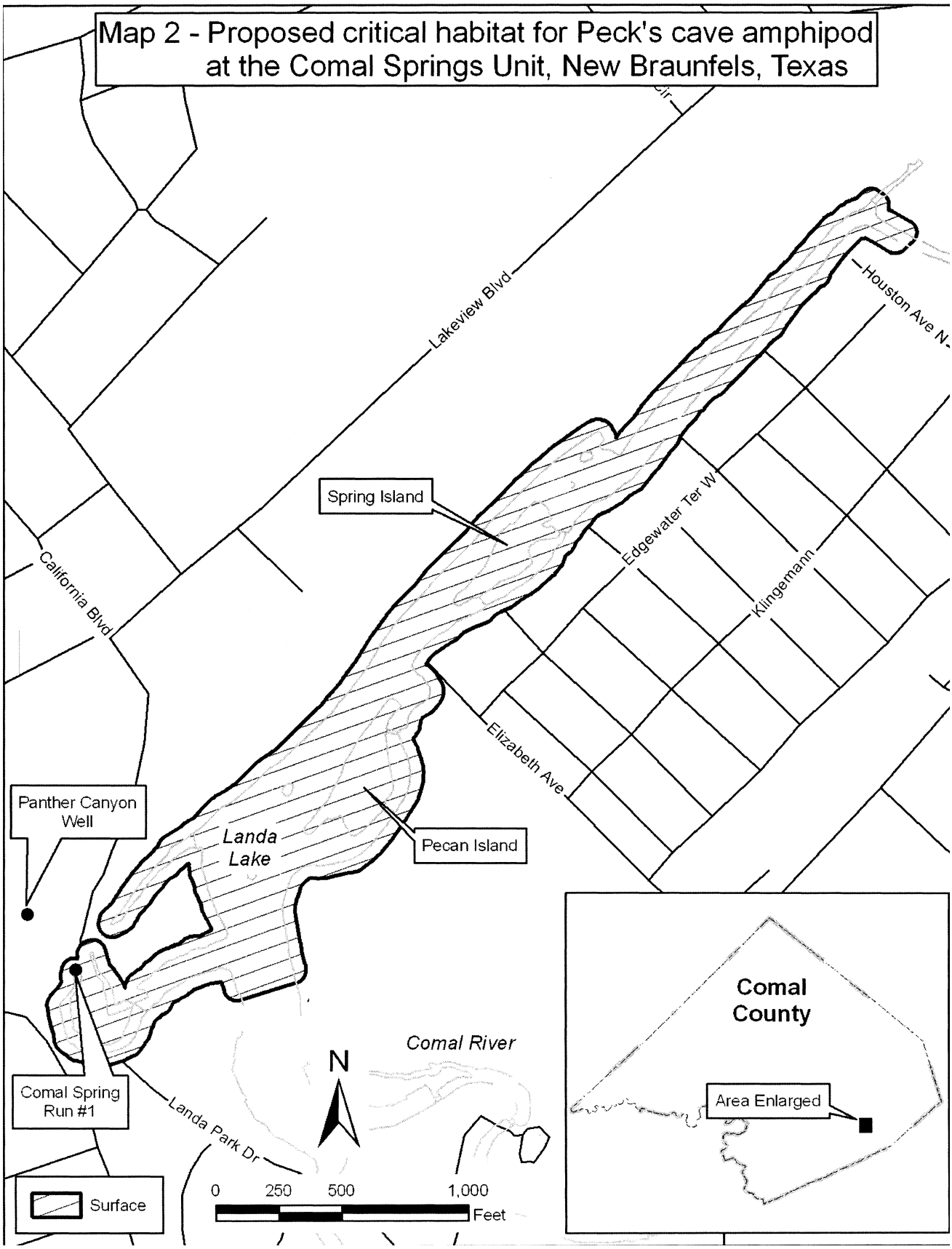


(6) Comal Springs Unit, Comal County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N) : 583387, 3287251; 583392, 3287264; 583405, 3287280; 583404, 3287290; 583407, 3287301; 583414, 3287307; 583425, 3287308; 583425, 3287320; 583433, 3287328; 583444, 3287330; 583454, 3287325; 583463, 3287301; 583482, 3287272; 583486, 3287286; 583501, 3287296; 583520, 3287314; 583547, 3287326; 583557, 3287333; 583572, 3287335; 583586, 3287342; 583567, 3287387;

583560, 3287408; 583559, 3287423; 583534, 3287403; 583499, 3287359; 583491, 3287347; 583484, 3287340; 583471, 3287334; 583461, 3287334; 583452, 3287340; 583450, 3287350; 583454, 3287364; 583465, 3287374; 583494, 3287415; 583521, 3287443; 583526, 3287453; 583563, 3287477; 583589, 3287503; 583613, 3287519; 583643, 3287547; 583662, 3287561; 583719, 3287617; 583759, 3287669; 583780, 3287701; 583811, 3287743; 583833, 3287764; 583848, 3287784; 583892, 3287826; 583911, 3287850; 583970, 3287907; 584008, 3287938; 584047, 3287963; 584055, 3287964; 584065, 3287960; 584073, 3287948; 584074, 3287941; 584081, 3287952; 584131, 3288011; 584164, 3288044; 584183, 3288062; 584197, 3288071; 584216, 3288093; 584236, 3288110; 584258, 3288138; 584284, 3288161; 584325, 3288209; 584343, 3288223; 584364, 3288233; 584375, 3288243; 584386, 3288244; 584401, 3288234; 584403, 3288218; 584433, 3288201; 584437, 3288193; 584436, 3288184; 584416, 3288167; 584405, 3288167; 584375, 3288184; 584365, 3288180; 584344, 3288156; 584329, 3288131; 584320, 3288125; 584298, 3288103; 584273, 3288067; 584204, 3287997; 584187, 3287985; 584176, 3287973; 584152, 3287943; 584147, 3287933; 584105, 3287880; 584080, 3287862; 584049, 3287844; 584026, 3287815; 584021, 3287805; 584013, 3287798; 584009, 3287787; 583999, 3287775; 583971, 3287751; 583947, 3287735; 583927, 3287725; 583920, 3287718; 583890, 3287704; 583850, 3287673; 583845, 3287665; 583851, 3287662; 583860, 3287650; 583865, 3287640; 583865, 3287629; 583863, 3287622; 583854, 3287609; 583840, 3287600; 583836, 3287584; 583829, 3287576; 583838, 3287552; 583841, 3287535; 583841, 3287520; 583835, 3287501; 583804, 3287452; 583790, 3287435; 583766, 3287416; 583727, 3287406; 583706, 3287406; 583695, 3287398; 583686, 3287370; 583699, 3287298; 583698, 3287288; 583694, 3287282; 583617, 3287257; 583610, 3287258; 583605, 3287262; 583597, 3287280; 583584, 3287277; 583565, 3287270; 583541, 3287255; 583534, 3287244; 583518, 3287233; 583510, 3287211; 583496, 3287192; 583480, 3287183; 583459, 3287177; 583436, 3287178; 583419, 3287184; 583400, 3287198; 583396, 3287205; 583387, 3287251.

(ii) **Note:** Comal Springs Unit (Map 2) follows:



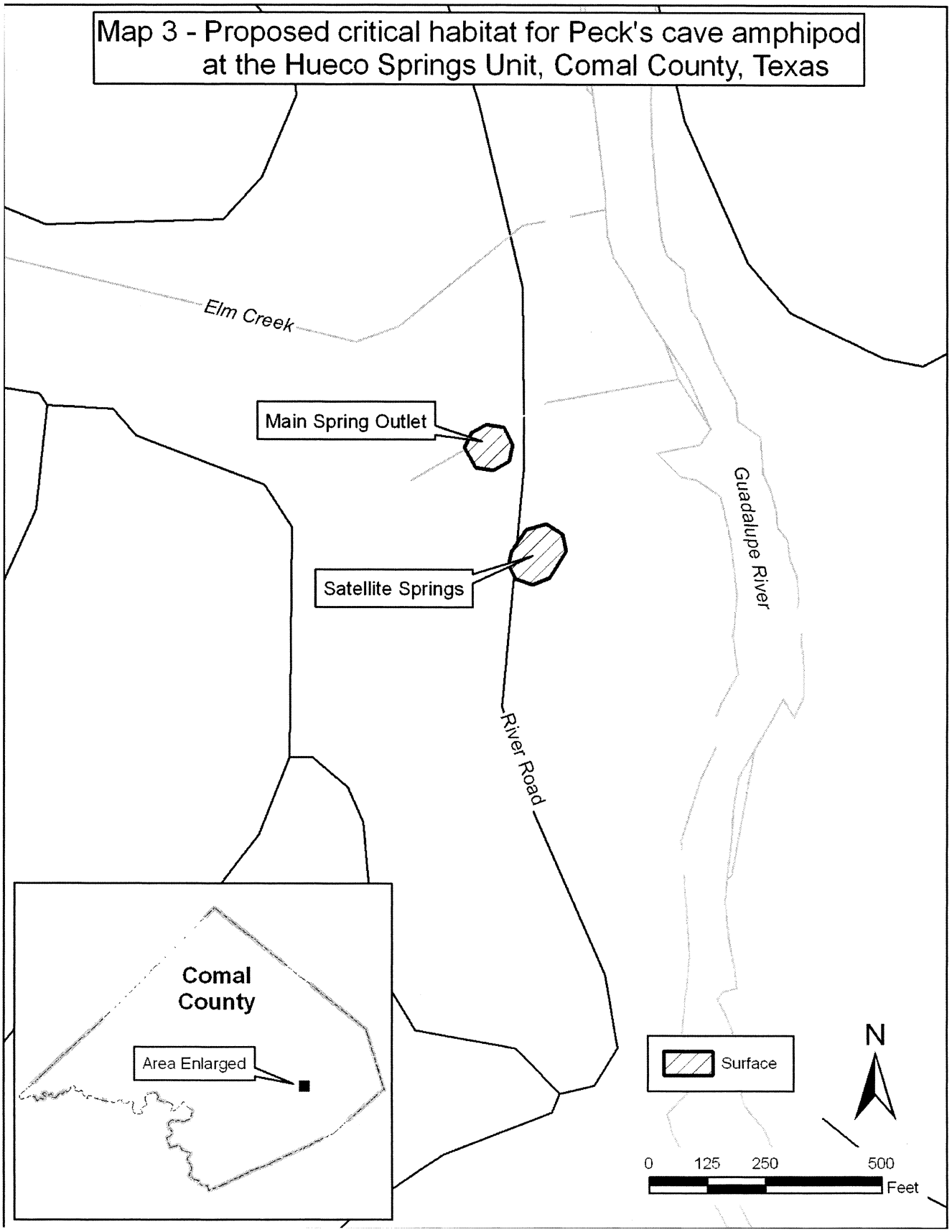
(7) Hueco Springs Unit, Comal County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N) : 583113, 3292498; 583114, 3292498; 583115, 3292498;

583116, 3292498; 583117, 3292498; 583118, 3292497; 583119, 3292497; 583120, 3292497; 583120, 3292496; 583121, 3292496; 583122, 3292495; 583123, 3292495; 583124, 3292494; 583124, 3292493; 583125, 3292493; 583126, 3292492; 583126, 3292491; 583127, 3292490; 583127, 3292489; 583127, 3292489; 583128, 3292488; 583128, 3292487; 583128, 3292486; 583128, 3292485; 583128, 3292484; 583128, 3292483; 583128, 3292482; 583128, 3292481; 583128, 3292480; 583128, 3292479; 583128, 3292478; 583127, 3292477; 583127, 3292477; 583127, 3292476; 583126, 3292475; 583126, 3292474; 583125, 3292473; 583124, 3292473; 583124, 3292472; 583123, 3292471; 583122, 3292471; 583122, 3292470; 583121, 3292470; 583120, 3292469; 583119, 3292469; 583118, 3292468; 583117, 3292468; 583116, 3292468; 583115, 3292468; 583114, 3292468; 583113, 3292468; 583112, 3292468; 583111, 3292468; 583111, 3292468; 583110, 3292468; 583109, 3292468; 583108, 3292469; 583107, 3292469; 583106, 3292470; 583105, 3292470; 583104, 3292471; 583104, 3292471; 583103, 3292472; 583102, 3292472; 583102, 3292473; 583101, 3292474; 583100, 3292475; 583100, 3292475; 583100, 3292476; 583099, 3292477; 583099, 3292478; 583099, 3292479; 583098, 3292480; 583098, 3292481; 583098, 3292482; 583098, 3292483; 583098, 3292484; 583098, 3292485; 583098, 3292486; 583098, 3292487; 583099, 3292488; 583099, 3292488; 583099, 3292489; 583100, 3292490; 583100, 3292491; 583101, 3292492; 583101, 3292493; 583102, 3292493; 583103, 3292494; 583103, 3292495; 583104, 3292495; 583105, 3292496; 583106, 3292496; 583107, 3292497; 583108, 3292497; 583108, 3292497; 583109, 3292498; 583110, 3292498; 583111, 3292498; 583112, 3292498; 583113, 3292498.

(ii) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 583132, 3292420; 583133, 3292421; 583133, 3292421; 583133, 3292422; 583134, 3292423; 583134, 3292424; 583134, 3292425; 583135, 3292426; 583136, 3292426; 583136, 3292427; 583137, 3292428; 583138, 3292428; 583138, 3292429; 583139, 3292430; 583140, 3292430; 583141, 3292430; 583142, 3292431; 583143, 3292431; 583143, 3292431; 583144, 3292432; 583145, 3292432; 583146, 3292432; 583147, 3292432; 583148, 3292432; 583149, 3292432; 583150, 3292432; 583151, 3292432; 583152, 3292431; 583153, 3292431; 583154, 3292431; 583155, 3292430; 583155, 3292430; 583156, 3292429; 583157, 3292429; 583158, 3292428; 583158, 3292427; 583159, 3292427; 583160, 3292426; 583160, 3292425; 583161, 3292424; 583161, 3292423; 583162, 3292422; 583162, 3292422; 583162, 3292421; 583162, 3292420; 583163, 3292419; 583163, 3292419; 583163, 3292417; 583163, 3292416; 583163, 3292415; 583162, 3292414; 583162, 3292421; 583162, 3292412; 583162, 3292411; 583161, 3292410; 583161, 3292409; 583160, 3292409; 583160, 3292408; 583159, 3292407; 583159, 3292406; 583158, 3292406; 583157, 3292405; 583156, 3292404; 583156, 3292404; 583156, 3292403; 583155, 3292402; 583155, 3292402; 583155, 3292401; 583154, 3292400; 583154, 3292399; 583153, 3292398; 583152, 3292398; 583152, 3292397; 583151, 3292396; 583150, 3292396; 583149, 3292395; 583149, 3292395; 583148, 3292394; 583147, 3292394; 583146, 3292393; 583145, 3292393; 583144, 3292393; 583143, 3292393; 583142, 3292393; 583141, 3292393; 583140, 3292393; 583139, 3292393; 583138, 3292393; 583137, 3292393; 583137, 3292393; 583136, 3292394; 583135, 3292394; 583134, 3292395; 583133, 3292395; 583132, 3292396; 583132, 3292396; 583131, 3292397; 583130, 3292397; 583129, 3292398; 583129, 3292399; 583128, 3292400; 583128, 3292400; 583127, 3292401; 583127, 3292402; 583127, 3292403; 583126, 3292404; 583126, 3292405; 583126, 3292406; 583126, 3292407; 583126, 3292408; 583126, 3292409; 583126, 3292410; 583126, 3292411; 583126, 3292412; 583127, 3292413; 583127, 3292413; 583127, 3292414; 583128, 3292415; 583128, 3292416; 583129, 3292417; 583129, 3292418; 583130, 3292418; 583131, 3292419; 583131, 3292420; 583132, 3292420.

(iii) **Note:** Hueco Springs Unit (Map 3) follows:



* * * * *

(i) *Insects.*

* * * * *

Comal Springs dryopid beetle (*Stygoparnus comalensis*)

(1) Critical habitat units are depicted for Comal and Hays counties, Texas, on the maps below.

(2) The primary constituent elements of critical habitat for the Comal Springs dryopid beetle are the habitat components that provide:

(i) High-quality water with pollutant levels of soaps, detergents, heavy metals, pesticides, fertilizer nutrients, petroleum hydrocarbons, and semi-volatile compounds such as industrial cleaning agents no greater than those documented to currently exist and including:

(A) Low salinity with total dissolved solids that generally range from 307 to 368 mg/L; and

(B) Low turbidity that generally is less than 5 NTUs;

(C) Aquifer water temperatures that range from approximately 68 to 75 °F (20 to 24 °C);

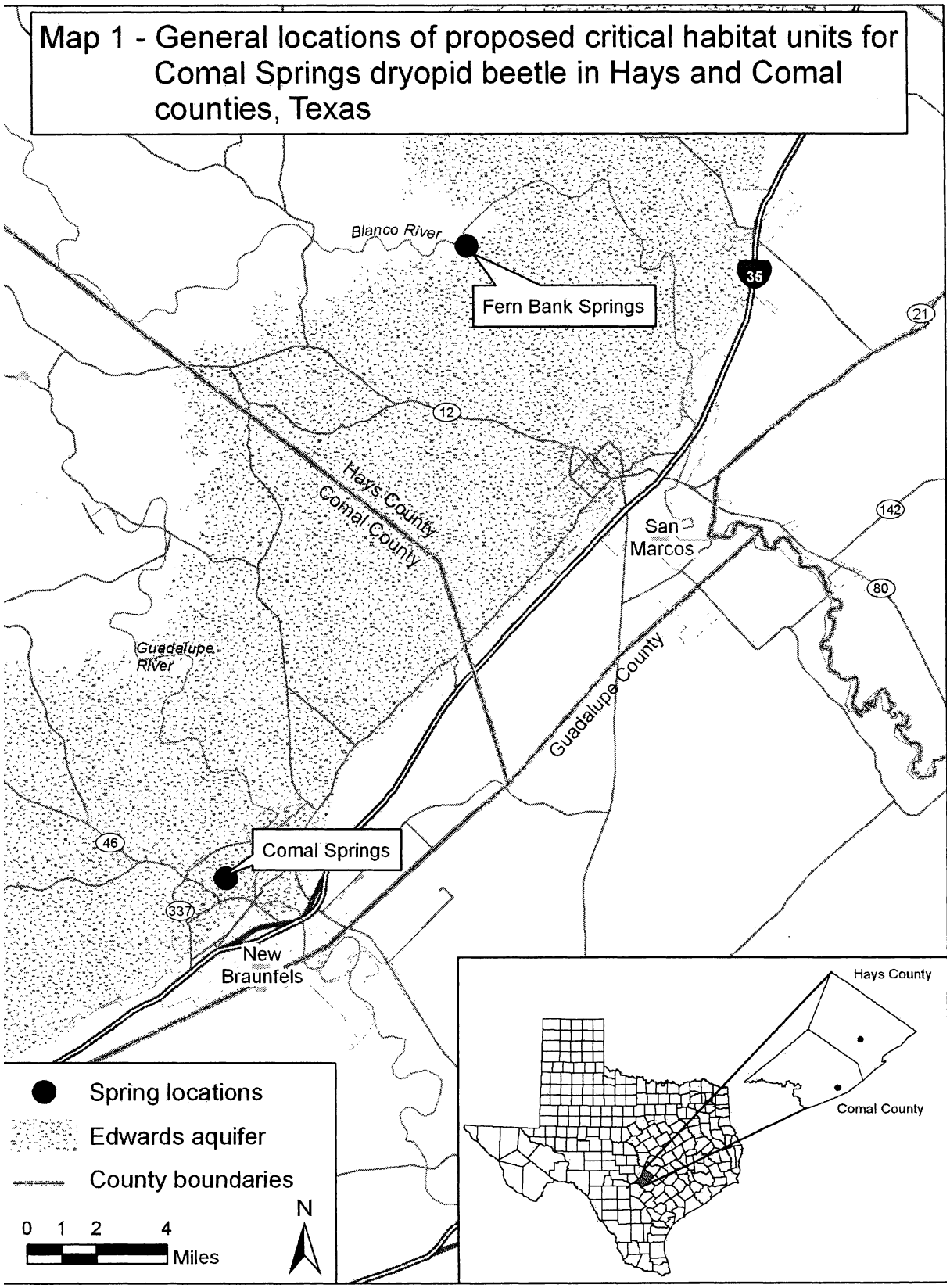
(D) A hydrologic regime with turbulent flows that provide adequate levels of dissolved oxygen in the general range of 4.0 to 10.0 mg/L for respiration of the Comal Springs dryopid beetle; and

(ii) Food supply for the Comal Springs dryopid beetle that includes, but is not limited to, detritus (decomposed materials), leaf litter, and decaying roots.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, and roads) and the surface on which they are located that exist on the effective date of this rule and do not contain one or more of the primary constituent elements. Where lakes are proposed, critical habitat does not include the lake bottom beyond 50 feet from the spring outlet.

(4) *Critical habitat map units.* Data layers defining map units were created by using ArcGIS. All coordinates are UTM zone 14 coordinate pairs, referenced to North American Horizontal Datum 1983. Coordinates were derived from 2004 digital orthophotographs. All acreage and mileage calculations were performed using GIS.

(5) **Note:** Index map of the critical habitat units for Comal Springs dryopid beetle and Comal Springs riffle beetle (Map 1) follows:



(6) Comal Springs Unit, Comal County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 583387, 3287251; 583392, 3287264; 583405, 3287280; 583404, 3287290; 583407, 3287301; 583414, 3287307; 583425, 3287308; 583425, 3287320; 583433, 3287328; 583444, 3287330; 583454, 3287325; 583463, 3287301; 583482, 3287272; 583486, 3287286; 583501, 3287296; 583520, 3287314; 583547, 3287326;

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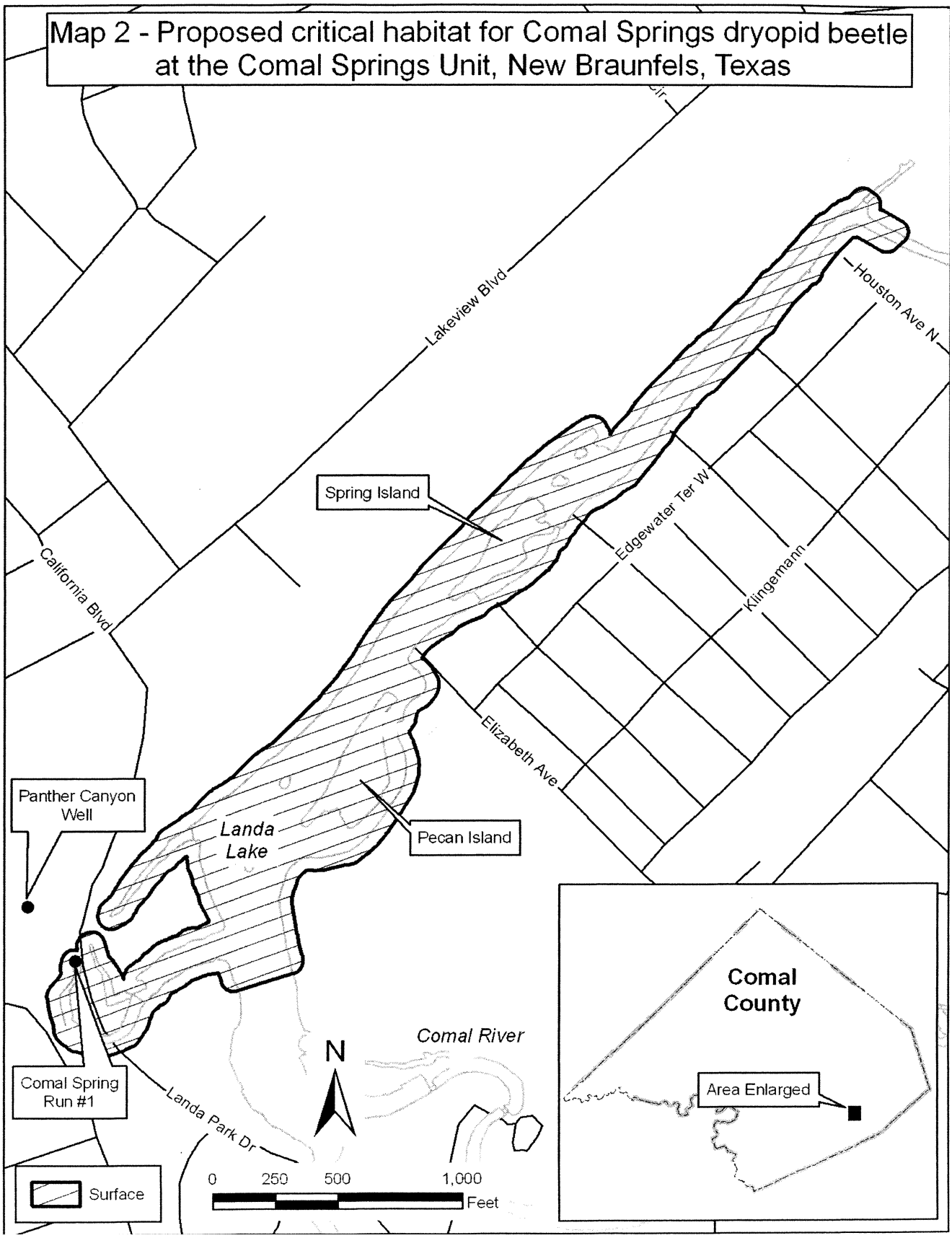
(ii) **Note:** Comal Springs Unit (Map 2) follows:

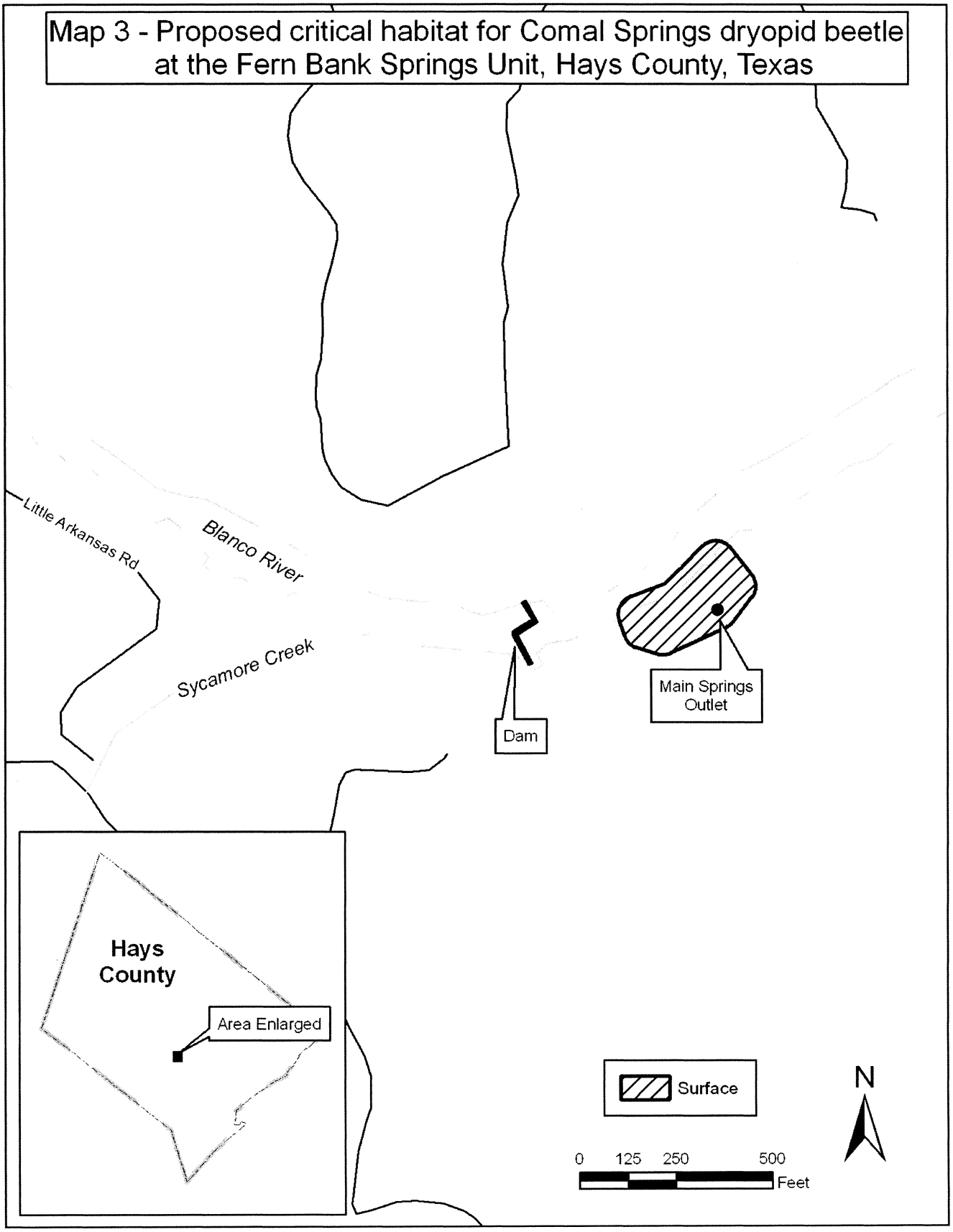


(7) Fern Bank Springs Unit, Hays County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 595131, 3317374; 595131, 3317375; 595132, 3317376;

595132, 3317377; 595132, 3317378; 595132, 3317379; 595133, 3317380; 595133, 3317381; 595133, 3317382; 595134, 3317383; 595135, 3317383; 595135, 3317384; 595136, 3317385; 595137, 3317386; 595137, 3317386; 595138, 3317387; 595139, 3317387; 595140, 3317388; 595141, 3317388; 595141, 3317388; 595168, 3317398; 595181, 3317411; 595198, 3317428; 595198, 3317428; 595199, 3317429; 595199, 3317430; 595200, 3317430; 595201, 3317431; 595202, 3317431; 595203, 3317432; 595204, 3317432; 595205, 3317432; 595206, 3317432; 595207, 3317433; 595208, 3317433; 595209, 3317433; 595210, 3317433; 595211, 3317433; 595212, 3317433; 595213, 3317432; 595214, 3317432; 595214, 3317432; 595215, 3317431; 595216, 3317431; 595217, 3317430; 595218, 3317430; 595219, 3317429; 595219, 3317428; 595220, 3317428; 595221, 3317427; 595237, 3317406; 595237, 3317406; 595238, 3317405; 595238, 3317404; 595239, 3317404; 595239, 3317403; 595239, 3317402; 595240, 3317401; 595240, 3317400; 595240, 3317400; 595240, 3317399; 595240, 3317398; 595240, 3317397; 595240, 3317396; 595240, 3317395; 595240, 3317394; 595240, 3317394; 595240, 3317393; 595239, 3317392; 595239, 3317391; 595239, 3317390; 595238, 3317389; 595238, 3317388; 595237, 3317388; 595237, 3317388; 595223, 3317369; 595223, 3317369; 595222, 3317368; 595221, 3317367; 595221, 3317366; 595220, 3317366; 595219, 3317365; 595218, 3317365; 595217, 3317364; 595217, 3317364; 595173, 3317343; 595173, 3317343; 595172, 3317343; 595171, 3317342; 595170, 3317342; 595169, 3317342; 595168, 3317342; 595167, 3317342; 595166, 3317342; 595165, 3317342; 595164, 3317342; 595163, 3317342; 595162, 3317343; 595146, 3317347; 595146, 3317348; 595145, 3317348; 595144, 3317348; 595143, 3317349; 595142, 3317349; 595141, 3317350; 595141, 3317350; 595141, 3317350; 595140, 3317351; 595139, 3317352; 595139, 3317352; 595139, 3317353; 595138, 3317353; 595138, 3317354; 595137, 3317355; 595137, 3317356; 595136, 3317357; 595136, 3317357; 595132, 3317369; 595132, 3317370; 595132, 3317370; 595132, 3317371; 595132, 3317372; 595131, 3317373; 595131, 3317374.

(ii) **Note:** Fern Bank Springs Unit (Map 3) follows:


Map 3 - Proposed critical habitat for Comal Springs dryopid beetle at the Fern Bank Springs Unit, Hays County, Texas
Little Arkansas Rd
Blanco River
Sycamore Creek
Dam
Main Springs Outlet
Hays County
Area Enlarged
Surface
N
0 125 250 500
Feet

* * * * *

Comal Springs riffle beetle (*Heterelmis comalensis*)

(1) Critical habitat units are depicted for Comal and Hays counties, Texas, on the maps below.

(2) The primary constituent elements of critical habitat for Comal Springs riffle beetle are the habitat components that provide:

(i) High-quality water with pollutant levels of soaps, detergents, heavy metals, pesticides, fertilizer nutrients, petroleum hydrocarbons, and semi-volatile compounds such as industrial cleaning agents no greater than those documented to currently exist and including:

(A) Low salinity with total dissolved solids that generally range from 307 to 368 mg/L; and

(B) Low turbidity that generally is less than 5 NTUs;

(C) Aquifer water temperatures that range from approximately 68 to 75 °F (20 to 24 °C);

(D) A hydrologic regime with turbulent flows that provide adequate levels of dissolved oxygen in the general range of 4.0 to 10.0 mg/L for respiration of the Comal Springs riffle beetle; and

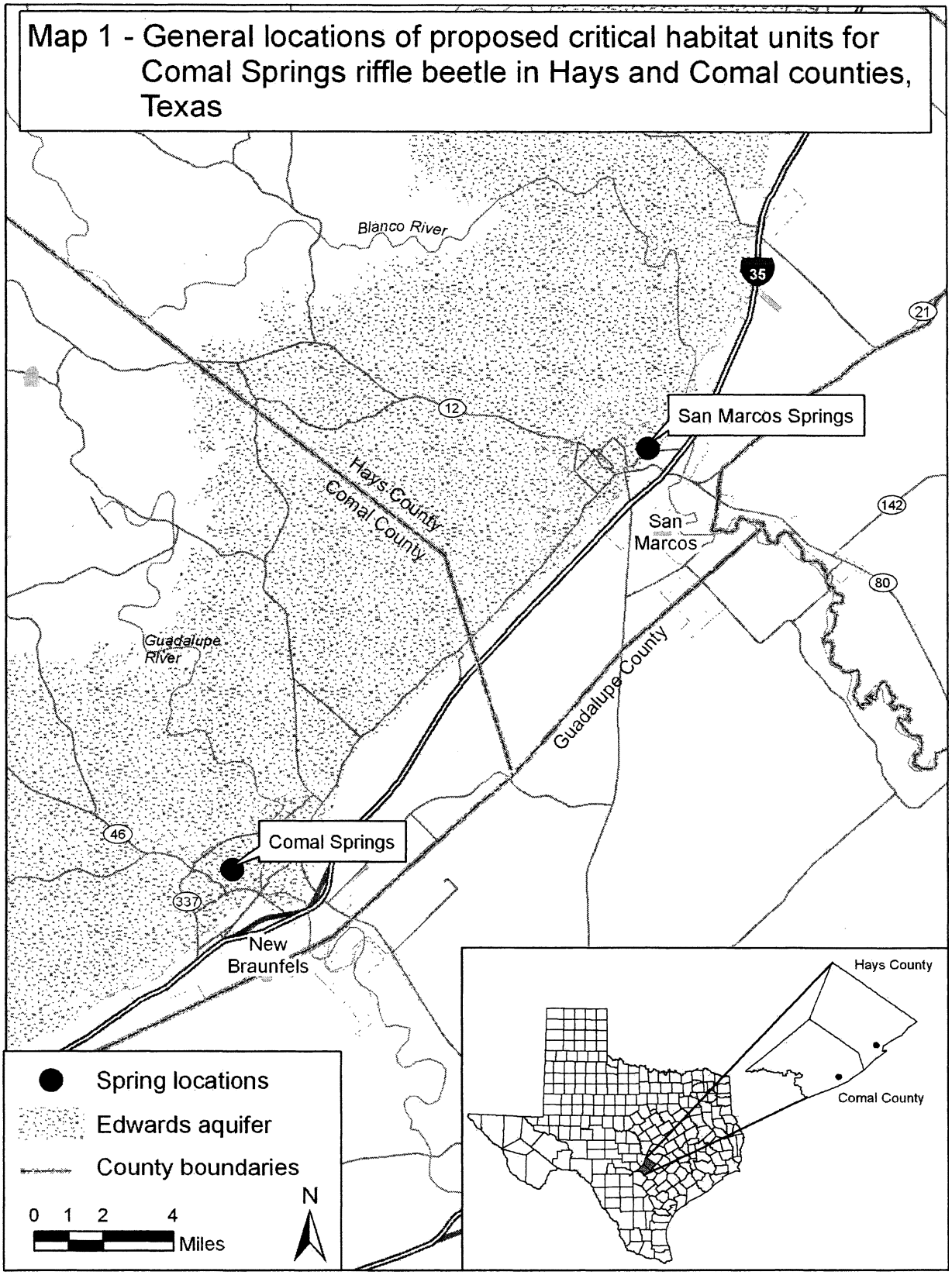
(ii) Food supply for the Comal Springs riffle beetle that includes, but is not limited to, detritus (decomposed materials), leaf litter, and decaying roots.

(iii) Bottom substrate in surface water habitat of the Comal Springs riffle beetle that is composed of sediment-free gravel and cobble ranging in size from 0.3 to 5.0 inches (8 to 128 millimeters).

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, and roads) and the surface on which they are located that exist on the effective date of this rule and do not contain one or more of the primary constituent elements. Where lakes are proposed, critical habitat does not include the lake bottom beyond 50 feet from the spring outlet.

(4) *Critical habitat map units.* Data layers defining map units were created by using ArcGIS. All coordinates are UTM zone 14 coordinate pairs, referenced to North American Horizontal Datum 1983. Coordinates were derived from 2004 digital orthophotographs. All acreage and mileage calculations were performed using GIS.

(5) **Note:** Index map of the critical habitat units for Comal Springs riffle beetle (Map 1) follows:



(6) Comal Springs Unit, Comal County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 583420, 3287293; 583423, 3287293; 583426, 3287293; 583428, 3287290; 583429, 3287285; 583428, 3287280; 583426, 3287273; 583422, 3287268; 583416, 3287259; 583415, 3287255; 583415, 3287249; 583417, 3287238; 583418, 3287233; 583419, 3287228; 583418, 3287222; 583421, 3287221; 583427, 3287216;

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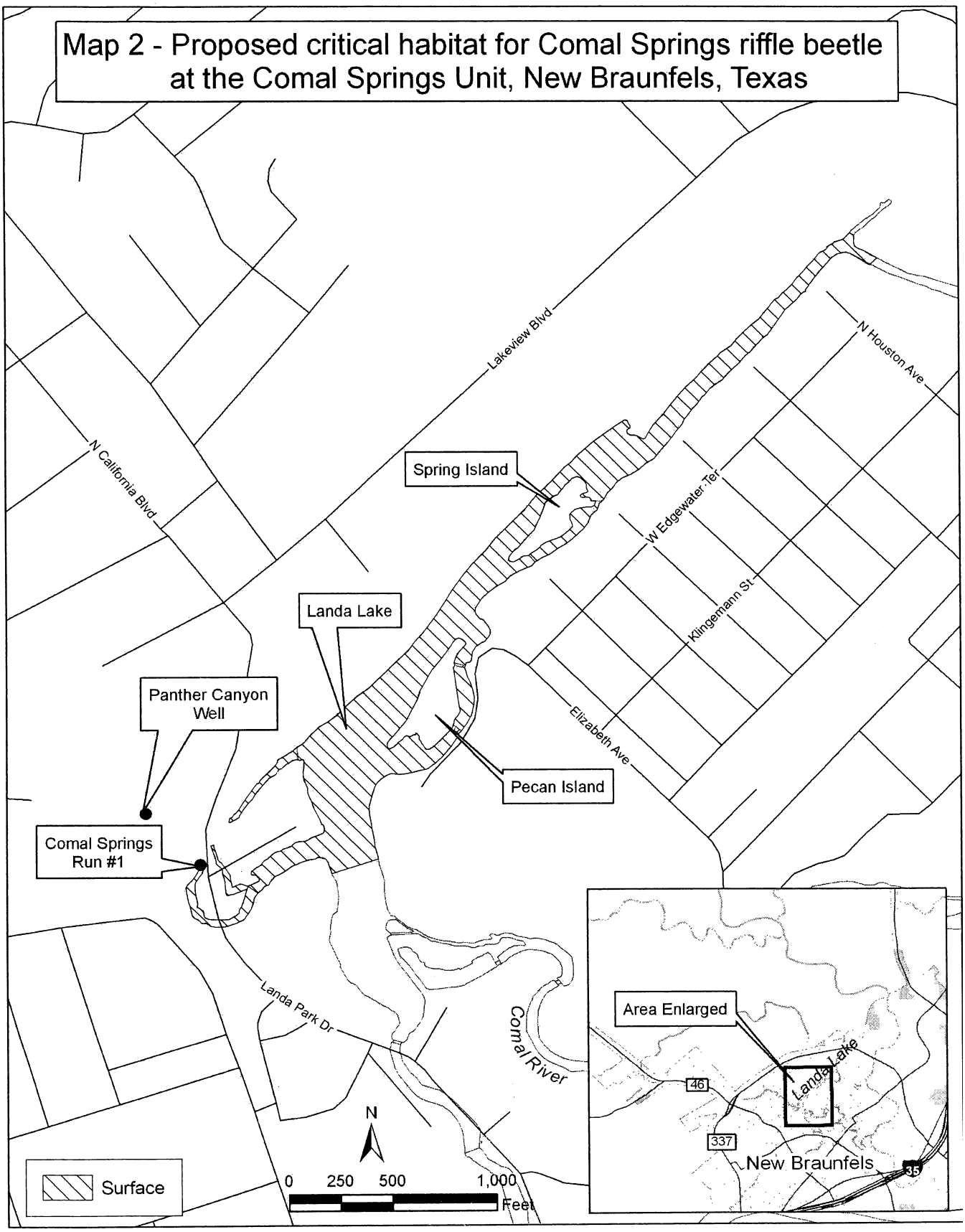
(ii) **Note:** Comal Springs Unit (Map 2) follows:

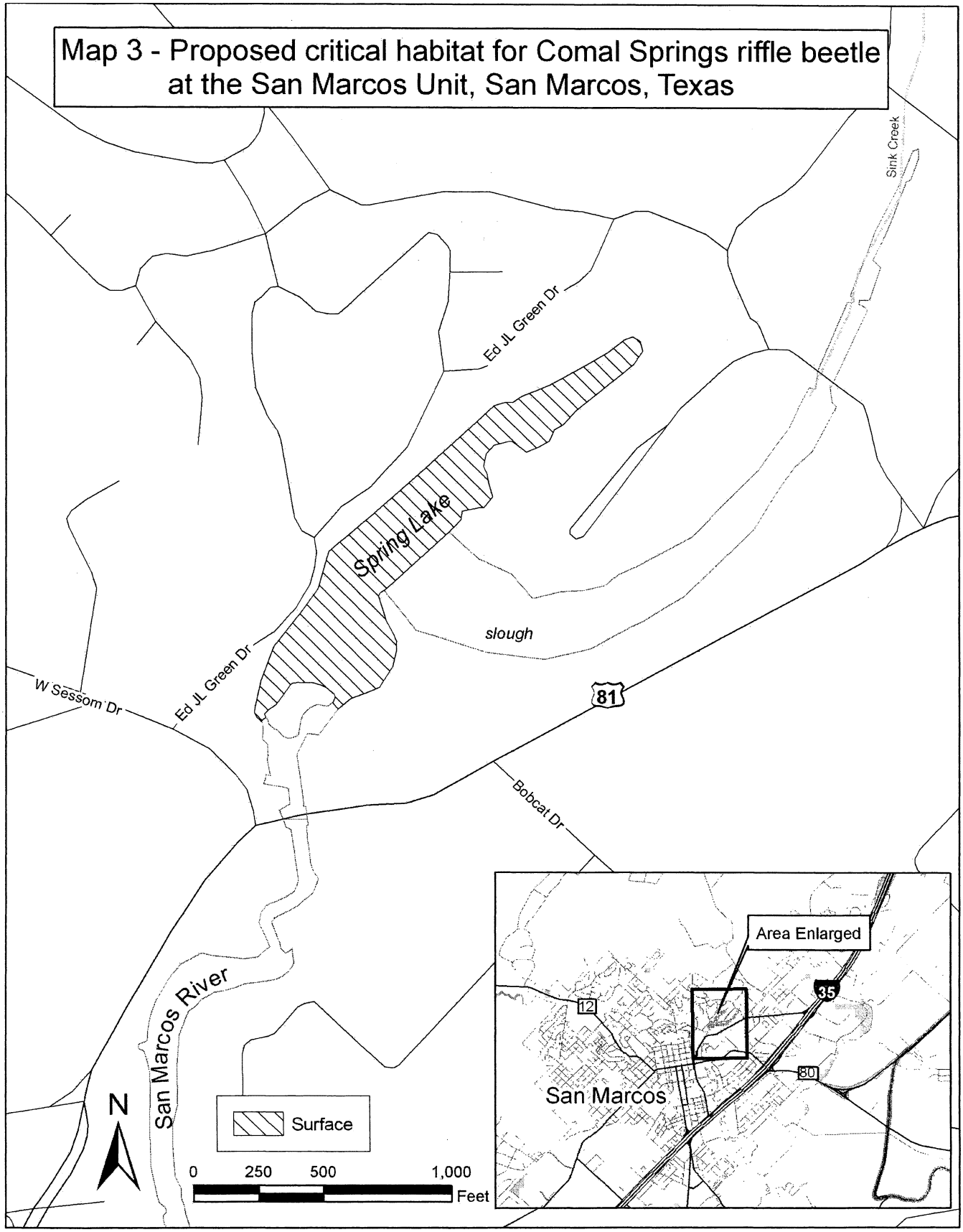


(7) San Marcos Springs Unit, Hays County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 602869, 3307092; 602870, 3307100; 602877, 3307131;

602892, 3307172; 602926, 3307215; 602936, 3307229; 602942, 3307237; 602945, 3307243; 602957, 3307286; 603007, 3307329; 603072, 3307386; 603154, 3307462; 603158, 3307463; 603166, 3307466; 603175, 3307465; 603186, 3307473; 603219, 3307486; 603258, 3307508; 603288, 3307526; 603307, 3307541; 603317, 3307544; 603326, 3307539; 603329, 3307527; 603319, 3307512; 603251, 3307456; 603234, 3307439; 603224, 3307433; 603218, 3307419; 603206, 3307412; 603192, 3307406; 603175, 3307418; 603170, 3307419; 603153, 3307414; 603144, 3307404; 603141, 3307389; 603145, 3307379; 603147, 3307369; 603152, 3307352; 603141, 3307339; 603135, 3307339; 603124, 3307337; 603120, 3307336; 603116, 3307335; 603114, 3307325; 603109, 3307318; 603105, 3307315; 603104, 3307314; 603100, 3307310; 603024, 3307239; 603023, 3307240; 603019, 3307237; 603017, 3307233; 603026, 3307203; 603035, 3307187; 603038, 3307178; 603038, 3307166; 603033, 3307148; 603027, 3307138; 603018, 3307123; 603002, 3307117; 602983, 3307109; 602968, 3307097; 602962, 3307105; 602962, 3307105; 602965, 3307112; 602963, 3307116; 602958, 3307119; 602954, 3307123; 602946, 3307126; 602938, 3307129; 602928, 3307129; 602921, 3307129; 602913, 3307128; 602896, 3307105; 602894, 3307101; 602887, 3307097; 602881, 3307091; 602883, 3307087; 602877, 3307082; 602875, 3307084; 602872, 3307087; 602869, 3307092.

(ii) **Note:** San Marcos Springs Unit (Map 3) follows:


Map 3 - Proposed critical habitat for Comal Springs riffle beetle at the San Marcos Unit, San Marcos, Texas
Sink Creek
Ed JL Green Dr
Spring Lake
slough
W Sessom Dr
Ed JL Green Dr
81
Bobcat Dr
San Marcos River
N
Surface
0 250 500 1,000
Feet
Area Enlarged
35
12
80
San Marcos

* * * * *

Dated: July 7, 2006.

Matt Hogan,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 06–6182 Filed 7–14–06; 8:45 am]

BILLING CODE 4310–55–C