Marjorie Ashby at (202) 501–1224, and provide an advance copy of your remarks not later than September 17, 1996.

Dated: August 28, 1996.

Ida M. Ustad,

Deputy Associate Administrator for Acquisition Policy.

[FR Doc. 96–22488 Filed 9–3–96; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AC22

Endangered and Threatened Wildlife and Plants; Withdrawal of Proposed Rule To List the Barton Springs Salamander as Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; withdrawal.

SUMMARY: The Fish and Wildlife Service (Service) withdraws the February 17, 1994, proposed rule (59 FR 7968) to list the Barton Springs salamander (*Eurycea sosorum*) as an endangered species under the Endangered Species Act of 1973, as amended. The Service finds that information now available, discussed below, justifies withdrawal of the proposed listing of this species as endangered. Various agencies of the State of Texas have committed to expedite developing and implementing conservation measures needed for the species and the Barton Springs segment of the Edwards Aquifer supporting its spring habitat, as set forth in the ''Barton Springs Salamander Conservation Agreement and Strategy'' (Agreement), signed August 13, 1996. The Texas Parks and Wildlife Department, Texas Natural Resource Conservation Commission, the Texas Department of Transportation, and the Service are signatories to the Agreement. The cooperative Agreement addresses risks to the survival and recovery of the Barton Springs salamander through a combination of measures. These measures include: revision, adoption, and implementation of regulations to protect water quality in the Barton Springs watershed and the Barton Springs segment of the Edwards Aquifer from degradation; development and implementation of Best Management Practices to address point source contaminants; refinement and enforcement of storage and disposal of hazardous waste protocols; increased commitment to compliance enforcement, monitoring, and reporting; and development and implementation of local management plans to prevent degradation of surface and springhead habitat. The Agreement contains measures to address potential water quantity concerns and to establish captive refugia to prevent extinction in case of catastrophic or chronic events. Because the commitment by the State of Texas to fully implement the cooperative Agreement significantly reduces the risks to the species, the Service concludes that listing is no longer warranted.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Ecological Services Field Office, U.S. Fish and Wildlife Service, 10711 Burnet Road, Suite 200, Austin, Texas 78758.

FOR FURTHER INFORMATION CONTACT: Steve Helfert, Field Supervisor (see **ADDRESSES** section) (512/490–0057; facsimile 512/490–0974).

SUPPLEMENTARY INFORMATION:

Background

The Service withdraws the proposal to designate the Barton Springs salamander (*Eurycea sosorum*) as endangered, under the authority of the Endangered Species Act (Act) (16 U.S.C. 1531 *et. seq.*). The Barton Springs salamander is entirely aquatic and neotenic (meaning it does not metamorphose into a terrestrial form and retains its bright red external gills throughout life) and depends on a constant supply of clean, flowing water from Barton Springs. Adults attain an average length of 6.35 cm (2.5 in). This species is slender, with slightly elongate limbs and reduced eyes. Dorsal coloration varies from pale purplish-brown or gray to yellowish-cream. Irregular spacing of dorsal pigments and pigment gaps results in a mottled, ''salt and pepper'' pattern (Sweet 1978, Chippindale *et al.* 1993a).

The Barton Springs salamander was first collected from Barton Springs Pool in 1946 by Bryce Brown and Alvin Flury (Chippindale *et al.* 1993a,b). Although he did not publish a formal description, Dr. Samuel Sweet (University of California at Santa Barbara) was the first to recognize the Barton Springs salamander as distinct from other central Texas *Eurycea* salamanders based on its restricted distribution and unique morphological and skeletal characteristics (such as its reduced eyes, elongate limbs, dorsal coloration, and reduced number of presacral vertebrae) (Sweet 1978, 1984). Based on Sweet's work and genetic studies conducted by the University of Texas and Chippindale *et al.* (1990, 1992, 1993b), the Barton Springs salamander was formally described in June 1993 (Chippindale *et al.* 1993a). An adult male (based on external examination only) collected from Barton Springs Pool in November 1992, was selected to be the holotype (Chippindale *et al.* 1993a).

The water that discharges at Barton Springs originates from the Barton Springs segment of the Edwards Aquifer (hereafter referred to as the ''Barton Springs segment''). Barton Springs is the fourth largest spring in Texas, exceeded only by Comal, San Marcos, and San Felipe springs (Brune 1981). The Barton Springs salamander is found near three of four hydrologically connected spring outlets that collectively make up Barton Springs. These three spring outlets are known as Parthenia (=Main), Eliza (=Concession, =Elk's), and Sunken Garden (=Old Mill, =Walsh) springs, and they occur in Zilker Park, which is owned and operated by the City of Austin. No salamanders have been found at the fourth spring outlet, which is in Barton Creek immediately above Barton Springs Pool (Chippindale *et al.* 1993a,b; Sweet, pers. comm., 1993; Hansen, *in litt.*, 1995a; William Russell, Texas Speleological Survey, *in litt.* 1995). The area around the main spring outlet (Parthenia Springs) was impounded in the late 1920's to create Barton Springs Pool. Flows from Eliza and Sunken Garden springs also are retained by concrete structures, forming small pools located on either side of Barton Springs Pool. The salamander has been observed at depths of about 0.1 to 5 m (0.3 to 16 ft) of water under gravel and small rocks, submerged leaves, and algae; among aquatic vegetation; and buried in organic debris. It is generally not found on exposed limestone surfaces or in silted areas (Sweet 1978; Dr. Charles Sexton, City of Austin, *in litt.*, 1992; Chippindale *et al.* 1993a,b; Jim Collett, Robert Hansen, and Mateo Scoggins, City of Austin, pers. comms., 1994–1995; O'Donnell, pers. obs., 1996).

''Dozens or hundreds'' of individuals were estimated to occur among sunken leaves in Eliza Pool during the 1970's (Chippindale *et al.* 1993a,b), while fewer than 15, and occasionally no individuals, were observed during surveys conducted in Eliza Pool between 1987 and 1992 (Chippindale *et al.* 1993a, b). Fifteen salamanders were observed on November 16, 1992 (Chippindale *et al.* 1993a,b). No salamanders were observed at this location between December 1993 and

May 1995 (Paul Chippindale, University of Texas at Arlington, Collett, Hansen, and Scoggins; pers. comms., 1994–1995; Hansen *in litt.* 1995b). Numbers ranged from 0 to 28 between June 1995 and July 1996. Dead salamanders also have been found (O'Donnell, unpubl. data, 1995–1996).

The Barton Springs salamander was reportedly abundant among the aquatic vegetation in the deep end of Barton Springs Pool when salamanders were collected there in 1946 (Hillis and Chippindale 1992; Chippindale *et al.* 1993a,b). Between 1989 and 1991, Sexton (*in litt.*, 1992) reported finding salamanders under rock rubble immediately adjacent to the main spring outflows on ''about one out of four [snorkeling] dives.'' On July 28, 1992, at least 50 salamanders (David Hillis, University of Texas at Austin, pers. comm., 1993) were found over an area of roughly 400 sq. m (4,300 sq. ft) near the spring outflows in Barton Springs Pool, about 3 to 5 m (10 to 15 ft) below the water (Chippindale *et al.* 1993a,b). Following reports of a fish kill on September 28, 1992, which was attributed to the improper application of chlorine to clean Barton Springs Pool, only 10 to 11 salamanders were observed and could only be found in an area of about 5 sq. m (54 sq. ft) in the immediate vicinity of the Parthenia Spring outflows (Chippindale *et al.* 1993a,b). At least 80 individuals were observed during the first comprehensive survey effort conducted in Barton Springs Pool on November 16, 1992, and about 150 individuals were seen on November 24, 1992 (Chippindale *et al.* 1993a,b). A comprehensive survey conducted immediately following an October 1994 flood event found a total of 16 salamanders. A total of 10 salamanders were counted in March 1995 (Hansen, *in litt.* 1995c).

The City of Austin initiated monthly transect surveys in June 1993 to provide more consistent data concerning the range and size of the Barton Springs salamander population in Barton Springs Pool. Survey counts ranged from 1 to 27 individuals (mean=13) between July 1993 and March 1995. The highest survey counts (27 individuals) were reported in November 1993 and May 1994. The lowest counts (ranging from 1 to 6 individuals) occurred during a five-month period following the October 1994 flood event (Hansen, *in litt.* 1995c). Survey counts between April 1995 and April 1996 ranged from 3 to 45 salamanders (City of Austin, unpubl. data).

The salamander was first observed at Sunken Garden Springs on January 12, 1993 (Chippindale *et al.* 1993b). Less than 20 individuals have been sighted on any given visit to that outlet (Chippindale 1993b; Hansen, pers. comm., 1995). Because it is part of the Barton Springs complex and is hydrologically connected to Parthenia Springs, biologists had speculated that the salamander occurred at Sunken Garden Springs. However, no salamanders were observed during previous surveys conducted at this location between 1987 and 1992. Low water levels and the presence of large rocks and sediment make searching for salamanders difficult at Sunken Garden Springs (Chippindale *et al.* 1993b; O'Donnell, pers. obs., 1995).

No evidence exists that the species' range extends beyond the immediate vicinity of Barton Springs. Despite survey efforts and searches at other spring outlets (including the spring outlet immediately above Barton Springs Pool), caves, and uncased wells in the Barton Springs segment, no other locations of the Barton Springs salamander have been found (Chippindale *et al.* 1993a,b; Russell, *in litt.* 1995; Russell 1996; Hillis; Andy Price, Texas Parks and Wildlife Department; Sweet; pers. comms., 1993; Hansen, *in litt.* 1995a). No other species of *Eurycea* is known to occur in this portion of the aquifer. Although the extent to which the Barton Springs salamander occurs in the aquifer is unknown, it is likely concentrated near the spring openings where light is available for photosynthesis and food supplies are abundant, water chemistry and temperatures are relatively constant, and where the salamander has immediate access to both surface and subsurface habitats. Barton Springs is also the main discharge point for the entire Barton Springs segment, and is one of the few perennial springs in the area.

The Barton Springs salamander's diet is believed to consist almost entirely of amphipods (*Hyallela azteca*) and other small invertebrates (James Reddell, Texas Memorial Museum, University of Texas at Austin, pers. comm., 1993; Hillis and Chippindale 1992; Chippindale *et al.* 1993a,b). Primary predators of the Barton Springs salamander are believed to be fish and crayfish (Chippindale *et al.* 1993a,b; Collett, Hansen, and Scoggins, pers. comms., 1995). Observations of larvae and females with eggs indicate breeding occurs year-round (Chippindale, pers. comm., 1993; Collett, Hansen, and Scoggins, pers. comms., 1994–1995). The Barton Springs salamander's eggs are white (Lynn Ables and Streett Coale, Dallas Aquarium; Jim Dwyer, Midwest Science Center; pers. comms., 1996) and have never been observed in the wild (Chippindale, Hillis, and Price, pers. comms. 1993; Collett, Hansen, and Scoggins, pers. comms., 1994–1995; O'Donnell, pers. obs., 1995–1996), and thus oviposition likely occurs in subsurface habitat.

Captive propagation of the Barton Springs salamander has been initiated at the Dallas Aquarium in Texas and at the National Biological Service's Midwest Science Center in Missouri. Although each facility has had one successful spawning, hatching success was less than 8 percent (Ables, Coale, and Dwyer, pers. comms., 1996).

The Barton Springs segment covers roughly 400 sq. km (155 sq. mi) from southern Travis County to northern Hays County, Texas, and has a storage capacity of over 37,000 hectare-meters (300,000 acre-feet) (Slade *et al.* 1985, 1986). The approximate boundaries are the ''bad-water'' line to the east (where dissolved solids are less than 1,000 milligrams/liter (mg/l) (1,000 parts per million (ppm)) in the aquifer, but greater than this to the east); the Colorado River to the north; the geologic divide between contiguous Edwards limestones overlying the aquifer and the Glen Rose limestones to the west (Slade *et al.* 1985, 1986); and a groundwater divide occurring roughly between the Onion Creek and Blanco River watersheds to the south. The area south of the southern boundary is known as the San Antonio segment of the Edwards aquifer and drains toward San Marcos Springs. Significant groundwater movement from the San Antonio segment northward to the Barton Springs segment is believed to occur only during extreme drought conditions. North of the southern boundary, water in the aquifer moves toward Barton Springs (Slade *et al.* 1985, 1986; Stein 1995). Transmissivity (the rate at which groundwater is transmitted through the aquifer) values for the Barton Springs segment have been estimated at 0.3 to 4,000 sq. m (3 to 47,000 sq. ft) per day and tend to increase as one moves northward toward the springs (Slade *et al.* 1985, 1986).

Barton Springs drains about 391 sq. km (151 sq. mi) of the Barton Springs segment. The remaining 10 sq. km (4 sq. mi) discharge at Cold and Deep Eddy springs and are believed to be hydrologically distinct from the area discharging from Barton Springs. Cold and Deep Eddy springs are recharged by Dry Creek and a portion of Barton Creek. About 96 percent of all springflow from the aquifer discharges through Barton Springs. The remaining 4 percent exits through intermittent springs. These intermittent springs flow only about 30

percent of the time and discharge up to 170 liters per second (l/s) (6 cubic feet per second (cfs)). The long-term mean discharge from Barton Springs is about 1,415 l/s (50 cfs), ranging from 283 l/s (10 cfs) to 4,700 l/s (166 cfs) (Andrews *et al.* 1984; Slade *et al.* 1985, 1986). The mean water temperature is 20°C (68°F) (Martyn-Baker *et al.* 1992). Depending on flow conditions and whether the pool is full or drained, about 55 to 82 percent of the total springflow from Barton Springs exits the main springs into Barton Springs Pool (Slade *et al.* 1986).

The Barton Springs segment is divided into the recharge and artesian zones. The recharge zone is that portion of the aquifer where Edwards limestones are exposed at the surface, and covers the western 79 percent (about 233 sq. km (90 sq. mi)) of the aquifer. The artesian zone is confined by an impermeable layer of Del Rio clay and covers the eastern 21 percent of the aquifer. About 85 percent of all recharge is through sinkholes, fractures, and other openings in the beds of six major creeks that cross the recharge zone, including (from north to south) Barton, Williamson, Slaughter, Bear, Little Bear, and Onion creeks. The remaining 15 percent of recharge is through tributaries and direct infiltration between the creeks (Andrews *et al.* 1984; Slade *et al.* 1985, 1986).

The watersheds of the six creeks upstream (west) of the recharge zone span about 684 sq. km (264 sq. mi). This area is referred to as the contributing zone and includes portions of Travis, Hays, and Blanco counties. The recharge and contributing zones (hereafter referred to collectively as the ''Barton Springs watershed'') make up the total area that provides water to the aquifer, which equals about 917 sq. km (354 sq. mi). Based on streamflow studies, Onion Creek and Barton Creek contribute the greatest percentages of total recharge to the aquifer (34 percent and 28 percent, respectively). Williamson, Slaughter, Bear, and Little Bear creeks each contribute 12 percent or less to total recharge (Andrews *et al.* 1984; Slade *et al.* 1985, 1986). The total maximum instantaneous recharge for the creeks has been estimated at 10,000 to 11,000 l/s (350 to 400 cfs), above which runoff does not infiltrate into the aquifer. Water flowing downstream off the recharge zone is runoff that has been rejected (Slade *et al.* 1985).

Water quality is highly variable throughout the Barton Springs segment and waters flowing from Barton Springs represent a mixture of these waters originating primarily from the six streams crossing the recharge zone. Owing to the amount of recharge contributed by Barton Creek and its proximity to Barton Springs, this creek has a greater impact on the water quality at the springs than any other recharge source in the Barton Springs segment (Slade *et al.* 1985, 1986). Although some development has occurred along Barton Creek near Barton Springs, these waters are diluted by recharge waters from more rural watersheds, such as Onion Creek. Although farthest from the springs, Onion Creek provides a significant amount of recharge and thus makes an important contribution to the water quality at Barton Springs (Andrews *et al.* 1984; Slade *et al.* 1985, 1986).

The Edwards Aquifer is a ''karst'' aquifer, characterized by subsurface features such as caves, sinkholes, and other conduits. The aquifer is made up of limestones that have high localized permeability and porosity. Dissolution of calcium carbonate along faults and fractures in the bedrock forms solution channels similar to an underground network of pipes. Since these subsurface ''pipes'' are not uniformly distributed, groundwater movement in the aquifer is highly variable, being rapid in areas where the ''pipes'' are large and extensive, and slow where permeability and porosity are low.

The potential of the Edwards Aquifer and other karst aquifers to rapidly transmit large volumes of water with little filtration makes them highly susceptible to pollution (Slade *et al.* 1986; Texas Water Commission (TWC) 1989; Environmental Protection Agency (EPA) 1990; City of Austin 1991; Margaret Hart, TWC, *in litt.* 1991; Ford and Williams 1994; Notenboom *et al.* 1994). Major potential sources of groundwater contamination have been attributed to construction activities, leaking underground storage tanks, pipelines, septic tanks, accidental spills, and pesticide and fertilizer use (EPA 1990, TWC 1989). Pollutants entering the creeks or other recharge features may then be rapidly transported into the aquifer. Once in a karst aquifer, treatment of water-borne contaminants is generally ineffective because: (1) Few materials (such as sand, gravel, and organic matter) are present to filter out pollutants; (2) little evaporation occurs, which is important in eliminating highly volatile organic compounds; (3) little filtration occurs through thin karst soils; (4) water is transported rapidly through a conduit system with little or no filtration (EPA 1990; TWC 1989; Slade *et al.* 1986; Ford and Williams 1994; Notenboom *et al.* 1994); and (5) some contaminants (such as nitrates and petroleum hydrocarbons) tend to be highly insoluble and mobile in water and may not adsorb onto karst substrates (TWC 1989).

Because of the characteristics of karst aquifers, Barton Springs is believed to be heavily influenced by the quality and quantity of runoff, particularly in the recharge zone (City of Austin 1991, Slade *et al.* 1986). Thus, increasing urban development over the area supplying recharge waters to the Barton Springs segment can threaten water quality within the aquifer. The Texas Water Commission (now known as the Texas Natural Resource Conservation Commission (TNRCC)) identified the Edwards Aquifer as being one of the most sensitive aquifers in Texas to groundwater pollution (TWC 1989; Hart, *in litt.*, 1991; TNRCC 1994).

Previous Federal Action

The Barton Springs salamander was a Category 2 candidate species on the Service's candidate notices of review from December 30, 1982 (47 FR 58454; September 18, 1985: 50 FR 37958; January 6, 1989: 54 FR 554; and November 21, 1991: 56 FR 58804) until publication of the proposed rule to list the species as endangered (59 FR 7968). Dr. Mark Kirkpatrick and Ms. Barbara Mahler petitioned the Service to list the Barton Springs salamander on January 22, 1992, and on December 11, 1992 (57 FR 58779), the Service published a notice in the Federal Register that the petitioner presented substantial information that the requested action may be warranted. A proposed rule to list the Barton Springs salamander was published in the Federal Register on February 17, 1994 (59 FR 7968). The Service held a public hearing on June 16, 1994, in Austin, Texas (59 FR 27257). On March 10, 1995, the Service published a notice extending the 1-year deadline for final action on the proposed rule until August 17, 1995, and reopened the public comment period (59 FR 27257). Reasons for the 6-month extension are provided in the March 10, 1995, Federal Register notice.

On April 10, 1995, Congress enacted a moratorium prohibiting work on listing actions (Public Law 104–6) and eliminated funding for the Service to conduct final listing actions. On November 27, 1995, in response to a lawsuit from the Save Our Springs Legal Defense Fund (Save Our Springs Legal Defense Fund, Inc., et al., v. Bruce Babbitt), a U.S. District Court invalidated the Service's March 10, 1995, notice of extension and ruled that the Service had to make a final determination on whether to list the Barton Springs salamander within 14 days of the court order. The court

granted a stay pending the Service's appeal of the order, on the grounds that the moratorium and lack of funding prohibited the Service from making a final listing determination. The moratorium was lifted on April 26, 1996, by means of a Presidential waiver, at which time limited funding for listing actions was made available through the Omnibus Budget Reconciliation Act of 1996 (Public Law No. 104–134, 100 Stat. 1321, 1996). The Service published guidance for restarting the listing program on May 16, 1996 (61 FR 24722). Due to the potential for new information during the lapse between the reinstatement of the listing program and the close of the last comment period (May 17, 1995), the Service reopened the public comment period on June 24, 1996, for 30 days. That comment period closed July 10, 1996, by U.S. District Court order.

Development of Conservation Agreement

Following the Service's decision to propose the species for listing as endangered, the City of Austin and the Texas Parks and Wildlife Department (TPWD) formed the Aquatic Biological Assessment Team (ABAT) to conduct independent peer review of the listing proposal and to address salamander issues. The ABAT concluded that important information gaps exist that prevent a conclusive scientific assessment regarding the biology of the salamander. The ABAT also noted that both short-term and long-term threats to the viability of the species exist. On September 20, 1995, the ABAT issued a report detailing its recommendations for further study of the Barton Springs salamander so that improved scientific understanding could lead to the development of factually based conservation measures for the species. Those recommendations led to the ''Barton Springs Salamander Conservation Agreement and Strategy'' (Agreement) signed by the State agencies on August 13, 1996.

In order to meet the objectives of the Agreement, agencies of the State of Texas will implement five conservation actions. These actions are: (1) Enforcement and monitoring of compliance with existing regulations and adoption, implementation, and enforcement of currently proposed regulations; (2) prevention of catastrophic contaminant releases into the spring waters; (3) prevention of degradation of the springhead habitat; (4) establishment of a captive breeding program; and (5) development of a better biological understanding of the salamander population. In addition, the State will effect four general administrative actions: (1) Coordination of conservation activities; (2) implementation of the conservation schedule; (3) funding of conservation actions; and (4) assessment of the conservation progress. The actions listed above are adequate to reduce risks to the salamander. But, if in the future, the adequacy is questioned, the Barton Springs Salamander Conservation Team (Conservation Team) will assess such issues for follow up on conservation actions.

The Conservation Team was formed under the Agreement to administer and revise the Agreement as needed, based on new biological information on the species. Such information will include the results of a TPWD-sponsored population and habitat study, which may lead to a population viability and habitat analysis (PVHA) workshop. The Conservation Team will coordinate conservation activities and monitor conservation actions taken by the signatories of the Agreement. The Service understands that the Conservation Team will review the current and proposed regulatory programs that contribute to conserving the Barton Springs salamander, its habitat and the ecosystem, the Barton Springs segment of the Edwards Aquifer.

The Service believes that the Agreement ensures the implementation of conservation measures that will reduce the threats to the salamander to the point that it does not warrant listing. The Service therefore withdraws the proposal to list the Barton Springs salamander as endangered.

Public Comments on the Proposed Rule

In the February 17, 1994, proposed rule (59 FR 7968) and associated Federal Register notices, including notification of a public hearing (59 FR 27257) and each of the five comment periods (February 17 to April 18, 1994 (59 FR 7968); May 26 to July 1, 1994 (47 FR 13105); July 8 to July 29, 1994 (59 FR 35089); March 10 to May 17, 1995 (47 FR 13105); and June 24 to July 10, 1996 (61 FR 32414)), all interested parties were requested to submit factual reports or information to be considered in making a final listing determination. Appropriate Federal and State agencies, local governments, scientific organizations, and other interested parties were contacted and asked to comment. Legal notices of the public hearing which invited general public comment were published in the Dripping Springs Century News and Austin-American Statesman on June 8, 1994, in the Drippings Springs Dispatch on June 9, 1994, and in the Austin Chronicle on June 10, 1994.

The Service received 657 written and oral comments, 8 videotapes, 5 petitions, and 2 resolutions from individuals and agencies. Of the 657 comments, 524 supported the proposed action, 123 opposed it, and 10 stated neither support nor opposition. Four petitions totaling over 1,800 signatures and one resolution from the City of Austin supported listing, and one petition containing 29 signatures and one resolution from the city of Dripping Springs opposed the listing.

The Service held a public hearing in two sessions on June 16, 1994, at the Lyndon Baines Johnson Auditorium at the University of Texas at Austin. Over 160 people attended the public hearing, and 74 individuals provided oral testimony.

Written and oral comments are incorporated into this withdrawal notice where appropriate. Most of the comments were directly related to listing the salamander as endangered. Many of the comments supporting listing provided substantive factual information that documented risks to the Barton Springs salamander. Those comments were considered, and listing appeared warranted prior to the signing of the Agreement. Conversely, substantive comments opposing listing generally discussed the adequacy of existing regulatory mechanisms then in place to protect the salamander. Since development of the Agreement, commitment to conservation of the species has been insured, rendering most of the comments on this action moot, outdated, or otherwise irrelevant to this withdrawal notice. The Service carefully considered all comments submitted relevant to the decision to withdraw the proposed listing. Comments submitted are available for review at the Service's Austin Ecological Services Office (see **ADDRESSES**).

Summary of Factors Affecting the Species

The Service must consider five factors described in section 4(a)(1) of the Act when determining whether to list a species. These factors, and their application to the Service's decision to withdraw the proposal to list the Barton Springs salamander, are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The primary risks to the Barton Springs salamander and its habitat, which the Service identified in its proposal to list the species (59 FR 7968), are degradation of water quality and

quantity resulting from urban expansion over the Barton Springs watershed (including roadway, residential, commercial, and industrial development). The Service identified cumulative degradation, catastrophic spills (such as hazardous materials), and increased water withdrawals from the aquifer (compounded by drought) as factors contributing to declining water quality and quantity in the portion of the Edwards Aquifer upon which the species depends. Other concerns identified by the Service are potential impacts to the salamander's surface habitat in Barton Springs pool caused by pool maintenance and cleaning activities.

The Agreement includes a State commitment to implement specific conservation measures to protect the salamander, its habitat and the ecosystem, the Barton Springs segment of the Edwards Aquifer. The Agreement addresses these risks to the Barton Springs salamander through a combination of measures. They are: (1) Revision, adoption, and implementation of regulations to protect water quality in the Barton Springs watershed and the Barton Springs segment of the Edwards Aquifer from degradation; (2) development and implementation of Best Management Practices (BMPs) to address point source contaminants; (3) refinement and enforcement of storage and disposal of hazardous waste protocols; (4) increased commitment to compliance enforcement, monitoring, and reporting; and (5) development of local management plans to prevent degradation of surface and springhead habitat.

The Agreement includes specific responsibilities to be implemented immediately and in Fiscal Year 1997 by the lead State agencies. Those responsibilities for the TPWD include: provide the team leader for the Conservation Team (formed in the Agreement); assist the City of Austin in Barton Springs pool maintenance; assist other State and local agencies in evaluating existing and proposed conservation actions that benefit the Barton Springs salamander; sponsor a salamander population and habitat study and follow up on a population viability and habitat analysis (PVHA) workshop; serve as the responsible State agency for protection and conservation of the salamander and its unique ecosystem; serve as the responsible State agency for enforcement of the Act; and serve as the responsible lead for establishing a captive breeding/refugium program. The responsibilities of the TNRCC include: evaluate existing and proposed water quality regulations for State and local agencies and private development compliance in the protection and conservation of Barton Springs, the Barton Springs segment of the Edwards Aquifer, and the recharge zone and contributing streams and watersheds; serve as the responsible State agency for ensuring water quality compliance and monitoring; and serve as the responsible State agency for coordinating State/regional/local response and remediation on hazardous materials spills and contingency plans and operations. Commitments by The Texas Department of Transportation (TxDOT) include: serve as the responsible State agency for ensuring that all transportation projects over the recharge zone are developed with BMPs that will minimize or prevent the degradation of recharging waters to Barton Springs; serve as responsible State agency for the design, construction and maintenance of permanent structural controls (e.g., hazardous materials traps, detention ponds, filtration basins, etc.) on transportation projects over the recharge zone; serve as the responsible State agency for ensuring that transportation projects are constructed in a manner to minimize water quality impacts in accordance with State law and regulations; and work with TPWD on conservation issues related to transportation activities in accordance with the Memorandum of Understanding between the two State agencies. The Service is responsible for: serving on the Conservation Team and providing technical assistance to all State agencies, regional and local agencies and cooperators; and providing technical input to State, regional and local agencies and cooperating interests concerning the conservation of the salamander.

The Agreement includes measures to address potential water quantity concerns and to minimize chances of a catastrophic event, however the Agreement establishes captive refugia to prevent extinction in case of catastrophic or chronic events. The Barton Springs salamander is still considered rare and potentially vulnerable; however, the commitment by the State of Texas to implement the cooperative Agreement reduces the imminence and severity of threats to the species so that listing is no longer considered warranted.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* No threat from overutilization of this species is known at this time.

C. *Disease or predation.* The Service is not aware of diseases or parasites of the Barton Springs salamander. Primary predators of the Barton Springs salamander are believed to be predatory fish and crayfish; however, no information exists to indicate that predation poses a major threat to this species.

D. *The inadequacy of existing regulatory mechanisms.* The conservation and recovery of this species is tied to the protection of water quality and quantity through regulatory mechanisms for Barton Springs, the Barton Creek watershed, and the Barton Springs segment of the Edwards Aquifer. The Service evaluated existing State and local regulatory mechanisms and BMPs prior to preparing the proposed rule for listing the species. The Service found evidence of inadequacy of existing regulatory mechanisms in 1994 and published the proposed rule with information on this factor. Several commentors, including the State of Texas, presented information on the issue of existing regulatory programs. The Service reopened the comment period on June 24, 1996, in part due to the potential for new information on proposed regulatory protection under State authorities and disagreement concerning data on existing regulatory mechanisms that would conserve the species. The State of Texas developed the Agreement specifically to implement conservation measures using existing and proposed regulatory mechanisms in a comprehensive program for the conservation of the Barton Springs salamander.

The Service recognizes that the Agreement reduces the threats to the salamander. The Agreement addresses the issue of reducing threats by charging the Conservation Team to review the adequacy of those regulatory mechanisms, rules, regulations, and State agency policies for conserving the species and its habitat. This review will ensure that revisions or changes will be developed cooperatively and implemented expeditiously through State government mechanisms to conserve the salamander and its ecosystem. As team leader, TPWD is charged with ensuring that these conservation measures are implemented. The Service serves on the team, but if the team's recommendations to State agencies are not implemented, the Service may withdraw from the Agreement and will consider the use of the full range of its listing authority, including emergency listing, to protect the species.

The signatories of the Agreement are those agencies with the responsibility, authority, and funding mechanisms to implement the provisions of the Agreement. The signatories include the

TPWD, the TNRCC, the TXDOT, and the Service. Other parties may be included as additional measures are added to the Agreement. The Agreement follows the recommendations presented by the ABAT report (1995), using an ecosystem approach to conserve the Barton Springs salamander population by maintaining the high quality spring ecosystem within which the salamander exists.

The Agreement focuses on two objectives. The main objective is to eliminate or significantly reduce the threats to the species. This includes eliminating risk of catastrophic events. In case this does not work, the Agreement establishes a captive breeding/refugium program in order to avoid extinction of the species should any potential threats actually cause the species to disappear in the wild. These objectives will be reached through implementation of the Agreement for the species.

The TNRCC has implemented a comprehensive water quality protection program for the Edwards Aquifer and related surface waters. This program covers the Barton Springs segment of the Edwards Aquifer that yields flow to Barton Springs and provides the most stringent groundwater quality protection measures in the State.

The Federal Clean Water Act and the Environmental Protection Agency's (EPA) rules require each State to develop and implement an anti-degradation policy, as a part of its water quality standards (40 CFR 131.6). Such standards, including the anti-degradation policy, must be approved by the EPA. The TNRCC's policy, which has been approved by EPA, is contained in 30 TAC 307.5 and adopts the language used by the EPA in its anti-degradation policy (40 CFR 131.12).

The Tier II Anti-degradation Policy contained in section 307.5 of the TNRCC's rules is currently applicable to the Barton Creek watershed. This policy provides that no activities subject to regulatory action which would cause degradation of waters which exceed fishable/swimmable quality will be allowed, unless it can be shown that the lowering of the water quality is necessary for important economic or social development. Degradation is defined as a lowering of water quality beyond a de minimus extent, to the extent that an existing use is impaired. Fishable/swimmable waters are waters which have quality sufficient to support propagation of indigenous fish, shellfish and wildlife, as well as recreation in and on the water. Water quality sufficient to protect existing uses is to be maintained. The Conservation Team will assess the potential impact to the salamander of the anti-degradation policy exception (important economic or social development) that could lead to degradation of the salamander's habitat. The policy exception would require careful assessment and recommended action to alleviate the threat to the salamander, its habitat and the ecosystem, the Barton Springs segment of the Edwards Aquifer. If the Conservation Team's recommended action is not implemented, the Service may withdraw from the Agreement and will consider the use of the full range of its listing authority, including emergency listing, to protect the species.

The TNRCC's rules seek to maintain and protect the water quality standards and related aquatic life uses designated for the Barton Creek watershed. The regulation of point discharges and effluent on and upstream of the recharge zone (section 313.6), as well as the design, installation, and removal of petroleum storage tanks (PSTs) (sections 313.10 and 313.11) and on-site sewage systems (section 285.9) are the most stringent in the State and are summarized in the TNRCC's July 1, 1996, memo entitled ''Protecting Water Quality in the Edwards Aquifer.'' No new or increased discharges are allowed in the recharge zone. Additionally, no confined animal operations may be located in the recharge zone (section 313.10).

In addition to the more broadly applicable chapter 313 TNRCC's rules, for which revisions are currently proposed, under State Senate Bill 1017 (codified as section 26.179, Texas Water Code), special water quality protection plans are being developed and implemented in the Barton Creek watershed within the contributing zone of the Edwards Aquifer. This legislation applies to property of 200 hectares (500 acres) or more within the City of Austin's extraterritorial jurisdiction where a designated water quality protection zone and a water quality protection plan are subject to review and approval by the TNRCC. The legislation provides a non-degradation water quality goal by providing that development on the property may not result in exceeding background water quality. The quality of runoff water must be comparable to those levels that existed prior to new development. Proposed rules under 30 TAC chapter 216 (relating to Water Quality Protection Zones) that implement this legislation were published in the *Texas Register* on April 14, 1996, for public comment. Adoption of these rules by the TNRCC is expected in October 1996. If not adopted in a timely manner, the Service would withdraw from the Agreement and re-propose the salamander for listing.

The TNRCC proposed a new Edwards Aquifer rule as a new chapter 213 to streamline and consolidate the existing chapter 313 Edwards Aquifer rule, which are also expected to be adopted in October, 1996. The proposed rule would also update the current day-to-day operations of the agency relating to the protection of the water quality of the Edwards Aquifer and make the administration of the Edwards Aquifer Protection Program more efficient and effective. The proposed rule also provides: new or revised definitions for regulated activity, BMP, aboveground and underground storage tank facilities, commencement of construction, geologic or manmade feature, sensitive feature, and site. The rule consolidates into one section the requirement for filing and processing an Edwards Aquifer protection plan, details how the plan will be processed by the agency; prohibits the commencement of construction of any regulated activity until a plan has been approved by the agency; and provides that the term of approval of a plan will expire two years after the initial issuance unless commencement of construction has occurred. The rule also consolidates the description of activities that require an Edwards Aquifer protection plan, the contents of various plans, notification and inspection requirements, and exemptions from submitting a plan.

Five new requirements for the technical report submitted as part of an Edwards Aquifer protection plan are proposed under the new rule in chapter 213. The report must include a description of measures to be taken to avoid or minimize instream erosion from water flowing off the site. Measures that would decrease instream erosion will protect water quality. The report must include a description of the BMPs and measures that will be taken to prevent pollutants from entering the aquifer while, to the extent practicable, maintaining flow to sensitive features identified in either the assessment of area geology or during excavation, blasting, or construction. The report must include a plan for inspection of BMPs and measures and their maintenance and repair. The existing rule requires measures to prevent pollution of stormwater flowing onto and off a site. The submission of this plan will formalize maintenance and repair as part of an Edwards Aquifer protection plan. The requirement for a downgradient assessment of area geology has been changed from one mile to one-half mile. A geological assessment will be performed 15 m (50

feet) on either side of the path of a proposed sewer line, allowing for pre-planning to address sensitive features. The rule prohibits construction on either the recharge or transition zone of new municipal solid waste landfill activities and restricts further the construction and use of underground and aboveground storage tanks and facilities.

Prior to commencement of construction, a developer of a project on the Edwards Aquifer recharge zone must submit a Water Pollution Abatement Plan (WPAP) to the TNRCC for review and approval. The developer must propose in the plan measures and practices that will prevent pollution of stormwater entering the site, on-site, and leaving the site. Pollution is defined in the rule as the alteration of the physical, chemical or biological quality of, or the contamination of, any water in the State that renders the water harmful, detrimental or injurious to humans, animal life, vegetation or property, or to public health, safety or welfare, or impairs the usefulness of the public enjoyment of the waters for any lawful or reasonable purpose. The plans must meet this performance goal of water quality protection. Under the proposed new rule in chapter 213, BMPs must be included and implemented as part of the WPAP.

The TNRCC is responsible for compliance monitoring of water pollution abatement plans for the Barton Creek watershed. The TNRCC's staff perform pre-construction onsite inspections prior to approval of WPAPs. This includes inspection to verify that all recharge features have been identified on the site. The TNRCC's staff conduct a follow-up inspection for each site during construction to ensure that all pollution prevention measures are in place, maintained properly and working as required. A reporting requirement in all approved plans is the immediate notification by the permittee to the TNRCC of any previously unidentified recharge feature discovered during construction. If such a feature is found, construction must stop until the TNRCC's staff can inspect the feature and approve the proposed measures to prevent pollution from entering the feature. The TNRCC conducts inspections before, during, and after construction of all TxDOT road and highway projects as well as commercial developments. The TNRCC also inspects any non-State road development project (e.g., city) to ensure that water quality protection under permitted WPAPs is enforced. During Fiscal Year 1996, TNRCC Austin field staff conducted 182 initial site assessments and 289 follow-up inspections. Almost all non-compliances (typically failure to properly maintain a BMP such as a sediment control fence or other structure) were remedied immediately during these inspections. The remainder were remedied after receipt of a ''Notice of Violation'' letter. In only one instance during Fiscal Year 1996 was it necessary for the field staff to refer a violation for formal enforcement in order to achieve compliance.

Statewide rules for the protection of water quality have been applied to the Barton Springs area since their inception. This includes requirements for PSTs, spill response and remediation, hazardous waste control, and point and non-point source pollution prevention programs. The Edwards Aquifer rules contained in chapter 313 were extended to Travis County beginning in 1990. Chapter 313 provides that if construction on a project has not commenced within two years of application approval, a new application must be submitted for review and approval. However, rules in effect at the time of resubmission of the initial application shall apply to the new application.

Pursuant to the TNRCC's authority to protect the water quality of the Edwards Aquifer, the TNRCC's rules contained in section 313.4(b)(4)(D) provide that a water pollution abatement plan must contain a description of the measures that will be taken to prevent pollutants from entering recharge features ''while maintaining or enhancing the quantity of water entering the recharge features. * * *'' This language is also contained in the proposed amendments to these rules and more clearly states that the sealing of a recharge feature may not be an acceptable measure to prevent contaminants from entering the aquifer unless there is no reasonable, practicable alternative.

The Edwards Aquifer/Barton Springs Conservation District controls the withdrawal and use of the Barton Springs segment of the Edwards Aquifer. The District's rules require users to implement water conservation measures and mandate reduction measures during a drought. When fully implemented, the District's drought contingency plan is set up to prevent the aquifer from dropping below historically low levels and thus conserve springflow at Barton Springs.

Full implementation of spill contingency plans and hazardous materials storage, transportation, and use during construction is a key component of protection of the waters supporting Barton Springs and the salamander. In particular, the potential for catastrophic spills from a highway over the recharge zone is a major risk to the species. In order to eliminate the risk, the TNRCC works with the TxDOT to address both potential contamination issues surrounding the construction of highways and the placement of hazardous materials traps (HMTs) to capture accidental spills resulting from accidents.

The U.S. Department of Transportation (USDOT) regulates the transportation of hazardous materials. The requirements for driver training, shipping papers, insurance, placarding and container integrity and labeling are established by the USDOT pursuant to the Hazardous Materials Uniform Transportation Safety Act. The TNRCC imposes additional regulations on the transportation of hazardous wastes, which call for tracking of shipments to ensure that they reach their intended destination. The Texas Department of Public Safety provides enforcement of both the USDOT and TNRCC transporter regulations.

The TxDOT began implementing stormwater runoff controls on projects over the Barton Springs segment of the Edwards Aquifer recharge zone in 1991. These controls include facilities to capture spills of hazardous material occurring on roadways that contribute runoff to creeks and streams in the recharge zone. To date, the TxDOT has constructed 44 HMTs at a cost of over $15 million at outfalls over the recharge zone on three major projects: Loop 1, State Highway (SH) 45, and U.S. Highway 290. These outfalls discharge to the watersheds of Slaughter, Williamson, and Barton creeks, all of which contribute to the recharge of the Barton Springs segment of the Edwards Aquifer. All new and retrofit TxDOT project plans incorporate stormwater runoff controls and HMTs where needed for water quality protection.

The HMT is a concrete-lined basin located at the end of the storm drainage system just prior to discharging to the natural drainageway. The HMT is designed to hold 38,000 l (10,000 gallons), the capacity of a large tanker truck. The HMTs operate as stand-alone structures or work in combination with other stormwater runoff controls such as detention ponds or filtration basins. Routine maintenance procedures for HMTs include regular inspections by TxDOT personnel. The HMTs are inspected at least monthly and/or after each rainfall event. Based on these inspections, the HMTs are cleaned, drained or otherwise repaired as necessary.

The TNRCC is authorized by statute to conduct emergency spill response and

cleanup activities statewide pursuant to section 26.264 of the Texas Water Code. This includes spills occurring on the recharge zone, within the transition zone and in the contributing watershed of the Edwards Aquifer. The TNRCC is the lead State agency for response to all hazardous substance spills into State waters. The TNRCC works with State, regional and local entities to carry out a comprehensive, coordinated plan that can be implemented in the event of a crisis. The TNRCC works closely with the TxDOT by implementing a contractual agreement (statute requirement) whereby personnel, equipment and materials under TxDOT control may be diverted and utilized for spill and discharge cleanup. The TNRCC works closely with the Edwards Aquifer/Barton Springs Conservation District in spill response and cleanup planning and action for the Barton Springs segment of the Edwards Aquifer. The TNRCC, the District and the TxDOT conduct joint training exercises to respond to simulated spills. The TNRCC works with local fire departments and county emergency services districts to develop and implement spill response plans, such as in the Barton Creek watershed with the Oak Hill Fire Department and Travis County Services District Number 3.

The TNRCC prohibits the storage of hazardous materials and waste in the recharge zone of the Edwards Aquifer. Hazardous waste storage facilities, waster piles or landfills containing hazardous waste may not be located in the recharge zone of the Edwards Aquifer unless secondary containment is provided to preclude migration to groundwater from spills, leaks or discharges. Approximately 70 to 80 percent of the recharge to the Edwards Aquifer comes from surface streams. Protection of water quality is provided in these affected riparian areas in the recharge zone as well as in the contributory watershed.

Wetlands are a major contributor of surface water to groundwater recharge and serve a vital water quality protection function. They trap sediments, filter contaminants, and help prevent flooding and increased soil erosion. The State regulates the location of hazardous material storage facilities in wetlands. Protected wetlands include those that may provide recharge to the Barton Springs segment of the Edwards Aquifer and serve a water quality protection function for the aquifer and related springs. Transition zones, areas of downgradient of the recharge zone but where faults and fractures may occur, provide additional recharge to the Edwards Aquifer. Waster disposal wells and disposal are also prohibited in the transition zone.

The Barton Springs pool is an on-channel impoundment on Barton Creek and constitutes a State water under the TNRCC's water quality rules and statutes. Any pool maintenance activity carried out by the City of Austin must have prior TNRCC review and approval. The TPWD and the Service have been working with the City to develop and implement BMPs for Barton Springs pool maintenance. The City of Austin is continuing to review and revise as necessary its pool maintenance practices in order to protect the salamander and its habitat while considering human recreational needs. The maintenance plan is designed to avoid impacting the salamander and maintain the highest possible level of water quality. The TPWD will work with the City of Austin to continue to improve the BMPs for the Barton Springs pool. The Service believes that current pool maintenance BMPs are sufficient to reduce threats to the salamander.

The Baron Spring salamander's limited geographic distribution, small population size, and presumed delayed reproductive strategy contribute to the recommendation for a captive breeding program for the species. Such a program may prevent extinction of the species should any of the potential threats previously described cause the salamander to disappear at Barton Springs. Small breeding populations are currently maintained at the Dallas Aquarium and at the Midwest Science Center of the National Biological Service in Columbia, Missouri. Both of these captive programs will continue and could serve as refugia in the event of a catastrophe. The Agreement commits to a third more local captive breeding/refugium program, to be established when sufficient founding stock are available. Local facilities may be available at either the national fish center at San Marcos, Texas, or the TPWD fish hatchery in San Marcos.

The Service believes that the actions noted above are sufficient to reduce the risks to the salamander. But uncertainty exists on the biological information on the species. Therefore, the Agreement makes the TPWD responsible for providing population monitoring studies for the Barton Springs salamander . These studies will include surveys of population numbers and observations on distribution, body sizes, stages of development, and habitat. Surveys will include times immediately following storm events, during periods of low spring flow, and during recovery periods from abnormal events such as prolonged drought or contamination events. Surveys will be conducted at all three springs. The TPWD will sponsor a Barton Springs salamander PVHA workshop based upon these studies and other information concerning the salamander.

By protecting the water quality and quantity at Barton Springs and in the Barton Springs segment of the Edwards Aquifer, the involved agencies will reduce the threats to the species to the point that it does not warrant listing. The Service will closely monitor the implementation of the Agreement and, if the Agreement is not accomplishing its purpose the Service will consider the use of the full range of its listing authority, including emergency listing, to protect the species.

E. *Other natural or manmade factors affecting its continued existence.* The very restricted range of the Barton Springs salamander makes this species especially vulnerable to acute and/or cumulative groundwater contamination. As described above, the threat to the salamander due to limited distribution, along with catastrophic spills and drought-related effects on the salamander through groundwater use of the Barton Springs segment of the Edwards Aquifer are factors that are addressed in the Agreement. The signatories of the Agreement will conduct a salamander population and habitat study, including sponsoring a PVHA workshop; develop a captive breeding/refugium program; and work with other agencies, local water conservation districts, local communities and private landowners to protect water quality in the Barton Springs segment of the Edwards Aquifer.

Finding and Withdrawal

The Barton Springs salamander is known only from the immediate vicinity of the three spring outlets that are collectively known as Barton Springs in Zilker Park, Austin, Travis County, Texas. The waters at Barton Springs originate from a 920 sq. km (354 sq. mile) area, which consists of the recharge zone of the Barton Springs segment of the Edwards Aquifer and its contributing zone. The Barton Springs segment is a designated sole source of water for over 35,000 people in a three-county area. The Barton Springs watershed occurs in Blanco, Hays and Travis counties.

The proposed rule identified degradation of water quality and quantity of Barton Springs, resulting from urban expansion over the Barton Springs watershed, as the primary threat to the Barton Springs salamander.

Reasons for this degradation were listed as: chronic degradation, catastrophic spills, and increasing water withdrawals from the Barton Springs segment of the Edwards Aquifer. Following the Service's publication of the proposed rule, the City of Austin and the TPWD initiated an effort to develop an independent peer review process to address salamander issues. The resulting Aquatic Biological Assessment Team (ABAT) concluded that both short-term and long-term threats to the viability of the salamander exist. The ABAT concluded that important information gaps exist that prevent a conclusive scientific assessment regarding the biology of the salamander. The ABAT report included conservation recommendations that emphasize an ecosystem approach to conservation and recovery of the Barton Springs salamander. Through its signatory agencies, the state of Texas developed the ''Barton Springs Salamander Conservation Agreement and Strategy'' (Agreement) to expedite conservation measures recommended by the ABAT. The signatory State agencies have committed to implement those conservation measures using existing and proposed regulatory mechanisms in a comprehensive program for the conservation of the salamander.

One function of the implemented Agreement is for the Barton Springs Salamander Conservation Team (Conservation Team) to review the adequacy of those regulatory mechanisms, rules, regulations, and State agency policies to ensure that revisions or changes can be developed cooperatively and implemented expeditiously through State responsibility for conservation of the salamander and its ecosystem. The goal of the Agreement is to conserve the Barton Springs salamander by protecting the high quality spring ecosystem within which the salamander exists.

The agreement focuses on two objectives. The primary objective is to eliminate or significantly reduce the threats to the species and to minimize chances of a catastrophic event. The Agreement establish a captive breeding/refugium program in order to avoid extinction of the species should any potential threats cause the species to disappear in the wild. These objectives will be reached through implementing the five management actions: (1) Enforce and monitor compliance with existing regulations and adopt, implement, and enforce currently proposed regulations to protect the Barton Springs recharge zone; (2) prevent catastrophic contaminant releases into spring waters; (3) prevent degradation of springhead habitat; (4) establish a captive breeding/refugium program; and (5) study the salamander population. In addition, four administrative actions will be implemented: (1) Coordinate conservation activities; (2) implement the conservation schedule; (3) fund conservation actions; and (4) assess conservation progress. The Agreement establishes the Conservation Team to ensure that the coordination and assessment roles are carried out under the team leadership of the TPWD. The Agreement will provide for conservation and recovery of the Barton Springs salamander by establishing a framework for interagency cooperation, State and local community leadership, and coordination on conservation efforts, setting recovery priorities, and assessing existing, proposed and future regulatory programs to ensure that the threats are reduced. By protecting water quality at Barton Springs and in the Barton Springs segment of the Edwards Aquifer and conserving water quantity, this Agreement reduces the threats to the species to the point that the Service no longer believes the species warrants listing. The Service will closely monitor the implementation of the Agreement and, if the Agreement is not accomplishing its purpose, the Service may list the salamander on an emergency basis if appropriate and re-propose it for permanent listing.

After a thorough review and consideration of all information available, including the development and implementation of the Agreement, the Service has determined that listing the Barton Springs salamander as endangered or threatened is no longer warranted. The Service has carefully assessed the best scientific and commercial information available in the development of this withdrawal notice.

References Cited

A complete list of all references cited herein is available upon request from the Austin Ecological Services Field Office (see **ADDRESSES** section).

Author

The primary author of this proposed rule is Steve Helfert, Austin Ecological Services Field Office (see **ADDRESSES** section).

AUTHORITY: The authority for this action is section 4(b)(6)(B)(ii) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)

Dated: August 28, 1996.

John G. Rogers,

Director, Fish and Wildlife Service.

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