attachment/DA 08–1523A1doc. This full text may also be downloaded at: *http://wireless.fcc.gov/releases.html.* Alternative formats (computer diskette, large print, audio cassette, and Braille) are available by contacting Brian Millin at (202) 418–7426, TTY (202) 418–7365, or via e-mail to *bmillin@fcc.gov.*

Summary of the Order

1. On March 20, 2008, the Commission released the *Broadband Radio Service/Educational Broadband Service Second Further Notice of Proposed Rulemaking* (BRS/EBS 2nd FNPRM), FCC 08–83. In the BRS/EBS 2nd FNPRM, comments were due on or before July 7, 2008, and reply comments were due on or before August 6, 2008. On May 8, 2008, a summary of the BRS/EBS 2nd FNPRM was published in the **Federal Register** (73 FR 26067, May 8, 2008).

2. On June 13, 2008, National EBS Association (''NEBSA''), formerly known as the National ITFS Association (NIA) and the Catholic Television Network (''CTN'') filed a motion for extension of time on June 13, 2008, to extend by 75 days the dates for filing comments and reply comments in the proceeding. NEBSA and CTN state that the comment dates ''fall in the middle of the summer recess period for virtually all schools, colleges and universities, making it difficult for NEBSA, CTN, EBS licensees and other educators to coordinate their response to the important issues raised in this proceeding.'' The Wireless Communications Association International, Inc. supports this request. No party has opposed the request.

3. It is the policy of the Commission that extensions of time are not routinely granted pursuant to 47 CFR 1.46(a). Such extensions may be warranted when, among other reasons, the additional time will serve the public interest. In the present instance, we grant NEBSA and CTN's motion for extension of time by extending by 75 days the deadlines to file comments and reply comments in the proceeding.

Ordering Clauses

4. Accordingly, *it is ordered* that, pursuant to section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), and § 1.46 of the Commission's rules, 47 CFR 1.46, that the Motion for Extension of Time filed by National EBS Association and the Catholic Television Network on June 13, 2008 is granted, and the time for filing comments in this proceeding is extended to September 22, 2008, and the time for filing reply comments in this proceeding is extended to October 22, 2008.

5. This action is taken under delegated authority pursuant to sections 0.131 and 0.331 of the Commission's rules, 47 CFR 0.131, 0.331.

Federal Communications Commission.

Joel D. Taubenblatt,

Deputy Chief, Wireless Telecommunications Bureau.

[FR Doc. E8–15445 Filed 7–7–08; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[FWS–R2–ES–2008–0080; 92220–1113–0000; C6]

RIN 1018–AU97

Endangered and Threatened Wildlife and Plants; Proposed Removal of the Concho Water Snake (Nerodia paucimaculata) From the Federal List of Endangered and Threatened Wildlife; Removal of Federally Designated Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The best available scientific and commercial data indicate that the Concho water snake (*Nerodia paucimaculata*) has recovered. Therefore, under the authority of the Endangered Species Act of 1973, as amended (Act), we, the U.S. Fish and Wildlife Service (Service) propose to remove (delist) the Concho water snake (*Nerodia paucimaculata*) from the Federal List of Endangered and Threatened Wildlife, and accordingly, also remove its federally designated critical habitat. This determination is based on a thorough review of all available information, which indicates that the threats to this species have been eliminated or reduced to the point that the species has recovered and no longer meets the definition of threatened or endangered under the Act.

The Concho water snake is a reptile endemic to central Texas. It was listed as threatened on September 3, 1986, due to threats of habitat modification and destruction (51 FR 31412). Through implementation of recovery efforts, the Service has determined that this species has been recovered and no longer meets the definition of threatened or endangered.

DATES: Comments on the proposed rule must be received on or before September 8, 2008. Public hearing requests must be received by August 22, 2008.

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

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *U.S. mail or hand-delivery:* Public Comments Processing, Attn: 1018–AU97, Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will post all comments on *http://www.regulations.gov.* This generally means that we will post any personal information you provide us (see the Public Comments section below for more information).

FOR FURTHER INFORMATION CONTACT: Adam Zerrenner, Field Supervisor, U.S. Fish and Wildlife Service, Austin Ecological Services Field Office, 10711 Burnet Road, Suite 200, Austin, TX 78758; telephone 512/490–0057, extension 248; facsimile 512/490–0974. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800/877–8339, 24 hours a day, 7 days a week.

SUPPLEMENTARY INFORMATION:

Public Comments Solicited

Our intent is to use the best available commercial and scientific data as the foundation for all endangered and threatened species classification decisions. Comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule to delist the (species name) are hereby solicited. Comments particularly are sought concerning:

(1) Any threat (or lack thereof) to the Concho water snake;

(2) Additional information on the range, distribution, and location of any additional populations of the Concho water snake;

(3) Information on habitat destruction and/or preservation for the Concho water snake;

(4) Current or planned activities in the species' habitat and the possible impacts to the Concho water snake;

(5) Data on population trends;

(6) Data on the status of Concho water snakes in reservoirs;

(7) Information regarding the sufficiency of planned flows in the Colorado River to maintain habitat for the Concho water snake;

(8) Data on the need for movement of Concho water snakes around large dams to maintain genetic diversity; and

(9) Information pertaining to the design of the required post delisting monitoring.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the **ADDRESSES** section. Comments must be submitted to *http://www.regulations.gov* before midnight (Eastern Standard Time) on the date specified in the **DATES** section. Please note that we may not consider comments we receive after the date specified in the **DATES** section in our final determination.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that we will post your entire comment—including your personal identifying information—on *http://www.regulations.gov.* While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

In making a final decision on this proposal, we will take into consideration the comments and any additional information we receive. Such communications may lead to a final rule that differs from this proposal.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *http://www.regulations.gov,* or by appointment, during normal business hours at the Austin Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT** section).

Public Hearing

The Act provides for one or more public hearings on this proposal, if requested. Requests must be received by August 22, 2008. Such requests must be made in writing and addressed to the Field Supervisor (see **FOR FURTHER INFORMATION CONTACT** section).

Background

The Concho water snake is endemic to the Colorado and Concho Rivers in central Texas (Tennant 1984, p. 344; Scott *et al.* 1989, p. 373). It occurs on the Colorado River from E.V. Spence Reservoir to Colorado Bend State Park, including Ballinger Municipal Lake and O.H. Ivie Reservoir, and on the Concho River from the City of San Angelo to its confluence with the Colorado River at O.H. Ivie Reservoir. The Concho water snake can be found in rivers and streams, and on artificial shoreline habitat of the three reservoirs. Counties of known occurrence include Brown, Coke, Coleman, Concho, Lampasas, McCulloch, Mills, Runnels, San Saba, and Tom Green.

At the time of listing, there were considered to be two subspecies of *Nerodia harteri,* the Concho water snake (*N. h. paucimaculata*) and the Brazos water snake (*N. h. harteri*). Densmore *et al.* (1992, p. 66) determined the Concho water snake was a distinct species based, in part, on its geographic isolation and fixed differences in genetic markers. Therefore, in 1996 we changed the name in the Federal List from *N. h. paucimaculata* to *N. paucimaculata* (50 CFR 17.11) in accordance with Densmore *et al.* (1992). Information about the Concho water snake's biology and life history can be found in the final listing rule (51 FR 31412–1422), the Concho Water Snake Recovery Plan (Service 1993, pp. 4–5), Werner and Dixon (2000, pp. 209–216), and Campbell (2003).

In 1998, the Colorado River Municipal Water District (District) (1998, pp. 8–29) summarized 10 years of data collected on Concho water snake populations, status, and distribution. In 2004, the U.S. Geological Survey (USGS) analyzed capture-recapture data from 3 sources: (1) Mueller (1990, pp. 18–27); (2) Whiting (1993, Appendix 1); and (3) the 10 years of District data. However, for a number of reasons, primarily insufficient sampling effort at any single study site and a host of variables, especially environmental variability within a site and among sites, study results have not been robust enough to allow either population or trend estimates with satisfactory precision (Service 2004, p. 23). Additional information, particularly concerning the habitat requirements of the Concho water snake, is discussed under Summary of Factors Affecting the Species below.

The Concho water snake is characterized by being somewhat smaller than most other *Nerodia.* At maturity, males average about 15 inches (in) (38.1 centimeters (cm)) snout-vent length (SVL), and females average about 18 in (45.7 cm) SVL, with a maximum reported length of 42 in (106.7 cm) SVL. Hibernation begins in late October to late November, depending upon weather and temperatures (Williams 1969, p. 11). Most adults probably hibernate in the tunnels of small burrowing animals, particularly crayfish, while hibernating juveniles may be more common in the crevices under rocks on gravel bars (Werler and Dixon 2000, pp. 212, 214). Males reach sexual maturity at about 1 year of age but females produce their first litter at 2 or 3 years of age, depending on their reproductive development (Werler and Dixon 2000). The snakes emerge from mid-March to mid-April for the main mating event, which occurs during April and early May, with a lesser event in October (Greene *et al.* 1999, p. 702; Williams 1969, p. 11). Most births occur from late July through September (Dixon *et al.* 1988, p. 15; 1990, p. 13; 1991, pp. 30–31; 1992, p. 28; Greene *et al.* 1999, p. 702). Females produce litter sizes that range from 4 to 29, with a mean of about 11 neonate snakes (Greene *et al.* 1999).

Concho water snakes feed almost exclusively on fish (Williams 1969, pp. 9–10; Dixon *et al.* 1988, p. 16; 1989, p. 8; 1990, p. 36; 1992, p. 6; Greene *et al.* 1994, p. 167; Thornton 1990, p. 14), and have been observed feeding both during the day and at night. In riverine habitat and especially among neonates (recently born snakes), minnows (fish in the Cyprinidae family) are the primary food source. Concho water snakes may also opportunistically feed on frogs (*Rana* and *Acris* spp.) (Greene 1993, p. 20).

Previous Federal Action

We classified the Concho water snake as threatened on September 3, 1986 (51 FR 31412). The primary reasons for listing were extensive habitat loss and imminent threats to a large portion of its remaining population. Critical habitat was designated on June 29, 1989 (54 FR 27377). In September 1993, we finalized a recovery plan for the Concho water snake (Service 1993). In June 1998, we received a petition to delist the Concho water snake from the District. On August 2, 1999, we published a 90-day petition finding that the petitioner did not present substantial information indicating that delisting the species may be warranted (64 FR 41903).

Recovery

Section 4(f) of the Act directs us to develop and implement recovery plans for listed species unless the Director determines that such a plan will not benefit the conservation of the species. The Service completed the Concho Water Snake Recovery Plan in 1993. The Concho Water Snake Recovery Plan outlines recovery criteria to assist in determining when the snake has recovered to the point that the protections afforded by the Act are no longer needed (Service 1993, p. 33). These criteria are: (1) Adequate instream flows are assured even when the species is delisted. (2) Viable populations are present in each of the three major reaches (the Colorado River above Freese Dam, Colorado River below Freese Dam, and the Concho River). Here, population is defined as all Concho water snakes in a given area, in this case, each major river reach. (3)

Movement of an adequate number of Concho water snakes is assured to counteract the adverse impacts of population fragmentation. These movements should occur as long as Freese Dam is in place or until such time that the Service determines that Concho water snake populations in the three reaches are viable and ''artificial movement'' among them is not needed.

We used the recovery plan to provide guidance to the Service, State of Texas, and other partners on methods to minimize and reduce the threats to the Concho water snake and to provide measurable criteria that would be used to help determine when the threats to the Concho water snake had been reduced so that it could be removed from the Federal List of Endangered and Threatened Wildlife.

Recovery plans in general are not regulatory documents and are instead intended to provide a guide on how to achieve recovery. There are many paths to accomplishing recovery of a species in all or a significant portion of its range. The main goal is to remove the threats to a species, which may occur without meeting all recovery criteria contained in a recovery plan. For example, one or more criteria may have been exceeded while other criteria may not have been accomplished. In that instance, the Service may judge that, overall, the threats have been reduced sufficiently, and the species is robust enough, to reclassify the species from endangered to threatened or perhaps to delist the species. In other cases, recovery opportunities may be recognized that were not known at the time the recovery plan was finalized. Achievement of these opportunities may be counted as progress toward recovery in lieu of methods identified in the recovery plan. Likewise, we may learn information about the species that was not known at the time the recovery plan was finalized. The new information may change the extent that criteria need to be met for recognizing recovery of the species. Overall, recovery of a species is a dynamic process requiring adaptive management. Judging the degree of recovery of a species is also an adaptive management process that may, or may not, fully follow the guidance provided in a recovery plan.

For more information on recovery of the Concho water snake, see the recovery plan at *http://ecos.fws.gov/docs/recovery_plan/930927b.pdf*. We caution that research conducted since the recovery plan was completed in 1993 has modified our understanding of habitat requirement of the species.

A review of the best scientific and commercial data currently available (see Summary of Factors Affecting the Species section below) indicates that all three criteria in the Concho water snake recovery plan (adequate instream flows even after delisting, viable populations in each of the three major river reaches, and movement of snakes to assure adequate genetic mixing) have been met. Further, recovery of the Concho water snake has been a dynamic process, which has been furthered by the significant amount of new data collected on the biology and ecology of the species by numerous species experts. Since the time of listing and completion of the recovery plan, biologists have discovered that the snakes are able to persist and reproduce in the shorelines of reservoirs and that the snakes have managed to persist in all three population segments, surviving many years of drought. Based on this new information, the analysis below considers the best available data in determining that the Concho water snake may no longer meet the definition of a threatened or endangered species.

Summary of Factors Affecting the Species

Section 4 of the Act and its implementing regulations (50 CFR part 424) set forth the procedures for listing, reclassifying, or removing species from listed status. ''Species'' is defined by the Act as including any species or subspecies of fish or wildlife or plants, and any distinct vertebrate population segment of fish or wildlife that interbreeds when mature (16 U.S.C. 1532(16)). Once the ''species'' is determined, we then evaluate whether that species may be endangered or threatened because of one or more of the five factors described in section 4(a)(1) of the Act. We must consider these same five factors in delisting a species. We may delist a species according to 50 CFR 424.11(d) if the best available scientific and commercial data indicate that the species is neither endangered nor threatened for the following reasons: (1) The species is extinct; (2) the species has recovered and is no longer endangered or threatened (as is the case with the (Concho water snake)); and/or (3) the original scientific data used at the time the species was classified were in error.

A recovered species is one that no longer meets the Act's definition of threatened or endangered. Determining whether a species is recovered requires consideration of the same five categories of threats specified in section 4(a)(1) of the Act. For species that are already listed as threatened or endangered, this analysis of threats is an evaluation of both the threats currently facing the species and the threats that are reasonably likely to affect the species in the foreseeable future following the delisting or downlisting and the removal or reduction of the Act's protections.

A species is ''endangered'' for purposes of the Act if it is in danger of extinction throughout all or a ''significant portion of its range'' and is ''threatened'' if it is likely to become endangered within the foreseeable future throughout all or a ''significant portion of its range.'' The word ''range'' in the phrase ''significant portion of its range'' (SPR) refers to the range in which the species currently exists. For the purposes of this analysis, we will evaluate whether the currently listed species, the Concho water snake, should be considered threatened or endangered throughout all of its range. Then we will consider whether there are any portions of the Concho water snake's range in which it is in danger of extinction or likely to become endangered within the foreseeable future.

For the purposes of this proposed rule, we consider ''foreseeable future'' for the Concho water snake to be 20 years. This is a reasonable timeframe for analysis of factors identified that could affect the species in the future and as they relate to Concho water snake biology. The snakes become sexually mature at 2 or 3 years old and reproduce annually (Werner and Dixon 2000, p. 216), with a likely life span rarely exceeding 5 years (Greene *et al.* 1999, p. 707). A 20-year timeframe would encompass about 4 life spans and multiple generations. Twenty years or about four life spans and multiple generations is a reasonable duration for analysis of hydrologic conditions and expected responses by a short lived species such as the Concho water snake. Factors most likely affecting the populations relate to hydrologic cycles and stream flows. Texas water law requirements, including the District's permit (TCEQ permit #3676), requires minimum flows below Ivie Reservoir that are the same as those the Service found in our 2004 Biological Opinion were the minimum needed by the Concho water snake. In 2008 the Service entered into a Memorandum of Understanding (MOU) with the District to provide for the maintenance of minimum flow releases in perpetuity (see the Floodwater Scouring and Instream Flows section under Factor A for further discussion of the TCEQ permit and MOU). Therefore, we have no reason to believe that any significant changes are expected in the next 20 years in reservoir operations or other

factors that might affect stream conditions and snake populations.

The following analysis examines all five factors currently affecting, or that are likely to affect, the Concho water snake within the foreseeable future.

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Habitat and Distribution

Concho water snakes are known to occur in rivers, streams, and along the artificial shoreline of reservoirs. These snakes are air-breathing; however, they feed almost exclusively on fish and are, therefore, found only near water sources capable of supporting at least a minimal fish population. Stream and river habitat used by the Concho water snake is primarily associated with riffles (Greene 1993, p. 96; Werler and Dixon 2000, p. 210; Forstner *et al.* 2006, p. 13), where the water is usually shallow and the current is of greater velocity than in the connecting pools. Riffles begin when an upper pool overflows at a change in gradient and forms rapids. The stream flows over rock rubble or solid to terraced bedrock substrate through a chute channel that is usually narrower than the streambed. The riffle ends when the rapids enter the next downstream pool. Riffles are believed to be the favored habitat for foraging, with young snakes using shallow parts of riffles and adult snakes using deeper parts of riffles (Greene 1993, pp. 13, 96; Scott *et al.* 1989, pp. 380–381; Williams 1969, p. 8; Werler and Dixon 2000, p. 215; Forstner *et al.* 2006, p. 13). Searches on the mainstream rivers (Concho and Colorado) also indicated Concho water snakes were found in the shallow pools between riffles (Williams 1969, p. 8). Dixon *et al.* (1989, p. 16) demonstrated that adult snakes used a variety of cover sites for resting, including exposed bedrock, thick herbaceous vegetation, debris piles, and crayfish burrows.

In the reservoirs, Concho water snake habitat is most likely shallow water with minimal wave action and rocks along the shoreline (Scott *et al.* 1989, pp. 379–380; Whiting 1993, p. 112). However, Concho water snakes have also been observed on steep shorelines and around boat houses (Scott *et al.* 1989, p. 379; Whiting 1993, p. 112). Unlike many other species of *Nerodia,* Concho water snakes do not seem to move far from water (Werler and Dixon 2000, p. 208). During Greene's (1993, p. 96) visual and radiotelemetry surveys, all snakes occurred within 33 feet (ft) (10 meters (m)) of water.

Adult and maturing Concho water snakes use a wider range of habitats than do juveniles (Scott *et al.* 1989, pp. 379–381; Werler and Dixon 2000, p. 211; Williams 1969, p. 8). In reservoirs and lakes, juvenile Concho water snakes are generally found in low-gradient, loose-rock shoals adjacent to silt-free cobble. In streams and rivers, juveniles are found in gravel shallows or riffles (Rose 1989, pp. 121–122; Scott *et al.* 1989, p. 379, Scott and Fitzgerald 1985, p. 35). This habitat is likely the best for juvenile snakes to successfully prey on small fish because the rocky shallows concentrate prey and are inaccessible to large predatory fish. The exposed rocky shoals act as thermal sinks, which may help keep the juvenile snakes warm and maintain a high growth rate (Scott *et al.* 1989, pp. 380–381).

Historically the Concho water snake was known to occur in spotty distribution on the mainstem of the Colorado River below E.V. Spence Reservoir near the City of Robert Lee downstream to the F.M. 45 bridge and then not again until further downstream near the City of Bend (Tinkle and Conant 1961, pp. 42–43; Williams 1969, p. 3). On the Concho River and its tributaries, Concho water snakes were historically known from Spring Creek, Dove Creek, and the South Concho River, all upstream of the Twin Buttes Reservoir, and on the mainstem of the Concho River downstream from San Angelo to the confluence with the Colorado River (Marr 1944, pp. 486–487; Tinkle and Conant 1961, pp. 42–43). By the time the Concho water snake was federally listed, it had been extirpated from the tributaries above the City of San Angelo (Flury and Maxwell 1981, p. 31), and surveys had never located snakes in lakes or reservoirs (Scott and Fitzgerald 1985, pp. 17, 34). At the time of listing, the range of the snake included O.C. Fisher, Twin Buttes, and Spence reservoirs and one tributary creek reservoir, Ballinger Municipal Lake. A fifth reservoir, O.H. Ivie (formerly known as Stacy), was already planned for construction at the confluence of the Concho and Colorado Rivers and was expected to reduce the range of Concho water snakes by more than 50 percent (Scott and Fitzgerald 1985, pp. 31, 35).

By 1993, Scott *et al.* (1989, pp. 382, 384), Thornton (1992, pp. 3–16), and Whiting (1993, pp.8, 28, 117–118, 121) determined the Concho water snake's distribution to be about 233 mi (375 km) (Service 1993, p. 9). Analysis for a 2004 amendment to the 1986 Biological Opinion (Service 2004, p. 32) summarized the known distribution of the Concho water snake to be the Colorado River from the confluence of Beals Creek (above Spence Reservoir), depending on reservoir stage, to downstream of Ivie Reservoir to Colorado Bend State Park, and on the Concho River downstream of the City of San Angelo to the confluence with the Colorado River. This is a total of about 280 mi (451 km) of river and about 40 mi (64 km) of reservoir shoreline. While the Concho water snake has been extirpated from some reaches of its historical distribution, mainly upstream of San Angelo (Flury and Maxwell 1981, p. 31), since the time of listing it has been confirmed farther downstream from Ivie Reservoir and upstream from Spence Reservoir (Scott *et al.* 1989, p. 384; and Dixon *et al.* 1988, p. 12; 1990, pp. 50, 62–65; 1991, pp. 60–67; 1992, pp. 84, 87, 96–97).

In 2004 and 2005, Drs. Forstner and Dixon surveyed for Concho water snakes across the species' range. One goal of Forstner *et al.* (2006, pp. 4–5) was to evaluate whether viable Concho water snake populations existed in all three reaches of the Colorado and Concho rivers separated by Ivie Reservoir. To do this, snake localities were surveyed ''for evidence of reproduction (one measure of sustainability).'' Persistence and reproduction were documented in the Concho River and upstream of Ivie Reservoir in the Colorado River. However, access below Ivie Reservoir was restricted by private property owners, preventing an intense assessment downstream of the impoundment. Regardless of limited access, females that exhibited signs of recently giving birth were collected from accessible areas, which Forstner *et al.* (2006, p. 18) considered technically sufficient to demonstrate persistence and reproduction downstream of Ivie Reservior. ''Even in the face of landscape scale or ecosystem wide stresses by severely reduced precipitation, increased human uses of instream flows, introduced species, and ever increasing human densities, the Concho water snake remains in the majority of the sites visited and continues to reproduce at those locations (Forstner *et al.* 2006, p. 18).'' Forstner *et al.* (2006, pp. 16–18, 20) state that ''self sustain[ed], seemingly viable populations in the Concho and Colorado Rivers at the end of a decade of monitoring'' occur in the three reaches of the snake's range.

Reservoir Inundation

At the time of listing, we believed the construction of Ivie Reservoir would have two major impacts that would result in loss of Concho water snake

habitat: (1) above the dam, the rocky shoreline and riffle habitat would be inundated, and (2) below the dam, normal water flow would be curtailed, and floodwater scouring would be prevented (see the Floodwater Scouring and Instream Flows section below for discussion of below-dam effects). At that time, the Colorado River at the proposed Ivie Reservoir site was believed to support the highest concentration of Concho water snakes (Flurry and Maxwell 1981, pp. 36, 48; 51 FR 31419). Outside of this area, the snake had been found only in isolated occurrences, which indicated a disjunct, fragmented distribution. The snake had not been collected in reservoirs or in the silted in riverine habitat below Spence Reservoir (Scott and Fitzgerald 1985, pp. 13, 28). It also had not been found in perennial tributaries except Elm Creek near Ballinger (Scott and Fitzgerald 1985, pp. 15, 34). Thus, we believed the inundation of the Ivie Reservoir would result in a substantial loss of habitat for the Concho water snake.

As a result of a 1986 formal consultation conducted under section 7 of the Act with the U.S. Army Corps of Engineers (USACE) on construction of Freese Dam to form Ivie Reservoir (1986 Biological Opinion), the District agreed to implement conservation measures that included, but were not limited to: Long-term monitoring of the snakes, completing life-history studies, maintaining specific flow regimes from Spence and Ivie reservoirs, creating six artificial riffles below Spence, and transplanting snakes between populations above and below Ivie Reservoir (Service 1986, pp. 12–24).

As part of their long-term monitoring plan, District field biologists conducted extensive searches for the Concho water snake beginning in 1987. According to Dixon *et al.* (1988, p. 12; 1990, pp. 50, 62–65; 1991, pp. 60–67; 1992, pp. 84, 87, 96–97), snakes have now been documented within and above Spence Reservoir, downstream of Spence Reservoir in the artificial riffles, at Ballinger Municipal Lake, the old Ballinger Lake, and the connecting channel between the two Ballinger lakes. The snake has also been documented in multiple locations on Elm Creek and two of its tributaries, Bluff Creek and Coyote Creek (Scott and Fitzgerald 1985, pp.14–15, 30; and Scott *et al.* 1989, p. 384).

Additionally, during the District's 10-year monitoring effort (1987–1997), snakes were regularly found in Spence, Ivie, and Lake Ballinger Reservoirs, a habitat type they were not known to occupy at the time of listing. Concho water snakes have continued to be found in reservoirs. Dixon's (2004, pp. 3–4) surveys in 2004 confirmed that snakes persist in Spence and Ivie Reservoirs, and, while Ballinger Lake had only a small pool of water (2 feet or less) in 2004 and no snakes were found, after rains in 2005 Forstner *et al.* (2006, p. 12) confirmed snake presence and reproductive activity within the lake. Whiting (1993, p. 17) stated that rocky shorelines were the single most important component of snake habitat in reservoirs, and that changes in water surface elevation of Spence Reservoir affect the availability of that shoreline habitat (Whiting 1993, p. 13). In discussing Spence Reservoir, Forstner *et al.* (2006, p. 17) states that, ''there are rocky outcrops, boulder slopes, in limited areas that have been occupied by the snake and the populations have remained there over the past decade.''

Because Concho water snakes are now known to be reproducing and persisting in lakes and reservoirs and their current distribution is larger than reported at the time of listing and historically, habitat loss from reservoir inundation is no longer believed to be a significant threat to the long-term survival of the species.

Drought

In severe drought, as the region has experienced over the last 15 years (TWDB 2006, 1–60, 1–67), the linear extent of dewatered riverine habitats could be large and the length of time without flows could extend for several months or more (Service 2004, p. 51). Decreased flow will likely reduce the amount of available shallow rocky habitats in much of the river. However, Concho water snakes appear able to survive these low flow periods. For example, Elm Creek had experienced a number of extended no flow periods over the 5 years prior to 2004 and then flooded in August 2004. In September 2004, Dixon (2004, p. 11) noted Concho water snakes inhabited the site. Dixon (2004, p. 12) surmised that snakes either moved from the mouth of Elm Creek at the Colorado River (a distance of 4.6 creek mi (7.4 creek km)), or existed in deep pools somewhere within a returnable distance to the site. Another example of snake persistence during dry times was the drying of Ballinger Lake in 2004 and confirmation of reproductive snakes in the lake in 2005 following rains (Dixon 2004, p. 4; Forstner *et al.* 2006, p. 15).

According to Dixon (2004, p. 9), during long periods of drought, the low-head dams (small private dams, a few feet tall, that create pools upstream and riffle-like areas downstream) within both the Concho and Colorado Rivers form pools that can extend two-thirds of a mile (1 km) or more up river (depending on dam height). The riffles and pools that lie upstream of these low-head dams may not completely dry up because of small springs and creeks nearby. These pools act as refuges for juvenile and adult Concho water snakes when flow ceases (Dixon 2004, p. 9). Concho water snakes have been located in pools behind low-head dams along the Colorado River, and Dixon (2004, p. 9) states that it is reasonable to expect the small pools behind low-head dams on the Concho River act in the same way. Even with the drought, water continues to flow over bedrock in some areas, and snakes have been observed foraging for fish in the diminished flow. The extent of solid bedrock in some of the riffle systems tends to maintain the nature of the riffle and does not allow vegetation to root and collect debris and silt (Dixon 2004, p. 9).

Another way the snakes may endure drying conditions is to use deep burrows. Greene (1993, pp. 89, 94) found Concho water snake hibernacula (shelters for hibernating snakes) within 19.7 ft (6 m) of water with a mean depth of 1.7 ft (0.52 m). Hibernacula types included crayfish burrows, rock ledges, debris piles, and concrete low water crossings for adults and loose embankments of rock and soil for juveniles. Dixon (2006, p. 2) stated that during droughts the snakes were possibly in the crayfish burrows, since they may retain moisture.

Even in light of the ongoing regional drought (TWDB 2006, pp. 1–60, 1–67), USGS stream gauges have registered four flood events greater than 400 cubic feet per second (cfs) below Spence Reservoir and six flood events greater than 1,000 cfs below Ivie Reservoir over the last 10 years. While both Dixon (2004, pp. 8–9) and Forstner *et al.* (2006, pp. 12, 15) document degradation of riffles from siltation, there are still numerous riffles continuing to support Concho water snakes (Dixon 2004, pp. 5–8).

The Concho water snake has evolved and adapted for thousands of years through many documented long-term droughts (Forstner *et al.* 2006, pp. 17–19). Forstner *et al.* (2006, pp. 16, 20) state that ''the impacts and future stressors on this taxon by anthropogenic and natural cycles are inevitable,'' and ''the snake has persisted in an environment for the past several millennia that has seen frighteningly intense periods of drought.'' Additionally, while there have never been minimum flows required for the Concho River below San Angelo, there

are several smaller dams ''up and down the Concho River, [which] act as refugia for Concho water snakes (Dixon 2004, p. 4).'' Therefore, because the snakes have survived under long-term drought and low-flow conditions (Forstner *et al.* 2006, p. 22), we believe that the threat from drought is not likely to endanger the Concho water snake in the foreseeable future.

Floodwater Scouring and Instream Flows

As discussed above, at the time of listing, we believed the construction of Ivie Reservoir would curtail normal water flow and prevent floodwater scouring. Without such flooding, riffle habitat is lost as the rocky streambed becomes covered with silt. In their recent survey of the Concho water snake and its habitat, Forstner *et al.* (2006, pp. 14, 16) found that the lack of flushing flows has allowed silt to settle and cover many of the riffles at historically occupied sites and that several sites have changed from riffles to slow-flowing sandy sections of river, reducing habitat available to these snakes. Sand and silt fill in graveled cobble substrate and provide areas for growth of salt cedar and other vegetation, which further eliminates the rocky-bottomed riffle areas required by Concho water snakes (51 FR 31419; Scott and Fitzgerald 1985, p. 13; Forstner *et al.* 2006, p. 15). However, despite some riffle habitat loss and the presence of other system stressors, Forstner *et al.* (2006, p. 18) noted that the Concho water snake persisted and continued to reproduce at the majority of the sites they visited. Thus, we believe that the loss of some riffle habitat does not threaten the Concho water snake.

Since issuance of the 1986 Biological Opinion and associated minimum flow requirements, stream flows throughout the range of the Concho water snake have declined considerably (Forstner *et al.* 2006, pp. 13–16). According to the Regional Water Plan for Region F of the Texas Water Development Board (TWDB 2006, p. 1–6), ranching, irrigated agriculture, and the oil and gas industry have historically dominated the regional economy. The largest water user, about 66 percent of the total demand, is irrigated agriculture (provided mostly by groundwater pumping), and municipal is the next largest water user at almost 22 percent (provided mostly by surface water reservoirs) (TWDB 2006, pp. 1–19, 1–24). Based on an analysis of USGS stream gauges (Service 2004, p. 36), low flows in the rivers in recent years have been exacerbated by low annual rainfall totals throughout the watershed. Stream flows during 1999 to 2003 were substantially lower than the period of record for seven USGS stream gauges analyzed on the Colorado and Concho rivers. Recent flows on the Concho River, where minimum flows have not been required, have been particularly low. Prior to reservoir construction near the City of San Angelo, median annual flow on the Concho River at the San Angelo and Paint Rock gauges was 32 and 26 cfs, respectively, but declined to a median annual flow of 0.2 and 0.1 cfs, respectively, from 1999 to 2003. Discharges on the Colorado River have not ceased since 1986 due partly to minimum flows required by the 1986 Biological Opinion on construction of Ivie Reservoir. However, median annual discharge prior to construction of Ivie Reservoir was 71 cfs and declined to 9 cfs between 1999 and 2003 (Service 2004, pp. 36–37).

In July 2004, the USACE reinitiated formal consultation (Consultation Number 2–15–F–2004–0242) with the Service on the District's activities. Prior to completing the consultation, the District indicated through a letter (2004, pp. 1–2), and the USACE concurred via e-mail (2004, p. 1), that an emergency situation existed due to a limited water supply endangering public health and safety to their municipal customers (450,000 people). The ongoing drought and implementation of the conditions in the 1986 Biological Opinion were given as the basis for this emergency. During the emergency, the District was allowed to cease releasing minimum flows, while formal consultation was ongoing. An amended biological opinion (2004 Biological Opinion) was completed in December 2004. Shortly thereafter, the District and the USACE determined the emergency had ended and the requirements of the amended Biological Opinion went into effect (Service 2004, pp. 1, 3). The main component of the 2004 Biological Opinion was a reduction in minimum flow requirements (Service 2004, pp. 11–12). The new flow requirements included, to the extent there is inflow into Spence Reservoir, that the District will maintain a minimum flow in the Colorado River downstream of not less than 4.0 cfs (0.11 cms) during April through September and 1.5 cfs (0.04 cms) during the months of October through March.

While the reduced minimum flows outlined in the 2004 Biological Opinion will have an impact on the aquatic habitat conditions in the Colorado River, those impacts will be ameliorated to some degree by the nature of the intervening watersheds that drain each of these stream segments, since both the Colorado and Concho rivers are gaining streams (Service 2004, pp. 50–51). Gaining streams gather water as you progress downstream. This gathering of water is exhibited not only by tributary inflow but also as bank discharge from spring flow that occurs where shallow aquifers interface with the stream. This gaining stream phenomenon is greatly controlled by ambient weather conditions. During periods of long-term drought, the tributaries and springs will cease flowing; however, during normal rainfall periods, these sources of water help to restore and maintain more stable instream flows in the mainstem (Service 2004, p. 50). Additionally, even when releases from dams have ceased, normal seepage from a dam occurs and provides for the formation of pools (large and small) that can provide habitat for the Concho water snake and the fish it preys upon for varying periods of time depending on ambient weather conditions. When dam releases are resumed, the pools (located below dams and up and downstream from spring areas) that may have served as refugial habitat are reconnected by flowing water.

If the Concho water snake is delisted, the minimum flow requirements required by the 2004 Biological Opinion will no longer apply. However, in February 2008 the Service entered into a MOU with the District to provide for the maintenance of these minimum flow releases in perpetuity. The purpose of the MOU is for the District to provide assurance that minimum reservoir releases will continue in perpetuity, consistent with the 2004 BO (Service, 2004, pp. 11–12). The releases will be maintained, to the extent there is inflow, if the Concho water snake is removed from the Federal list of threatened species. While this means the District has the authority to further reduce or even terminate flows during times of extremely low inflow, earlier analysis using 10 years of historical data indicated that, based on studies that demonstrate persistence of the snake in the past, such low flows occurring only occasionally and temporarily should not affect the snake's long-term status.

The District has implemented every activity requested by the Service in previous biological opinions beginning in 1986. The minimum flows required in the 2004 Biological Opinion have been implemented by the District and those flow requirements were duplicated in the 2008 MOU signed by the District. The District has an excellent track record of carrying out conservation actions to benefit the Concho water snake (Freese and Nichols 2006, Service pp. 42–47). The Service is

confident in the District's commitment and ability to carry out the provisions of the 2008 MOU to provide for minimum flows. Even in the absence of the MOU flow requirements, minimal amounts of water and stream flows will still be present at various times of the year in the gaining reaches of the Colorado River and below Spence and Ivie Reservoirs due to: dam leakage/seepage, inflow from creeks and other drainages, and spring activity.

In addition to the MOU, and the 2004 Biological Opinion, Texas water law requirements also result in maintenance of instream flow. Texas observes traditional appropriative water rights, which is also known as the ''first in time, first in right'' rule (See Texas Water Code § 11.027). The state's water policy requires the Texas Commission on Environmental Quality (TCEQ) to set, to the extent practicable, minimum instream flows to protect the state's water quality when issuing water rights permits (See Texas Water Code § 11.0235(c)). Furthermore, Texas water law prohibits the owner of stored water from interfering with water rights holders downstream or releasing water that will degrade the water flowing through the stream or stored downstream (Texas Water Code § 297.93).

The District's water rights permit (TCEQ permit #3676) requires the District to maintain flows below Ivie Reservoir of 8 cfs from April through September and 2.5 cfs from October through March. Flows must be maintained below both Spence and Ivie reservoirs to ensure water quality and provide for downstream water rights. Flows are mandated and releases from Spence Reservoir are periodically required by the State of Texas to ensure the quality of water entering Ivie Reservoir. Spence Reservoir is known to be high in dissolved solids and chlorides (Service 2004, p. 6), so if flows into Spence Reservoir are low, water quality in the reservoir can become degraded unless flushing flows are released. The District must also ensure that senior water right holders are delivered specific amounts of water from Ivie Reservoir. Therefore, long-term low flow releases or no releases from Spence and Ivie Reservoirs are rare.

The District has been able to maintain flows from both Spence and Ivie reservoirs over the long term as evidenced by long-term measures of flows at two gages. Daily median flows in the reach of the Colorado River below Spence Reservoir (as measured at USGS near Ballinger since Spence Reservoir was constructed, 1969–2007) exceeded 4.0 cfs in the summer (April through September) all but 12 days. During the winter (October through March), daily median flows always exceeded 1.5 cfs. Daily median flows in the reach of the Colorado River below Ivie Reservoir (as measured at USGS at Winchell since Ivie Reservoir was constructed, 1990–2007) exceeded 8.0 cfs in the summer (April through September) all but 15 days. During the winter (October through March), daily median flows always exceeded 2.5 cfs. We believe that the District will continue to maintain instream flows in the foreseeable future.

While instream flows have decreased, Concho water snakes have continued to be found throughout their range. In addition, as discussed above in the Drought section, Concho water snakes appear to be able to survive low flow situations. Therefore, because the snakes have survived under low-flow conditions, and because some minimal flows will persist throughout parts of the snake's range (Forstner *et al.* 2006, p. 22) due to natural inflows and dam releases by the District, we believe that the Concho water snake is not threatened due to lack of instream flows in the foreseeable future.

Vegetation Encroachment

Salt cedar (Tamarisk sp.) is a nonnative species that was introduced to the United States in the 1800s from southern Europe or the eastern Mediterranean region (DiTomaso 1998, p. 326). In the watersheds of the Spence and Ivie Reservoirs, these plants are abundant and have been reported to have greatly affected water quality and quantity because they consume large volumes of water and then transport salts from the water to the surfaces of their leaves. When the leaves are dropped in the fall, the salt is concentrated at the soil surface (Freese and Nichols 2006, p. 5.5; DiTomaso 1998, p. 334).

In an effort to increase water yield and reduce salt concentrations in Spence and Ivie reservoirs, the District, in cooperation with the Texas Cooperative Extension, the Texas Department of Agriculture, the U.S. Department of Agriculture—Agricultural Research Service, and the Texas State Soil and Water Conservation Board (TSSWCB), has initiated a salt cedar control project in the Upper Colorado River Basin, which includes spraying an herbicide to eradicate mass concentrations of salt cedar and then using a leaf beetle for biological control of new plant growth (Freese and Nichols 2006, p. 6.4). This project ''is an excellent first step in the recovery of the Upper Colorado River Basin back to many of its [pre-infestation] functions, including native riparian habitat for wildlife and improved habitat for fish and other aquatic organisms,'' and is ''one of the most crucial options for improving water quality and quantity'' (Freese and Nichols 2006, pp. 6.5–6.6). We have no information that the herbicide poses a direct poisoning threat to the Concho water snake.

Additionally, control programs for invasive brush species, such as juniper (*Juniperus* sp.) and mesquite (*Prosopis* sp.), are also being implemented in the Concho and Upper Colorado River basins to increase water quantity (Freese and Nichols 2006, p. 6.6; TSSWCB 2004, pp. 2–3). The TSSWCB is currently focusing above O.C. Fisher and Twin Buttes reservoirs on the Concho River and to date over 175,000 acres (70,820 hectares) of invasive brush have been treated in these watersheds (TSSWCB 2004, pp. 2–3). The removal and control of salt cedar and other invasive brush from the riparian reaches of the Colorado and Concho rivers helps augment existing stream discharge and also reduces buildup of dissolved solids (salts) in the soils of the riparian zone (Service 2004, p. 56). Additionally, this removal encourages reformation of riffle areas, increases stream flow, and reduces sediment deposition, which improves instream habitat for the Concho water snake and other aquatic species (Freese and Nichols 2006, p. 6.6).

Fragmentation

At the time of listing, we believed construction of Ivie Reservoir (formed by Freese Dam) would likely segment Concho water snakes into three separate populations and thereby reduce genetic exchange (Scott and Fitzgerald 1985, p. 34). Prior to the snake's listing in 1986, no researchers had documented Concho water snakes traveling over land to circumvent the barriers caused by large dams, and snakes had not been located in reservoirs. Due to this separation, a reasonable and prudent measure in the 1986 Biological Opinion was to transfer snakes annually between the populations separated by the dam. Snakes were transferred in 1995 and again in 2006 (District 1995, p. 1; District 2006, pp. 1–3).

Because we now know Ivie Reservoir, which receives flow from both the Concho and Colorado Rivers, to be occupied, we believe it is reasonable to surmise that snakes are capable of genetic interchange between the Concho and Colorado Rivers via the reservoirs' shorelines. The District (1998, p. 14) summarized Concho water snake habitat within Ivie Reservoir and found that

although the habitat is not linearly consistent, it does occur throughout the reservoir. Female Concho water snakes produce their first young at 2 or 3 years of age (Werler and Dixon 2000, p. 216). Based on occupancy of reservoirs and moderate generation time, we have a high level of confidence that gene flow occurs between populations.

In recent surveys, Forstner *et al.* 2006 (pp. 10–13, 18) found that Concho water snakes were reproducing in the Concho and Colorado Rivers above Ivie Reservoir and in the Colorado River below it; they concluded that the populations in those three river reaches were self sustaining and seemingly viable (Forstner *et al.* 2006, pp. 16–18, 20). The 2008 MOU (mentioned above), Article 4.1 also provides that, in the springtime, the District, in coordination with the Service, should move 5 male snakes from below Spence and Freese dams to above these dams, once every 3 years. Moving snakes will be dependent upon availability of funding for the District. We believe this movement will benefit the snake by enhancing genetic exchange between the three populations. Should funding be unavailable in any particular snake-moving year, every effort will be made to move snakes in the succeeding year. Based on the available data, we do not believe the species is likely to become threatened or endangered in the foreseeable future due to genetic isolation.

Pollution and Water Quality

At the time of listing, we believed buildup of algae in riffle areas reduced oxygen and nutrients available to populations of fish, the Concho water snake's primary food (51 FR 31419). We were also concerned that the inflow of nutrients into the Concho River in the San Angelo area, along with reduced dilution capability associated with lower flows, created large concentrations of algae in portions of the river (51 FR 31419). A summary of the 1987–1996 fish collections in the Colorado and Concho Rivers, included in the Service's 2004 Biological Opinion (Appendix A, pp. 68–69), suggested that fish populations have persisted despite the presence of algae. Also, no impacts to snakes have been observed or documented as a result of water quality conditions during the ongoing drought (Service 2004, p. 52). Additionally, according to Dixon (2006, p. 2), Concho water snakes have been documented to survive in captivity for as long as 12 months with a reduced food supply. Therefore, we no longer consider algal growth and nutrient enrichment to be significant threats to the snake's survival.

The Concho water snake was listed as endangered by the State of Texas in 1984. In 2000, it was removed from the State's list of threatened species (TPWD 2000, p. 3) because TPWD no longer considered it likely to become endangered (64 FR 41903).

The Texas State Legislature implemented the Texas Clean Rivers program in 1991. The District has actively participated in the program since that time and monitors surface water quality in the upper Colorado River basin, which includes the distribution of the Concho water snake above Freese Dam. The Lower Colorado River Authority (LCRA) has the responsibility for water quality monitoring below Freese Dam. Both of these entities have participated in the Clean Rivers Program since 1991 and have provided a proactive response for ensuring a high level of surface water quality in the Colorado River and its mainstem reservoirs. These programs are ongoing and designed to ensure water quality integrity for all aquatic resources, including the Concho water snake and fish, its primary food source, in the upper basin. As water quality problems are detected, swift responses by the District and LCRA to effect corrective actions through State of Texas regulatory agencies (TCEQ and the Texas Railroad Commission) are completed (Service 2004, pp. 52–53).

Additional water quality protections for Concho water snakes in riverine and reservoir habitats will continue indirectly under the Clean Water Act (CWA). According to the Environmental Protection Agency (2006, p. 1), the CWA establishes basic structures for regulating discharges of pollutants into United States waters, protecting water quality for species dependent on rivers and streams for their survival.

According to species experts, minimally maintained, ''mandated flows below Ivie Reservoir (TCEQ permit #3676) [and] senior water rights below both Spence and Ivie reservoirs'' will adequately provide instream flows for the Concho water snake (Forstner *et al.* 2006, p 21), preventing the snake from likely becoming threatened or endangered in the foreseeable future because the snake has persisted under these conditions historically, including the ongoing drought, as discussed earlier in this proposal.

Forage Fish Availabilty

At the time of listing, we believed that declining flows, inundation, pollution, and other habitat threats would have adverse impacts on riffle-dwelling fish, the principal food of the Concho water snake (Williams 1969, pp. 9–10; Dixon *et al.* 1988, p. 16; 1989, p. 8; 1990, p. 36; 1992, p. 6; Greene *et al.* 1994, p. 167; Thornton 1990, p. 14). While we do not know the full extent of the drought's effects on the local fish populations, we do have information that indicates the snake is able to survive in captivity for up to 12 months with a reduced food supply (Dixon 2006, p. 2), and based on the snake's persistence and reproduction within all three reaches (Forstner *et al.* 2006, pp. 10–13, 18), we believe that the Concho water snake is no longer threatened with endangerment in the foreseeable future as a result of potential threats to local food fish populations.

Factor A Summary

In conclusion, over the course of 20 years, including the construction of three dams that were anticipated to fragment the distribution of the Concho water snake, a prolonged drought accompanied by extreme low water flows in parts of the snake's range, and concerns about heavy nutrient inflows, surveys have confirmed that the snakes have occupied habitat along the new lakeshores, survived in or quickly reoccupied areas of extreme low flows, and have not been adversely affected by nutrient-related effects. Additionally, habitat restoration efforts such as the removal of salt cedar and other brushy species may be improving instream habitat for the Concho water snake and other aquatic species. We believe that destruction, modification, or curtailment of the Concho water snake habitat or range due to habitat loss, altered instream flows and floodwater scouring, drought, vegetation encroachment, fragmentation, and pollution no longer threaten the Concho water snake with becoming endangered.

Forstner (2006 p. 12) cites Soule's 1987 definition that describes the key criteria for a viable population to include the ability of the population to be self sustaining, able to persist over time (a century or longer for the Concho water snake), and the ability to adapt to local conditions and evolutionary pressures. Forstner stated that the criteria of self sustaining, seemingly viable populations in the Concho and Colorado rivers at the end of a decade of monitoring have been met. Recalling the three recovery criteria from the 1993 Concho Water Snake Recovery Plan: Adequate instream flows, viable populations in each of the three major reaches (as indicated by not only the repeated presence of snakes at long-term monitoring sites, but by documented evidence of reproduction as a measure

of sustainability), and movement of water snakes to counteract population fragmentation. Forstner's 2006 Final Survey Assessment Report (May 18, 2006 p. 12) concludes that his assessment indicates that two out of three of the criteria have been met. Fortner (2006 p. 13) then states that his assessment did not address the final instream flow criterion, yet concludes that ''in addition to the mandated flows below Ivie Reservoir (TCEQ permit #3676), senior water rights below both Spence and Ivie Reservoirs virtually assure maintenance of instream flows simply as a consequence of meeting those water right demands. The assurance of the instream flow criterion can be met without ever considering the flows agreed to by the District in the 2008 MOU. The Service realizes that severe environmental conditions that reduced reservoir releases and instream flow have occurred in the past and will occur in the future, and we are confident that the District will continue to implement all appropriate conservation actions, including providing the flows outlined in the 2008 MOU. Furthermore, we believe that the District will continue to comply with its TCEQ water rights permit, which mandates flow releases from Ivie Reservoir. Since the listing of the Concho water snake in 1986, the District has an impeccable track record of providing flows, moving snakes, and facilitating/conducting research and monitoring to conserve the species.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

At the time of listing, Concho water snakes were known to sometimes be captured or killed by recreationists (51 FR 31420). The effect of this activity on Concho water snake populations was and still is believed to be minimal. However, instances of Concho and Brazos water snakes being killed have been reported in both populated and unpopulated areas. For example, Brazos water snakes have been crushed under stones at the water's edge by people walking on the banks and shot by small caliber firearms, and fishermen have commented on their success in removing the ''water moccasins'' from the river (Forstner *et al.* 2006, pp. 18–19). At one of the historically most productive localities for Brazos water snakes (a closely related species occurring in an adjacent drainage), Forstner *et al.* (2006, p. 18) found no snakes in 2 years of searching. They noted dozens to hundreds of campers at the site each year. According to Dixon (2006, p. 2), there is not as much recreation occurring on the Concho and Colorado Rivers, where the Concho water snake occurs, as there is on the Brazos River. We are unaware of any plans to increase recreational opportunities in the Colorado and Concho Rivers to increase recreational use. Therefore, we believe that impacts from recreationists will continue to be less in the foreseeable future in the areas occupied by Concho water snakes.

While some limited killing of snakes is likely still occurring, there is no evidence indicating that these mortalities are affecting the species on a rangewide or population level. Therefore, we find that mortality from this factor is not likely to cause the species to become threatened or endangered in the foreseeable future.

C. Disease or Predation

At the time of listing, no problems of disease or predation on Concho water snakes were known to exist (51 FR 31420). While currently no disease problems are known, predators on Concho water snakes have been identified. As is true for most snakes, predation is considered a major natural source of mortality for Concho water snakes (Werler and Dixon 2000, p. 215). Predators documented to prey on Concho water snakes include kingsnakes (*Lampropeltis getula*), coachwhip snakes (*Masticophis flagellum*), racers (*Coluber constrictor*), raccoons (*Procyon lotor*), and great blue herons (*Ardea herodias*) (Greene 1993, p. 102; Dixon *et al.* 1988, p. 18; Williams 1969, p. 15). Raptors such as hawks (*Buteo spp.*) and falcons (*Falco sp p.*) are also known to predate upon snakes (Steenhof and Kochert 1988, p. 42). Predatory fish include bass (*Micropterus salmoides*) and channel catfish (*Ictaclurus punctatus*) (McGrew 1963, pp. 178–179; Jordan and Arrington 2001, 158). Predation of Concho water snakes clearly is occurring; however, all of these predators are native to this region and the snakes have persisted in the face of such predation both historically and during the last 20 years during periods of dam construction and drought. Thus, we believe that mortality from predation is not likely to cause them to become threatened or endangered in the foreseeable future.

D. The Inadequacy of Existing Regulatory Mechanisms

Due to the Texas Clean Rivers program, other Texas water law requirements, and the 2008 MOU between the Fish and Wildlife Service and the ASACE, both discussed earlier under Factor A, we believe that inadequacy of existing regulatory mechanisms does not constitute an ongoing threat to the Concho water snake.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

We are unaware of any other natural or manmade factors affecting the continued existence of the Concho water snake at this time.

Conclusion of the Five-Factor Analysis

As required by the Act, we considered the five potential threat factors to assess whether the Concho water snake is threatened or endangered throughout all or a significant portion of its range. When considering the listing status of the species, the first step in the analysis is to determine whether the species is in danger of extinction throughout all of its range. If this is the case, then the species is listed in its entirety. For instance, if the threats on a species are acting only on a portion of its range, but they are at such a large scale that they place the entire species in danger of extinction, we would list the entire species.

Since the time of listing, it has been shown that: (1) Concho water snakes can survive lower flows than previously thought necessary for their survival; (2) mandated flows, downstream senior water rights, and the 2008 MOU between the District and the Service virtually assure maintenance of adequate instream flows; (3) viable populations of Concho water snakes exist in all three reaches of the species' range; (4) the snake uses the shoreline of reservoirs; (5) snakes may not need to be transferred between populations in order to prevent genetic isolation, although the 2008 MOU provides for them to be moved; and (6) it persists, reproduces, and remains viable throughout its range. In addition, the removal of salt cedar and other invasive brushy species is restoring riparian habitat, small riffles, and water quality for the Concho water snake.

Application of the Results of the Five Factor Analysis to the Recovery Plan's Criteria

The 1993 Recovery Plan described maintenance of adequate instream flows (Recovery Criterion 1) to maintain both the quantity and quality of Concho water snake habitat so that occupied habitat would continue to support viable populations of the species. At the time the recovery plan was completed, adequate instream flow rates were based on the constituent elements identified in the 1989 critical habitat designation (54 FR 27382) and the reasonable and prudent alternatives identified in the

1986 Biological Opinion for the construction of O.H. Ivie Reservior. However, those requirements changed as the following new information became available:

(1) Lower flow rates support the snake population;

(2) Information on the snake's habitat indicates that they are more of a generalist and do not depend on the previously accepted narrow habitat requirements; and

(3) Adequate flow to maintain the snake's habitat and the snake population is provided by a variety of sources in addition to the flow required by the 2004 Biological Opinion (and subsequently required in a 2008 Memorandum of Understanding (MOU)).

As discussed above, in 2004, we revised the biological opinion and determined that lower flow rates were adequate to support riverine habitat for the snake. This was based on new information from numerous studies funded by the District in the 1990s that greatly added to our knowledge of the biology of the snake and its habitat. Monitoring of the snake population indicated that the population was sustained by the lesser flows required in the 2004 Biological Opinion (Forstner 2006, p. 12).

It is now known that the Concho water snake is more of a habitat opportunist than originally believed (Dixon 2004). In addition to riverine habitat, the snake is known to use areas above and below low head dams, pools created by the dams, man-made lakes, naturally occurring pools in the river, and tributaries, as Concho water snake has been found in Elm Creek and two of its tributaries. Further analysis by Forstner *et al.* (2006, p. 16) concluded that Concho water snakes can survive in habitats with lower flows than previously thought.

While riverine habitat is important for the conservation of the snake, the need to maintain continuous flows at levels previously required were determined to no longer be necessary to provide adequate habitat for snakes. The flows described in the Recovery Plan and the specific flows included in the 1989 critical habitat designation were based on the best scientific information at that time; however, subsequent information provided by Forstner, Dixon, and Thornton indicated that the snake survived, reproduced, and maintained population viability with less stream flow. In response to that new information, the Service required lower stream flows in the 2004 Biological Opinion and based that decision on the continued population viability of the water snake (including snake abundance and reproductive success). This was further confirmed by the Fortner *et al.* 2006 report.

In order to maintain riverine habitats in the Colorado River, we entered into a MOU in 2008 to ensure that the District will operate Colorado River reservoirs to provide adequate instream flows if the species were delisted, consistent with the 2004 Biological Opinion (see Factor A section above for more information).

In addition to the MOU, the District also maintains flows below Spence and Ivie reservoirs to ensure water quality and provide for downstream water rights. Flows are mandated and releases from Spence Reservoir are periodically required by the State of Texas to ensure the quality of water entering Ivie Reservoir. Spence Reservoir is known to be high in dissolved solids and chlorides (Service 2004, p. 6), which results in period releases of water from Spence Reservoir to maintain its water quality. The District must also ensure that senior water right holders are delivered specific amounts of water from Ivie Reservoir. Therefore, long term low flow releases or no releases from Spence and Ivie Reservoirs are not common practices unless an emergency situation occurs.

The Recovery Plan also required maintaining viable populations of the snake (Recovery Criterion 2). Forstner *et al.* (2006, pp. 18, 20) reviewed the past population data collected on the snake as well as conducted field surveys in 2005 and 2006. Based on the snakes' persistence and reproduction throughout its range Forstner *et al.* (2006, pp. 18, 20) concluded that seemingly viable populations of Concho water snakes exist in all three reaches of the species' range. A re-analysis of Concho water snake monitoring data collected from 1987 to 1996 attempted to evaluated the population dynamics of the species and assess the long-term viability (Whiting *et al.* 2008, pp. 438–439). The results, however, were inconclusive due to uncertainties in the various models used and the inability to account for snake movements from the database used in the analysis (Whiting *et al.* 2008, p. 443). The study stated that snakes continued to persist even in drought-prone areas with hydrologically dynamic systems (Whiting *et al.* 2008, p. 443). Although we lack adequate data on population size and viability, we have used data on range, persistence, and breeding activity as surrogates.

The Recovery Plan also discussed the movement of Concho water snakes to counteract adverse impacts of population fragmentation and prescribed the movement of four snakes (two of each sex) every five years in a specific pattern above and below Ivie Reservoir (Recovery Criterion 3). The 2004 Biological Opinion discussed population fragmentation (Service 2004, p. 52) and changed the specific requirement for snake movements to five male water snakes above and below both the Robert Lee and Freese Dams once every three years. The Service believes that these movements are sufficient to maintain genetic heterogeneity between the separated populations. The 2008 MOU requires the same movements of snakes by the District even after the species is delisted. The Service based its belief and change in snake movement requirements on information available from monitoring and capture and release data after the preparation of the Recovery Plan.

As a result of the new information discussed above, it is our belief that the Recovery Plan's criteria for recovery of the species have been met.

Significant Portion of the Range Analysis

Having determined that the Concho water snake no longer meets the definition of threatened or endangered, we must next consider whether there are any significant portions of its range that are in danger of extinction or are likely to become endangered in the foreseeable future. On March 16, 2007, a formal opinion was issued by the Solicitor of the Department of the Interior, ''The Meaning of 'In Danger of Extinction Throughout All or a Significant Portion of Its Range' '' (U.S. DOI 2007). We have summarized our interpretation of that opinion and the underlying statutory language below. A portion of a species' range is significant if it is part of the current range of the species and is important to the conservation of the species because it contributes meaningfully to the representation, resiliency, or redundancy of the species. The contribution must be at a level such that its loss would result in a decrease in the ability to conserve the species.

The first step in determining whether a species is threatened or endangered in a significant portion of its range is to identify any portions of the range of the species that warrant further consideration. The range of a species can theoretically be divided into portions in an infinite number of ways. However, there is no purpose to analyzing portions of the range that are not reasonably likely to be significant and threatened or endangered. To identify only those portions that warrant

further consideration, we determine whether there is substantial information indicating that (i) The portions may be significant and (ii) the species may be in danger of extinction there or likely to become so within the foreseeable future. In practice, a key part of this analysis is whether the threats are geographically concentrated in some way. If the threats to the species are essentially uniform throughout its range, no portion is likely to warrant further consideration. Moreover, if any concentration of threats applies only to portions of the range that are unimportant to the conservation of the species, such portions will not warrant further consideration.

If we identify any portions that warrant further consideration, we then determine whether in fact the species is threatened or endangered in any significant portion of its range. Depending on the biology of the species, its range, and the threats it faces, it may be more efficient in some cases for the Service to address the significance question first, and in others the status question first. Thus, if the Service determines that a portion of the range is not significant, the Service need not determine whether the species is threatened or endangered there; conversely, if the Service determines that the species is not threatened or endangered in a portion of its range, the Service need not determine if that portion is significant.

The terms ''resiliency,'' ''redundancy,'' and ''representation'' are intended to be indicators of the conservation value of portions of the range. Resiliency of a species allows the species to recover from periodic disturbance. A species will likely be more resilient if large populations exist in high-quality habitat that is distributed throughout the range of the species in such a way as to capture the environmental variability within the range of the species. It is likely that the larger size of a population will help contribute to the viability of the species. Thus, a portion of the range of a species may make a meaningful contribution to the resiliency of the species if the area is relatively large and contains particularly high-quality habitat or if its location or characteristics make it less susceptible to certain threats than other portions of the range. When evaluating whether or how a portion of the range contributes to resiliency of the species, it may help to evaluate the historical value of the portion and how frequently the portion is used by the species. In addition, the portion may contribute to resiliency for other reasons—for instance, it may contain an important concentration of certain types of habitat that are necessary for the species to carry out its life-history functions, such as breeding, feeding, migration, dispersal, or wintering.

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

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

Applying the process described above for determining whether a species is threatened in a significant portion of its range, we next addressed whether any portions of the range of the Concho water snake warranted further consideration. We concluded through the five-factor analysis, in particular Factor A that the existing or potential threats are consistent throughout its range, and there is no portion of the range where one or more threats is geographically concentrated. We believe that there are no small geographic areas where localized threats still exist. Because the low level of threats to the species is essentially uniform throughout its range, no portion warrants further consideration.

In summary, Concho water snakes can survive lower flows than previously thought necessary for their survival; mandated flows and downstream senior water rights virtually assure maintenance of instream flows; viable populations of Concho water snakes exist in all three reaches of the species' range. Based on the snake's use of reservoirs, persistence, reproduction, and viability throughout its range, we have determined that none of the existing or potential threats, either alone or in combination with others, are likely to cause the Concho water snake to become in danger of extinction within the foreseeable future throughout all or a significant portion of its range. We believe the Concho water snake no longer requires the protection of the Act, and, therefore, we are proposing to remove it from the Federal List of Endangered and Threatened Wildlife.

Effects of This Proposed Rule

If made final, this rule would revise 50 CFR 17.11 (h) to remove the Concho water snake from the Federal List of Endangered and Threatened Wildlife. The prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9, would no longer apply to this species. Federal agencies would no longer be required to consult with us to insure that any action they authorize, fund, or carry out may affect the Concho water snake. Critical habitat was designated for the Concho water snake on June 29, 1989 (54 FR 27377). If finalized, this rule would also revise 50 CFR 17.95(x) to remove the critical habitat designation.

Regulatory Planning and Review (Executive Order 12866)

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

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

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

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

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

Post-Delisting Monitoring

Section 4(g)(1) of the Act requires the Service to implement a system, in cooperation with the States, to monitor for not less than 5 years the status of all species that have recovered and been removed from the lists of threatened and endangered wildlife and plants (50 CFR 17.11, 17.12). The purpose of this post-delisting monitoring (PDM) is to verify that the species remains secure from risk of extinction after it has been removed from the protections of the Act. We are to make prompt use of the emergency listing authorities under section 4(b)(7) of the Act to prevent a significant risk to the well being of any

recovered species. Section 4(g) of the Act explicitly requires cooperation with the States in development and implementation of PDM programs, but we remain responsible for compliance with section 4(g) and, therefore, must remain actively engaged in all phases of PDM. We also seek active participation of other entities that are expected to assume responsibilities for the species' conservation, post-delisting.

The Service is developing a draft PDM plan in cooperation with the District and Texas Parks and Wildlife Department. We intend to publish a notice of availability of the draft plan in the **Federal Register**, and solicit public comments on that plan, prior to finalizing this proposed rule. All public comments on the draft PDM will be considered and incorporated into the final PDM plan as appropriate. The final PDM plan and any future revisions will be posted on our Endangered Species Program's national Web page (*http://endangered.fws.gov*) and on the Austin Ecological Services Field Office Web page (*http://www.fws.gov/southwest/es/AustinTexas/*).

Peer Review

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

Clarity of the Rule

Executive Order 12866 requires each agency to write regulations 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 this proposed rule clearly stated? (2) Does the proposed rule contain technical language or jargon that interferes with the clarity? (3) Does the format of the proposed rule (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? (4) Would the rule be easier to understand if it were divided into more (but shorter) sections? (5) Is the description of the proposed rule in the ''Supplementary Information'' section of the preamble helpful in understanding the document? (6) What else could we do to make the proposed rule easier to understand? Send a copy of any written comments about how we could make this rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street, NW, Washington, DC 20240. You also may e-mail the comments to this address: *Exsec@ios.goi.gov.*

Paperwork Reduction Act

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

We have determined that an Environmental Assessment or an Environmental Impact Statement, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited herein is available upon request from the U.S. Fish and Wildlife Service, Austin Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this document are staff located at the Austin Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

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

§ 17.11 [Amended]

2. Section 17.11(h) is amended by removing the entry ''Snake, Concho water'' under ''REPTILES'' from the List of Endangered and Threatened Wildlife.

§ 17.95 [Amended]

3. Amend section 17.95(c) by removing the critical habitat entry for ''Concho water snake, *Nerodia paucimaculata.*''

Dated: June 26, 2008.

H. Dale Hall,

Director, U.S. Fish and Wildlife Service.

[FR Doc. E8–15133 Filed 7–7–08; 8:45 am]

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