(2) Evaluation factors for each assessment shall include, at a minimum, the following:

(i) Technical or Quality.

(ii) Cost Control (as applicable).

(iii) Schedule/Timeliness.

(iv) Management or Business Relations.

(v) Small Business Subcontracting (as applicable).

(3) These evaluation factors, including subfactors, may be tailored, however, each factor and subfactor shall be evaluated and supporting narrative provided.

(4) Each evaluation factor, as listed in paragraph (b)(2) of this section, shall be rated in accordance with a five scale rating system (*e.g.,* exceptional, very good, satisfactory, marginal, and unsatisfactory). Rating definitions shall reflect those contained in the CPARS Policy Guide available at *http://www.cpars.gov/*.

(c)(1) When the contract provides for incentive fees, the incentive-fee contract performance evaluation shall be entered into CPARS. (See 16.401(f).)

(2) When the contract provides for award fee, the award fee-contract performance adjectival rating as described in 16.401(e)(3) shall be entered into CPARS.

(d) Agency evaluations of contractor performance, including both negative and positive evaluations, prepared under this subpart shall be provided to the contractor as soon as practicable after completion of the evaluation. Contractors shall be given a minimum of 30 days to submit comments, rebutting statements, or additional information. Agencies shall provide for review at a level above the contracting officer to consider disagreements between the parties regarding the evaluation. The ultimate conclusion on the performance evaluation is a decision of the contracting agency. Copies of the evaluation, contractor response, and review comments, if any, shall be retained as part of the evaluation. These evaluations may be used to support future award decisions, and should therefore be marked ''Source Selection Information''. Evaluation of Federal Prison Industries (FPI) performance may be used to support a waiver request (see 8.604) when FPI is a mandatory source in accordance with subpart 8.6. The completed evaluation shall not be released to other than Government personnel and the contractor whose performance is being evaluated during the period the information may be used to provide source selection information. Disclosure of such information could cause harm both to the commercial interest of the Government and to the competitive position of the contractor being evaluated as well as impede the efficiency of Government operations. Evaluations used in determining award or incentive fee payments may also be used to satisfy the requirements of this subpart. A copy of the annual or final past performance evaluation shall be provided to the contractor as soon as it is finalized.

(e) Agencies shall require—

(1) Performance issues be documented promptly during contract performance to ensure critical details are included in the evaluation;

(2) The award fee determination, if required, align with the contractor's performance and be reflected in the evaluation;

(3) Timely assessments and quality data (see the quality standards in the CPARS Policy Guide at *http://www.cpars.gov/*) in the contractors past performance evaluation; and

(4) Frequent assessment (*e.g.,* monthly or quarterly) of agency compliance with the reporting requirements in 42.1502, so agencies can readily identify delinquent past performance reports and monitor their reports for quality control.

(f) Agencies shall prepare and submit all past performance reports electronically into the CPARS at *http://www.cpars.gov/*. These reports are transmitted to the Past Performance Information Retrieval System (PPIRS) at *http://www.ppirs.gov*. Past performance reports for classified contracts and special access programs shall not be reported in CPARS, but will be reported as stated in this subpart and in accordance with agency procedures.

Agencies shall ensure that appropriate management and technical controls are in place to ensure that only authorized personnel have access to the data and the information safeguarded in accordance with 42.1503(b).

(g) Agencies shall use the past performance information in PPIRS that is within the last three years (six for construction and architect-engineer contracts) and information contained in the Federal Awardee Performance and Integrity Information System (FAPIIS), *e.g.,* termination for default or cause.

(h) *Other contractor performance information.* (1) Agencies shall ensure information is reported in the FAPIIS module of CPARS within 3 working days after a contracting officer—

(i) Issues a final determination that a contractor has submitted defective cost or pricing data;

(ii) Makes a subsequent change to the final determination concerning defective cost or pricing data pursuant to 15.407–1(d);

(iii) Issues a final termination for cause or default notice; or

(iv) Makes a subsequent withdrawal or a conversion of a termination for default to a termination for convenience.

(2) Agencies shall establish CPARS focal points who will register users to report data into the FAPIIS module of CPARS (available at *http://www.cpars.gov/,* then select FAPIIS).

(3) The primary duties of the CPARS focal point is to administer CPARS and FAPIIS access. Agencies must also establish PPIRS group managers. The primary duties of the PPIRS group managers are to grant or deny access to PPIRS. The CPARS Reference Material, on the Web site, includes reporting instructions.

Dated: August 3, 2011.

Rodney P. Lantier,

Deputy Director for Acquisition Policy.

[FR Doc. 2011–20089 Filed 8–8–11; 8:45 am]

BILLING CODE 6820–EP–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R2–ES–2011–0057; MO 92210–0–0008 B2]

Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List the Nueces River and Plateau Shiners as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 12-month petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list the Nueces River shiner (*Cyprinella* sp.) and plateau shiner (*Cyprinella lepida*) as threatened or endangered and to designate critical habitat under the Endangered Species Act of 1973, as amended (Act). After review of all available scientific and commercial information, we find that listing the Nueces River and plateau shiners is not warranted at this time. However, we ask the public to submit to us any new information that becomes available concerning the threats to the Nueces River and plateau shiners or their habitats at any time.

DATES: The finding announced in this document was made on August 9, 2011.

ADDRESSES: This finding is available on the Internet at *http://*

www.regulations.gov at Docket Number [FWS–R2–ES–2011–0057]. Supporting documentation we used in preparing this finding is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Austin Ecological Services Field Office, 10711 Burnet Road, Suite 200, Austin, TX 78758. Please submit any new information, materials, comments, or questions concerning this finding to the above address.

FOR FURTHER INFORMATION CONTACT: Adam Zerrenner, Field Supervisor, Austin Ecological Services Field Office (see **ADDRESSES**); by telephone at 512–490–0057, extension 248; or by facsimile at 512–490–0974. If you use a telecommunications device for the deaf (TDD), please call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(B) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*), requires that, for any petition to revise the Federal Lists of Endangered and Threatened Wildlife and Plants that contains substantial scientific or commercial information that listing the species may be warranted, we make a finding within 12 months of the date of receipt of the petition. In this finding, we will determine that the petitioned action is: (1) Not warranted, (2) warranted, or (3) warranted, but the immediate proposal of a regulation implementing the petitioned action is precluded by other pending proposals to determine whether species are threatened or endangered, and expeditious progress is being made to add or remove qualified species from the Federal Lists of Endangered and Threatened Wildlife and Plants. Section 4(b)(3)(C) of the Act requires that we treat a petition for which the requested action is found to be warranted but precluded as though resubmitted on the date of such finding, that is, requiring a subsequent finding to be made within 12 months. We must publish these 12-month findings in the **Federal Register.**

Previous Federal Actions

On June 25, 2007, we received a petition dated June 18, 2007, from Forest Guardians (now WildEarth Guardians), requesting that 475 species in the southwestern United States, including the Nueces River and plateau shiners, be listed under the Act and critical habitat be designated. We acknowledged the receipt of the petition in a letter to the petitioner, dated July 11, 2007. In that letter we also stated that the petition was under review by staff in our Southwest Regional Office.

On March 19, 2008, WildEarth Guardians filed a complaint alleging that the Service failed to comply with its mandatory duty to make a preliminary 90-day finding on the June 18, 2007, petition to list 475 southwest species. We subsequently published an initial 90-day finding for 270 of the 475 petitioned species on January 6, 2009 (74 FR 419), concluding that the petition did not present substantial information that listing of those 270 species may be warranted. This initial 90-day finding did not include the Nueces River and plateau shiners. Subsequently, on March 13, 2009, the Service and WildEarth Guardians filed a stipulated settlement agreement, agreeing that the Service would submit to the **Federal Register** a finding as to whether their petition presented substantial information indicating that the petitioned action may be warranted for the remaining 192 southwestern species by December 9, 2009. On December 16, 2009 (74 FR 66866), we published a second 90-day finding for the remaining 192 southwestern species, which included a determination that listing the Nueces River and plateau shiners may be warranted, and initiated a status review. This notice constitutes the 12-month finding on the June 18, 2007, petition to list the Nueces River and plateau Shiners as threatened or endangered with critical habitat.

Species Information

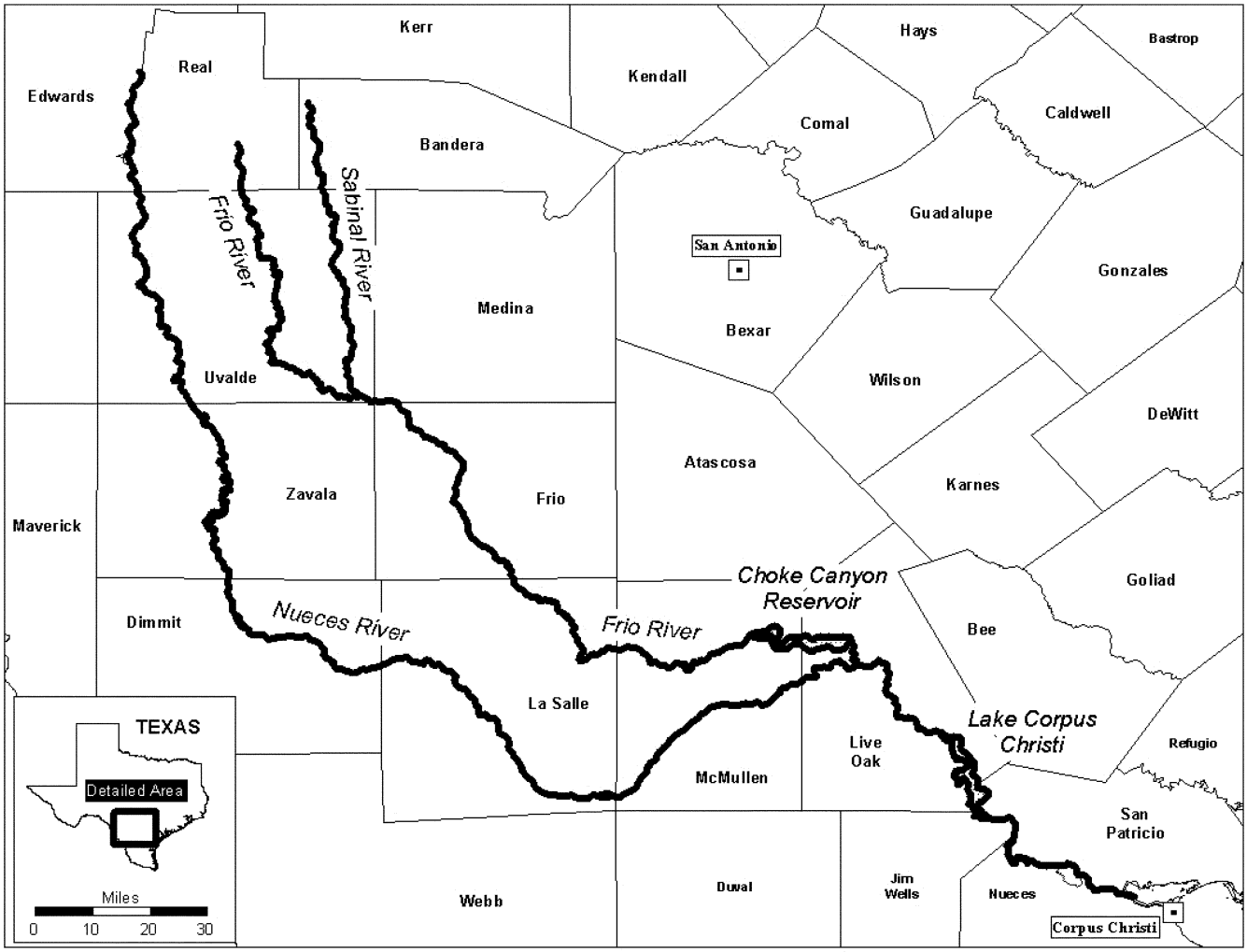
Taxonomy and Species Description

There has been some confusion and inconsistency regarding the taxonomy of the Nueces River and plateau shiners. Currently, there are approximately 30 species that belong to the genus *Cyprinella,* of which both species of shiners are members (Nelson *et al.* 2004, p. 69; Schonhuth and Mayden 2010, p. 77). The taxonomy within this genus has been associated with extensive confusion because similarities in body characteristics have made it difficult to differentiate between species (Schonhuth and Mayden 2010, p. 77). Fortunately, much of this confusion is being resolved with advances in genetic analysis (Schonhuth and Mayden 2010, pp. 77–98). However, there are still outstanding taxonomic issues that need to be resolved to clarify any potential confusion between the Nueces River and plateau shiners.

When first described, the Nueces River and plateau shiners were not considered separate species. They were both originally described as the plateau shiner, *Cyprinella lepida,* by Girard in 1856 (Richardson and Gold 1995, p. 29). Nearly 100 years later, both species were still thought to be one species. For example, Hubbs (1954, pp. 277–291) recognized only one species as distinct, the plateau shiner, *Notropis* (=*Cyprinella*) *lepidus,* occurring in the Nueces, Frio, and upper Guadalupe Rivers. However, Mayden (1989, p. 60) later pointed out that the shiner Hubbs (1954, pp. 277–291) referred to in the upper Guadalupe River was actually a red shiner species, *Notropis* (=*Cyprinella*) *lutrensis,* and not the plateau shiner.

Morphological studies conducted by Matthews (1987, pp. 616–637) and Mayden (1989, pp. 58–60) provided support that *Cyprinella lepida* was a distinct and valid species occurring in the Nueces, Frio, and Sabinal Rivers of the Nueces River basin (Figure 1). However, Matthews (1987, p. 269) noted that there were morphological differences between specimens collected in the Nueces and Frio Rivers, but did not suggest that there were two separate taxonomic entities. One of the main differences was breeding coloration in male specimens collected in the Frio River; these male specimens had red on the tip of their snouts (Matthews 1987, pp. 632–634). The male specimens collected in the Nueces River exhibited no breeding coloration (Matthews 1987, pp. 632–634).

FIGURE 1. Map of Nueces, Frio, and Sabinal Rivers, Texas.



These morphological differences between the Nueces and Frio Rivers' shiners were validated by genetic investigations that revealed two distinct lineages within populations of *Cyprinella lepida.* In 1987 and 1988, Richardson and Gold (1995, p. 29) conducted a genetic study on *Cyprinella lepida,* in which they (Richardson and Gold 1995, p. 29) collected individuals from the Nueces, Frio, and Sabinal Rivers. The results of their genetic analysis showed that *Cyprinella lepida* in the Frio and Sabinal Rivers was a distinct species from *Cyprinella lepida* collected in the Nueces River (Richardson and Gold 1995, pp. 31–33). Specimens collected in the Frio River were very similar genetically to specimens collected in the Sabinal River (Richardson and Gold 1995, p. 31). However, specimens collected from the Frio and Sabinal Rivers were quite different genetically from specimens collected in the Nueces River (Richardson and Gold 1995, p. 31). The genetic differences, along with the observed morphological differences, led Richardson and Gold (1995, pp. 31–33) to conclude that *Cyprinella* in the Frio and Sabinal Rivers was a distinct species from those in the Nueces River. Since 1995, the population in the Nueces River has been referred to as the Nueces River shiner, an unnamed species within *Cyprinella,* while populations in the Frio and Sabinal Rivers have kept the kept the name plateau shiner, *Cyprinella lepida.* Formal naming of the Nueces River shiner, *Cyprinella* sp., is still pending.

Further genetic investigations by Richardson and Gold (1999) supported their previous conclusion that *Cyprinella* in the Frio and Sabinal Rivers is a distinct species from those in the Nueces River. In this study, Richardson and Gold (1999, p. 50) focused on variation in mitochondrial genes in the five species of the shiner group inhabiting the southwestern United States, which included specimens of *Cyprinella lepida* from the Frio River and *Cyprinella* sp. from the Nueces River. Based on results of this study, Richardson and Gold (1999, p. 55) were hesitant to promote a sister relationship between the Nueces River shiner, *Cyprinella* sp., and the plateau shiner, *Cyprinella lepida,* meaning that the two lineages were not closely related. Instead, they concluded that the Nueces River shiner and plateau shiner were not as closely related to each other as they were to other species within the *Cyprinella* genus (Richardson and Gold 1999, p. 55).

Another genetic study agreed that the Nueces River shiner and plateau shiner are distinct species. In 2000, Broughton and Gold (pp. 1–10) conducted a genetic analysis of all *Cyprinella* species found

in the United States. As part of their methodology, Broughton and Gold (2000, p. 5) grouped the Nueces and Plateau shiners into the same species, *Cyprinella lepida,* but did make the distinction that ''*Cyprinella lepida*-a'' from the Frio River were not closely related to ''*Cyprinella lepida*-b'' from the Nueces River.

In an effort to clarify some of the genus' taxonomic confusion, Schonhuth and Mayden (2010, pp. 77–98) conducted a genetic study of all species within the *Cyprinella* genus, with a more exhaustive focus on the problematic taxa. Results from Schonhuth and Mayden's (2010, p. 91) genetic analysis were consistent with previous genetic studies: *Cyprinella lepida* in the Sabinal and Frio Rivers are genetically separate and distinct from the *Cyprinella* sp. found in the Nueces River. Genetic differences between specimens from the Sabinal and Frio Rivers were very different from those collected in the Nueces River, enough so that Schonhuth and Mayden (2010, p. 91) recommended leaving them as separate species.

Despite the morphological and genetic studies of the Nueces River and plateau shiners, the scientific community has been inconsistent in recognizing these shiners as separate species. The Texas Parks and Wildlife Department (TPWD) recognizes the plateau shiner (*Cyprinella lepida*) and Nueces River shiner (*Cyprinella* sp.) as separate species (Norris *et al.* 2005, p. 10). However, Phillips *et al.* (2010, p. 130) failed to recognize the Nueces River shiner as a separate species during a study on sound production and spawning behavior. In fact, Phillips *et al.* (2010, p. 130) stated that they collected *Cyprinella lepida* with seines from the Nueces River 0.5 mi (0.8 km) west of Camp Wood, Real County, Texas, during December 2002 and March 2003, and transferred them to a lab to do an acoustic study on spawning behavior. It is not clear whether Phillips *et al.* (2010) collected actual plateau shiners from the Nueces River, or whether they collected Nueces River shiners but mistakenly called them plateau shiners. Phillips *et al.* (2010) did not mention the name Nueces River shiner, *Cyprinella* sp., nor did they mention how they determined that the fish were *Cyprinella lepida.* To add further confusion, acceptance of the Nueces River shiner, *Cyprinella* sp., as a separate species from the plateau shiner, *Cyprinella lepida,* by the American Fisheries Society (2004, p. 69) is still pending. On the other hand, Hubbs *et al.* (2008, p. 19) recognized the Nueces River and plateau shiners as separate species in their annotated checklist of the freshwater fishes of Texas. Because there is still inconsistency, a formal systematic description by the scientific community of the Nueces River shiner, *Cyprinella* sp., is needed.

Based on the best available science, we accept the characterization of the Nueces River shiner, *Cyprinella* sp., and the plateau shiner, *Cyprinella lepida,* as separate species. We base this distinction on the morphological and genetic research conducted by Richardson and Gold (1995, pp. 28–37), Edwards *et al.* (2008, pp. 1–30), and Schonhuth and Mayden (2010, pp. 77–98), and due to the fact that this research has been accepted by much of the scientific community (Hubbs *et al.* 2008, p. 19). However, we recognize there is a need for more extensive morphological, genetic, and life history research with more thorough species characterizations and formal descriptions of these two shiners, especially for the Nueces River shiner. Because we recognize these two shiners as separate species, we conduct separate five-factor analyses below under section 4(a)(1) of the Act to determine whether either species meets the definition of threatened or endangered. However, we address both species in this finding because they occur in nearby watersheds and could be subject to the similar threats.

Distribution

Because of the inconsistencies in taxonomy and species descriptions of the Nueces River and plateau shiners, there has been similar confusion and inconsistencies regarding these shiners' distribution. However, one thing that has been clearly understood is that both the historic and current range of both shiners is the uppermost headwaters of the Nueces, Frio, and Sabinal Rivers of the Nueces River basin (Figure 1). The Nueces River basin covers approximately 17,000 square miles (44,030 square kilometers), encompassing all or part of 23 counties in south-central Texas (Nueces River Authority 2010, p. 1). Rivers within the basin include Nueces, Frio, Leona, Sabinal, and Atascosa Rivers (Nueces River Authority 2010, p. 1). Because the Nueces River basin is so large, running from the Edwards Plateau region of Texas to the Gulf Coast of Mexico, there are large physical and chemical differences between streams in the upper and lower parts of the basin (Norris *et al.* 2005, p. 1; Nueces River Authority 2010, p. 1). The differences between the upper and lower parts may be why the Nueces River and plateau shiners are only found in the upper, cooler headwaters.

The upper Nueces River basin, where the Nueces River and plateau shiners are found, is composed of three main tributary systems: The Nueces, Frio, and Sabinal Rivers (Edwards *et al.* 2008, p. 2). The plateau shiner is an endemic (native to and generally confined to a particular region) minnow that inhabits clear, spring-fed streams over gravel limestone substrates in the uppermost headwaters of the Frio and Sabinal Rivers on the Edwards Plateau (Edwards *et al.* 2004, p. 261; Edwards *et al.* 2008, p. 2; Hubbs *et al.* 2008, p. 19). Meanwhile, the Nueces River shiner is an endemic minnow that is only found in the uppermost headwaters of the Nueces River, which is also on the Edwards Plateau (Edwards *et al.* 2004, p. 261; Hubbs *et al.* 2008, p. 19).

An example of the inconsistency in the species' distribution occurred when TPWD associated the plateau and Nueces River shiners with the wrong stream segments in their 2005 designation of ecologically significant stream segments, which are stream segments designated based on factors related to biological function, hydrologic function, presence of riparian conservation areas, high water quality, exceptional aquatic life, high aesthetic value, threatened or endangered species, and uniqueness (Norris *et al.* 2005, pp. 16–19). Norris *et al.* (2005, pp. 16–19) stated that the Nueces River shiner occurred in the Frio and Sabinal River, and the plateau shiner occurred in the Nueces River (p. 17). However, this inconsistency may have occurred because of the confusion associated with the species' taxonomy, even though TPWD recognized the Nueces River and plateau shiners as two separate species (Norris *et al.* 2005, p. 10).

In a recent study, Edwards *et al.* (2008, p. 3) attempted to estimate the current distributional range of plateau shiner in the Frio and Sabinal Rivers, and Nueces River shiner in the Nueces River. During their seasonal sampling from 2007 to 2008, Edwards *et al.* (2008, p. 5) captured over 11,700 individuals of 24 species, including the Nueces River and plateau shiners. They noted that the Frio, Sabinal, and Nueces Rivers were all dominated by fishes that are typical of spring-fed headwater central Texas streams, but added that there is still incomplete knowledge of the current range of the plateau shiner in the Frio and Sabinal Rivers, and of the Nueces River shiner in the upper Nueces River (Edwards *et al.* 2008, p. 3). Based on the best available information, we believe that the Nueces River and

plateau shiners' historical and current ranges are the uppermost headwaters of the Sabinal, Frio, and Nueces Rivers in the Edwards Plateau region of Texas, but the extent of their ranges remains to be determined.

Habitat

There is limited information in the literature regarding the Nueces River and plateau shiners' habitat. Edwards *et al.* (2004, p. 261) noted that the plateau shiner inhabited clear, spring-fed streams over gravel limestone substrates. Phillips *et al.* (2010, p. 133) noted that *Cyprinella* collected out of the Nueces River in 2002 and 2004 were crevice spawners (females release their eggs in crevices), like the majority of other *Cyprinella* species. Also, Phillips *et al.* (2010, p. 133) noted that the specimens they collected relied on spring or spring-fed water. Although not specified to species, we assume that the *Cyprinella* Phillips *et al.* (2010, p. 133) referred to were Nueces River shiners based on where the specimens were collected. In any case, it is apparent that both shiners' habitat is spring-fed streams, which are typically found in the headwaters. Furthermore, the headwater streams where both Nueces River and plateau shiners occur are characterized by limestone bedrock with significant gravel and cobble bottoms, clear evidence of spring-flows with emergent vegetation and relatively shallow depths, relatively high pH values typical of limestone bedrock streams of the Edwards Plateau, relatively stable water temperatures, and dissolved oxygen levels generally around 10 parts per million (Edwards *et al.* 2008, p. 21). Though limited, this information is consistent with what is known about the shiners' habitat.

Population Abundance

There has been much speculation and very little research actually surveying and documenting the abundance of the Nueces River and plateau shiners. A genetic study by Richardson and Gold (1995, p. 35) noted that the plateau shiner's abundance appeared to have decreased considerably over the previous 20 years prior to their study. However, their note of plateau shiner abundance was not based on actual surveys or data collection (Richardson and Gold 1995, p. 35). Also, we could not find any evidence or documentation that either of these shiners' abundance actually declined over this time period. Therefore, we cannot conclude that there was a decline in the Nueces River or plateau shiners over the 20 years prior to Richardson and Gold's (1995) study.

Because of Richardson and Gold's (1995, p. 35) statement regarding the presumed decline of the two shiners, other researchers cited Richardson and Gold while making the same conjecture. For example, Hoagstrom *et al.* (2011, p. 24) claimed that 41 endemic fishes, including plateau and Nueces River shiners, were declining in the plains of North America because of dewatering, low flows, habitat fragmentation, nonnative species, and pollution. However, this presumption was based on the Richardson and Gold (1995) genetic study discussed above rather than on actual abundance data or surveys.

There has been a noted decline throughout Texas for many of the State's native fishes (Hubbs *et al.* 2008, p. 2). Nonnative species, as well as degradation of water and habitat quality, are thought to be major components of the native fishes' decline (Hubbs *et al.* 2008, p. 5). As part of the annotated checklist of the freshwater fishes of Texas, Hubbs *et al.* (2008, p. 19) identified both the Nueces River and plateau shiners as species of special concern. Hubbs *et al.* (2008, p. 5) defined a species of ''special concern'' as a taxon whose abundance or range has been reduced to the degree that it may be threatened with extinction or whose range is only peripherally in Texas and could be easily extirpated. Some species were included in this category of special concern because up-to-date information concerning their status was unavailable or fragmentary (Hubbs *et al.* 2008, p. 5). In any case, Hubbs *et al.* (2008) provided no evidence for categorizing the Nueces River and plateau shiners as species of special concern. There was no supporting information on abundance, range reduction, or any other reason for classifying these two fishes as species of special concern. Therefore, it is reasonable to assume that Hubbs *et al.* (2008) classified the Nueces River and plateau shiners as a species of special concern because there was no up-to-date information concerning their status.

Contrary to the information above, other studies have noted that the Nueces River and plateau shiners were abundant within the past decade in the headwaters of the Sabinal, Frio, and Nueces Rivers (Figure 1). In fact, Edwards *et al.* (2004, p. 261) stated that the plateau shiner was moderately abundant in the Edwards Plateau region. To obtain a more thorough assessment on the status of the Nueces River and plateau shiners, Edwards *et al.* (2008, p. 6) conducted a sampling study from 2007 to 2008 in the Nueces, Frio, and Sabinal Rivers and found that the Nueces River and plateau shiners were two of the most abundant fishes in each of these rivers out of 21 different species collected.

Even though there have been claims in the scientific literature that the Nueces River and plateau shiners were declining, these claims appear to be unsubstantiated by actual survey data. On the other hand, a recent study conducted by Edwards *et al.* (2008, pp. 1–30) that surveyed abundance of the Nueces River and plateau shiners found large numbers of these species. In conclusion, there is insufficient evidence to determine population trends for either species.

Summary of Information Pertaining to the Five Factors

Section 4 of the Act (16 U.S.C. 1533) and implementing regulations (50 CFR part 424) set forth procedures for adding species to, removing species from, or reclassifying species on the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a)(1) of the Act, a species may be determined to be endangered or threatened based on any of the following five factors:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;

(B) Overutilization for commercial, recreational, scientific, or educational purposes;

(C) Disease or predation;

(D) The inadequacy of existing regulatory mechanisms; or

(E) Other natural or manmade factors affecting its continued existence.

In making this finding, information pertaining to the Nueces River and plateau shiners in relation to the five factors provided in section 4(a)(1) of the Act is discussed below. In making our 12-month finding on the petition, we considered and evaluated the best available scientific and commercial information. We reviewed the petition, information available in our files, and other available published and unpublished information. We also consulted with recognized fish experts and biologists with TPWD and The Nature Conservancy.

Summary of Information Pertaining to the Five Factors for Nueces River Shiner

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

The following factors have the potential to affect the habitat or range of the Nueces River shiner: Livestock grazing, water quantity, water quality,

and land use. Below, we discuss in detail each of these factors and determine whether or not they constitute a threat to the species.

Livestock Grazing

While we know that livestock grazing occurs within the range of the species, we could find no information on the extent or intensity of historical or current livestock grazing practices or the impact grazing might have on the Nueces River shiner and its habitat. In areas where livestock are grazed inappropriately, impacts could include, but are not limited to, runoff from disturbed stream banks, livestock urine and manure deposited into streams, disturbance and erosion from trampled banks, and increased solar exposure due to reduced shade from streamside vegetation and loss of undercut streambanks. Any of these impacts could affect the Nueces River shiner by degrading water quality and negatively impacting the species. Richardson and Gold (1995, p. 35) concluded that much of the land in the Nueces River basin is used for agriculture, and that overgrazing by cattle posed serious problems for aquatic fauna. However, we found no monitoring data indicating that water quality degradation associated with livestock grazing is occurring within the range of the Nueces River shiner. Based on the best available information, we could find no evidence that overgrazing is posing a threat to the Nueces River shiner or is likely to in the future. Therefore, because the best available information does not indicate that livestock grazing is negatively impacting the species, we find that the Nueces River shiner is not in danger of extinction now or in the foreseeable future as a result of livestock grazing.

Water Quantity

Diminished water flows can cause losses in habitat diversity, reduce stream productivity, and degrade water quality for many fish species (Norris *et al.* 2005, p. 1). Richardson and Gold (1995, p. 35) suggested that groundwater (underground aquifer) levels for much of south-central Texas had decreased substantially over the decade preceding their study (1980s), resulting in significantly reduced water flow in spring-fed rivers, including the habitat of the Nueces River shiner. Although there is evidence of stream flow fluctuations that most likely relate to annual rainfall events, the best available information does not indicate that reduced stream flows are occurring within the range of the Nueces River shiner at a level that may adversely impact the species. As we have noted previously, the Nueces River shiner is an endemic minnow that is only found in the uppermost headwaters of the Nueces River within the Edwards Plateau (Edwards *et al.* 2004, p. 261; Hubbs *et al.* 2008, p. 19). Over the past century in the Edwards Plateau region of Texas, there has been evidence of some loss of natural spring and headwater stream flows (Edwards *et al.* 2004, p. 253). Yet, water users in the Edwards Plateau are altering their usage of waters from the aquifers of the Edwards Plateau. Reduced water usage has allowed for the conservation of regional spring flows (Edwards *et al.* 2004, p. 263). Additionally, stream flow monitoring is occurring at various sites within the Nueces River shiner's range by the United States Geological Survey (Edwards *et al.* 2008, p. 25), and Edwards *et al.* (2008, p. 25) analyzed these stream flow measurements in the Frio, Sabinal, and Nueces Rivers for the last decade. Results of Edward's *et al.* (2008, p. 25) analysis showed that there was a normal range of flow variation in each of the streams due to natural rainfall events. Edwards *et al.* (2008, p. 6) also noted that the Nueces River shiner was one of the most abundant fishes in the upper stream segments of the Nueces River. Thus, the stream flow variation was occurring at a level that had no known impact on the species. While there may be fluctuations in stream flow, there is no evidence indicating that reduced water flow is a threat to the species either now or in the foreseeable future. Therefore, we find that the Nueces River shiner is not in danger of extinction now or in the foreseeable future as a result of reduced water flow.

Water Quality

Within the last 12 years, there has been cause for concern along certain stream segments of the Nueces River. In 1999, a 91-mile (mi) (147-kilometers (km)) stream segment of Nueces River that flows from Holland Dam in La Salle County to its confluence with the Frio River at the Choke Canyon Reservoir in Live Oak County was included in the State of Texas' Clean Water Act 303(d) list as impaired due to concentrations of dissolved oxygen below the minimum standards criteria in the lower 25-mi (40-km) portion of the stream (Bonner *et al.* 2005, p. 1; Nueces River Authority 2010, p. 13). Adequate dissolved oxygen is necessary for respiration and other essential processes of aquatic organisms; thus, low levels may be detrimental to the health of aquatic organisms. The majority of this lower 25-mi (40-km) portion of the stream occurs in McMullen County, which lies in the South Texas Brush Country region of Texas, well outside the historical and current range of the Nueces River shiner. As noted above in the *Species Information* section, the Nueces River shiner's range occurs in the uppermost headwaters in the Edwards Plateau region of Texas. Therefore, the concerns about low dissolved oxygen content associated with this segment of Nueces River do not relate to the Nueces River shiner or its range.

Based on the best available scientific and commercial information, there is no evidence that pollution causing diminished water quality may be having an impact on the Nueces River shiner or its habitat. In 2005, the TPWD reported the Nueces River as having high water quality and exceptional aquatic life (Norris *et al.* 2005, p. 17). Also, the TPWD designated stream segments in the upper Nueces River as ecologically significant based on low levels of development in the watershed, no point sources of pollution, no channelization, and no atypical nonpoint sources of pollution (Norris *et al.* 2005, p. 5). Furthermore, water quality monitoring has been conducted in the uppermost reaches of the Nueces River where the majority of Nueces River shiners occur, and no problems have been found (Nueces River Authority 2010, p. 17). Therefore, we find that the Nueces River shiner is not in danger of extinction now or in the foreseeable future as a result of diminished water quality caused by pollution.

Land Use

The decline of native fishes in the southern United States generally is attributable to pervasive, complex habitat degradation across the landscape that both reduces and fragments habitat and increases isolation of fish populations (Warren *et al.* 2000, p. 8). Often, physical habitat alteration in the form of channelization, impoundment, sedimentation, and flow modification are frequently associated with fish declines (Warren *et al.* 2000, p. 8).

Edwards *et al.* (2008, p. 3) mentioned potential impacts to the Nueces River from existing agricultural practices, land use changes, and groundwater pumping, and stated that these have combined to create stream segments identified as impaired under section 303(d) of the Clean Water Act. One of the main purposes of the Edwards *et al.* (2008, p. 3) study was to find out if these potential impacts may actually be a factor in population and range declines among native fishes, including the Nueces River shiner. In order to determine the extent of these potential

impacts, Edwards *et al.* (2008, p. 27) looked at the biological integrity of streams in the upper Nueces River and found that the Nueces River had high water quality within the range of the Nueces River shiner. Also, Edwards *et al.* (2008, p. 29) noted that the fish fauna sampled are typically associated with high-quality spring-fed streams within the southern Edwards Plateau. On the other hand, Edwards *et al.* (2008, p. 27) noted some impacts along the upper Nueces River, such as development along the watercourse and recreational pressures during the summer months. Even with these impacts, the headwater streams of the Nueces River basin maintained much of their integrity as evidenced by such fish as the Nueces River shiner (Edwards *et al.* 2008, p. 27). In fact, Edwards *et al.* (2008, p. 6) stated that the Nueces River shiner was one of the most abundant fishes in the upper stream segments of the Nueces River. Further, The Nature Conservancy of Texas is currently engaged in watershed protection in the upper Nueces River basin, mainly as a participant in the City of San Antonio's Aquifer Protection Program (Edwards *et al.* 2008, p. 3). The Nature Conservancy holds several conservation easements and is exploring ways to increase conservation efforts in this part of the river basin (Edwards *et al.* 2008, p. 3). Therefore, we find no evidence indicating that land uses are negatively impacting the Nueces River shiner now or in the foreseeable future.

Summary of Factor A

We relied on the best available scientific and commercial information, which does not indicate that these or any factors are impacting the Nueces River shiner at a level that may impact the species. Therefore, we find that the Nueces River shiner is not in danger of extinction now or in the foreseeable future as a result of destruction, modification, or curtailment of its habitat or range.

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

Based on the best available scientific and commercial information, there is no evidence that impacts are occurring to the Nueces River shiner or its habitat under this factor. Other than the scientific studies referenced in this finding, this shiner is not used for any commercial, recreational, or educational purposes. Therefore, we find that the Nueces River shiner is not in danger of extinction now or in the foreseeable future as a result of overutilization for commercial, recreational, scientific, or educational purposes.

Factor C. Disease or Predation

We are not aware of any research that has been conducted to examine disease or predation in the Nueces River shiner. Also, we are not aware of any nonnative species that may prey on the Nueces River shiner. Therefore, based on the best available scientific and commercial information, we find that the Nueces River shiner is not in danger of extinction now or in the foreseeable future as a result of disease or predation.

Factor D. The Inadequacy of Existing Regulatory Mechanisms

To determine if existing regulatory mechanisms are adequate to protect the Nueces River shiner, we evaluated agreements and laws in effect within the range of the species. One regulatory mechanism is the Clean Water Act (CWA), which was established in 1972. The CWA is the primary Federal law addressing water pollution in the United States. The purpose of the CWA is to stop pollutants from being discharged into waterways and to maintain water quality to provide a safe environment for fishing, swimming, and drinking. All navigable waters in the United States are covered under the CWA. The CWA provides guidelines and offers Federal financial assistance for identifying the causes of pollution. There are standards and regulations that must be adhered to by industries that discharge into waterways. The CWA sets forth water quality standards that are site-specific allowable pollutant levels for individual water bodies, such as rivers, lakes, streams, and wetlands. State agencies are required by the CWA to set water quality standards by designating uses for the water body (*e.g.,* recreation, water supply, aquatic life, and agriculture) and applying water quality criteria to protect the designated uses.

In Texas, the Texas Commission on Environmental Quality (TCEQ), formerly known as Texas Natural Resource Conservation Commission, is the environmental agency that oversees water quality standards as required by the CWA (TCEQ 2010b, p. 19). The TCEQ strives to protect Texas' human and natural resources consistent with sustainable economic development, by providing clean air, clean water, and the safe management of waste (TCEQ 2010b, p. 4). The TCEQ key operations include, but are not limited to, issuing, administering, renewing, and modifying permits, water rights, licenses, or certifications for organizations and individuals whose activities have some potential or actual environmental impact that must be formally authorized by the agency; monitoring the current condition of a geographic area or natural resource, often through sampling or surveys; and identifying, verifying, and tracking violations of regulations and initiating enforcement actions in response to violations (TCEQ 2010b, p. 21). The TCEQ developed the Clean Rivers Program to implement the goals of the Texas Clean Rivers Act (TCRA), described below.

The TCRA, which was passed in 1991 by the Texas legislature, requires that basinwide water quality assessments be conducted for each river basin in Texas (Nueces River Authority 2010, p. 1). The goal of the TCRA is to provide waterways in the State with coordinated monitoring and protection, to identify the locations of water quality problems, and develop solutions on a river basin by river basin basis. The Clean Rivers Program is a partnership involving the TCEQ, other State agencies, river authorities, local governments, industry, and citizens (Nueces River Authority 2010, p. 1). Also, the Nueces River Authority was created in 1935 by special act of the 44th Texas Legislature codified as Article 8280–115 (Texas Water Code Auxiliary Laws, as amended). Under supervision of the TCEQ, the Nueces River Authority has broad authority to preserve, protect, and develop surface water resources, including flood control, irrigation, navigation, water supply, wastewater treatment, and water quality control. The Nueces River Authority serves all or parts of 22 counties in Texas, covering over 17,000 square miles (44,030 square kilometers), including the drainage area of the Nueces River and its tributaries and the adjoining coastal basins.

Under the Clean Rivers Program and using a watershed management approach, the Nueces River Authority and TCEQ work together to identify and evaluate surface water quality issues and to establish priorities for corrective action within the Nueces River basin (Nueces River Authority 2010, p. 1). The Nueces River Authority and TCEQ conduct quarterly water quality monitoring at routine monitoring sites, testing for such things as wastewater discharge, runoff from quarry operations, accidental spills, ammonia excreted by animals or from fertilizers, and agricultural runoff, among many other things (Nueces River Authority 2010, pp. 2–3). If water quality issues are detected, the Nueces River Authority and TCEQ may take appropriate corrective actions.

Lastly, the TPWD recognized the upper reaches of the West Nueces, Nueces, Frio, and Sabinal Rivers as ecologically significant river and stream

segments (Norris *et al.* 2005, p. 3). Designation of a stream segment as ecologically unique offers a certain degree of protection from activities such as reservoir construction (Norris *et al.* 2005, p. 5). This designation does not impart protection from degradation, but rather prohibits a State agency or political subdivision of the State from financing the actual construction of a reservoir in a specific river or stream segment designated as ecologically significant by the legislature under section 16.051(f) of the Texas Water Code (Norris *et al.* 2005, p. 4).

Summary of Factor D

In conclusion, there are Federal and State regulatory protections currently in place offering some levels of protection for the Nueces River shiner from such factors as degraded water quality, pollution, and reservoir construction. However, as discussed in other *Factors* of the Nueces River shiner, we have not identified any threats to the species that are likely to negatively affect the status of the species such that an inadequacy of existing regulatory mechanisms is likely to be a threat to the species. Therefore, we find that the Nueces River shiner is not in danger of extinction now or in the foreseeable future as a result of inadequacy of existing regulatory mechanisms.

Factor E. Other Natural or Manmade Factors Affecting Its Continued Existence

Global climate change, and associated effects on regional climatic regimes, is not well understood, but model predictions are that temperatures in the southwestern United States will continue to increase, with extreme weather events (such as heat waves, drought, and flooding) occurring with more frequency (Archer and Predick 2008, p. 24). Also, there is some scientific information suggesting that fish in streams in southwestern North America may be vulnerable to extirpation or extinction due to global climate change because many fish species are already living near their lethal thermal limits (Mathews and Zimmerman 1990, p. 26). Endemic species, like the Nueces River shiner, which only inhabits the spring-fed headwaters of the Nueces River, could be more vulnerable to rising stream temperatures because they may not be able to move to more suitable areas. On the other hand, spring-fed streams have nearly constant environmental conditions, such as temperature, due to the constancy of groundwater chemistry and discharge (Hoagstrom *et al.* 2011, p. 22). Thus, areas with substantial connections to aquifers may sustain endemic fishes because groundwater responds slowly to climate change, buffering against fluctuations in climate conditions (Hoagstrom *et al.* 2011, p. 22). Additionally, we are not aware of any research that has been conducted on water temperature tolerance of the Nueces River shiner. Because the Nueces River shiner's water temperature tolerance is unknown, the point at which rising stream temperatures may impact the species is also unknown.

Likewise, recent models on climate change have indicated that annual mean precipitation in the southwestern United States is likely to decrease (Intergovernmental Panel on Climate Change (IPCC) 2007, p. 887). Decreased precipitation could result in diminished water flows, which may cause losses in habitat diversity, reduce stream productivity, and degrade water quality (Norris *et al.* 2005, p. 1). While it appears reasonable to assume that climate change could affect the Nueces River shiner by reduced water flows, we lack sufficient certainty to know specifically how climate change will affect the species. We have not identified, nor are we aware of, any data on an appropriate scale to evaluate habitat or population trends for the Nueces River shiner within its range, or to make predictions on future trends and whether the species will actually be impacted.

There are multiple hypothetical outcomes associated with climate change that could potentially affect the Nueces River shiner, but we lack predictive local or regional models on how climate change will specifically affect the Nueces River shiner or its habitat. Currently, we have no certainty regarding the timing, magnitude, or effects of impacts. Therefore, we find at this time that it is not possible to make reliable predictions of climate change effects on the status of the Nueces River shiner due to current limitations in available data and climate models. Based on the best available information and our current knowledge and understanding, we find that the Nueces River shiner is not in danger of extinction now or in the foreseeable future as a result of natural or other manmade threats affecting its continued existence.

Finding for the Nueces River Shiner

As required by the Act, we considered the five factors in assessing whether the Nueces River shiner is threatened or endangered throughout all or a significant portion of its range. We examined the best scientific and commercial information available regarding the past, present, and future threats faced by the species. We reviewed the petition, information available in our files, other available published and unpublished information, and we consulted with recognized species experts and State agencies.

In considering what factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the species responds to the factor in a way that causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine how significant a threat it is. If the threat is significant, it may drive or contribute to the risk of extinction of the species such that the species warrants listing as threatened or endangered as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could impact a species negatively is not sufficient to compel a finding that listing is appropriate; we require evidence that these factors are operative threats that act on the species to the point that the species meets the definition of threatened or endangered under the Act.

Our review of all the available information does not support a determination that any current activities or activities in the foreseeable future threaten the Nueces River shiner or its habitat to the point that the species meets the definition of threatened or endangered under the Act. There is no evidence indicating that reduced water flow, improper grazing of livestock, pollution, and land use are affecting the species or its habitat. Overutilization, disease, and predation are not known concerns for this species. We find that no existing regulatory mechanisms are inadequate to limit or prevent possible negative impacts from human activities. Climate change could affect the habitat of the Nueces River shiner in the future, but we have no certainty regarding the timing, magnitude, or effects of impacts to the species.

Based on our review of the best available scientific and commercial information pertaining to the five factors, we find that there are no threats to indicate that the Nueces River shiner is in danger of extinction (endangered) or likely to become endangered within the foreseeable future (threatened)

throughout its range. Therefore, we find that listing the Nueces River shiner as endangered or threatened is not warranted throughout its range at this time.

Summary of Information Pertaining to the Five Factors for Plateau Shiner

The plateau shiner's range is in close proximity to the Nueces River shiner's range. Subsequently, many of the factors that may affect the Nueces River shiner also may affect the plateau shiner. Therefore, much of the information presented in this section is similar to that presented above for the Nueces River shiner. However, the plateau shiner does inhabit separate headwaters of the Sabinal and Frio Rivers in the Edwards Plateau region of Texas, whereas the Nueces River shiner inhabits the headwaters of the Nueces River. The Sabinal and Frio Rivers are part of the Nueces River basin because they flow into and become part of the Nueces River in south-central Texas. Because the plateau shiner occupies separate headwaters than the Nueces River shiner, we will discuss any potential threats that might uniquely affect the plateau shiner, but because these two shiner species occupy nearby headwaters and are very similar species, we will refer to the information above, where appropriate.

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

The following factors have the potential to affect the habitat or range of the plateau shiner: Livestock grazing, reduced water quantity, impaired water quality, and land use. Below, we discuss each of these factors and determine whether or not they constitute a threat to the plateau shiner.

Livestock Grazing

While we know that livestock grazing occurs within the range of the species, we could find no information on the extent or intensity of historical, current, or future livestock grazing practices or impacts that grazing may be having on the species. As previously mentioned, Richardson and Gold (1995, p. 35) cited a personal communication in their study to conclude that much of the land in the Nueces River basin was used for agriculture, and that overgrazing by cattle posed serious problems for aquatic fauna. However, based on the best available information, we could find no evidence or data to indicate that improper livestock grazing affects the plateau shiner or its habitat. Therefore, we find that the plateau shiner is not in danger of extinction now or in the foreseeable future as a result of livestock grazing.

Water Quantity

Please see *Factor A* discussion of the Nueces River shiner for a more thorough discussion of the potential impacts of reduced water flow on these fish. As stated above and based on the best available information, we have no evidence to indicate that reduced stream flow is occurring within the range of the plateau shiner at a level that may be impacting the species. As we have noted previously, Edwards *et al.* (2008, p. 25) analyzed stream flow measurements in the Frio, Sabinal, and Nueces Rivers for the last decade and showed that there was a normal range of flow variation in each of the streams. Therefore, based on the best available information, we find that the plateau shiner is not in danger of extinction now or in the foreseeable future as a result of reduced water flows.

Water Quality

Based on the best available information, there is no evidence that diminished water quality caused by pollution may be occurring within the range of the plateau shiner at a level that affects the species or its habitat. In 2005, the TPWD noted the Frio and Sabinal Rivers as having high water quality and exceptional aquatic life (Norris *et al.* 2005, pp. 16, 19). However, water quality tests have been conducted on other areas where plateau shiners are known to occur, such as the uppermost reaches of the Sabinal River, and water quality impairment has been detected (Nueces River Authority 2010, p. 16). Even though a stream segment in the upper Frio River remains on the State of Texas' Clean Water Act 303(d) list as impaired and is within the range of the species, there does not appear to be adverse impacts to the plateau shiner or its habitat.

In 2000, a 47-mi (76-km) stream segment from where the West Frio River and the East Frio River flow together in Real County, at a point 110 yards (yd) (100 meters (m)) upstream of Highway 90 in Uvalde County, was included on the State of Texas' Clean Water Act 303(d) list as impaired due to concentrations of dissolved oxygen below criteria associated with exceptional aquatic life (Bonner *et al.* 2004, pp. 1–3). The dissolved oxygen criteria was established based on the fact that organisms that live in water need oxygen to live, and in waters with depressed dissolved oxygen levels, organisms may not have sufficient oxygen to survive (Nueces River Authority 2010, p. 3). Following this designation as impaired in 2000, TCEQ initiated a project to verify the impairment through the collection of additional physical, chemical, and biological data (Bonner *et al.* 2004, p. 3). As a result, Bonner *et al.* (2004, p. 1) conducted a 3-year monitoring study of water quality at several stations along the upper Frio River from 2002 through 2004. Based upon the 24-hour dissolved oxygen data collected for this study, Bonner *et al.* (2004, p. 20) found no impairment due to depressed levels of dissolved oxygen in the water and concluded that the upper Frio River was meeting the exceptional aquatic life use standard. Routine water samples yielded no significant levels of nutrient impairment (Bonner *et al.* 2004, p. 20). Therefore, Bonner *et al.* (2004, p. 1) recommended removing the upper Frio River from the State's list of impaired waters.

As part of the impairment verification monitoring project on this 47-mi (76-km) stream segment in the upper Frio River, Ecological Communications Corporation conducted biological data collection and analysis in September 2002, August 2003, and October 2003 (Walther and Palma 2004, p. 3). Based on the biological and habitat data collected by Ecological Communications Corporation, it appeared that the number and diversity of aquatic organisms were lower than the established standards set forth in the Texas Clean Water Act (Walther and Palma 2004, p. 8).

In 2008 and 2010, this same stream segment of the Frio River continued to remain on the 303(d) list because of concerns for impaired habitat, fish community, and organisms living at the bottom of the water (Nueces River Authority 2008, pp. 56–58; Nueces River Authority 2010, p. 17; TCEQ 2010a, p. 86). However, all testing resulted in data that were within TCEQ's normal range, which included dissolved oxygen, pH, total phosphorus, nitrates, ammonia, chlorophyll-a, nutrients, and bacteria (Nueces River Authority 2008, pp. 56–58; Nueces River Authority 2010, p. 17). Also, no hypotheses were given for the reasons this stream segment had aquatic life uses that were lower than established standards (Nueces River Authority 2008, 2010). Edwards *et al.* (2008, p. 29) analyzed the biological integrity of streams in the upper headwaters of the Nueces River basin, and noted that the water quality was generally high and the fish fauna present were typical of high-quality spring-fed streams. Also, Edwards *et al.* (2008, p. 6) stated that the plateau shiner was one of the most abundant fishes surveyed.

Another stretch of the Frio River, a segment 158 mi (254 km) long, from 110 yds (100 m) upstream of Highway 90 in Uvalde County to the confluence with Choke Canyon Reservoir in McMullen County, was placed on the 303(d) list as impaired for bacteria in 2008 and 2010 (Nueces River Authority 2008, pp. 66–71; Nueces River Authority 2010, p. 20; TCEQ 2010a, p. 86). However, this stretch of the Frio River is further downstream in south-central Texas, outside of the plateau shiner's range. Therefore, factors affecting this stream segment are not likely to affect the plateau shiner or its habitat.

As previously noted above under *Factor A* analysis for the Nueces River shiner, Edwards *et al.* (2008, p. 3) conducted a study to find out if there were potential impacts that may be factors in population and range declines among native fishes, including the plateau shiner, in the upper headwaters of the Nueces River basin. Edwards *et al.* (2008, p. 27) analyzed the biological integrity of streams in the upper Nueces River basin, including the Sabinal and Frio Rivers where the plateau shiner is found. Edwards *et al.* (2008, p. 27) found that the Sabinal and Frio Rivers had exceptional water quality within the range of the plateau shiners. Also, Edwards *et al.* (2008, p. 29) noted that the water quality was generally high and the fish fauna present were typical of high-quality spring-fed streams within the southern Edwards Plateau. On the other hand, Edwards *et al.* (2008, p. 29) noted a number of significant impacts, such as development along the watercourse, low-head dams along the Sabinal River, and at times intense recreational pressures during the summer months, especially along the Frio River. Even with these impacts to the streams, the headwaters of the Sabinal and Frio Rivers maintained much of their integrity as evidenced by the numerous indicator fishes (fishes thought to be sensitive to, and serve as an early warning indicator of, environmental changes), such as the plateau shiner (Edwards *et al.* 2008, p. 27). In fact, Edwards *et al.* (2008, p. 6) stated that the plateau shiner was one of the most abundant fishes. Because the plateau shiner was one of the most abundant species surveyed, it does not appear that factors related to development along the watercourse, low-head dams, and recreational use are negatively impacting the plateau shiner.

In conclusion, even though a portion of the Frio River is listed as impaired by the State of Texas under the Clean Water Act 303(d) because of concerns for impaired habitat, fish community, and organisms living at the bottom of the water, a study conducted by Edwards *et al.* (2008) found no evidence of actual impacts on the plateau shiner. Likewise, Bonner *et al.* (2004, p. 20) previously found no impairment due to depressed levels of dissolved oxygen in the water and concluded that the upper Frio River was meeting the exceptional aquatic life use standard. In addition, all water quality monitoring in the impaired stream segment resulted in water parameters within the normal range (Nueces River Authority 2008, pp. 56–58; Nueces River Authority 2010, p. 17). Based on the best available information, we find that the plateau shiner is not in danger of extinction now or in the foreseeable future as a result of degraded water quality.

Land Use

The primary land use factors that could affect the plateau shiner are recreation, agricultural activities, and land development. The upper Frio River is used extensively for recreation, and the extensive recreational usage is expected to continue in the future (Walther and Palma 2004, p. 1; Nueces River Authority 1998, p. 2). Although we could find no evidence to indicate that recreational usage may be impacting plateau shiner in the Sabinal River, it is reasonable to assume that recreational use does occur in this river. The Frio River is very popular for recreational activities such as canoeing, tubing, fishing, and wildlife viewing (Norris *et al.* 2005, p. 15). A study was conducted on the upper Frio River to evaluate the impact of recreational use and land development on water quality and the aquatic biological community (Nueces River Authority 1998, p. 2). Impacts were evaluated through the collection and interpretation of information on land uses and historic utilization, and by conducting biological assessments, toxicity testing, and water quality analysis (Nueces River Authority, p. 2). The Nueces River Authority (1998, p. 3) noted that the upper Frio River was primarily forest and rangeland with some agricultural activities, mainly orchards and nurseries, and very limited urban land development, primarily related to tourist and camping accommodations. Overall, the chemical and physical water quality of the upper Frio River was found to be very good, and recreational use had little impact on river quality during the spring and summer visitation period (Nueces River Authority 1998, p. 10). This is further supported by an Edwards *et al.* (2008, p. 27) study, which found that the Sabinal and Frio Rivers had exceptional water quality. Based on our review of the best available information, we find that the plateau shiner is not in danger of extinction now or in the foreseeable future as a result of recreational use or any other type of land use.

Summary of Factor A

We relied on the best available scientific and commercial information, which does not indicate that any of the factors discussed above are impacting the plateau shiner at a level that constitutes a threat to the species. Therefore, we find that the plateau shiner is not in danger of extinction now or in the foreseeable future as a result of the present or foreseeable destruction, modification, or curtailment of its habitat or range.

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

Based on the best available scientific and commercial information, there is no evidence that impacts are occurring to the plateau shiner or its habitat under this factor. Other than the scientific studies referenced in this finding, the plateau shiner is not used for any commercial, recreational, or educational purposes. Therefore, we find that the plateau shiner is not in danger of extinction now or in the foreseeable future as a result of overutilization for commercial, recreational, scientific, or educational purposes.

Factor C. Disease or Predation

As with the Nueces River shiner, we are not aware of any research that has been conducted to specifically examine disease or predation in the plateau shiner. There was no mention of disease or predation in our review of the best available information. Also, we are not aware of any nonnative species that may prey on the plateau shiner. Therefore, we find that the plateau shiner is not in danger of extinction now or in the foreseeable future as a result of disease or predation.

Factor D. The Inadequacy of Existing Regulatory Mechanisms

As we discussed in more detail above under *Factor D* analysis for the Nueces River shiner, there are Federal and State regulatory protections currently in place offering some levels of protection for the plateau shiner, particularly from such factors as degraded water quality, pollution, and reservoir construction. The *Factor D* analysis for the Nueces River shiner presented above also pertains to the plateau shiner's habitat and range. However, as discussed in other *Factors* for the plateau shiner, we have not identified any threats to the

species that are negatively affecting the status of the species, such that an inadequacy of regulatory mechanisms is likely to be a threat to the species. Therefore, we find that the plateau shiner is not in danger of extinction now or in the foreseeable future as a result of inadequacy of regulatory mechanisms.

Factor E. Other Natural or Manmade Factors Affecting Its Continued Existence

The same impacts discussed above under the *Factor E* analysis for the Nueces River shiner also apply to the plateau shiner. As with the Nueces River shiner, there are multiple hypothetical outcomes associated with climate change that could potentially affect the plateau shiner, but we lack predictive local or regional models on how climate change will specifically affect the plateau shiner or its habitat. Currently, we have no certainty regarding the timing, magnitude, or effects of impacts from climate change. Therefore, we conclude that at this time it is not possible to make reliable predictions of climate change effects on the status of the plateau shiner due to current limitations in available data and climate models. Based on the best available information, we find that the plateau shiner is not in danger of extinction now or in the foreseeable future as a result other natural or manmade factors affecting its continued existence.

Finding for the Plateau Shiner

As required by the Act, we considered the five factors in assessing whether the plateau shiner is threatened or endangered throughout all or a significant portion of its range. We examined the best scientific and commercial information available regarding the past, present, and future threats faced by the species. We reviewed the petition, information available in our files, other available published and unpublished information, and we consulted with recognized species experts and State agencies.

In considering what factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the species responds to the factor in a way that causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine how significant a threat it is. If the threat is significant, it may drive or contribute to the risk of extinction of the species such that the species warrants listing as threatened or endangered as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could impact a species negatively is not sufficient to compel a finding that listing is appropriate; we require evidence that these factors are operative threats that act on the species to the point that the species meets the definition of threatened or endangered under the Act.

Our review of the best available information does not support a determination that any current activities or activities in the foreseeable future threaten the plateau shiner or its habitat to the point that the species meets the definition of threatened or endangered under the Act. There is no evidence indicating that reduced water flow, improper grazing by livestock, diminished water quality caused by pollution, or land use is affecting the species or its habitat. Overutilization, disease, and predation are not concerns for this species. We find no existing regulatory mechanisms that are inadequate to limit or prevent possible negative impacts from human activities. Climate change is another factor that could affect the habitat of the plateau shiner in the future, but we have no certainty regarding the timing, magnitude, or effects of impacts to the species.

Based on our review of the best available scientific and commercial information pertaining to the five factors, we find that there are no threats to indicate that the species is in danger of extinction (endangered), or likely to become endangered within the foreseeable future (threatened), throughout its range. Therefore, we find that listing the plateau shiner as a threatened or endangered species is not warranted throughout its range at this time.

Significant Portion of the Range and Distinct Vertebrate Population Segments

After assessing whether the two species are threatened or endangered throughout their ranges, we next consider whether either a significant portion of the Nueces River and plateau shiners' ranges or a distinct population segment (DPS) of either or both species meets the definition of endangered or is likely to become endangered in the foreseeable future (threatened).

Significant Portion of the Range

Having determined that the Nueces River and plateau shiners do not meet the definition of a threatened or endangered species throughout all of their ranges, we must next consider whether there are any significant portions of the range where either species are in danger of extinction or is likely to become endangered in the foreseeable future.

The Act defines an endangered species as one ''in danger of extinction throughout all or a significant portion of its range,'' and a threatened species as one ''likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' The term ''significant portion of its range'' is not defined by the statute. For the purposes of this finding, a portion of the species' range is ''significant'' if it is part of the current range of the species, and it provides a crucial contribution to the representation, resiliency, or redundancy of the species. For the contribution to be crucial it must be at a level such that, without that portion, the species would be in danger of extinction.

In determining whether a species is threatened or endangered in a significant portion of its range, we first identify any portions of the range of the species that warrant further consideration. The range of a species can theoretically be divided into portions 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: (1) The portions may be significant, and (2) 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 species' range that clearly would not meet the biologically based definition of ''significant'' (*i.e.,* the loss of that portion clearly would not reasonably be expected to increase the vulnerability to extinction of the entire species to the point that the species would then be in danger of extinction), such portions will not warrant further consideration.

If we identify portions that warrant further consideration, we then determine whether the species is threatened or endangered in these portions of its range. Depending on the biology of the species, its range, and the threats it faces, it might be more efficient for us to address either the ''significant'' question first, or the status question first. Thus, if we determine that a portion of the range is not ''significant,'' we do not need to determine whether the species is in endangered or threatened there; if we determine that the species is not endangered or threatened in a portion of its range, we do not need to determine if that portion is ''significant.''

Applying the process described above for determining whether a species is threatened or endangered in a significant portion of its range, we consider status first to determine if any threats or potential threats acting individually or collectively threaten or endanger the species in a portion of its range. We have analyzed the threats to the degree possible, and determined they are essentially uniform throughout both species' ranges.

There is no information to suggest that any portion of the ranges of either species contributes more significantly to species than any other portion of their ranges. There is no information to suggest that any portion of their ranges is of better quality than any other portion, or that any portion includes important concentrations of certain types of habitat that are necessary for the species to carry out its life-history functions. As a result, we conclude that there is no information that a particular portion of the Nueces River or plateau shiners' range warrants further consideration as threatened or endangered.

Conclusion of 12-Month Finding

We do not find the Nueces River shiner or plateau shiner to be in danger of extinction now, nor is either species likely to become endangered within the foreseeable future throughout all or a significant portion of their range. Therefore, listing either species as threatened or endangered under the Act is not warranted at this time.

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

Distinct Vertebrate Population Segment

Under the Service's Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act (61 FR 4722, February 7, 1996), three elements are considered in the decision concerning the establishment and classification of a possible DPS. These are applied similarly for additions to or removal from the Federal List of Endangered and Threatened Wildlife. These elements include:

(1) The discreteness of a population in relation to the remainder of the species to which it belongs;

(2) The significance of the population segment to the species to which it belongs; and

(3) The population segment's conservation status in relation to the Act's standards for listing, delisting, or reclassification (*i.e.,* is the population segment endangered or threatened).

Discreteness

Under the DPS policy, a population segment of a vertebrate taxon may be considered discrete if it satisfies either one of the following conditions:

(1) It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation.

(2) It is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

We determine, based on a review of the best available information, that neither the Nueces River shiner nor the plateau shiner meet the discreteness conditions of the 1996 DPS policy. Neither species has populations that are known to be markedly separate from other populations of the same taxon, nor does either species have populations delimited by international governmental boundaries. Therefore, these population segments do not qualify as a DPS under our policy and are not listable entities under the Act.

The DPS policy is clear that significance is analyzed only when a population segment has been identified as discrete. Because no population segment met the discreteness element for either the Nueces River or plateau shiners, neither species qualifies as a DPS under the Service's DPS policy. Therefore, we will not conduct an evaluation of significance.

References Cited

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

Authors

The primary authors of this notice are staff members of the Southwest Regional Office.

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

Dated: July 27, 2011.

James J. Slack,

Acting Director, Fish and Wildlife Service.

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