Regional Office official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding Federal holidays.

Please see the direct final rule which is located in the Final Rules section of this **Federal Register** for detailed instructions on how to submit comments.

**FOR FURTHER INFORMATION CONTACT:** Carolyn Persoon, Environmental Engineer, Criteria Pollutant Section, Air Programs Branch (AR–18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353–8290, *persoon.carolyn@epa.gov.*

**SUPPLEMENTARY INFORMATION:** In the Final Rules section of this **Federal Register**, EPA is approving the State's SIP submittal as a direct final rule without prior proposal because the Agency views this as a noncontroversial submittal and anticipates no adverse comments. A detailed rationale for the approval is set forth in the direct final rule. If no adverse comments are received in response to this rule, no further activity is contemplated. If EPA receives adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed rule. EPA will not institute a second comment period. Any parties interested in commenting on this action should do so at this time. Please note that if EPA receives adverse comment on an amendment, paragraph, or section of this rule and if that provision may be severed from the remainder of the rule, EPA may adopt as final those provisions of the rule that are not the subject of an adverse comment. For additional information, see the direct final rule which is located in the Rules section of this **Federal Register**.

Dated: March 30, 2011.

**Susan Hedman,**

*Regional Administrator, Region 5.*

[FR Doc. 2011–8860 Filed 4–13–11; 8:45 am]

**BILLING CODE 6560–50–P**

## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

### 50 CFR Part 17

**[Docket No. FWS–R2–ES–2011–0018; MO92210–0–0008–B2]**

## Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition To List the Prairie Chub as Threatened or Endangered

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

**ACTION:** Notice of petition finding and initiation of status review.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list the prairie chub (*Macrhybopsis australis*) as threatened or endangered under the Endangered Species Act of 1973, as amended (Act), and to designate critical habitat. The prairie chub is a fish endemic to the upper Red River basin in Oklahoma and Texas. Based on our review, we find that the petition presents substantial scientific or commercial information indicating that listing the prairie chub may be warranted. Therefore, with the publication of this notice, we are initiating a review of the status of the species to determine if listing the prairie chub is warranted. To ensure that this status review is comprehensive, we are requesting scientific and commercial data and other information regarding this species. Based on the status review, we will issue a 12-month finding on the petition, which will address whether the petitioned action is warranted, as provided in the Act.

**DATES:** To allow us adequate time to conduct this review, we request that we receive information on or before June 13, 2011. Please note that if you are using the Federal eRulemaking Portal (see **ADDRESSES** section, below), the deadline for submitting an electronic comment is 11:59 p.m. Eastern Time on this date.

**ADDRESSES:** You may submit information by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* In the box that reads "Enter Keyword or ID," enter the Docket number for this finding, which is [Docket No. FWS–R2–ES–2011–0018]. Check the box that reads "Open for Comment/Submission," and then click the Search button. You should then see an icon that reads "Submit a Comment." Please ensure that you have found the correct rulemaking before submitting your comment.
- *U.S. mail or hand-delivery:* Public Comments Processing, Attn: [Docket No. FWS–R2–ES–2011–0018]; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042–PDM; Arlington, VA 22203.

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

After June 13, 2011, you must submit information directly to the Field Office (see **FOR FURTHER INFORMATION CONTACT** section below). Please note that we might not be able to address or incorporate information that we receive after the above requested date.

**FOR FURTHER INFORMATION CONTACT:** Dixie Bounds, Field Supervisor, U.S. Fish and Wildlife Service, Oklahoma Ecological Services Field Office, 9014 East 21st Street, Tulsa, OK 74129, by telephone at 918–581–7458, or by facsimile at 918–581–7467. If you use a telecommunications device for the deaf (TDD), please call the Federal Information Relay Service (FIRS) at 800–877–8339.

**SUPPLEMENTARY INFORMATION:**

### Request for Information

When we make a finding that a petition presents substantial information indicating that listing a species may be warranted, we are required to promptly review the status of the species (status review). For the status review to be complete and based on the best available scientific and commercial information, we request information on the prairie chub from governmental agencies, Native American Tribes, the scientific community, industry, and any other interested parties. We seek information on:

(1) The species' biology, range, and population trends, including:

(a) Habitat requirements for feeding, breeding, and sheltering;

(b) Genetics and taxonomy;

(c) Historical and current range, including distribution patterns;

(d) Historical and current population levels, and current and projected trends; and

(e) Past and ongoing conservation measures for the species, its habitat, or both.

(2) The factors that are the basis for making a listing determination for a species under section 4(a) of the Act (16 U.S.C. 1531 *et seq.*), which are:

(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.

If, after the status review, we determine that listing the prairie chub is warranted, we will propose critical habitat (see definition in section 3(5)(A) of the Act), under section 4 of the Act, to the maximum extent prudent and determinable at the time we propose to list the species. Therefore, within the geographical range currently occupied by the prairie chub, we request data and information on:

(1) What may constitute "physical or biological features essential to the conservation of the species";

(2) Where these features are currently found; and

(3) Whether any of these features may require special management considerations or protection.

In addition, we request data and information on "specific areas outside the geographical area occupied by the species" that are "essential to the conservation of the species." Please provide specific comments and information as to what, if any, critical habitat you think we should propose for designation if the species is proposed for listing, and why such habitat meets the requirements of section 4 of the Act.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Submissions merely stating support for or opposition to the action under consideration without providing supporting information, although noted, will not be considered in making a determination. Section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered or threatened species must be made "solely on the basis of the best scientific and commercial data available."

You may submit your information concerning this status review by one of the methods listed in the **ADDRESSES** section. If you submit information via *http://www.regulations.gov,* your entire submission—including any personal identifying information—will be posted on the Web site. If you submit a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this personal identifying information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on *http://www.regulations.gov.*

Information and supporting documentation that we received and used in preparing this 90-day finding are available for you to review at *http://www.regulations.gov,* or you may make an appointment during normal business hours at the U.S. Fish and Wildlife Service, Oklahoma Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

## Background

Section 4(b)(3)(A) of the Act (16 U.S.C. 1533(b)(3)(A)) requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. We are to base this finding on information provided in the petition, supporting information submitted with the petition, and information otherwise available in our files. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition and publish our notice of the finding promptly in the **Federal Register**.

Our standard for substantial scientific or commercial information within the Code of Federal Regulations (CFR) with regard to a 90-day petition finding is "that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted" (50 CFR 424.14(b)). If we find that substantial scientific or commercial information was presented, we are required to promptly conduct a species status review, which we subsequently summarize in our 12-month finding.

## Petition History

On January 25, 2010, we received a petition dated January 14, 2010, from WildEarth Guardians, requesting that the prairie chub be listed as threatened or endangered and that critical habitat be designated under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioner, as required by 50 CFR 424.14(a). In a July 19, 2010, letter to the petitioner, we responded that we reviewed the information presented in the petition and determined that issuing an emergency regulation temporarily listing the species under section 4(b)(7) of the Act was not warranted. We also stated that, due to court orders and judicially approved settlement agreements for other listing and critical habitat determinations under the Act that required nearly all of our listing and critical habitat funding for fiscal year 2010, we would not be able to further address the petition at that time, but would complete the action when workload and funding allowed. This finding addresses the petition.

*Previous Federal Actions*

There have been no Federal actions specific to the prairie chub.

## Species Information

*Taxonomy and Description*

The prairie chub is a small fish that was originally described by Hubbs and Ortenberger (1929, pp. 23–28) from a collection in the Red River 10 to 14 kilometers (km) (6 to 9 miles (mi)) southwest of Hollis, Harmon County, Oklahoma. Until 2004, the prairie chub was treated as a single, wide-ranging, geographically variable species, referred to as *Macrhybopsis aestivalis* (Wallace 1980, p. 180; Eisenhour 2004, pp. 9–10). An analysis of the species' morphology conducted by Eisenhour (2004, p. 13) resulted in the recognition of five species west of the Mississippi River within the *Macrhybopsis* complex: The prairie chub (*M. australis*) in the upper Red River drainage; the peppered chub (formerly Arkansas River speckled chub) (*M. tetranema*) in the upper Arkansas River drainage; the shoal chub (*M. hyostoma*) in the central and eastern United States; the speckled chub (*M. aestivalis*) from the Rio Grande River in Texas; and the burrhead chub (*M. marconis*), which occurs in the San Antonio and Guadalupe Rivers in Texas, with remnant populations possibly in the Edwards Plateau portion of the Colorado River (Miller and Robison 2004, pp. 126–127; Hubbs *et al.* 2008, p. 21).

Even though there are morphological characteristics separating *Macrhybopsis* into five species, there are genetic similarities that dispute this species separation. Underwood *et al.* (2003, pp. 493, 497) examined genes in three of the western members of the *Macrhybopsis* complex and noted that the three forms of speckled chub occurring in the Red and Arkansas Rivers could possibly comprise a single species. Underwood *et al.* (2003, p. 297) suggested that the mixing of the species' genes through hybridization may be why the shoal chub (*M. hyostoma*) in the Red and Arkansas Rivers is genetically similar to the prairie chub (*M. australis*) in the Red River and the peppered chub (*M. tetranema*) in the Arkansas River (Underwood *et al.* 2003, p. 498). Further genetic studies are needed on all five species of *Macrhybopsis* west of the

Mississippi River to help resolve their genetic lineages.

We accept the characterization of the prairie chub as a separate species with the scientific name *Macrhybopsis australis* because of research conducted by Eisenhour (2004, pp. 13, 28–31); this research has been accepted by the scientific community. The prairie chub is listed as a species in the *Common and Scientific Names of Fishes,* which was published by the American Fisheries Society in 2004.

*Distribution*

The prairie chub is endemic to the upper Red River basin in Oklahoma and Texas. Based on information in the petition and readily available in our files, the species' current distribution appears to include the following rivers and streams: Elm Fork of the Red River, North Fork of the Red River downstream of Altus Lake, Salt Fork of the Red River, Prairie Dog Town Fork of the Red River, Buck Creek, Pease River, North Wichita River, South Wichita River, Mud Creek, Bitter Creek, Gypsum Boggy Creek, Sandy (Lebos) Creek, Beaver Creek, and the Red River proper upstream of Lake Texoma (Wilde *et al.* 1996, pp. 26–55; Underwood 2003, p. 499; Eisenhour 2004, pp. 30, 40–41; Miller and Robison 2004, pp. 126–127). The species is presumed extirpated in the Washita River (Miller and Robison 2004, p. 127) and the North Fork of the Red River upstream of Altus Lake (Winston *et al.* 1991, pp. 102–103).

*Habitat*

Little is known about the habitat requirements of the prairie chub. The species is known to occupy relatively large, shallow rivers of the Red River basin, and is typically found over clean sand or gravel substrates (Miller and Robinson 2004, p. 126). The peppered and prairie chubs are considered sister species with similar genetics and ecological distributions (Underwood 2003, p. 498). For this reason, we can use scientific information gathered on the peppered chub as a means to explain unknown biological and ecological attributes of the prairie chub. Bonner (2000, p. 16) found that the peppered chub favored relatively shallow depths of 18.1 to 23.5 centimeters (cm) (7.1 to 9.3 inches (in)) and swift currents of 40 centimeters per second (cm/s) to 62 cm/s (16 to 24 inches per second (in/s)). Peppered chubs were typically collected from sand substrates throughout the year; however, the species favored cobble substrate during the spring and gravel substrate during the summer (Bonner 2000, p. 17). The peppered chub was collected from water temperatures ranging from 0 to 34 degrees Celsius (°C) (32 to 93 degrees Fahrenheit (°F)) (Bonner 2000, p. 16).

*Age and Growth*

Similar to the peppered chub, the prairie chub likely has a relatively short lifespan, with very few individuals surviving to their third year (Bonner 2000, p. 44; Wilde and Durham 2008, p. 1657). Bonner (2000, p. 63) found that the population of peppered chubs was dominated by age-0 and age-1 fish, suggesting high post-spawning mortality and high overwinter mortality. Age-2 peppered chubs reached a maximum length of 77 millimeters (mm) (3 in) in the study (Bonner 2000, p. 64).

*Reproduction*

Little is known about prairie chub reproduction, but based on known reproductive habits of other *Macrhybopsis* species, the prairie chub is likely a broadcast spawner, meaning it releases semibuoyant nonadhesive eggs into moving water (Platania and Altenbach 1998, p. 561). This reproductive strategy is considered to be an adaptation to highly variable stream environments (Platania and Altenbach 1998, p. 565). Based on drift rates and the length of time needed for egg development, Platania and Altenbach (1998, p. 566) suggested that peppered chub eggs could be transported 72 to 144 km (44 to 90 mi) before hatching. Once hatched, fry (recently hatched fish) could continue to be transported downstream another 216 km (134 mi) until they are able to swim (Platania and Altenbach 1998, p. 566).

Reproductive success of species within the *Macrhybopsis* complex appears to be related to stream discharge during the spring and summer (Wilde and Durham 2008, p. 1658). Many studies have shown that species in the *Macryhobopsis* complex spawn during high-discharge events (Platania and Altenbach 1998, p. 565). However, Durham and Wilde (2006, pp. 1647–1649) found that young were produced throughout the summer, when relatively low discharge was present. In addition, Durham and Wilde (2006, pp. 1647–1649) found that high peak discharges were associated with low catch rates. Durham and Wilde (2006, p. 1651) concluded that there was an association between moderate peak rates and reproductive success of five minnows, including the peppered chub. Further, Bonner (2000, p. 62) found that the peppered chub spawned in pools; however, reproductive success was not documented. Based on these studies, the reproductive success of prairie chubs may be related to stream discharge.

**Evaluation of Information for This Finding**

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations at 50 CFR 424 set forth the procedures for adding a species to, or removing a species from, the Federal Lists of Endangered and Threatened Wildlife and Plants. A species may be determined to be a threatened or endangered species due to one or more of the five factors described in section 4(a)(1) of the Act:

(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 90-day finding, we evaluated whether information regarding threats to the prairie chub, as presented in the petition and in other information available in our files, is substantial scientific or technical information, thereby indicating that the petitioned action may be warranted. Our evaluation of this information is presented below.

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

The petitioner asserts that impoundments, water quality, Red River chloride control, land use, water use, and invasive plants are threats to the prairie chub's habitat or range.

Impoundments

Information Provided in the Petition

In support of the assertion that impoundments are a threat to the prairie chub, the petitioner suggests that stream flows within the Red River basin have been greatly altered by dams and dikes. These structures include Lake Tanglewood Dam, Altus Dam, Altus Auxiliary Dike, Altus East Dike, Altus Lugert Dike, Altus North Dike, Altus South Dike, Farmers Creek Dam, and Fish Creek Dam. The petitioner referenced Bonner (2000, p. 1) to describe how dams alter physical and chemical conditions of streams. These alterations, including changes in temperature and substrate, presence of backwaters, and timing and volume of discharge, all directly affect fish populations. A reduction in discharge can result in changes to channel

morphology and indirectly affect stream fish populations that require streams or rivers for all or part of their life history. For example, Altus Dam on the North Fork of the Red River caused changes to the fish community above the dam, including extirpation of the prairie chub (Winston *et al.* 1991, p. 98). In addition, Eisenhour (2004, pp. 30–31) states that reproduction and recruitment would be affected by reservoirs because the species is likely a flood-pulse spawner and because downstream habitat in the form of permanent flowing streams would be altered.

Evaluation of Information Provided in the Petition and Available in Service Files

Information readily available in our files supports the petitioner's assertions that impoundments, such as dams and dikes, cause modification of prairie chub habitat. Streams and rivers of the Red River basin have been significantly altered by dams and small impoundments. A total of 660 named reservoirs and an additional 3,877 impoundments, all 2 hectares (ha) (5 acres (ac)) or larger, have been constructed within the prairie chub's current known distribution. Twenty-eight percent of named streams (181 of 647) within the current prairie chub drainage have at least 1 impoundment over 2 ha (5 ac) in size (U.S. Geological Survey 2007, p. 1).

Impoundments, particularly those that are regulated, cause dampened and less-frequent peak flows downstream of dams, and prolonged periods of high or no flow. Because reproduction of the prairie chub is likely dependent upon discharge and varying flows, any alteration of the natural flow regime could affect its reproductive capability. Regulation of flow also causes increased channelization, decreased complexity of stream habitats, and a loss of connectivity between the river and its floodplain (Dudley and Platania 2007, p. 2081). As a result, flow velocity is increased, which increases downstream transport of eggs into unsuitable reaches such as reservoirs (Dudley and Platania 2007, p. 2081), where the eggs drop out of suspension and possibly perish because of unsuitable habitat (Platania and Altenbach 1998, p. 566). Additionally, because the connection between the river and its floodplain is diminished or lost, refugia for newly hatched fish are less available, leaving them vulnerable to potential predation.

Luttrell *et al.* (1999, p. 986) found that extirpation of peppered chubs from the Arkansas River basin coincided with completion of reservoirs and severe drought. Their finding was supported by a life history model for the peppered chub, developed by Wilde and Durham (2008, p. 1663), that predicted that for the peppered chub population to be maintained, an annual discharge below the long-term average would have to be followed the next year by a higher-than-average discharge. For example, if annual discharge was less than the long-term average by 10 percent, discharge the following year would have to exceed 11 percent of the long-term average in order for the peppered chub population to recover. Because peppered and prairie chubs are thought to spawn only once, a quick population rebound is critical to its survival. Thus, impoundments throughout the prairie chub's range may affect the ability of the species to rebound from a population decline.

In reference to the petitioner's claims regarding impoundments as a threat to the prairie chub, the information appears to be reliable. Information readily available in our files indicates that impoundments alter stream flows, which the prairie chub appears to be dependent upon for reproduction and recruitment. Therefore, we find that there is substantial information indicating that impoundments may be a threat to the species such that listing may be warranted.

Water Quality

Information Provided in the Petition

The petitioner asserts that degraded water quality is a threat to the prairie chub. In support of this threat, the petitioner provided information on both Oklahoma and Texas water-quality inventories of the Upper Red River Basin, which demonstrate that several regions of the system are degraded (Oklahoma Department of Environmental Quality 2008, Appendix B, pp. 1–170; Texas Commission on Environmental Quality 2008, pp. 1–117). For example, in Texas, 11 stream segments in the Red River basin are on the Environmental Protection Agency's Clean Water Act 303(d) list of degraded waters. These segments make up close to 1,448 km (900 mi) of stream. Additionally, malathion (a chemical toxic to fishes) is used to eradicate boll weevils (*Anthonomus grandis*) from cotton crops in the region (Grefenstette and El-Lissy 2003, p. 131). Furthermore, the petitioner references Jester *et al.* (1992, p. 14) to state that the speckled chub (incorrectly referenced as prairie chub in the petition) is intolerant of changes to habitat and moderately intolerant to changes in water quality.

Evaluation of Information Provided in the Petition and Available in Service Files

With regard to degraded water quality being a threat to the prairie chub, the information provided by the petitioner appears to be reliable. Information in our files supports the petitioner's assertion that water quality in many streams of the upper Red River basin is degraded to some degree and that prairie chubs may be susceptible to this degradation. Of the 14 streams known to recently support prairie chubs, the Environmental Protection Agency considers 10 of those to be impaired due to one or more of the following parameters: Fecal coliform, total dissolved solids, *Escherichia coli, Enterococcus,* turbidity, chlorides, selenium, sulfates, lead, dichlorodiphenyltrichloroethane (DDT), *Toxaphene,* and fish bioassessments (EPA 2008, p. 1). These elements are detrimental to water quality and affect fishes by limiting their potential distribution, lowering dissolved oxygen, and accumulating in fish tissues. Additionally, a study by Adornato and Martin (1995, p. 18) concluded that fish within their project area, including two streams occupied by prairie chubs, were highly contaminated with organochlorine pesticides, including dieldrin, DDT metabolites, and *Toxaphene,* all of which are known to be toxic to all fishes. Selenium, also toxic to fishes, was found to be elevated, which the authors attributed to crop irrigation (Adornato and Martin 1995, p. 18). Because various chemical toxins have been found in the same streams of the prairie chub, and the toxins are known to cause mortalities in all fishes, degraded water quality may be a threat to the species. Therefore, we find that the petition and information in our files provides substantial information indicating that listing the prairie chub may be warranted due to degraded water quality.

Red River Chloride Control

Information Provided in the Petition

The petitioner asserts that the U.S. Army Corps of Engineers' (ACE) Red River Chloride Control Project is a threat to the prairie chub. The ACE is authorized to identify and implement measures to reduce naturally occurring brine emissions into several Red River basins in Texas and Oklahoma. The project's primary purpose is to minimize chloride inputs into the Red River. The petitioner references Matthews *et al.* (2005, p. 304) and states that completion of the program to control chlorides in the Upper Red

River Basin will threaten the natural salinity gradient upon which many flora and fauna depend. Additionally, if chloride levels in the upper Red River basin were lowered to the point that allowed for additional irrigation, water withdrawals would increase and hydrologic estimates suggest that "no-flow" days in the upper basin might be tripled annually. Taylor *et al.* (1993, p. 22) is also referenced in the petition, suggesting that the chloride control program could have a substantial effect on the fish community structure.

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claims that the Red River Chloride Control Project is a threat to the prairie chub, the information appears to be reliable. Information in our files confirms the petitioner's assertion that the project could alter existing stream flows, thus negatively affecting the prairie chub's ability to successfully reproduce. According to projections supplied by the ACE, the project would result in average annual streamflow reductions ranging from a 4.5 percent reduction in the Elm Fork of the Red River to a 52 percent reduction in the South Fork of the Wichita River (Service 1996, p. iii). The project, in combination with irrigation withdrawals anticipated following project implementation, is expected to increase the number of average annual no-flow days from a low of 3 days at the Benjamin, Texas, gage to a high of 67 days at the Vernon, Texas, gage (Service 1996, p. iii). This decrease in flows could eliminate existing resources, such as food and habitat, and could result in less dilution of environmental contaminants that are known to exist in the system (Adornato and Martin 1995, p. 18; EPA 2008, p. 1). By limiting resources and potentially increasing the concentrations of contaminants, the Red River Chloride Control Project could possibly have negative impacts on the prairie chub.

Also, an increase in no-flow days would affect the prairie chub's ability to spawn. Because discharge is necessary for successful reproduction (Durham and Wilde 2006, p. 1647), any increase in the number of no-flow days would decrease the number of days prairie chubs have available to spawn. Because prairie chub eggs disperse downstream after spawning (Platania and Altenbach 1998, p. 566), more frequent no-flow days in combination with lower overall flows could minimize dispersal and potentially cause an overall reduction in populations.

After reviewing information provided by the petitioner and readily available in our files, we find that substantial information exists indicating that the Red River Chloride Control Project, including impacts of reduced stream flow and degraded water quality may be a threat to the prairie chub, such that listing may be warranted.

Land Use

Information Provided in the Petition

The petitioner asserts that land use changes are a threat to the prairie chub. In support of this claim, the petitioner references Steuter *et al.* (2003, p. 53) to describe how southern short- and mid-grass river systems, including Red River basin streams, have been altered by land use changes like oil and gas production and agriculture.

Evaluation of Information Provided in the Petition and Available in Service Files

Regarding the petitioner's claim that land use changes are a threat to the prairie chub, the information appears to be reliable. Agriculture is the principal land use throughout the Red River basin. Floodplain soils are generally well suited for alfalfa, wheat, corn, cotton, peanuts, grain sorgum, and other small grains. Consequently, native floodplain vegetation has been cleared or fragmented into small, isolated patches and replaced with pasture, hay, vegetables, and small grains. Contaminants widely known to originate from agricultural operations also appear to negatively impact fish and wildlife in the upper Red River basin and are described above under *Water Quality.* Besides agriculture-related contaminants, the information provided by the petitioner and readily available in our files does not indicate that any other agriculture-related activities are impacting the prairie chub in a way that may pose a threat to the species.

In reference to the petitioner's claims that oil and gas production has altered Red River basin streams, information available in our files indicates that oil and gas production has eliminated or fragmented native plant communities throughout the Red River basin (Service 1996, p. 5); however, the petitioner provided no information indicating how this potential impact may be acting on the species. Therefore, the petitioner has not provided substantial information indicating that land use changes from oil and gas production may be a threat to the prairie chub.

In summary, we find the petition, along with information readily available in our files, presents substantial information indicating that agricultural-related contaminants, which are described above under *Water Quality,* may pose a threat to the prairie chub such that listing may be warranted. However, neither the petition or information in our files, present substantial information to suggest that oil and gas production impacts the prairie chub at a level where listing may be warranted.

Agricultural Water Use

Information Provided in the Petition

The petitioner asserts that agricultural water use is a threat to the prairie chub. The petitioner provided information from Steuter *et al.* (2003, p. 53) stating that river flows have been greatly altered by dams and excessive groundwater withdrawals for irrigation. In addition, the petitioner cited Eisenhour (2004, pp. 30–31) to describe the potential disruptive impacts from water modification (reservoir construction, channelization, and groundwater withdrawals) on reproduction and recruitment of the prairie chub.

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claim that water use, primarily irrigation, is a threat to the prairie chub, the information appears to be reliable. Ground and surface water withdrawals for irrigation can have significant negative impacts on the prairie chub. One of the major factors contributing to the decline of the Federally listed Arkansas River shiner (*Notropis girardi*) is water depletion due to irrigation for agriculture (Service 1998, pp. 64773, 64779). Irrigation, in combination with water depletions from the Red River Chloride Control Project, could significantly reduce flows in the upper Red River basin (Service 1996, p. iii). The detrimental effects of decreased water flows on the prairie chub are described above under *Impoundments* and *Red River Chloride Control Project.* Based on the effects of reduced flows, the information provided by the petitioner and readily available in our files indicates that agricultural water use and subsequent stream flow reduction may be a threat to the prairie chub, such that listing may be warranted.

Invasive Plants

Information Provided in the Petition

The petitioner asserts that invasive plants are a threat to the prairie chub.

In support of this threat, the petitioner states that saltcedar (*Tamarix spp.*) and Russian olive (*Elaeagnus angustifolia*) are prolific along the Red River and its tributaries (DeLoach 2009, p. 1). Further, the petitioner claims that both plants can be detrimental to native plains fishes by decreasing stream flows.

Evaluation of Information Provided in the Petition and Available in Service Files

Regarding the petitioner's claims that invasive plants may be a threat to the prairie chub, the information appears to be reliable. The banks of the Red River once sustained growth of tall willows (*Salix spp.*) and cottonwoods (*Populus deltoides*), but these trees have been supplanted by saltcedar and Russian olive (Texas Parks and Wildlife Department 2005, p. 151). Early studies of water use by saltcedar have led many to assume that removal of saltcedar would result in water savings, primarily as increased flows in rivers (U.S. Geological Survey 2009, p. 43). Some research has shown that removal of saltcedar from spring ecosystems may be beneficial to fish species by increasing groundwater inputs and available habitat (DeLoach 2009, p. 1). However, saltcedar and Russian olive removal projects on larger streams and rivers, which were intended to increase stream flows, have provided mixed results (U.S. Geological Survey 2009, pp. 43–44). In a few cases, clearing saltcedar resulted in temporary increases in stream flow (U.S. Geological Survey 2009, pp. 43–44). But, most studies found no significant long-term changes in stream flow (U.S. Geological Survey 2009, pp. 43–44). A U.S. Geological Survey (2009, p. ix) report suggests that additional research is needed at a scale large enough to detect changes to the water budget, and that all variables associated with the water budget should be examined. Based on information provided by the petitioner and readily available in our files, it appears that more research is needed to determine the actual impacts of saltcedar and Russian olive on stream flows in the upper Red River and to determine the extent that this impact may have on the prairie chub. At this time, it is unclear whether invasive plants may be a threat to the prairie chub. Therefore, we will analyze this issue further in the 12-month finding.

Additionally, saltcedar and Russian olive encroachment has been shown to alter stream geomorphology by narrowing and deepening channels through dense accumulation along the banks (Hultine *et al.* 2009, p. 469). This alteration to stream morphology limits the stream's connectivity with the floodplain, which is needed for native plant establishment (Hultine *et al.* 2009, p. 469) and refugia habitat for fishes. However, the petitioner provided no information to indicate that saltcedar and Russian olive within the current range of the prairie chub are at high enough densities, nor will be in the future, to alter stream morphology and affect the prairie chub's habitat.

In conclusion, information provided by the petition, and readily available in our files, is unclear about whether invasive plants, particularly saltcedar or Russian olive, may be a threat to the prairie chub because of stream flow alterations. Therefore, we will investigate this issue further in the 12-month finding.

In summary of the Factor A analysis, we find that the petition, along with information available in our files, has presented substantial information indicating that the prairie chub may warrant listing due to the present or threatened destruction, modification, or curtailment of its habitat or range, primarily due to impoundments altering stream flows, degraded water quality, the Red River Chloride Control Project, and irrigation.

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

Information Provided in the Petition

The petition does not present any information concerning impacts from overutilization for commercial, recreational, scientific, or educational purposes to the prairie chub.

Evaluation of Information Provided in the Petition and Available in Service Files

We have no information available in our files to indicate that any impact from overutilization is occurring to the prairie chub. Therefore, we find that the petition, along with information readily available in our files, has not presented substantial information that the prairie chub may warrant listing due to overutilization for commercial, recreational, scientific, or educational purposes.

*C. Disease or Predation*

Information Provided in the Petition

The petitioner asserts that nonnative species, such as bullfrogs (*Rana catesbeiana*), may be a threat to the prairie chub. However, the petitioner does not provide any information indicating how nonnative species may be impacting the prairie chub.

Evaluation of Information Provided in the Petition and Available in Service Files

We have no information available in our files to indicate that nonnative species, disease, or predation are impacting the prairie chub. Therefore, we find that the petition, along with information readily available in our files, has not presented substantial information that the prairie chub may warrant listing due to disease or predation.

*D. The Inadequacy of Existing Regulatory Mechanisms*

Information Provided in the Petition

The petitioner asserts that the inadequacy of existing regulatory mechanisms is a threat to the prairie chub. In support of this claim, the petitioner states that the prairie chub receives no Federal or State protection, even though the prairie chub is listed as a Tier-I priority species in Oklahoma under the State's Comprehensive Wildlife Conservation Strategy, and the Texas Comprehensive Conservation Strategy lists the prairie chub as a medium-priority Species of Concern. Also, the petitioner states that the Oklahoma Comprehensive Conservation Strategy does not identify specific conservation actions that will benefit the species.

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claim that the inadequacy of existing regulatory mechanisms is a threat to the species, the information appears reliable. However, in 2007 the State of Texas developed legislation that authorized a program that could be beneficial to the prairie chub by requiring an instream flow. An instream flow requirement, as defined by the National Academy of Sciences (NAS), is the amount of water flowing through a natural stream course that is needed to sustain, rehabilitate, or restore the ecological functions of a stream in terms of hydrology, biology, geomorphology, connectivity, and water quality at a particular level (NAS 2005, p. 139). Although this could be beneficial to the prairie chub, we have no information in our files showing that any parts of the program have been implemented for the Red River. No such instream flow legislation exists in the State of Oklahoma. Without protection of existing flows, the prairie chub's habitat could be significantly altered. The alteration of natural flows could disrupt the species' ability to successfully

spawn and disperse throughout the upper Red River basin. For more details on how reduced flows impact the prairie chub, see discussion in the *Impoundments* and *Red River Chloride Control Project* sections.

Also, the EPA (2008, p. 1) established Total Maximum Daily Loads for many of the streams occupied by the prairie chub in order to reduce water degradation. However, we have no information in our files to suggest that measures to meet the established Total Maximum Daily Loads standards have been implemented.

In summary, we find that the petition, along with information readily available in our files, presents substantial information indicating that prairie chub may warrant listing due to the inadequacy of existing regulatory mechanisms, primarily due to inadequate protections of water quality and stream flow.

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

Invasive Aquatic Species

Information Provided in the Petition

The petitioner asserts that nonnative aquatic species are threats to the prairie chub. In support of this claim, the petitioner references Gido *et al.* (2004, p. 128) to assert that invasive nonnative species may cause fish population declines in the southern Great Plains river systems. Additionally, the petitioner states that nonnative species that have invaded the Red River basin include common carp (*Cyprinus carpio*), threadfin shad (*Dorosoma petensense*), and inland silverside (*Menidia beryllina*). However, neither the petitioner, nor the references provided, identifies how nonnative species impact the prairie chub.

Evaluation of Information Provided in the Petition and Available in Service Files

Information in our files supports the assertion that nonnative fish species may cause native fish population declines in the southern Great Plains river systems, but there is no evidence that nonnative species are impacting the prairie chub. Gido (2004, p. 129) found that Great Plains streams appear to be gaining introduced species at the rate of 0.5 species every 18 years. One example is the introduction and establishment of the Red River shiner (*Notropis bairdi*), a species endemic to the Red River drainage, into the Cimarron River in Oklahoma and Kansas, which has had a detrimental effect on the Arkansas River shiner by competing for limited resources (Cross *et al.* 1983, pp. 93–98; Felley and Cothran 1981, p. 564). The Red River shiner was first recorded from the Cimarron River in 1976 (Marshall 1978, p. 109). It has since colonized the Cimarron River and may be a dominant component of the fish community (Cross *et al.* 1983, pp. 93–98; Felley and Cothran 1981, p. 564; Service unpublished data 2007–2010). However, we do not consider the Red River shiner to be a threat to the prairie chub. Because the Red River shiner is endemic to the Red River basin, it has adapted and evolved with the prairie chub. Therefore, it is not considered an invasive species, and there is no evidence indicating that competition with the Red River shiner has any impacts on the prairie chub.

In addition, the petitioners have provided no information indicating how the three invasive species mentioned in the petition (common carp, threadfin shad, and inland silverside) may be acting on the prairie chub, or whether an impact from these species may actually be occurring within the chub's range. Although the adverse effects from invasive aquatic species are evident for other native fish species, neither the petition nor information available in our files presented substantial information indicating that nonnative species may be a threat to the prairie chub, such that listing may be warranted.

Climate Change

Information Provided in the Petition

The petitioner asserts that climate change is a threat to the prairie chub, and further notes that climate change poses a fundamental challenge for all species' survival in the coming years and decades. The petitioner provided information suggesting that climate change is already causing a rise in temperatures across the United States and is increasing extreme weather events such as droughts and increased rainfall (NSC 2003, pp. 43–44; USCCSP 2008, pp. 35–36). The petitioner referenced the Intergovernmental Panel on Climate Change (IPCC) (2007, p. 30) and stated that 11 of the 12 years from 1995 through 2006 ranked among the 11 warmest years on instrumental record. The petitioner also cites an IPCC 2007 report (p. 48) to discuss how resilience of many ecosystems is likely to be exceeded, and that 20 to 30 percent of plant and animal species assessed are likely to be at increased risk of extinction.

In further support of climate change being a threat to the prairie chub, the petitioner provided information on climate change within the Great Plains, where more extreme and frequent weather events are expected, including droughts, heavy rainfall, and heat waves (Karl *et al.* 2009, pp. 123–128). The petitioner asserts that some species may not be able to adapt to projected changes in temperature and climate change when combined with human-induced stresses (Karl *et al.* 2009, pp. 123–128). In referencing Matthews and Marsh-Matthews (2003, p. 1232), the petitioner asserts that the additional stress of drought will only be exacerbated if climate change is already increasing the severity and duration of droughts in the southern Great Plains. The petitioner cited Matthews and Marsh-Matthews (2003, p. 1232) in stating that projected climate change may result in massive changes in fish biodiversity and widespread extirpation of fish species in many regions.

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claim that climate change is a threat to the prairie chub, the information appears reliable; however, we are lacking information that links reliable impacts from climate change to effects on prairie chub populations. According to the IPCC (2007, p. 1), "Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level." Average Northern Hemisphere temperatures during the second half of the 20th century were very likely higher than during any other 50-year period in the last 500 years and likely the highest in at least the past 1,300 years (IPCC 2007, p. 1). It is very likely that over the past 50 years, cold days, cold nights, and frosts have become less frequent over most land areas, and hot days and hot nights have become more frequent (IPCC 2007, p. 1). Data suggest that heat waves are occurring more often over most land areas, and the frequency of heavy precipitation events has increased over most areas (IPCC 2007, p. 1).

Regional analysis for the Great Plains from North Dakota to Texas predicts that hot extremes, heat waves, and heavy precipitation events will increase in frequency (IPCC 2007, p. 8). Milly *et al.* (2005, p. 349) projected a 10 to 30 percent decrease in runoff in mid-latitude western North America by the year 2050, based on an ensemble of 12 climate models. However, predictions for smaller subregions, such as Oklahoma and Texas, are not presented in the petition or readily available in our files. In addition, the petitioner did

not provide information indicating how climate change might potentially impact the prairie chub. The prairie chub has persisted for millennia with periods of extreme weather events, such as droughts and floods. If climate change causes more extreme weather events, there is no information to indicate that such events will have a negative impact on the prairie chub. At this time, we lack sufficient certainty to know specifically how climate change will affect the species. We are not aware of any data at an appropriate scale to evaluate habitat or population trends for the prairie chub within its range, make predictions about future trends, or determine whether the species will actually be impacted. Therefore, based on information presented by the petitioner and readily available in our files, we do not consider climate change to be a threat to the species; however, we intend to investigate this factor more thoroughly in our status review of the species.

In summary, we find that the petition, along with information readily available in our files, has not presented substantial information that the prairie chub may warrant listing due to other natural or manmade factors.

**Finding**

On the basis of our determination under section 4(b)(3)(A) of the Act, we have determined that the petition presents substantial scientific or commercial information indicating that listing the prairie chub throughout its entire range may be warranted. This finding is based on information provided under factors A and D about the potential threats from altered stream flows and degraded water quality, and inadequacy of existing regulatory mechanisms to protect prairie chubs from altered stream flows or degraded water quality. We determine that the information provided under factors B, C, and E is not substantial. 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 may warrant 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 may not be sufficient to compel a finding that listing may be warranted. The information must contain evidence sufficient to suggest that these factors may be operative threats that act on the species to the point that the species may meet the definition of threatened or endangered under the Act.

Because we have found that the petition presents substantial information indicating that listing the prairie chub may be warranted, we are initiating a status review to determine whether listing the prairie chub as threatened or endangered under the Act is warranted.

The "substantial information" standard for a 90-day finding differs from the Act's "best scientific and commercial data" standard that applies to a status review to determine whether a petitioned action is warranted. A 90-day finding does not constitute a status review under the Act. In a 12-month finding, we will determine whether a petitioned action is warranted after we have completed a thorough status review of the species, which is conducted following a substantial 90-day finding. Because the Act's standards for 90-day and 12-month findings are different, as described above, a substantial 90-day finding does not mean that the 12-month finding will result in a warranted finding.

**References Cited**

A complete list of references cited is available on the Internet at *http://www.regulations.gov* and upon request from the Oklahoma Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

**Author**

The primary author of this notice is the staff of the Oklahoma Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

**Authority**

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

Dated: April 4, 2011.

**Rowan W. Gould,**

*Acting Director, U.S. Fish and Wildlife Service.*

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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

### 50 CFR Part 17

**[Docket No. FWS–R8–ES–2010–0031; MO 92210–0–0008–B2]**

## Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List Hermes Copper Butterfly as Endangered or Threatened

**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 Hermes copper butterfly (*Hermelycaena [Lycaena] hermes*) as 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 Hermes copper butterfly as endangered or threatened is warranted. Currently, however, listing Hermes copper butterfly is precluded by higher priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants. Upon publication of this 12-month petition finding, we will add Hermes copper butterfly to our candidate species list. We will develop a proposed rule to list Hermes copper butterfly as our priorities allow. We will make any determination on critical habitat during development of the proposed listing rule. During any interim period, we will address the status of the candidate taxon through our annual Candidate Notice of Review (CNOR).

**DATES:** The finding announced in this document was made on April 14, 2011.

**ADDRESSES:** This finding is available on the Internet at *http://www.regulations.gov* at Docket Number FWS–R8–ES–2010–0031. Supporting documentation we used in preparing this finding is available for public inspection, by appointment, during normal business hours at the Carlsbad Fish and Wildlife Office, U.S. Fish and Wildlife Service, 6010 Hidden Valley Road, Suite 101, Carlsbad, CA 92011. Please submit any new information, materials, comments, or questions concerning this finding to the above internet address or the mailing address listed under **FOR FURTHER INFORMATION CONTACT**.

**FOR FURTHER INFORMATION CONTACT:** Jim Bartel, Field Supervisor, Carlsbad Fish