

Mandates Reform Act of 1995 do not apply to this rulemaking.

#### List of Subjects in 49 CFR Part 211

Administrative practice and procedure, Rules of practice.

In consideration of the foregoing, FRA proposes to amend 49 CFR part 211 as follows:

#### PART 211—[AMENDED]

1. The authority citation for part 211 would continue to read as follows:

**Authority:** 49 U.S.C. 20103, 20107, 20114, 20306, 20502–20504, and 49 CFR 1.49.

2. In part 211, Subpart B—Rulemaking Procedures, would be amended by adding a new § 211.33, Procedures for direct final rulemaking, as follows:

#### § 211.33 Procedures for direct final rulemaking.

(a) Rules that the Administrator judges to be noncontroversial and unlikely to result in adverse public comment may be published in the final rule section of the **Federal Register** as direct final rules. These include noncontroversial rules that:

(1) Affect internal procedures of the Federal Railroad Administration, such as filing requirements and rules governing inspection and copying of documents,

(2) Are nonsubstantive clarifications or corrections to existing rules,

(3) Update existing forms, and

(4) Make minor changes in the substantive rules regarding statistics and reporting requirements.

(b) The **Federal Register** document will state that any adverse comment or notice of intent to submit adverse comment must be received in writing by the Federal Railroad Administration within the specified time after the date of publication and that, if no written adverse comment or request for oral hearing (if such opportunity is required by statute) is received, the rule will become effective a specified number of days after the date of publication.

(c) If no adverse comment or request for oral hearing is received by the Federal Railroad Administration within the specified time of publication in the **Federal Register**, the Federal Railroad Administration will publish a notice in the **Federal Register** indicating that no adverse comment was received and confirming that the rule will become effective on the date that was indicated in the direct final rule.

(d) If the Federal Railroad Administration receives any written adverse comment or request for oral hearing within the specified time of

publication in the **Federal Register**, a notice withdrawing the direct final rule will be published in the final rule section of the **Federal Register** and, if the Federal Railroad Administration decides a rulemaking is warranted, a notice of proposed rulemaking will be published in the proposed rule section of the **Federal Register**.

(e) An “adverse” comment for the purpose of this subpart means any comment that the Federal Railroad Administration determines is critical of the rule, suggests that the rule should not be adopted, or suggests a change that should be made in the rule.

Issued in Washington, DC, on September 29, 2006.

**Joseph H. Boardman,**  
Administrator.

[FR Doc. E6–16825 Filed 10–10–06; 8:45 am]

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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

RIN 1018–AV01

#### Endangered and Threatened Wildlife and Plants; Withdrawal of the Proposed Rule To List the Cow Head Tui Chub (*Gila bicolor vaccaceps*) as Endangered

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

**ACTION:** Proposed rule; withdrawal.

**SUMMARY:** We, the Fish and Wildlife Service (Service), have determined that the proposed listing of the Cow Head tui chub (*Gila bicolor vaccaceps*) as an endangered species under the Endangered Species Act of 1973, as amended (Act), is not warranted, and we therefore withdraw our March 30, 1998, proposed rule (63 FR 15152–15158). We have made this determination because the threats to the species identified in the March 30, 1998, proposed rule are not significant, and currently available data do not indicate that the threats to the species, as analyzed under the five listing factors described in section 4(a)(1) of the Act, are likely to endanger the species in the foreseeable future throughout all or a significant portion of its range.

**ADDRESSES:** Supporting documentation for this action is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Klamath Falls Fish and Wildlife Office, 6610 Washburn Way, Klamath Falls, OR 97603.

**FOR FURTHER INFORMATION CONTACT:** Curt Mullis, Field Supervisor, at the above address (telephone, 541–885–8481, or facsimile, 541–885–7837).

#### SUPPLEMENTARY INFORMATION:

##### Background

The Cow Head tui chub, *Gila (Siphateles) bicolor vaccaceps*, is a small fish in the minnow family Cyprinidae. It was first recognized as a distinct subspecies in 1939, and was later named and formally described in 1980 (Bills and Bond 1980, pp. 320–322). Although it was referred to as the Cowhead Lake tui chub in the March 30, 1998, proposed listing (63 FR 15152), we now conform to the accepted geographical spelling of Cow Head as two words and use the shorter name, Cow Head tui chub, for reasons discussed in Reid (2006b, pp. 1–6). It is distinguished from other tui chubs primarily by the number and form of its gill rakers (bony projections in the gills), as well as other characteristics, such as fin and scale counts, and the shape of its fins and head (Bills and Bond 1980, pp. 320–322). Like other tui chubs, its coloration is generally silver, except for a dark lateral stripe and dark speckles scattered on the cheek, operculum (area behind the eye), and lower body.

The known range of the Cow Head tui chub is limited to the Cow Head Basin in extreme northeastern California and northwestern Nevada (Reid 2006a, pp. 15–19). The Cow Head Basin is relatively small (10,400 hectares (ha); 25,700 acres) and drains north into the Warner Basin of Oregon through Cow Head Slough. Historically, the basin contained a shallow, marshy lake when sufficient water was available. Cow Head Lake was altered in the 1930s, following the extended drought of the 1920–30s, to allow drainage of the lake in the spring and to facilitate agricultural uses of the lakebed.

Populations of Cow Head tui chub occupy all principal low gradient streams in the basin (Cow Head Slough and Barrel, West Barrel and Keno creeks) and a relatively large population still exists on the lakebed, where it is restricted to permanent water in drainage channels when the lake is dry (Scopettone and Rissler 2006, pp. 108–109). Stream populations of Cow Head tui chub annually expand throughout most of the low gradient stream habitat in the basin during wet periods and contract as the summer progresses and streams dry up. Connectivity between stream populations of Cow Head tui chub is generally unobstructed during springtime flows, but during summer and fall, all populations are restricted to

isolated perennial pools (Reid 2006a, p.19).

Landownership in the Cow Head Basin is both private and Federal (U.S. Bureau of Land Management (BLM)). However, most perennial habitat of the chub is on private land (Reid 2006a, p. 10–11).

Cow Head tui chubs generally occupy pool areas in streams and open water channels having dense aquatic vegetation (Homuth 2000, p. 6; Moyle 2002, p. 124; Reid 2006a, p. 20). They grow about 50 millimeters (mm) (2 inches (in)) fork length (tip of nose to the fork in tail) during the first year and reach an average of 100 mm (4 in) at about 5 years of age, with larger individuals uncommon (Scoppettone and Rissler 2003, p. 5; Scoppettone and Rissler 2006, p. 110). The maximum recorded size for Cow Head tui chubs is 235 mm (9 in) (Scoppettone and Rissler 2006, p. 111).

Although there is no specific information on the reproductive behavior of the Cow Head tui chub, spawning by most tui chubs usually takes place from late April to late June, beginning in their second to fourth year (Moyle 2002, pp. 124–125). Fecundity is relatively high, and a female of 100 mm (4 in) produces about 4,000 eggs over a series of spawning events. Tui chubs typically spawn in groups, with several males attending each female. Eggs adhere to plants, or the bottom, and hatch in about 3–6 days (Moyle 2002, pp. 124–125).

Tui chubs in general evolved in the arid Great Basin where water bodies experience wide fluctuations in water conditions, and therefore they are highly tolerant of high alkalinity, high turbidity, and high temperatures (Moyle 2002, pp. 124–125). They also appear to tolerate relatively low levels of dissolved oxygen (Castleberry and Cech 1986, pp. 149–150; Moyle 2002, p. 124). While there have been no long-term diurnal studies of water quality in the Cow Head Basin, short-term surveys and measurements associated with distributional surveys in Cow Head streams and channels indicate that most water quality parameters are generally well within the documented tolerances of tui chubs, with the exception of localized low dissolved oxygen conditions near the bottom of desiccating pools and canals (Richey 1999, pp. 20–25; Homuth 2000, p. 6; Scoppettone and Rissler 2003, p. 6). There are no records of large fish die-offs caused by water quality in permanent pools or canals associated with the Basin, again indicating that water quality parameters are well within limits tolerated by tui chubs. Fish

trapped in seasonal pools die as the season progresses and the pools dry up (Homuth 2000, p. 8), but this is not due to water quality.

#### Previous Federal Actions

On December 30, 1982, the Service published a revised notice of review for vertebrate wildlife in the **Federal Register** (47 FR 58454) designating the Cow Head tui chub as a category 2 candidate. At that time, the Service defined category 2 candidates as taxa for which information in the Service's possession indicated that a proposed listing rule was possibly appropriate, but for which sufficient data on biological vulnerability and threats were not available to support a proposed rule (45 FR 82481, December 15, 1980). The Service reclassified the Cow Head tui chub as a category 1 candidate in the November 21, 1991, notice of review (56 FR 58804). Category 1 candidate species were defined as "taxa for which the Service presently has sufficient information on hand to support the biological appropriateness of their being listed as endangered or threatened" (45 FR 82480, December 15, 1980). In the Candidate Notice of Review published on February 28, 1996 (61 FR 7595), the Service announced a revised list of candidate plant and animal taxa based on a single category for candidates that closely matched the previous definition of category 1 candidates. Specifically, the 1996 notice adopted a single category of candidates, defined as: "those species for which the Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list but issuance of the proposed rule is precluded" (61 FR 7597). As a former category 1 candidate taxon, the Cow Head tui chub was included as a candidate in the February 28, 1996 (61 FR 7596), and September 19, 1997 (62 FR 49398), notices of review.

On March 30, 1998, the Service published in the **Federal Register** a proposed rule to list the Cow Head tui chub as endangered (63 FR 15152). The Cow Head tui chub was proposed for listing based primarily on concerns about the apparent present and threatened destruction, modification, and curtailment of its habitat and range (particularly as related to dewatering of Cow Head Lake and livestock grazing), as well as other natural or manmade factors affecting its continued existence (particularly the introduction of pesticides into the drainage as a result of pest control activity, and vulnerability to random naturally occurring events that can pose risks associated to small, restricted

populations) (63 FR 15152–15155). The proposed rule also stated that introduction of nonnative fish, game fish, or other nonnative tui chubs could harm the Cow Head Lake tui chub through increased competition, predation, and hybridization (63 FR 15154). The proposed rule had a 60-day public comment period, until May 29, 1998. On June 17, 1998, we reopened the comment period for an additional 65 days at the request of private citizens and organizations (63 FR 33033). The second comment period closed on August 3, 1998. On February 2, 2000, we opened a third comment period at the request of signatories of the conservation agreement (described below), to allow the Service to consider conservation measures in the conservation agreement; this comment period closed on February 16, 2000 (65 FR 4940).

#### Conservation Agreement

On October 22, 1999, stakeholders signed a conservation agreement (CA), including a conservation strategy, with the stated purpose of ensuring the long-term survival of the Cow Head tui chub (Service 1999, p. 2). Signatories included private landowners of Cow Head Lake, Cow Head Slough, and the California reach of Barrel Creek (four owners, all CA signatories); principal permittees on BLM lands within the drainage; California and Modoc County Cattlemen's Associations; the California Farm Bureau Federation; the BLM (Surprise Field Office); and California Department of Fish and Game (CDFG). The two owners on West Barrel Creek and the single owner for perennial reaches of Barrel and Keno creeks (Nevada) were not original signatories to the CA, as chub populations in those areas were unknown at the time; however, these landowners have been supportive by providing access to meet the goals and objectives of the conservation strategy.

The stated purpose of the conservation strategy is to identify specific procedures and strategies required for the long-term survival of the Cow Head tui chub. The strategy has two main objectives: Phase one—develop baseline data; and Phase two—use the baseline data to determine the most feasible conservation actions to implement the goals of the conservation strategy. Phase one included studies intended to increase our understanding of the species and its habitat. Most of the proposed actions in Phase one have been addressed or are part of ongoing projects.

Phase two builds upon the information developed in Phase one, or

by any future studies, to adaptively implement conservation and management actions to meet the goals of the conservation strategy. The general goals of actions implemented in Phase two (and their completion status) are: (1) To establish, or confirm the current existence of, additional populations (completed); (2) to create more stable habitat for those populations (in progress); (3) to provide greater assurance of stability for the Cow Head tui chub population upstream of the pump in the lakebed channels (ongoing); (4) to create, to the extent feasible, additional stable habitat in the area of historic Cow Head Lake upstream of the pump (under review); and (5) to monitor, as appropriate, the status of Cow Head tui chub populations and effectiveness of conservation actions (ongoing).

By signing the October 22, 1999, CA, the Service and other stakeholders in the Cow Head Lake watershed committed to actions and goals intended to ensure the long-term survival of the Cow Head tui chub by balancing current practices in the watershed with the long-term needs of the subspecies. As previously stated, we opened a third comment period on the proposed rule on February 2, 2000, by request of signatories to the CA, so that the Service could also consider the conservation measures of the CA when making a final determination (65 FR 4940). The third comment period closed on February 16, 2000.

### Summary of Public Comments

During the comment period for the March 30, 1998, proposed rule, we received 13 responses from local government, local organizations, and private individuals. Of those responses, none provided new information pertinent to the proposed listing. Six responses expressed views against the listing, one implied general support of the listing, and six were requests for a 60-day extension. There were no requests for a public hearing.

On June 17, 1998, the Service reopened the comment period on the proposed rule in response to requests from private organizations and private citizens (63 FR 33033). During the second comment period, only one comment letter was received. It provided additional information on historical conditions, past and current management, and trends in riparian conditions. The commenter did not state a position relative to the appropriateness of the proposed listing.

On February 2, 2000, we reopened the comment period on the proposed rule to allow consideration of the conservation

agreement signed on October 22, 1999, and to solicit additional information on the biology, distribution, and status of the Cow Head tui chub (65 FR 4940). The reopening of comment period was in response to requests from signatories of the conservation agreement. During the third comment period, the Service received five responses from State and local governments and private individuals. Four responses were against the proposed listing, and one was in support. No new information pertinent to the proposed listing was obtained.

(1) *Comment:* One commenter felt that the Service could not demonstrate that this action has the purpose of interstate commerce, and thus the Service did not have the authority to apply the protection of the Act.

*Our Response:* We disagree with this comment. The Service has the authority to protect all endangered species, including intrastate species or those with no direct commercial value in interstate commerce.

(2) *Comment:* One commenter stated that there is a deficiency in the data, asserting the Service lacks information about the historical range of the fish and evidence of endangerment across the species range, and thus cannot move forward with listing the species under the Act.

*Our Response:* In the March 30, 1998, proposed rule (63 FR 15152), the present or threatened destruction, modification, or curtailment of its habitat and range was a factor considered to threaten the Cow Head tui chub. At that time, we stated that the diversion of water from Cow Head Lake had eliminated approximately 98 percent of the chub's historical range and that the dewatering was a threat to the species. Based on the information available, the chub was thought to be restricted to a very small portion of its historic range, occurring only in various pools along the southern portion of Cow Head Slough, and in the drainage channels on the bed of Cow Head Lake, for a total range of approximately 5.4 km (3.4 mi), with no additional populations known (for additional information see Factor A below). Since the proposed rule was published, the Service has gathered much more information about the species' range and habitat conditions (including information from Reid 2006a, 2006b). Current information, based on more complete basin-wide surveys, demonstrates that the Cow Head tui chub is more widely distributed than previously thought and maintains populations throughout all of its historical range, including in all streams and lakebed channels that

would have offered suitable habitat in the past. We therefore recognize that the perceived reduction of historical range, and the related concern of dewatering that was believed to be the cause of the reduction in the range, was a function of incomplete information and that current information demonstrates that reduction of the historical range has not occurred and is not a threat to the Cow Head tui chub. Recognizing that this and other threats we identified in the March 30, 1998, proposed rule (63 FR 15152) either (1) do not exist or (2) have been eliminated or otherwise ameliorated, we have determined that the Cow Head tui chub does not meet the Act's definition of either a threatened or an endangered species. Consequently, we are withdrawing the proposal to list the species. For further information, please see the Summary of Factors Affecting the Species section below.

(3) *Comment:* One commenter stated that Cow Head tui chub could live in highly eutrophic water and that this was not a threat as the Service had indicated in the March 30, 1998, proposed rule.

*Our Response:* Eutrophic water conditions were not one of the substantial threats we identified in our proposed rule; however, we noted this condition as a subject of potential concern. As described in the background section of this notice, tui chubs in general evolved in the arid Great Basin and are highly tolerant of high alkalinity, high turbidity, and high temperatures (Moyle 2002, pp. 124–125). They also appear to tolerate relatively low dissolved oxygen levels in water (Castleberry and Cech 1986, pp. 149–150; Moyle 2002, p. 124). While there have been no long-term diurnal studies of water quality in the Cow Head Basin, short-term surveys and measurements associated with distributional surveys in the various Cow Head streams and channels indicate that most water quality parameters are generally well within the tolerances of tui chubs. Additionally, there are no records of large fish die-offs caused by water quality in the permanent pools or the canals associated with the Basin, again indicating that water quality parameters are well within limits tolerated by the chubs. Fish trapped in seasonal pools certainly die as the season progresses and the pools dry up (Homuth 2000, p. 8). We recognize that most water quality parameters collected within the range of the Cow Head tui chub since the 1998 proposed rule, with the exception of localized low dissolved oxygen conditions near the bottom of desiccating pools and canals, are

generally well within the tolerances of tui chubs (Richey 1999, pp. 20–25; Homuth 2000, p. 6; Scoppettone and Rissler 2003, p. 6), and poor water quality is not a threat to the Cow Head tui chub. Considering that this and the other threats we identified in the March 30, 1998, proposed rule do not exist, or have been eliminated or otherwise ameliorated, we are withdrawing the proposal to list the species. For further information, please see the Summary of Factors Affecting the Species section below.

(4) *Comment:* One commenter stated the Service had poorly articulated the threat from native wildlife, and the threat from future introductions of nonnative fish and disease was unlikely.

*Our Response:* In the March 30, 1998, proposed rule (63 FR 15152), the introductions of a catastrophic disease or nonnative predatory fish were both recognized as potentially harmful to Cow Head tui chub, particularly due to the small estimated population size and confined known range of the chub at that time. However, this factor was not considered a principal threat to the chub. Since 1998, the Service has gathered additional information about the extent of predation and the likelihood of nonnative introduction and disease (Reid 2006a, p. 28; also see Factor C discussion, below). The Service notes that no disease or predator currently threatens the Cow Head tui chub and that the introduction and establishment of a disease or nonnative fish predator into the Cow Head Basin is unlikely. Were introduction and establishment of a disease or nonnative fish predator into the Cow Head Basin to occur, is not likely to threaten the chub with extinction, as explained below in our discussion of Factor C. We recognize that the potential threats to the tui chub from disease and introductions of nonnative predatory fish are both unlikely and minor. Considering that these and other threats we identified in the March 30, 1998, proposed rule (63 FR 15152) either (1) do not exist or (2) have been eliminated or otherwise ameliorated, we are withdrawing the proposal to list the species. For further information, please see the Summary of Factors Affecting the Species section below.

(5) *Comment:* One commenter stated there were no current threats to the species; therefore the Service was incorrect in its determination that inadequacy of existing regulations to reduce risk was a threat to the species.

*Our Response:* In the March 30, 1998, proposed rule, the Service found that there were no existing regulations to deal with the threats to the species

described in the proposed rule (63 FR 15152). Since 1998, information developed about potential threats leads the Service to conclude that there are currently no recognized threats to the continued existence of the Cow Head tui chub; therefore additional regulatory mechanisms are unnecessary. Also, we now know that the Cow Head tui chub maintains populations throughout all of its historical range, and this has occurred in the context of the existing regulatory mechanisms. Therefore, we recognize that inadequacy of existing regulatory mechanisms is not a threat to the Cow Head tui chub. Considering that this and other threats we identified in the March 30, 1998, proposed rule (63 FR 15152) either (1) do not exist or (2) have been eliminated or otherwise ameliorated, we are withdrawing the proposal to list the species. More information on the topic of adequacy of existing regulatory mechanisms can be found in Factor D discussion, below.

(6) *Comment:* One commenter stated that the Service offered no proof that pesticide programs were a threat to the species.

*Our Response:* The concern over impacts of pesticides was based on the assumption that nearby agricultural activities used pesticides and that the Cow Head tui chub population had been reduced to a single, small population, with an extremely restricted range and no additional populations available for recolonization in the event of a localized extinction (63 FR 15152). Using new information gathered since 1998, the Service has found that the population is not as small as previously thought. (See Factor D discussion below.) Agricultural activities and land management in the Cow Head Basin are limited to hay production and grazing (Reid 2006a, p. 10). The only substantial use of pesticides is in the U.S. Department of Agriculture's grasshopper control program, which occurs only during occasional years when grasshopper outbreaks occur, and then it focuses on localized upland areas surrounding the lakebed that are used by grasshoppers for egg laying. Pesticides are not applied to aquatic habitat, and in the event of an accidental spill or application, the adverse effect would be localized, particularly because application typically occurs in late summer when flow is low and pool habitats are not connected (Reid 2006a p. 19; see also Factor E discussion below). We recognize that pesticide use is not a significant threat to the Cow Head tui chub. Considering that this and other threats we identified in the March 30, 1998, proposed rule (63 FR 15152)

either (1) do not exist or (2) have been eliminated or otherwise ameliorated, we are withdrawing the proposal to list the species. For further information, please see the Summary of Factors Affecting the Species section below.

(7) *Comment:* One commenter stated that the Service had no proof that the risks associated with small and restricted fish populations was a threat.

*Our Response:* The vulnerabilities identified in the March 30, 1998, proposed rule (63 FR 15152) (possible excessively high death or low birth rates, deleterious effects of genetic drift and inbreeding, and sensitivity to localized stochastic events) were based on the assumption that the Cow Head tui chub had been reduced to a single, small population, with an extremely restricted range and no additional populations were available for recolonization in the event of a localized extinction. Using information gathered since 1998, we have found that the chub is not as reduced as previously thought. (See Factor D discussion, below.) Also, a recent genetic study of tui chubs found that the genetic diversity in the Cow Head tui chub is similar to other stream-resident chub populations, and there is no indication of genetic threats (Chen 2006, p. 46–48). The fact that the Cow Head tui chub is restricted in population size and distribution does not by itself pose a significant risk to the species. Considering that this and other threats we identified in the March 30, 1998, proposed rule (63 FR 15152) either (1) do not exist or (2) have been eliminated or otherwise ameliorated, we are withdrawing the proposal to list the species. For further information, please see the Summary of Factors Affecting the Species section below.

(8) *Comment:* Six commenters requested a 60-day extension of the comment period.

*Our Response:* In response to these requests, the Service reopened the comment period for 65 days.

(9) *Comment:* Two commenters stated that humans have influenced water movement in the Cow Head tui chub's range and this has benefited the chub by enhancing or protecting aquatic habitat.

*Our Response:* We agree with the commenters that humans can provide benefits to aquatic species in a highly manipulated environment because of our desire to create permanent water sources. In the Cow Head basin, some areas of perennial habitat are maintained by water management structures and these structures can decrease the likelihood of nonnative fish getting into the area. (See discussions of Factors C and E, below.)

Since 1998, we have investigated the effects of historical changes in water-flow patterns on the Cow Head tui chub's status. As a result of interest in the conservation agreement, we were able to work with local residents to develop a better understanding of water flow and management in the area, and have considered that information in our assessment of potential impacts to the chub. (See discussion of habitat under Factor A, below.) We no longer believe that water management is a current or potential threat. Considering that this and other threats we identified in the March 30, 1998, proposed rule (63 FR 15152) either (1) do not exist or (2) have been eliminated or otherwise ameliorated, we are withdrawing the proposal to list the species. For further information, please see the Summary of Factors Affecting the Species section below.

(10) *Comment:* One commenter felt that the proposed listing was an attempt to take away private landowner's rights.

*Our Response:* The commenter's concerns regarding the effects of listing on private property rights is no longer germane because we are withdrawing our 1998 proposal to list the Cow Head tui chub (63 FR 15152). However, the listing of a species under the Act, in and of itself, does not affect private lands and does not effect a taking of private property by the Federal government. Only if the landowner engages in an activity that is likely to take a listed fish or wildlife species, or an activity that requires Federal authorization or funding and may affect a listed species, do the Act's regulatory restrictions come into play. In those situations, the Act provides regulatory mechanisms under Sections 7 and 10 to enable such activities to proceed consistent with protection of the listed species.

(11) *Comment:* One commenter stated that the Cow Head tui chub should not be listed because the conservation agreement was in place.

*Our Response:* We believe conservation agreements are important conservation tools, and this particular agreement was especially crucial for identifying information gaps and forming a basis for collaboration. By signing the conservation agreement, the Service and other stakeholders in the Cow Head Lake watershed committed to actions and goals intended to ensure the long-term survival of the chub by balancing current practices in the watershed with the long-term needs of the subspecies. Although we believe the Cow Head tui chub conservation agreement is important, listing decisions are made based on a thorough analysis of all substantial and foreseeable threats.

Based on an analysis of all the factors, and the new information collected with the help of the conservation agreement, we no longer believe the Cow Head tui chub is in danger of extinction throughout all or a significant portion of its range or likely to become so in the foreseeable future; therefore we are withdrawing the March 30, 1998 proposal to list the chub (63 FR 15152).

(12) *Comment:* California Department of Fish and Game questioned whether the modification to landowner agreements would impact the implementation of the conservation agreement.

*Our Response:* In a recent peer review of Reid (2006a), Randal C. Benthin, Senior Fishery Biologist at the California Department of Fish and Game (CDFG), wrote a letter to us confirming that the landowners have been working with management agencies to implement the conservation agreement, and he praised their commitment. We discussed this comment with Mr. Benthin, in a September 22, 2006 phone call, and he said the issue was satisfactorily addressed in the final conservation agreement. He further stated that CDFG had no further concerns.

(13) *Comment:* One commenter stated that the listing should be delayed so that additional populations could be established. The commenter felt that if the species were listed, the resulting section 7 consultation process would delay the establishment of additional populations.

*Our Response:* We agree with the commenter that multiple populations are important for species conservation. In the case of the Cow Head tui chub at the time of the original listing proposal, we believed that the number of populations was quite small (63 FR 15152). Since the March 30, 1998, proposed rule was published, we determined that the number of populations is larger than originally thought. New surveys show the Cow Head tui chub maintains populations throughout all of its historical range in all streams and lakebed channels that would have offered suitable habitat in the past (Reid 2006a, p. 18). Therefore the chub is more widely distributed than previously thought. (See Factor A discussion, below.) We now recognize that the number of populations and relatively narrow range of the species are not threats to the Cow Head tui chub. Considering that this and other threats we identified in the March 30, 1998, proposed rule (63 FR 15152) either (1) do not exist or (2) have been eliminated or otherwise ameliorated, we are withdrawing the proposal to list the

species. For further information, please see the Summary of Factors Affecting the Species section below.

Regarding the comment that listing the species and any resulting section 7 consultations would delay the establishment of additional populations, because we are withdrawing the proposal to list the Cow Head tui chub, this comment is no longer germane. Nevertheless, even if the species were listed, section 7 consultation would not have hampered efforts to establish additional populations. Section 7 consultation is a valuable tool to minimize adverse effects of Federal actions to listed species and, as such, provides benefits to species.

(14) *Comment:* One commenter offered several specific goals for conservation actions for the species, including establishment of additional populations, water management certainty, and protection of habitat from over-grazing.

*Our Response:* We agree with the commenter that multiple populations and protection of habitat from threats are key to species conservation. In the case of the Cow Head tui chub, at the time of the original proposal, we believed that the number of populations was quite small and that there were threats to the quantity and quality of habitat (63 FR 15152). Since that time, we have focused on addressing these and other potential threats and obtaining additional information from various sources to clarify the status of the species (e.g., Reid 2006a). As a result, we have determined that the number of populations is larger than originally thought.

We also looked carefully into the role that current and future water availability could have on the conservation of the species. As described in more detail under the discussions of Factors A and E below, the Cow Head tui chub evolved in a low-precipitation region and has survived numerous droughts including a severe 16-year drought early in the 20th century. We have also found that current water management is compatible with the conservation needs of the species and that there is a lack of evidence to suggest water management will substantially change in the foreseeable future.

Furthermore, we have reached a similar conclusion regarding grazing management. As described under the discussion of Factor A below, the chub has coexisted with the current grazing management for decades, and we have no information that leads us to believe grazing management will substantially change in a manner that would

adversely affect the species in the foreseeable future. We now recognize that water availability, water management, and grazing do not pose threats to the Cow Head tui chub. Considering that these and other threats we identified in the March 30, 1998, proposed rule (63 FR 15152) either (1) do not exist or (2) have been eliminated or otherwise ameliorated, we are withdrawing the proposal to list the species. For further information, please see the Summary of Factors Affecting the Species section below.

(15) *Comment*: One commenter felt that conservation agreements fail to protect species adequately.

*Our Response*: The Service believes conservation agreements (CAs) can serve a valuable role in helping to conserve species, and we also recognize that they may have limitations, as suggested by this comment. In the specific case of the Cow Head tui chub, the CA enabled the Service get additional valuable information on the species' status on private lands, and it provided a means for stakeholders to take an active role in the conservation of the species. This withdrawal of the proposed rule to list the Cow Head tui chub is not based on anticipation of future improvements in the status of the species that we believe will occur as a result of the CA. Instead, this withdrawal is based on new information that demonstrates a lack of identified treats, as is described below in the discussions of Factors A–E; this new information was obtained in large measure through implementation of the CA. More discussion of this topic is found under the sections titled "Conservation Agreement" above and "Summary of Factors Affecting the Species" below.

#### Conservation Review

At the time the March 30, 1998, proposed rule was published (63 FR 15152), little information was available regarding the Cow Head tui chub. The CA has allowed us to obtain more extensive and accurate information on the Cow Head tui chub, including its distribution, population status, habitat use, and land management in the Cow Head basin. The CA has also resulted in the initiation of management activities by private and public stakeholders, which further secure the Cow Head tui chub and its habitat.

In 2005, in order to make a final determination on the listing status of the Cow Head tui chub given this crucial new information, we arranged for an independent scientific review of the Cow Head tui chub to obtain a comprehensive synthesis of all available

data pertinent to the conservation of the species, including clarification of the complicated history and management of the basin, evaluation of biological information regarding the species, and compilation of previous population and habitat surveys in the basin. The purpose of the review was to assemble all scientific and commercial information on the Cow Head tui chub, as well as to assimilate the collective knowledge of local landowners and managers. The review did not evaluate the status of the Cow Head tui chub under the Act, as that is the Service's ultimate responsibility. The principal author of the review is Dr. Stewart Reid, an independent biologist, who is a recognized expert in the native fishes of this region and who is familiar with the Cow Head Basin. The review was peer reviewed in May–June 2006 and made available to stakeholders to ensure its accuracy and completeness (see Peer Review section, below). The revised synthesis (Reid 2006a) and its supporting documentation reflect the most recent information regarding the Cow head tui chub; this information significantly informs our determination to withdraw our previous proposal to list this subspecies (63 FR 15152, March 30, 1998).

#### Peer Review

In accordance with our July 1, 1994, Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities (59 FR 34270), we solicited the opinions of seven independent specialists. We provided the reviewers with the synthesis document (Reid 2006a) which contains new information, and a review of all available scientific, historical, and management information pertaining to the species. We specifically asked the reviewers to review the document for accuracy of the information, any missing information, and threats to the species not mentioned in the report. Reviewers were not asked to interpret the Act as it applies to this species or to make a recommendation as to the appropriate regulatory status for the Cow Head tui chub.

The Service's Policy for Peer Review requires that we: (1) Solicit the expert opinions of a minimum of three appropriate and independent specialists regarding pertinent scientific and commercial data and assumptions relating to the taxonomy, population models, and supportive biological and ecological information for species under consideration for listing; and (2) summarize in the final decision document the opinions of all independent peer reviewers received on the species under consideration. The

purpose of a peer review is to ensure that listing decisions are based on scientifically sound data, assumptions, and analyses, including input of appropriate experts and specialists.

Peer reviewers included two senior research scientists familiar with the Cow Head tui chub and the Cow Head Basin (one from the University of California, Davis and one from U.S. Geological Survey—Biological Resources Division, Reno), four scientists from agencies with management responsibilities in the Cow Head Basin (two from CDFG, one from BLM, and one from the U.S. Forest Service), and one representative of the Cow Head Irrigation District who could provide detailed information on local conditions, especially water management in the basin.

All reviewers confirmed the accuracy and completeness of the scientific information in the synthesis. Two reviewers (BLM and Cow Head Irrigation District) helped clarify details of management and hydrology in the Cow Head Basin, which have been incorporated into the final document used for this analysis, along with minor editorial suggestions from the various reviewers. The reviewers did not identify any additional factors that might threaten the Cow Head tui chub.

#### Summary of Factors Affecting the Species

Section 4 of the Act and its implementing regulations (50 CFR 424) establishes procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. A species may be determined to be an endangered or threatened 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 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, we evaluated whether any of these five factors are a threat to the continued existence of the Cow Head tui chub throughout all or a significant portion of its range. Our evaluation of these threats is presented below.

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

In the 1998 proposed rule, reduction of historical range and modification of habitat were considered threats to the

Cow Head tui chub (63 FR 15153—54, March 28, 1998). We stated that the range had been reduced by 98 percent due to loss of Cow Head Lake. A better understanding of the basin's hydrology has shown that the lake still provides seasonal habitat in wet years and maintains permanent habitat in the lakebed canals (Reid 2006a, pp. 15–19).

In 1998, we also stated that stream habitat was restricted to 5.4 km (3.4 miles). New information developed by Reid (2006a, pp. 15–19) has shown that total linear stream and channel habitat was approximately 10.5 km (6.5 mi) in 2001, a very dry year (Scoppettone and Rissler 2006, p. 108). In the spring, and at times when there is sufficient water, the chub occupies the full lengths of the tributary streams (21.2 km; 13.2 mi).

Current information, based on more complete basin-wide surveys, demonstrates that the Cow Head tui chub is more widely distributed than previously thought and maintains populations throughout all of its historical range in all streams and lakebed channels that would have offered suitable habitat in the past.

#### Range

Based on our knowledge of historical conditions, the species' habitat needs, and its current distribution, we assume the natural historical range (geographical distribution) of the Cow Head tui chub would have encompassed all low gradient streams with perennial reaches in the Cow Head Basin of California and Nevada, including: Cow Head Lake, Cow Head Slough, Barrel Creek, West Barrel Creek, and Keno Creek (Reid 2006a, pp. 5–6 and 15–19). Based on knowledge of the chub's biology, it is logical to assume there was some natural dispersal downstream into the Twelvemile Creek drainage during higher springtime flows, as there apparently is today, but the fate of these individuals is not known (Reid 2006a, pp. 18–19). Within the Cow Head Basin, the primary distribution of tui chubs, based on habitat needs, would have included any low-energy aquatic habitats, including stream pools, emergent marshes with open water, and Cow Head Lake itself, when present (Moyle 2002, p. 124–125; Reid 2006a, p. 20). Because tui chubs show a preference for low-energy habitats such as pools, it is unlikely they would have typically occupied higher-energy stream reaches with steep gradients, strong flow, or shallow riffles (e.g., the lower canyon section of Cow Head Slough), although they might move through such habitats. They also would not have occupied higher gradient reaches of the western tributaries coming off the

Warner Mountains (e.g., Eightmile and Ninemile creeks), which have cooler temperatures and are occupied by trout, *Oncorhynchus mykiss*, and speckled dace, *Rhinichthys osculus* (Hubbs 1934, p. 2; Sato 1992, p. 5).

Recent surveys on public and private land, facilitated by the 1999 CA, have documented the presence of Cow Head tui chub in all historically perennial water bodies (Minto 1879; see map and discussion in Reid 2006a, pp. 5–8) containing suitable habitat in the Cow Head Basin (Scoppettone and Rissler 2006, p. 5). In 2001, populations were found in all eastern tributaries (Keno, West Barrel, and Barrel Creeks, as well as Cow Head Slough), including private land that had not been previously surveyed, and a large population (estimated to be in the 10,000s) exists on the historic lakebed in perennial canals (Scoppettone and Rissler 2002, p. 5; Reid 2006a, p. 22). Cow Head tui chub presumably disperse throughout Cow Head Slough and the various low-gradient tributaries in the spring and onto the lakebed when it is flooded, with their distribution contracting to the lakebed channels and perennial spring-fed stream reaches each year as the arid summer progresses. In 2001, a very dry year, perennial habitat occupied by the chub remained in all eastern tributaries (Keno Creek—0.5 km (0.3 mi) perennial, West Barrel Creek—1.0 km (0.6 mi) perennial, and Barrel Creek—4.0 km (2.5 mi) perennial), Cow Head Slough (approximately 3 km (1.9 mi) perennial) and the two principal lakebed channels (Pump and Eightmile canals—2 km (1.2 mi) perennial) (Scoppettone and Rissler 2006, pp. 108–109; Reid 2006a, pp. 16–18).

#### Habitat—Streams

Stream populations of Cow Head tui chub primarily occupy pool habitats, and available habitat area varies depending on the time of year and degree of drought severity (Homuth 2000, p. 10; Scoppettone and Rissler 2006, p. 109). Historically, there were four low gradient stream drainages in the Cow Head Basin that had perennial flow and would have contained suitable Cow Head tui chub habitat; all still maintain Cow Head tui chub populations (Reid 2006a, pp. 15–19; Scoppettone and Rissler 2002, p. 5; Scoppettone and Rissler 2006, p. 109). These drainages are currently referred to as Cow Head Slough, which forms the outlet for the Cow Head Basin; Barrel Springs and West Barrel, both of which entered Cow Head Lake itself from the east in 1879; and Keno Spring, which enters Cow Head Slough from the east before it drops into the higher-gradient

canyon section. All contain locally perennial pool habitat, which is naturally maintained by small springs.

Cow Head Slough flows out of Cow Head Lake. After flowing about 5 km (3.1 mi) to the north, the slough enters a short, half-mile-long canyon and then joins Twelvemile Creek in the Warner Basin. Historically, the slough apparently contained water along most of its length into the summer (Minto 1879; see map and discussion in Reid 2006a, pp. 5–8), but Minto's survey notes do not mention actual flow conditions, and local ranchers interviewed in the 1930s reported that the slough overflowed only during high spring runoff periods (Hubbs 1934, p. 1).

Under present management, Cow Head Slough only flows into Twelvemile Creek during the springtime runoff period and while the lakebed is being pumped down, with most continuous stream flow typically ending by late May or early June. Pools with marshy margins and herbaceous riparian vegetation are present all along the length of the slough, with perennial spring-fed reaches concentrated in the southern (upstream) 3 km (1.9 mi). The Barrel Springs drainage also carries considerable runoff in the spring, but summer flows are low, and in the 1879 Minto surveys, the stream channel did not have perennial flow between the Nevada border and Cow Head Lake (see Minto map in Reid 2006a, p. 6). Likewise, the Keno Springs drainage near its confluence with Cow Head Slough was surveyed by Minto in 1879, and was noted simply as a meadow with no creek.

The Cow Head Basin is in an arid landscape. (See Factor E—Natural Drought, below). Although surface water is present throughout most of the basin in the early spring, hot and dry summer conditions naturally reduce the quantity of aquatic habitat progressively through the summer and early fall. In drier years, much of Cow Head Slough and the reaches of tributary streams without perennial springs are reduced to isolated pools which often dry up. Permanent pool habitat suitable for Cow Head tui chubs is restricted to reaches maintained by perennial springs. Under historical conditions channel desiccation may have been retarded in Cow Head Slough by the storage capacity of the lake and associated wetlands, and in other streams by narrow wet meadows along the riparian corridors. However, in most dry years when the lake was not overflowing during the summer (which is similar to the current situation under present management), desiccation and loss of aquatic habitat would have progressed

in a manner similar to that experienced today; by late summer, available stream habitat would have been limited to perennial spring-fed reaches of Cow Head Slough and the three eastern tributaries (Barrel, West Barrel and Keno creeks). All spring-fed reaches of the slough and the three eastern tributaries currently maintain perennial tui chub populations (Scoppettone and Rissler 2006, p. 109).

The only direct modification of streams containing Cow Head tui chub occurred in the 1930s with the dredging of Cow Head Slough for a distance of about 1.3 km (0.8 mi) downstream of Cow Head Lake, and with construction of an earthen levy on the east side to divert flow from the eastern watershed (West Barrel and Barrel Spring drainages) directly into Cow Head Slough near the historical outlet of Cow Head Lake (Reid 2006a, p.8). These modified reaches have since developed into stream reaches with vegetated riparian corridors. There are no water diversions in Cow Head Slough or the eastern tributary streams. Modification of grazing management in the last decade has produced notable improvements and continuing upward trends in channel stability, riparian vegetation, and aquatic habitat quality (USBLM 1996, p. 2; USBLM 2003, p. 9; Reid 2006a, pp. 10, 15–16).

#### Habitat—Cow Head Lake

In 1879 a shallow lake covered much of the Cow Head valley floor (Minto 1879, pp. 47, 56, 59; see map, Reid 2006a, p. 8). The maximum depth of the lake was not recorded, but general depths of 40–60 cm (15–24 in) were noted. Its northwestern and southeastern shores were bounded by belts of wet meadow and tule marshes, which are dominated by hardstem bulrush (*Scirpus acutus*), as was the outlet channel for a distance of about 4 km (2.5 mi) north along Cow Head Slough, which carried overflow north to a short canyon where it entered Twelvemile Creek and the southern Warner Basin. The lake was fed primarily by snow runoff in the spring from the Warner Mountains to the west and the Barrel Creek and West Barrel Creek drainages in the lower hills to the east. Summer and fall inputs to the lake would have been limited to ground-water-fed base flows of Eightmile Creek, which is supplemented by perennial springs in its lower reaches, and other small perennial springs in the immediate vicinity of the lake (Reid 2006, pp. 5–8). The original survey map shows only Eightmile Creek and the short spring-fed West Barrel Creek as providing flow into the lake in July

1879. Ninemile Creek, which currently does not reach Cow Head Lake during the summer, was shown as a “brook” with no surface flow closer than about 0.8 km (0.5 mi) to the west of the lake on the 1879 survey map drawn by Minto (Reid 2006a, pp. 6–7). Barrel Creek, which contains perennial springs in its middle and upper reaches, apparently did not reach the lake in July 1879. Although Cow Head Lake and its associated emergent marsh historically provided extensive aquatic habitat during some years, it was not a permanent feature. Regional, climatic, and historical evidence suggests that Cow Head Lake itself would have periodically dried up (Reid 2006a, pp. 8, 26–27). (For additional information, see Factor E—Natural Drought, below.)

Modification of the western tributaries to Cow Head Lake began in the late 1800s with the diversion of the upper reaches of Eightmile Creek itself to the south into Lake Annie (Reid 2006a, pp. 7–10). The upper Eightmile drainage would have historically provided considerable spring snow runoff into Cow Head Lake; however, late summer base flows from that elevation are minimal following loss of the snow pack. The lower Eightmile drainage is now primarily fed by the Schadler Ditch (built around 1904), which captures runoff from Mount Bidwell (not originally part of the Cow Head Basin) and carries it into Schadler Creek (labeled as Eightmile Creek on the U.S. Geological Survey, Lake Annie Quadrangle). Schadler Reservoir, which is approximately 250 acre-feet in size and was built in the 1960s, collects the flow of Schadler Creek and numerous small springs about 1.6 km (1 mi) upstream of the lake. Water from the reservoir (about 50 acre-feet/month) is used throughout the summer to irrigate downstream pastures, which drain into the Cow Head lakebed channels, or is sent downstream to maintain water in the lakebed channels themselves.

In the 1930s, following a period of extended drought, alterations were made to the lakebed to allow drainage of the lake in the spring for agricultural use. Three channels were dug to carry water out of the lakebed. The first comes from the center of the lake to the northwest (here referred to as Lakebed Canal), where it meets a second channel carrying flow from the Eightmile drainage (Eightmile Canal), and then enters a third channel (Pump Canal, also known as Cow Head Ditch) that runs 1 km (0.6 mi) northeast to a pumping station. At that point, water is pumped past a weir into a continuation of the channel (Discharge Channel) that continues on to Cow Head Slough. The

outlet of Cow Head Lake into Cow Head Slough was also dredged in the 1930s for a distance of about 1.3 km (0.8 mi), and an earthen levy was constructed on the east side to divert flow from the eastern watershed (West Barrel and Barrel Spring drainages) directly into Cow Head Slough, reducing runoff into the lakebed.

Cow Head Lake is now flooded only in the springtime, when it receives local snowmelt and rain, as well as runoff primarily from the western slopes of the basin. Most runoff from the eastern tributaries either flows naturally (Keno Creek) or is now diverted by the earthen levy (Barrel and West Barrel Creeks) into Cow Head Slough. There was enough water to fill the lake in the mid-1980s, 1997, and 2006. When extensive standing water is present, it is pumped off the lakebed by May or June to allow for growth of hay or pasture grass. Pumping has not been necessary for more than a few days since about 1999; however, the high runoff year of 2006 required about 30 days of pumping to bring water levels off the lakebed and into the channels. During the summer, irrigation water is supplemented by local groundwater inputs and water brought down the Eightmile system with releases of water from Schadler Reservoir and perennial spring flow.

Perennial aquatic habitat on the lakebed is contained within the canals above the pump. The canal channels are about 10 meters (m) (33 ft) wide, with a depth up to about 4 m (13 ft). The Pump Canal is approximately 1 km (0.6 mi) long and contains water throughout the summer. Suitable chub habitat in Eightmile Canal is slightly less than 1 km (0.6 mi) long; while this reach has not been specifically surveyed for Cow Head tui chubs, it receives high quality water from the Eightmile drainage and carries it into the Pump Canal. The Lakebed Canal is approximately 1.3 km (0.8 mi) long; however this channel dries up through the summer, after water is pumped down off the lakebed, and rarely contains water much upstream of the confluence with the Pump Channel. Although the lakebed is no longer characterized by extensive emergent marsh habitat, the canals contain submerged aquatic vegetation that provides food, cover, and spawning habitat for the chub.

Modifications to the natural hydrology of Cow Head Lake, which occurred in the late 1800s and early 1900s, altered the characteristics and availability of suitable habitat for the Cow Head tui chub on the lakebed (reviewed in Reid 2006a, pp. 5–9). The annual diversion and pumping of water from Cow Head Lake, initiated in the



late 1930s, eliminated the opportunity for continuous utilization of lake and peripheral marsh habitat in wet years when the lake would have otherwise filled. However, the Cow Head Basin historically went through periods of extended drought, during which the lake would have contracted or dried completely. During these periods, available Cow Head tui chub habitat would have been restricted to stream reaches fed by perennial springs, as it currently is during dry years.

Some of the modifications to the lakebed now actually serve to maintain perennial habitat on the lakebed, which would not have been available to the fish prior to the modifications. The present-day lakebed channels, which provide approximately 2 km (1.2 mi) of perennial habitat, are deeper than the historical lakebed, and water management practices that maintain suitable habitat in the canals during dry periods have actually expanded the habitat available to the Cow Head tui chub during droughts (Reid 2006a, p. 9). The Cow Head tui chub population in the lakebed channels presumably still disperses onto the lakebed when it is flooded in the spring, as there are no barriers that would prevent such movement.

#### Land Management

The Cow Head lakebed was generally farmed for grain from 1924 until about 1980, when farming was discontinued (Reid 2006a, p. 10). Since then, the lakebed has been managed solely for grazing and hay production, with no tillage and no application of fertilizers or pesticides. Changes in land management within the basin have resulted in a generally upward trend for Cow Head tui chub habitat. These changes include: (1) Runoff storage in west-side reservoirs to supplement late-season water supplies for the western channels; (2) the termination of farming and switch to grazing management on the lakebed itself in the early 1980s, which has resulted in reduced sedimentation in the lakebed channels and Cow Head Slough; (3) modifications in grazing management on public and private lands, which have resulted in improved conditions within stream corridors and upward trending riparian vegetation conditions; (4) acquisition of an additional 80-acre parcel by BLM in 2003, which places it under management guidelines established to improve aquatic and riparian habitat, including about 0.5 km (0.3 mi) of occupied habitat in Cow Head Slough containing perennial springs and permanent pools (USBLM 2003, p. 4; Reid 2006a, p. 10); and (5) ongoing

cooperation between public and private stakeholders under a CA signed in 1999 with the stated purpose of conserving the Cow Head tui chub. Landownership in the basin is limited to seven families and the BLM, with most land dedicated to hay and grazing. Based on our knowledge of the area and on the general stability of the local ranching community, we know of no reason why current land use is likely to substantially change in the foreseeable future.

#### Factor A Conclusion

The range of the Cow Head tui chub has not changed substantially since 1879. Modification of low-gradient stream habitat in the Cow Head Basin occurred primarily in the early 20th century, with channelization of the southern end of Cow Head Slough in the 1930s and continued livestock grazing. Current management of riparian corridors has resulted in upward habitat trends (USBLM 1996, p. 2; USBLM 2003, p. 9; Reid 2006a, pp. 10, 15–16), and there has been no substantial loss of perennial stream habitat for the Cow Head tui chub. In contrast, the character of Cow Head Lake has changed considerably since the 1800s, with the dewatering of the lake and its associated emergent marshes as a generally perennial, though intermittent, landscape feature. However, even prior to such changes, Cow Head Lake would have been dry and would have provided no habitat during past periods of natural drought when the Cow Head tui chub population would have been most stressed by environmental conditions.

During natural droughts, perennial stream reaches associated with permanent springs provided habitat for the Cow Head tui chub, as they do today (Scoppettone and Rissler 2006, p. 109). Furthermore, management of the Cow Head Basin has been essentially stable since the late 1930s, following a 16-year period (1923–1938) of drought when the entire lake was naturally dry; during that time a large population of Cow Head tui chub nevertheless sustained itself throughout the basin and specifically in the drainage canals on the lakebed (Reid 2006a, pp. 5–10; Scoppettone and Rissler 2006, pp. 108–109).

There is no reason to expect substantial negative changes to the current management regime. Habitat conditions are generally upward trending and private and public land managers have incorporated and are continuing to implement strategies that have enhanced the availability of permanent water and suitable habitat for Cow Head tui chub (USBLM 1996, p. 2;

USFWS 1999, pp. 2, 12; USBLM 2003, p. 9; Reid 2006a, pp. 10, 15–16). Therefore, destruction, modification, or curtailment of its habitat or range is not likely to threaten the Cow Head tui chub with extinction throughout all or a significant portion of its range within the foreseeable future.

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

Overutilization was not considered a threat to the species in the 1998 proposed rule (63 FR 15154). The Cow Head tui chub is not a commercial or recreational fish species, and there have been only a few documented scientific collections since 1939 (Reid 2006a, pp. 37–38). Future collections for scientific purposes presumably would be limited to small collections for genetic, morphological, or life history studies, and these would not substantially affect the population as a whole. Therefore, over-utilization is not likely to threaten the Cow Head tui chub with extinction throughout all or a significant portion of its range within the foreseeable future.

#### *C. Disease or Predation*

In the 1998 proposed rule, we indicated that the potential introduction of a catastrophic disease or a nonnative predatory fish could be harmful to Cow Head tui chub, particularly due to the small estimated population size and confined known range of the Cow Head tui chub at that time (63 FR 15154). We also noted that there were no documented instances of disease actually affecting the tui chub or detections of nonnative predatory fish in tui chub habitat. This factor was not considered a principal threat to the species.

The potential introductions of a disease or nonnative predators to the Cow Head Basin would be subject to a number of constraints that greatly reduce the likelihood of such occurrence and also reduce the likelihood that a nonnative predator would become established if introduced. These constraints include: (1) The isolated location of the Cow Head Basin; (2) the absence of existing nonnative fish populations in the basin; (3) the habitat characteristics of upper Twelvemile Creek (high gradient, cool water) and the lower canyon reach of Cow Head Slough (high gradient, generally dry or low flow, with no upstream passage except possibly during high spring flows), both of which would impede the upstream invasion of warm-water game fish from the Warner Valley floor; (4) the absence of source water bodies suitable for warm-water

sport fishing (e.g., reservoirs) in the basin (all permanent reservoirs in the Basin are at higher elevations and contain cold water suitable only for trout); (5) the warm water habitat characteristic of the lower elevation streams containing Cow Head tui chub are not suitable for establishment of nonnative trout; (6) the location of perennial stream reaches and reservoirs on private lands (so public access and the potential introduction of nonnative fish is less likely); (7) the expectation that a point source introduction transported illegally to the basin would be limited to relatively few individuals of the nonnative species; and (8) the continued participation and awareness of private landowners in the CA, which addresses the potential risks of disease or nonnative introductions.

The low likelihood of introductions also is supported by the lack of historical introductions of disease or nonnative fishes to the basin over the last century. In the event of an introduction of a nonnative fish, risks to the Cow Head tui chub are further ameliorated by its separation into at least six seasonally isolated populations, and the complete upstream isolation of the largest population (Cow Head lakebed channels) from other areas by the pump structure. We also note that stakeholders will continue to monitor the composition of the fish community in the Cow Head Basin through implementation of the CA and can notify CDFG and the Service if a nonnative fish is identified. The agencies could then remove the introduced fish.

While the outbreak of a catastrophic fish disease in the Cow Head Basin could theoretically threaten the Cow Head tui chub due to its relatively limited range, there is no evidence of fish disease in the Cow Head Basin, and we are aware of no documented loss of any native tui chub populations (*Siphateles* spp.) or other native western cyprinid (fish in the minnow family) due to disease. Because it is unlikely that fish or other exotic hosts will be introduced into Cow Head Basin, there is a very low likelihood that disease will be introduced and spread in the basin.

The Cow Head tui chub is most vulnerable to predation during droughts, when much of the drainage dries up and fish are concentrated in smaller pools. Natural predators of the Cow Head tui chub include garter snakes, aquatic insects, and fish-eating birds, with which the population has naturally coexisted under current conditions since the 1920s (Homuth 2000, pp. 6, 8). The original name of Cow Head Lake was Pelican Lake (see

Minto 1879 map in Reid 2006a, p. 6), and therefore it is logical to assume that pelicans were among the historic natural predators of the chub. There is no indication that these natural predators represent an extinction threat to the Cow Head tui chub. Introduction of predatory nonnative fishes (e.g., bass, crappie, sunfish, and brown trout) would increase predation pressure on the Cow Head tui chub population. However, for a nonnative predator to represent a threat to the Cow Head tui chub, the nonnative species would have to successfully establish a resident population that spreads throughout a significant portion of basin. This is unlikely for the reasons given above, and during a severe drought, when the Cow Head tui chub would be most vulnerable, the various populations and even individual pools are generally isolated by dry reaches.

#### Factor C Conclusion

No known disease or predator currently threatens the Cow Head tui chub. For the reasons described above, the introduction and establishment of a disease or nonnative fish predator into the Cow Head Basin is not likely to occur and, in the unlikely event it were to occur, is not likely to threaten the Cow Head tui chub with extinction. Therefore, disease and predation are not likely to threaten the Cow Head tui chub with extinction throughout all or a significant portion of its range within the foreseeable future.

#### D. The Inadequacy of Existing Regulatory Mechanisms

The 1998 proposed rule stated that there were no regulatory mechanisms that specifically protected the Cow Head tui chub or its habitat, and generally concluded that available regulatory mechanisms were inadequate to protect or appropriately manage the species (63 FR 15154, March 30, 1998). The proposed rule summarized the following regulatory mechanisms: (1) CDFG's designation of the Cow Head tui chub as a species of special concern, Class 1: Endangered; (2) The National Environmental Policy Act; (3) section 404 of the Clean Water Act; (4) the California Environmental Quality Act; and (5) section 1603 of the California Fish and Game Code (63 FR 15154). However, as discussed above, based on current information, we have determined that there are no significant threats to the Cow Head tui chub or its habitat that would trigger the need for additional regulation.

The Cow Head tui chub occurs on a mix of public (BLM) and private land, with the majority of the populations

being on private land where there is more perennial water. On public lands (i.e., Cow Head Slough) and most adjoining riparian corridors on private lands used for grazing, Cow Head tui chub habitat is managed according to riparian health standards under BLM policy and receives protection from measures undertaken by BLM as a result of a Section 7 consultation with the Service on the Warner sucker, *Catostomus warnerensis*, a federally-listed species with similar habitat requirements (BLM 2003, p. 4).

#### Factor D Conclusion

We are not aware of threats to the continued existence of the Cow Head tui chub that would require or be ameliorated by further regulation. Therefore "inadequacy of existing regulatory mechanisms" is not a factor likely to threaten the Cow Head tui chub with extinction throughout all or a significant portion of its range within the foreseeable future.

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

The 1998 proposed rule briefly discussed several additional factors that were considered potential threats to the Cow Head tui chub, including the generalized vulnerabilities of species that have very small populations, pesticides, introduction of nonnative competitors, and natural drought (63 FR 15154–55, March 30, 1998). The vulnerabilities identified in the 1998 proposed rule (possible excessively high death or low birth rates, deleterious effects of genetic drift and inbreeding, and sensitivity to localized stochastic events) were based on the assumption that the Cow Head tui chub had been reduced to a single, small population, with an extremely restricted range and no additional populations available for recolonization in the event of a localized extinction (63 FR 15155, March 30, 1998). Current information demonstrates that the Cow Head tui chub population is considerably larger and more widely distributed than previously thought and is separated into six seasonally isolated populations in five subdrainages of the Cow Head Basin. (See Factor A discussion, above.) A recent genetic study of regional tui chubs also found that genetic diversity in the Cow Head tui chub is similar to other stream-resident chub populations, and shows no indication of genetic threats to the species (Chen 2006, pp. 46–48).

In the proposed rule we said: "Pest control programs \* \* \* that introduce pesticides into the drainage are a threat to the Cowhead Lake tui chub." We no

longer believe such programs pose a threat to the Cow Head tui chub. The only substantial use of pesticides in the Cow Head Basin is in the U.S. Department of Agriculture's Animal Plant Health Inspection Service (APHIS) rangeland grasshopper/cricket control program, which is implemented only during occasional years when there are grasshopper or cricket outbreaks. The Service is familiar with this program because of section 7 consultations with APHIS. Pesticides are applied so as to minimize risk to non-target species; this is done through ultra-low volume sprays, selection of chemical sprays and baits, use of adequate buffers, and other means. Moreover, this program focuses on localized upland areas (surrounding the lakebed) where grasshoppers lay their eggs. Pesticides are not applied to aquatic habitat, and in the event of an accidental spill or application or drift by wind or water movement, the adverse effect would be localized, particularly since application typically occurs during low or no flow seasons, when pool habitats are not interconnected. Other agricultural activities and land management in the Cow Head Basin are limited to hay production and grazing and pesticides are not applied to these crops (Reid 2006a, p. 10). Therefore, pesticide contamination is not likely to threaten the Cow Head tui chub with extinction throughout all or a significant portion of its range within the foreseeable future.

The introduction of nonnative competitors, such as bait minnows (e.g., shiners, fathead minnows) tui chubs introduced from other basins, and mosquito fish (*Gambusia*), could adversely affect the Cow Head tui chub. However, there are no populations of nonnative fishes present in the basin at this time, and the likelihood of their introduction and subsequent establishment is low, for the reasons discussed earlier (see Factor C discussion of predation, above).

#### Natural Drought

The northwestern corner of the Great Basin, where Cow Head Lake is located is subject to extended droughts, during which even the larger lakes are sometimes dry (Phillips and Van Denburgh 1971, p. B6; Negrini 2002, p. 40). Goose Lake, with an area over 100,000 acres, is located in the next basin to the west. It was recorded as essentially dry in the summers of 1846 and 1849 by early travelers, and more recently was dry in the late summers of 1926, 1929–34 and 1992 (Pease 1965, p. 30, 58; Phillips and Van Denburgh 1971, pp. 31–32; Johnson et al. 1985, p. 82). Crump Lake, which is the southernmost

lake in the Warner Basin into which Cow Head and Twelvemile Creek waters ultimately flow, also has a history of natural desiccation and sometimes goes dry for several years at a time. Also, the large, shallow Alkali lakes in Surprise Valley to the south of the Cow Head Basin are dry or nearly dry in most summers (Phillips and Van Denburgh 1971, pp. 37–38; Johnson et al. 1985, p. 180). There is no record of how frequently Cow Head Lake went dry under natural conditions. However, residents of the Cow Head Basin reported that Cow Head Lake was dry in 1908, 1912, 1923 or 1924, 1928, and from 1930–34, all prior to alteration of the lakebed (Hubbs 1934, p.1; Reid 2006a, p. 8).

In the past, the Cow Head tui chub must have survived severe droughts by occupying perennial habitat such as natural spring-fed reaches of tributary drainages and more recently, in perennial canal habitat on the lakebed. The “dustbowl” drought of the 1920–30s appears to have been the most extreme regional drought in at least the last 270 years, and probably the last 700 years (Keen 1937, p.188; Knapp et al. 2004, p.144). The original collection of Cow Head tui chub in 1939 followed that drought. Since that time, periodic droughts have occurred every 10–20 years (Reid 2006a, p. 26–27).

A recent genetic study indicates that the population has maintained genetic diversity comparable to other stream populations of chubs, in spite of the relatively frequent constraints on its distribution and potential population size reductions caused by droughts (Chen 2006, pp. 46–48). The 2001 distribution surveys, undertaken in one of the driest years under current management regimes, showed Cow Head tui chubs were widely distributed, thus providing further evidence of the ability of the chub population to persist given availability of suitable habitat (Scoppettone and Rissler 2006, p.109; Reid 2006a, p.27).

Although it is impossible to accurately predict future climatic conditions, drought will very likely continue to play an important role in the biology of the Cow Head tui chub. Conservation of perennial spring-fed reaches in the tributary drainages and on the lakebed is, therefore, crucial to the long-term survival of the Cow Head tui chub. Public and private land managers are providing grazing management and efforts that have protected and continue to protect and enhance spring resources. We have no reason to believe this situation will change.

Although extreme natural drought has the potential to reduce the distribution of the Cow Head tui chub and its available habitat (and droughts are likely to occur periodically in the future), the chub has demonstrated considerable resiliency in its ability to survive substantial regional droughts experienced over the last century, all under the current management regime. Permanent habitat, provided by perennial spring-fed stream reaches in five subdrainages of the Cow Head Basin, including the lakebed channels, is likely to remain available in the foreseeable future.

#### Factor E Conclusion

As discussed above, based on the best scientific information currently available, we have determined that none of the natural or manmade factors identified as potential threats in the 1998 proposed rule (63 FR 15152, March 30, 1998), including vulnerabilities associated with local endemic species, pesticide use, nonnative competitors and natural droughts, individually or collectively rise to a level likely to threaten the Cow Head tui chub throughout all or significant portion of its range in the foreseeable future.

#### Finding

In making this determination, we carefully assessed the best scientific and commercial information available regarding past, present, and future threats to the Cow Head tui chub. Much of this information was developed or improved subsequent to the original 1998 proposal to list the Cow Head tui chub (63 FR 15152, March 30, 1998). As discussed under Factor A, the natural range of the Cow Head tui chub has not changed substantially since 1879. Modification of low-gradient stream habitat in the Cow Head Basin occurred primarily in the early 20th century, and there has been no substantial loss of perennial stream habitat for the Cow Head tui chub due to habitat modification. Although the character of Cow Head Lake itself has changed considerably since the 1800s, management of the Cow Head Basin has been essentially stable since the late 1930s. This is evidenced most dramatically by the fact that a large population of Cow Head tui chub has sustained itself throughout the basin (and specifically in the drainage canals on the lakebed), even following an especially severe, 16-year (1923–1938) drought when the entire lake was naturally dry. There is no reasonable expectation for substantial negative changes to the current management

regime, and habitat conditions are generally upward trending, with management by private and public land managers incorporating strategies that enhance the availability of permanent water and suitable habitat for Cow Head tui chub.

As discussed under Factor B, the Cow Head tui chub is not a commercial or recreational fish species and there are only a few documented scientific collections since 1939. Future collections for scientific purposes presumably would be limited, and overutilization is not likely to threaten the Cow Head tui chub with extinction in the foreseeable future.

As discussed under Factor C, no disease or predator currently threatens the Cow Head tui chub. Furthermore, the introduction and establishment of a disease or nonnative predator into the Cow Head Basin is not likely to occur and, in the unlikely event it were to occur, is not likely to threaten the Cow Head tui chub with extinction in the foreseeable future.

As discussed under Factor D, there are currently no recognized threats to the continued existence of the Cow Head tui chub identified under the other factors that require or would be ameliorated by further regulation. Further, the chub has persisted, with populations still occurring throughout its historic range, with the existing regulatory mechanisms. Therefore, we conclude that the possible inadequacy of existing regulatory mechanisms is not likely to threaten the Cow Head tui chub with extinction in the foreseeable future.

As discussed under Factor E, we have not identified additional factors that rise to a level likely to threaten the Cow Head tui chub with extinction throughout all or a significant portion of its range. Extreme natural drought has the potential to severely constrain the distribution of the Cow Head tui chub and its available habitat as it has in the past, and droughts are likely to occur periodically in the future. However, the Cow Head tui chub has demonstrated considerable resiliency in its ability to survive substantial regional droughts experienced over the last century, all under the current management regime. Permanent habitat provided by perennial spring-fed stream reaches in five subdrainages of the Cow Head Basin is likely to remain available in the foreseeable future. Therefore, natural drought and the additional factors discussed in Factor E are not likely to threaten the Cow Head tui chub with extinction in the foreseeable future.

Based on the lack of present or foreseeable threats to its continued

existence, we have determined that the Cow Head tui chub is not likely to become in danger of extinction in the foreseeable future throughout all or a significant portion of its range (section 3(6) of the Act) and, therefore, does not meet the Act's definition of threatened or endangered. Consequently, we withdraw our 1998 proposal to list the Cow Head tui chub as endangered (63 FR 15152, March 30, 1998).

We will continue to monitor the status of the species and to accept additional information and comments from all concerned governmental agencies, the scientific community, industry, or any other interested party concerning this finding. We will reconsider this determination in the event that new information indicates that such an action is appropriate.

#### References Cited

A complete list of all references cited is available at the Service's Klamath Falls Fish and Wildlife Office (see **ADDRESSES**).

#### Author

The primary authors of this notice are the staff of the Service's Klamath Falls Fish and Wildlife Office (see **ADDRESSES** above).

#### Authority

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

Dated: September 28, 2006.

#### Marshall Jones,

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

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## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

#### Endangered and Threatened Wildlife and Plants; Revised 12-Month Finding for the Beaver Cave Beetle (*Pseudanophthalmus major*)

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

**ACTION:** Notice of revised 12-month petition finding.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), announce our revised 12-month finding for a petition to list the Beaver Cave beetle (*Pseudanophthalmus major*) under the Endangered Species Act (Act) of 1973 (16 U.S.C. 1531 *et seq.*). After a review

of the best available scientific and commercial information, we conclude that this species is not likely to become an endangered or threatened species within the foreseeable future throughout all or a significant portion of its range. Therefore, we find that proposing a rule to list the species is not warranted, and we no longer consider it to be a candidate species for listing. However, the Service will continue to seek new information on the taxonomy, biology, and ecology of this species, as well as potential threats to its continued existence.

**DATES:** This finding was made on October 11, 2006. Although no further action will result from this finding, we request that you submit new information concerning the taxonomy, biology, ecology, and status of the Beaver Cave beetle, as well as potential threats to its continued existence, whenever such information becomes available.

**ADDRESSES:** The complete file for this finding is available for inspection, by appointment and during normal business hours, at the U.S. Fish and Wildlife Service, 3761 Georgetown Road, Frankfort, Kentucky 40601. Submit new information, materials, comments, or questions concerning this species to us at the same address.

**FOR FURTHER INFORMATION CONTACT:** Dr. Michael A. Floyd, Kentucky Ecological Services Field Office at the address listed above, by telephone at 502-695-0468, by facsimile at 502-695-1024, or by e-mail at [mike\\_floyd@fws.gov](mailto:mike_floyd@fws.gov).

#### SUPPLEMENTARY INFORMATION:

#### Background

The Act provides two mechanisms for considering species for listing. One method allows the Secretary, on his own initiative, to identify species for listing under the standards of section 4(a)(1). We implement this through an assessment process to identify species that are candidates for listing, which means we have on file sufficient information on biological vulnerability and threats to support a proposal to list the species as endangered or threatened, but for which preparation and publication of a proposal is precluded by higher-priority listing actions. Using this process, we identified the Beaver Cave beetle as a candidate for listing in 2001 and included it in the Candidate Notice of Review (CNOR) published in the **Federal Register** on October 30, 2001 (66 FR 54808). In subsequent CNORs that we published on June 13, 2002 (67 FR 40657), May 4, 2004 (69 FR 24875), and May 11, 2005 (70 FR 24870), we continued to recognize this