ACTION: Notice of a revised 90-day petition finding and initiation of a 5-year status review.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a revised 90-day finding for a petition to remove the Lost River sucker (Deltistes luxatus) and shortnose sucker (Chasmistes brevirostris) throughout their ranges from the Federal List of Threatened and Endangered Wildlife and Plants (List) pursuant to the Endangered Species Act (Act) (16 U.S.C. 1531 et seq.). We find that the petition does not present substantial scientific or commercial information indicating that delisting of the Lost River and shortnose suckers may be warranted. As a result of the 1995, 1996, and 1997 fish die-offs, the endangered suckers experienced significant losses of thousands of adult suckers and have not recovered. Although the petition and information in our files do not provide new information relevant to the status of the Lost River and shortnose suckers, we are initiating a 5-year review of these species under section 4(c)(2)(A) of the Act to consider any new information that has become available as a result of recent actions to reduce threats to the species, and to provide the States, tribes, agencies, university researchers, and the public an opportunity to provide information on the status of the species. We are requesting any new information on the Lost River and shortnose suckers since their original listing as endangered species in 1988 (53 FR 27130).

DATES: The finding announced in this document was made on July 14, 2004. To be considered in the 5-year review, comments and information should be submitted to us by October 31, 2004.

ADDRESSES: Data, information, written comments, or materials, or questions concerning this finding and 5-year review should be submitted to the Field Supervisor, Klamath Falls Fish and Wildlife Office, U.S. Fish and Wildlife Service, 6610 Washburn Way, Klamath Falls, Oregon 97603. The petition finding, supporting data, and comments are available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Curt Mullis, Field Supervisor, at the above address, or at 541-885-8481.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Act requires that the Service 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. To the maximum extent practicable, we must make the finding within 90 days of receipt of the petition, and the finding is to be published promptly in the Federal Register. If we find substantial information exists to support the petitioned action, we are required to promptly commence a review of the status of the species, if one has not already been initiated (50 CFR 424.14). "Substantial information" is defined as "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)). Petitioners need not prove that the petitioned action is warranted to support a "substantial" finding; instead, the key consideration in evaluating a petition for substantiality involves demonstration of the reliability of the information supporting the action advocated by the petition (USFWS 1995).

The factors for listing, delisting, or reclassifying a species are described at 50 CFR 424.11. We may delist a species only if the best scientific and commercial data available substantiate that it is neither endangered nor threatened. Delisting may be warranted as a result of: (1) Extinction; (2) recovery; and/or (3) a determination that the original data used for classification of the species as endangered or threatened were in error. A petition to delist the Lost River sucker and shortnose sucker, dated September 12, 2001, was submitted by Mr. Richard A. Gierak, representing Interactive Citizens United. Three other similar petitions were received and treated as comments on Mr. Gierak's petition. On May 14, 2002, the Service published its initial finding that the petitions to delist the Lost River and shortnose suckers did not present substantial scientific or commercial information indicating that delisting the suckers may be warranted (67 FR 34422). On June 12, 2002, Waldo Moden, Merle Carpenter, Charles Whittlatch, John Bair, Tiffany Baldock, and Dale Cross filed a complaint in Federal District Court alleging that our initial finding on the petition to delist the Lost River sucker and shortnose sucker was arbitrary and capricious and violated the Act (Moden v. U.S. Fish and Wildlife Service). On September 3, 2003, the court ruled that our finding was arbitrary and capricious because it reached unexplained conclusions not supported by the administrative record. The court remanded the initial finding, and ordered us to either reissue the
the shoreline spawning population of Lost River suckers for only a few of the last fifteen years (USFWS 2002). Also, there is apparently low survivorship over the first winter, suggesting that fall/winter survival is low (USFWS 2002). Die-offs in 1995, 1996, and 1997 have killed many of the older fish, thus reducing the ability of the populations to reproduce. Over 6,000 dead adult suckers were collected following a 1996 fish die-off, and this figure likely represented only a small fraction of the total that died (USFWS 2001). Following the 1995 through 1997 fish die-offs, the Sprague River spawning index declined 80 to 90 percent for the two suckers (USFWS 2001). Therefore, current conditions, including poor water quality and low lake levels resulting from drought, pose a serious risk to even tolerant and adaptive fish like suckers. (The spawning index is an indicator of the relative number of suckers that migrate in the Sprague River during the spring spawning period. Nets to survey suckers are put in the river weekly over the entire spawning season. The index is calculated by taking the average number of suckers caught per day per net and summing the averages over the season. While the spawning index is not necessarily the most accurate measure of population size, because individual suckers may not spawn every year and the capture efficiency of nets can be affected by water clarity, currents, debris loading, and other factors, it is a good indicator of trends when measured over a long period of time. Therefore, current conditions, including poor water quality and low lake levels resulting from drought, pose a serious risk to even tolerant and adaptive fish like suckers. The two sucker species were federally listed as endangered in 1988 (53 FR 27130). The original listing and status assessments conducted in 2001 and 2002 and included in two biological opinions on the operations of the Bureau of Reclamation’s Klamath Project (USFWS 2001, 2002) concluded that the suckers were still subject to the following threats: (1) Drastically reduced adult populations and reduction in range; (2) extensive habitat loss, degradation and fragmentation; (3) small or isolated adult populations; (4) isolation of existing populations by dams (passage); (5) poor water quality leading to large fish die-offs and reduced fitness; (6) lack of sufficient recruitment; (7) entrainment into irrigation and hydropower diversions; (8) hybridization with the other native Klamath sucker species; (9) potential competition with introduced exotic fishes; and (10) lack of regulatory protection from Federal actions that might adversely affect or jeopardize the species. These status assessments drew upon information from all published and unpublished reports on the biology, distribution, and status of the listed sucker species in the Klamath region and the ecosystem on which they depend. The assessments also included and considered new information that was available.

Discussion of Petition

The petition states that delisting of the Lost River and shortnose suckers should occur because, either: (1) The estimates of the sucker populations in the 1980s were in error and did not, in fact, demonstrate a precipitous decline (i.e., sucker populations in the 1980s were much larger than assumed); or (2) the estimates of the sucker populations in the 1980s were reasonably accurate, and the suckers have demonstrated an enormous boom in the period since listing and no longer exhibit “endangered” status (i.e., sucker populations have increased and are no longer endangered).

The petition’s supporting documentation consists of an excerpt (four pages and “Figures 2 & 3”) from testimony by David A. Vogel before the U.S. House Committee on Resources (Vogel 2001), five bibliographic references, and eight footnotes. The referenced testimony concerns sucker population estimates from the 1950s to 1997, which are included in the petition as a table labeled “Figure 2.” Figure 2 provides selective information for the two sucker species from three time periods: pre-1980s (1950s–1976), 1980s, and 1990s (see Table 1 below). While this table displays population estimates that are higher since listing, we find that comparisons of population sizes pre- and post-listing using these data are invalid because: (1) Data were obtained using different methods and models, and assumptions used by those models were violated; and (2) the estimates do not refer to the same populations. These limitations are explained below.
The petitioners state that sucker populations in the 1980s were much larger than assumed at listing and therefore listing was unnecessary. In support of this statement, the petitioner refers to Mr. Vogel’s testimony concerning sucker population estimates, which were included in the petition (and reproduced as Figure 1) in this finding.

In response to the court’s questions in its remand regarding the significance of supplementary information concerning sucker populations prior to the listing in 1988, we also considered data contained in supplementary references provided by the plaintiffs, including a letter from Craig Beinz (The Klamath Tribes) (Beinz 1986); meeting notes of the Sucker Working Group (Williams 1986); a USFWS memorandum (USFWS 1986); and a Service endangered species technical bulletin (USFWS 1987). These documents emphasize the drastic decline in sucker populations in the 1980s and the need for Federal protection, and thus supported the 1988 listing.

The sucker population information for the 1980s provided by the petitioners and reproduced above in Table 1 was obtained from surveys jointly conducted by the Klamath Tribes and Oregon Department of Fish and Wildlife from 1984 through 1986, and was produced in a final report by Bienz and Ziller (1987) titled “Status of Three Lacustrine Sucker Species (Catostomidae).” Sucker population information in this report was considered by the Service in the original listing and in the two status assessments (USFWS 1988, 2001, 2002). Bienz and Ziller (1987) focused on sucker populations that spawned in the Sprague River, the major tributary of the lake and the primary spawning site for Upper Klamath Lake suckers, because it was believed that the sport fishery on that river was adversely impacting the sucker populations. Bienz and Ziller (1987) noted significant declines in the numbers and sizes of suckers caught over the 3 years of their study and concluded: “Lost River and shortnose suckers appear headed for extirpation from Upper Klamath and Agency lakes * * *”.

Table 1, above, shows evidence that suckers spawning in the Sprague River very likely experienced a precipitous decline between 1984 and 1986, consistent with the supporting literature provided by the petitioners and consistent with the final listing rule (USFWS 1988). Therefore, information referenced in the petition supports the fact that sucker populations prior to listing experienced significant declines. Consequently, the information cited in the petitions corroborates the Service’s 1988 determination that listing was warranted.

The petition did not provide any information about the status of the suckers during the period between the 1950s and 1976 other than what is presented above in Table 1. The 2001 biological opinion reviewed this early data and found that creel surveys indicated an increase in the Sprague River harvest between 1966 and 1969 and then a sharp decline by 1974 (USFWS 2001).

The petitioners state that the suckers no longer exhibit “endangered” status because their populations have dramatically increased since listing, citing the referenced testimony, including various brief statements concerning additional aspects of the sucker’s status. These statements are reviewed below.

Table 1, above, provides estimates of sucker population sizes for the Upper Klamath Lake in 1996 and 1997. Although the original source of the estimates is not referenced in the petition, the Service believes the data are from a draft report entitled “Information on the Population Dynamics of Shortnose and Lost River Suckers in Upper Klamath Lake, Oregon,” written by U. S. Geological Survey (USGS) staff in 1998, following their spring and summer sampling of adult sucker populations in Upper Klamath Lake and recovery of dead suckers in the 1996 through 1997 fish die-offs (Shively 2002, 2003).

The USGS did not finalize the draft report on the population estimates, owing to concerns that the implicit assumptions in the methods they used to estimate population sizes may have been violated and due to concerns associated with the data’s statistical limitations (Shively 2002). As a result, the information from this report that was referenced in the petition regarding population increases is unreliable. With regard to the 1997 estimate, the Service concluded that a violation had likely occurred in both of the assumptions in the mark and recapture method (i.e., that marked fish are randomly mixed in the population, and all fish have equal probability of being recaptured) (USFWS 2001). Because of inherent problems with these data, the Services did not include them in the body of its 2002 biological opinion, but instead included the population estimates in an appendix, where we carefully and fully explained their limitations (USFWS 2002).

Others have also concluded that the 1996 and 1997 population estimates based on the fish die-offs are unreliable, including Dr. D. Anderson, a specialist in the analysis of mark and recapture data to estimate fish and wildlife population sizes (Anderson 2003); the State of Oregon’s Independent Multidisciplinary Science Team (IMST 2003); and the National Academy of Science’s National Research Council’s Committee on Endangered and Threatened Fishes in the Klamath River Basin (NRC 2003). The IMST concluded their review with the statement, “At this time, it is not possible to accurately determine the current total abundance of suckers in Upper Klamath Lake or the trend in abundance over the past 15+ years with reliability” (IMST 2003). The NRC, which had included the 1996 through 1997 population estimates in their 2002 draft interim report (NRC 2002), removed the population estimates from their final report and concluded their evaluation of population sizes with the statement: “For purposes of ESA actions, the critical facts, which are known with a high degree of certainty, are that the fish are much less abundant than they originally were and that they are not showing an increase in overall abundance” (NRC 2003).

Additionally, the 1996 through 1997 population estimates were derived from dead suckers collected during extensive summer die-offs, and therefore those data were applicable to population sizes prior to the die-offs, based on catches of migrating suckers in the Williamson River, the USGS found that the
spawning index had declined 97 percent for both species of suckers between 1995 and 1999 (USFWS 2002). There has been an increase in the spawning index for Lost River suckers since 1999, but it has not reached the 1995 levels. Spawning indices for shortnose suckers are showing little recovery and if a substantial number of adults die in the near future, the population could plummet. Therefore, the information in the petition and in our files, rather than showing healthy populations in the 1990s, depicts populations subject to high adult mortality and showing inadequate recruitment. Consequently the data suggest a downward trend occurred in population sizes (USFWS 2002). This addresses a concern raised by the court on page 19 of the Opinion and Order regarding apparent trends in the population information. The trend that is apparent in the 1990s is one that is downward.

On page 18 of the Opinion and Order, the court pointed out that the 2001 status report does not explore the differences in methodology between estimates in the 1980s and the 1990s, except to say that “no accurate population estimate was available.” As we noted through the clarification above, data collected in the 1980s were based on sampling in the Sprague River, while those obtained in the 1990s were based on dead suckers recovered from the Upper Klamath Lake fish die-offs. The population estimates, 1980s v. 1990s, are not comparable because the 1990s estimates are unreliable, as the USGS has stated, because those data failed to meet necessary model assumptions. Also, the estimates from the Sprague River are only for suckers that spawn in particular reaches of the Sprague River, whereas data from the die-offs likely represented suckers from several populations that might spawn in other river reaches or along the shoreline of the lake. Therefore the data are not comparable, because one data set has been invalidated and the data were not from the same populations.

Information in the petitions noted that the Upper Klamath Lake sucker populations have experienced substantial recruitment in recent years and also exhibit recruitment every year. For recruitment to occur, young suckers must survive to spawn. Although the Upper Klamath Lake sucker populations appear to spawn and produce some young every year, significant recruitment into the spawning population is infrequent (USFWS 2002). From 1988 to 2001, only two relatively strong cohorts (i.e., those born in 1991 and 1993) have recruited into the spawning populations (USFWS 2002).

The petitioners referenced testimony that populations of both Lost River and shortnose sucker in Clear Lake Reservoir, and the population of shortnose sucker in Gerber Reservoir, are more abundant than reported at the time of listing and exhibit good recruitment. Clear Lake and Gerber Reservoir are much smaller than Upper Klamath Lake, and therefore have smaller sucker populations. The recent status assessments of the suckers considered this information (USFWS 2001, 2002). However, available data shows that older suckers may be absent and the populations are physically and genetically isolated by dams from the rest of the Upper Klamath Basin. Because of the small size of the reservoirs and inadequate inflows during prolonged droughts, those populations may be subject to extinction if water levels get so low that the reservoirs are dry, if predators consume the fish, or if water quality gets too poor for survival (USFWS 2001, 2002).

Following the drought of 1992, Clear Lake reached levels so low that it contained only 5 percent of its full capacity. If that drought would have continued, much of the reservoir would have been dry the following year (USFWS 2002). Droughts also may prevent suckers from reaching upstream spawning areas because access is blocked (USFWS 2002). Following droughts, suckers appear to be stressed and in poor health (USFWS 2002). The petitioners also referenced testimony that the geographic range of the suckers is greater than believed at the time of listing in 1988. The recent status assessments of the suckers reflect that the known geographic ranges of the two suckers have not changed substantially since listing (USFWS 2001, 2002). At the time of listing, shortnose and Lost River suckers were reported from Upper Klamath Lake, its tributaries, Lost River, Clear Lake Reservoir, the Klamath River, and the three Klamath River reservoirs (Copco, Iron Gate, and J.C. Boyle). The two additional shortnose sucker and one additional Lost River sucker populations that have been recognized since listing are within the Lost River drainage, which was identified as part of the species’ range at the time of listing. The populations occur in isolated sections of the Lost River drainage and are separated from other populations by dams. They include a small population of each species in Tule Lake (below Anderson Rose Dam), which are apparently limited to several hundred adults for each species, and an isolated population of shortnose suckers in Gerber Reservoir of unknown size. Because the additional sucker populations were within the known range at the time of listing, we do not consider the additional populations as representing a substantial increase in the geographic range.

The petitioners referenced testimony that the sucker populations in the Klamath River reservoirs are more abundant and widespread than assumed at the time of listing. At the time of listing, a “substantial” population of shortnose suckers was reported from Copco Reservoir, with additional collections from Iron Gate and J.C. Boyle reservoirs. Lost River suckers were reported to have been collected from all three reservoirs but have been practically eliminated from Copco Reservoir. More recent sampling in the Klamath River reservoirs indicates these populations are not large and there is no evidence that these reservoir populations are self-sustaining (USFWS 2001, 2002).

The petitioners also referenced testimony that hybridization among the species of suckers in the Klamath Basin was assumed to be a threat in the 1988 listing, but is now known not to be as problematic. The recent status assessment of the suckers reflects that ongoing genetic and morphological studies have confirmed that hybridization has resulted in genes from one species being transferred to another species and has occurred among the four species of suckers native to the Klamath Basin (USFWS 2001, 2002). The 2002 assessment found that some hybridization may be natural within Klamath suckers. However, the biological and conservation implications of hybridization, as well as the degree to which recent man-made changes to the Klamath Basin have altered the natural rate of hybridization, are still unresolved, and therefore the degree of the threat is unknown (USFWS 2002).

All of the issues discussed in the petitioner’s referenced testimony, i.e., mid-1990s population sizes, recruitment, geographic range, and hybridization, are addressed in the recent biological opinions that assessed the species’ status and found that the endangered suckers are faced with continued threats to their populations (USFWS 2001, 2002). The quantitative comparisons among population estimates pre- and post listing provided by the petitioners and reproduced in Table 1 above are not informative owing to differences in methods and violations of model assumptions. Nevertheless, it
appears likely that some population increase occurred in the mid-1990s following cessation of the sport fishery and owing to a large 1991 year class recruiting into the adult sucker populations in the mid-1990s. However, three consecutive years of water-quality-related die-offs in 1995 through 1997 killed a major portion of the adult populations (USFWS 2002). Therefore, regardless of what the population sizes were prior to the fish die-offs, they were much smaller afterwards and consequently their reproductive potential would have been much reduced. Following the die-offs, poor water quality was realized as a serious threat, if not the major threat, to the two species’ continued survival. Thus, the available scientific or commercial information indicates that: (1) The increased population numbers referenced in the petition are based on population estimates that have been determined to be unreliable; (2) any population increase that may have occurred in early 1990s was offset by later declines owing to large sucker die-offs; and (3) poor water quality was recognized as being more of a threat than was previously considered owing to three recent fish-die-off events.

Finding

We have reviewed the petition and its supporting documentation, as well as information in Service files and readily available published and unpublished studies and reports. On the basis of this review, we find that the petitions do not present substantial information indicating that delisting of the Lost River sucker or shortnose sucker may be warranted.

Five-Year Review

Section 4(c)(2)(A) of the Act requires that we conduct a review of listed species at least once every 5 years. We are then, under section 4(c)(2)(B), to determine, on the basis of such a review, whether or not any species should be removed from the List (delisted), or reclassified from endangered to threatened, or threatened to endangered. Our regulations at 50 CFR 424.21 require that we publish a notice in the Federal Register announcing those species currently under active review. Although the 90-day petition finding precludes the need to initiate a 12-month status review, we believe that a comprehensive, 5-year status review is appropriate in order for us to consider new information that has become available as a result of recent actions, and to provide the States, Tribes, agencies, university researchers, and the public an opportunity to provide information on the status of the species. This notice announces our active review of the Lost River sucker and shortnose sucker.

Although we recently completed status assessments for these species (USFWS 2001, USFWS 2002), new information is being acquired and a number of actions have been implemented or will soon be implemented to reduce threats to the species, including installing a fish screen at A-Canal in 2003, constructing a fish ladder at the Link River Dam in 2004, and improving passage in the near future at the Chiloquin Dam. Additionally, habitat restoration is occurring around Upper Klamath Lake and in its tributaries. These actions, combined with new information on the species, could affect the species’ status and we are, therefore, proceeding to an updated status review of the species.

Public Information Solicited

To ensure that the status review is complete and based on the best available scientific and commercial information, we are soliciting any additional information, comments, or suggestions on the Lost River sucker and shortnose sucker from the public, other concerned governmental agencies, tribes, the scientific community, industry, environmental entities, or any other interested parties. Information sought includes any data regarding historical and current distribution, biology and ecology, ongoing conservation measures for the species or its habitat, and threats to the species or its habitat. We also request information regarding the adequacy of existing regulatory mechanisms.

The 5-year review considers all new information available at the time of the review. This review will consider the best scientific and commercial data that has become available since the current listing determination or most recent status review, such as:

A. Species biology including, but not limited to, population trends, distribution, abundance, demographics, and genetics;

B. Habitat conditions including, but not limited to, amount, distribution, and suitability;

C. Conservation measures that have been implemented that benefit the species;

D. Threat status and trends; and

E. Other new information, data, or corrections including, but not limited to, taxonomic or nomenclatural changes, identification of erroneous information contained in the list, and improved analytical methods.

If you wish to provide information for the status review, you may submit your comments and materials to the Field Supervisor, Klamath Falls Fish and Wildlife Office (see ADDRESSES section). Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Respondents may request that we withhold a respondent’s identity, as allowable by law. If you wish us to withhold your name or address, you must state this request prominently at the beginning of your comment. However, we will not consider anonymous comments. To the extent consistent with applicable law, we will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

References Cited

A complete list of all references cited in this finding is available, upon request, from the Klamath Falls Fish and Wildlife Office (see ADDRESSES section).

Author

The primary author of this document is Ron Larson, fishery biologist, Klamath Falls Fish and Wildlife Office, U.S. Fish and Wildlife Service (see ADDRESSES section).

Authority

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


Marshall Jones, Jr.,
Acting Director, U.S. Fish and Wildlife Service.