



## **DEPARTMENT OF THE INTERIOR**

### **Fish and Wildlife Service**

#### **50 CFR Part 17**

**[Docket No. FWS–R8–ES–2013–0133; 4500030113]**

**RIN 1018–AY78**

### **Endangered and Threatened Wildlife and Plants; Removal of the Modoc Sucker from the Federal List of Endangered and Threatened Wildlife**

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

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), are removing the Modoc sucker (*Catostomus microps*) from the Federal List of Endangered and Threatened Wildlife. This determination is based on a thorough review of the best available scientific and commercial information, which indicates that the threats to this

species have been eliminated or reduced to the point that the species no longer meets the definition of an endangered species or a threatened species under the Endangered Species Act of 1973, as amended (Act). Because we are removing the Modoc sucker from the List of Endangered and Threatened Wildlife, we are also removing the designated critical habitat for this species. In addition, we are making available the final post-delisting monitoring plan for the species.

**DATES:** This rule is effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** *This rule:* This final rule is available on the internet at <http://www.regulations.gov> and <http://www.fws.gov/klamathfallsfwo/>. Comments and materials we received, as well as supporting documentation we used in preparing this rule, are available for public inspection at <http://www.regulations.gov> under Docket No. FWS–R8–ES–2013–0133. All of the comments, materials, and documentation that we considered in this rulemaking are available by appointment, during normal business hours at: U.S. Fish and Wildlife Service, Klamath Falls Fish and Wildlife Office, 1936 California Avenue, Klamath Falls, OR 97601; by telephone 541–885–8481; or by facsimile 541–885–7837.

*The post-delisting monitoring plan:* The post-delisting monitoring plan for the Modoc sucker is available on our Endangered Species Program’s national website (<http://endangered.fws.gov>), on the Klamath Falls Fish and Wildlife Office website (<http://www.fws.gov/klamathfallsfwo>), and on the Federal eRulemaking Portal

(<http://www.regulations.gov>).

**FOR FURTHER INFORMATION CONTACT:** Laurie Sada, Field Supervisor, U.S. Fish and Wildlife Service, Klamath Falls Fish and Wildlife Office, 1936 California Avenue, Klamath Falls, OR 97601; by telephone 541–885–8481; or by facsimile 541–885–7837. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

#### **SUPPLEMENTARY INFORMATION:**

##### **Previous Federal Actions**

The Modoc sucker was added to the List of Endangered and Threatened Wildlife on June 11, 1985, as an endangered species (50 FR 24526). Critical habitat for the species was designated at the time of listing. A recovery plan was adopted for the species in 1992. On June 4, 2012, we published in the **Federal Register** a 90-day finding (77 FR 32922) for a 2011 petition to reclassify the species from an endangered species to a threatened species. In our 90-day finding, we determined that the 2011 petition provided substantial information indicating the petitioned action may be warranted, and we initiated a status review for Modoc sucker. On February 13, 2014, we published in the **Federal Register** a combined 12-month finding and proposed rule (79 FR 8656) to remove the Modoc sucker from the Federal List of Endangered and Threatened Wildlife. On February 13, 2015, we published a document in the **Federal Register** (80 FR 8053) that reopened the public comment period on the February 13, 2014, proposed rule.

Please refer to the February 13, 2014, proposed rule for a detailed description of previous Federal actions concerning this species.

### **Background**

Please refer to the February 13, 2014, proposed rule (79 FR 8656) for a summary of background information on the Modoc sucker's taxonomy, life history, and distribution. A completed scientific analysis is presented in detail in the Modoc Sucker Species Report (Service 2015a, entire) (Species Report), which is available at <http://www.regulations.gov> at Docket Number FWS–R8–ES–2013–0133. The Species Report was prepared by Service biologists to provide a thorough discussion of the species' ecology and biological needs, and an analysis of the stressors that may be impacting the species. For a detailed discussion of biological information on the Modoc sucker, please see the “Background” section of the Species Report, which has been updated since the proposed rule and includes discussions on taxonomy and species description, habitat, biology, and distribution and abundance of the species (Service 2015a, p. 4–14).

### **Range of the Species**

We consider the “range” of Modoc sucker to include an estimated 42.5 mi (68.4 km) of occupied habitat in 12 streams in the Turner Creek, Ash Creek, and Goose Lake sub-basins of the Pit River in northeastern California. This amount has increased substantially since the time of listing, when the known distribution of Modoc sucker was limited to an estimated 12.9 mi (20.8 km) of occupied habitat in seven streams in the

Turner Creek and Ash Creek sub-basins. This distribution represents its entire known historical range, with the exception of Willow Creek within the Ash Creek sub-basin. Previous reports of Modoc suckers in Willow Creek are based on limited and unverifiable reports (Reid 2009, p. 14), and their present existence in Willow Creek remains questionable (Reid 2008a, p. 25). Therefore, we consider the confirmed historical range to be occupied.

### **Summary of Changes from the Proposed Rule**

We have not made any substantive changes in this final rule based on the comments that we received during the public comment period, but we have added or corrected text to clarify the information which we presented. One peer reviewer provided information on hybridization between Modoc suckers and Sacramento suckers (*Catostomus occidentalis*). This information and other clarifications have been incorporated into the Species Report for the species as discussed below in the **Summary of Comments and Recommendations** section.

### **Recovery and Recovery Plan Implementation**

Section 4(f) of the Act directs us to develop and implement recovery plans for the conservation and survival of endangered and threatened species unless we determine that such a plan will not promote the conservation of the species. At the time of listing, the Service, the California Department of Fish and Wildlife (CDFW), and the U.S. Forest Service (USFS) were developing an “Action Plan for the Recovery of the Modoc sucker” (Action Plan). The April 27, 1983, Action Plan was formally signed by all participants in

1984 (Service 1984, entire). The Action Plan was revised in 1989 (Service 1989, entire). We determined that the Action Plan and its 1989 revision (Service 1984, 1989) adequately fulfilled the requirements of a recovery plan, and in a 1992 memorandum from the Regional Director (Region 1) to the Service's Director, we adopted it as the recovery plan for the Modoc sucker ("1992 Recovery Plan"; Service 1992) and determined we would not prepare a separate recovery plan pursuant to section 4(f) of the Act.

The 1992 Recovery Plan included downlisting and delisting objectives (considered to be equivalent to criteria). In the February 13, 2014, proposed rule (79 FR 8656), we outlined the objectives to reclassify the Modoc sucker from an endangered species to a threatened species and the objectives to remove the Modoc sucker from the List of Endangered and Threatened Wildlife, and we discussed progress towards meeting the objectives. Please see the February 13, 2014, proposed rule for a detailed discussion of the downlisting and delisting objectives and how they apply to the status of the Modoc sucker. The objectives are summarized below.

#### Downlisting Objectives:

*Downlisting objective 1: Maintain the integrity of extant habitats and prevent the invasion of Sacramento suckers into isolated stream reaches of the Turner-Hulbert-Washington Creek system and upper Johnson Creek.* The intent of meeting this objective was to halt the threat of further loss and degradation of habitat (Factor A) and to address

the threat of genetic introgression from hybridization with Sacramento sucker (Factor E).

*Downlisting objective 2: Restore and maintain the quality of aquatic habitat conditions within these watersheds and thereby increase their carrying capacity for Modoc suckers.* The intent of this objective was to further address habitat loss and degradation (Factor A) through active restoration, with the ultimate goal to allow the habitat to support an increase in population numbers.

*Downlisting objective 3: Secure populations of Modoc sucker have been maintained in these creeks for 3 consecutive years.* The intent of this objective was to monitor Modoc sucker populations to ensure recruitment had occurred and is based on the life history of Modoc suckers, in which individuals mature at age 2+ years.

Delisting Objectives:

*Delisting objective 1: The remaining suitable, but presently unoccupied, stream reaches within Turner-Hulbert Creek-Washington Creek and Rush-Johnson Creek drainages must be renovated and restored to Modoc sucker.* The intent of this objective was to further address habitat loss and degradation (Factor A) through active restoration, as well as to increase population sizes and resiliency.

*Delisting objective 2: Secure populations of Modoc suckers must be reestablished in at least two other streams outside of the above drainages, but within the historical*

*range*. The intent of this objective was to increase both habitat available and the number of populations, thereby increasing redundancy of the Modoc sucker populations.

*Delisting objective 3: All populations must have sustained themselves through a climactic cycle that includes drought and flood events.* The intent of this objective was to determine if Modoc suckers have responded positively to habitat protection and restoration, and have a sufficient number of populations and individuals to withstand and recover from environmental variability and stochastic events.

Since the time of listing, actions have been taken to maintain or improve Modoc sucker habitat within Turner Creek, Hulbert Creek, Washington Creek, and Johnson Creek in support of downlisting objectives 1 and 2. The Service and partners have implemented projects and management that maintain the integrity of extant habitat (downlisting objective 1) and restore and maintain the quality of habitat (downlisting objective 2) via effective stabilization of stream banks, fencing to exclude livestock grazing in riparian areas, restoration of riparian vegetation, and increased instream habitat. On public lands, 1.5 miles (mi) (2.4 kilometers (km)) of Washington Creek, 0.2 mi (0.3 km) of Hulbert Creek, 0.5 mi (0.8 km) of Coffee Mill Creek, and approximately 1.5 mi (2.4 km) of Turner Creek have been fenced to protect riparian habitat (Reid 2008a, p. 85; M. Yamagiwa, USFS, personal communication). Additionally, since the Modoc sucker was listed in 1985, fencing has been constructed to exclude cattle on Rush Creek and Johnson Creek below Higgins Flat (Modoc National Forest). Fencing led to immediately protecting extant habitat (immediate, near-term), and allowed habitat to



recover. This improved the quality and carrying capacity in the long term, thus addressing downlisting objectives 1 and 2. Extensive landowner outreach by the Service, USFS, and State agencies (CDFW, Oregon Department of Fish and Wildlife (ODFW)), and improved livestock grazing management practices in Modoc and Lassen Counties, have also resulted in improved protection of riparian corridors on private lands in the Turner and Ash Creek sub-basins. Protection of riparian habitat by excluding cattle and by improving livestock grazing management practices on both public and private lands has resulted in improved habitat conditions along these streams as a result of reduced erosion and improved vegetative and hydrologic characteristics (Reid 2008a, pp. 41, 85–86).

Active habitat restoration (downlisting objective 2) has been implemented in many locations throughout the species' range since the species was listed. Restoration on the Modoc National Forest has led to improved habitat conditions in riparian areas along many of the streams occupied by Modoc suckers. Willows have been planted along portions of streams occupied by Modoc suckers in the Turner Creek and Ash Creek sub-basins to stabilize streambanks and provide shading and cover (Reid 2008a, pp. 85–86; USFS 2008, p. 16). As a result of riparian habitat improvements and improved livestock grazing management practices, channel widths have narrowed and created deeper habitat preferred by Modoc suckers (USFS 2008, p. 16). Other habitat restoration activities include juniper revetment (the use of cut juniper trees to stabilize streambanks), creation and expansion of pool habitat, placement of boulders within streams to provide cover and shade, and restoration of channel headcuts (areas of deep erosion) to prevent further

downcutting of channels (Reid 2008a, pp. 85–86; USFS 2008, p. 16).

Habitat conditions in designated critical habitat and other occupied streams have steadily improved since listing and have sustained populations of Modoc suckers for at least 25 years, although recent habitat surveys indicate erosion and sedimentation continue to be a problem along lower Turner Creek. However, this degraded reach amounts to only 2.4 percent (1.01 mi (1.63 km)) of the total length (42.5 mi (68.4 km)) of streams occupied by Modoc sucker. Land management practices employed on public and private lands since the early 1980s are expected to continue, or improve, thereby maintaining stable to upward habitat trends. Thus, we have determined that the integrity of extant habitat has been maintained (part of downlisting objective 1) and the quality of habitat has been restored and maintained through restoration efforts (downlisting objective 2), and we conclude that these portions of the downlisting objectives have been met.

While part of downlisting objective 1 was to prevent invasion of Sacramento sucker, further research into the magnitude and consequences of genetic introgression with Sacramento suckers has led us to conclude that this part of the objective is no longer relevant. Observed levels of genetic introgression by Sacramento suckers in streams dominated by Modoc suckers are low (Smith *et al.* 2011, pp. 79–83), even when there are no physical barriers between the two species (Topinka 2006, pp. 64–65). This suggests that either ecological differences, selective pressures, or other natural reproductive-isolating mechanisms are sufficient to maintain the integrity of the species, even after

more than a century of habitat alteration by human activities. Currently, only Ash Creek exhibits a considerable degree of introgression. Scientists who have studied suckers in western North America consider that, throughout their evolutionary history, hybridization among sympatric native fishes is not unusual and may actually provide an adaptive advantage (Dowling and Secor 1997, pp. 612–613; Dowling 2005, p. 10; Topinka 2006, p. 73; Tranah and May 2006, p. 313). Reexamination of information on natural barriers, information on morphological characters, and new genetic information that was unavailable at the time of listing indicates that hybridization is not a threat to the Modoc sucker and may be part of its natural evolutionary history. Thus, because of the new information that has become available since the time of listing, we have determined this portion of the downlisting criterion (to prevent the invasion of Sacramento suckers) is not a valid concern for the conservation of the species and no longer needs to be met for Modoc sucker recovery.

Several estimates of population size of Modoc suckers in Turner Creek, Hulbert Creek, Washington Creek, and Johnson Creek have been completed since the 1970s, and found that Modoc sucker populations have been maintained in the Turner-Hulbert-Washington Creek system and upper Johnson Creek for 3 consecutive years (downlisting objective 3). Modoc suckers appear broadly distributed throughout suitable habitat in these streams. Although the observations during each survey may not be directly comparable due to differences in sampling methods, there does not appear to be any major changes in observations of these stream populations over time. Observations of Modoc suckers in Hulbert Creek and Johnson Creek prior to 2008 appear to be greater

than observations made in 2008 and 2012. However, this may be explained by differences in survey methods, inclusion of young-of-the-year suckers in earlier counts, and the fact that some numbers reported are population estimates rather than counts of individuals. Although population monitoring has not been conducted on an annual basis, sucker surveys conducted in 2008 and 2012 show that Modoc sucker populations have been maintained, and are still well-established, in Turner Creek, Washington Creek, Hulbert Creek, and Johnson Creek—as well as in each of the other streams known to be occupied at the time of listing—more than 25 years after listing. Thus, we have determined that populations of Modoc sucker have demonstrated persistence, have had successful recruitment (given that individuals mature at 2+ years), and remain stable over this timeframe. As a result we conclude that downlisting objective 3 has been met.

At the time of listing in 1985, it was estimated that Modoc suckers occupied 2.0 mi (3.2 km) of habitat in Turner Creek, 0.8 mi (1.3 km) of habitat in Hulbert Creek, 0.5 mi (0.8 km) of habitat in Washington Creek, 4.6 mi (7.4 km) in Rush Creek, and 1.2 mi (1.9 km) of habitat in Johnson Creek (Reid 2008a, p. 25) (50 FR 24526). Since the time of listing, Reid (2008a, p. 25) estimated that there was 5.5 mi (8.9 km) of available habitat in Turner Creek, 3.0 mi (4.8 km) in Hulbert Creek, 4.1 mi (6.6 km) in Washington Creek, 4.6 mi (7.4 km) in Rush Creek, and 2.7 mi (4.3 km) in Johnson Creek. Habitat conditions along Turner Creek, Hulbert Creek, Washington Creek, and Johnson Creek have improved since the time of listing. Modoc suckers currently occupy all available habitats within Turner Creek, Hulbert Creek, Rush Creek, and Johnson Creek; Modoc suckers occupy 3.4 mi (5.5 km) of the available habitat in Washington Creek (Reid

2008a, p. 25). Therefore, we have determined that delisting objective 1, restoring Modoc suckers to unoccupied habitat, has been met.

The 1992 Recovery Plan stated that additional populations were needed to provide population redundancy (delisting objective 2). New information indicates the presence of Modoc sucker populations in four streams that were not known to be occupied at the time of listing (Garden Gulch Creek in the Turner Creek sub-basin; and Thomas Creek, an unnamed tributary to Thomas Creek, and Cox Creek in the Goose Lake sub-basin). In addition, in 1987, CDFW transplanted Modoc suckers from Washington Creek to Coffee Mill Creek to establish an additional population in the Turner Creek sub-basin (CDFW 1986, p. 11). In those four populations, Modoc suckers appear to be well-established and relatively abundant; spawning adult and juvenile suckers have been consistently observed there during visual surveys (Reid 2009, p. 25). Therefore, we have determined that the intent of delisting objective 2 has been met by the discovery of Modoc sucker populations in additional locations and the establishment of one population.

The northwestern corner of the Great Basin where the Modoc sucker occurs is naturally subject to extended droughts, during which even the larger water bodies such as Goose Lake have dried up (Laird 1971, pp. 57–58). Regional droughts have occurred every 10 to 20 years in the last century (Reid 2008a, pp. 43–44). Collections of Modoc suckers from Rush Creek and Thomas Creek near the end of the “dustbowl” drought of the 1920s to 1930s (Hubbs 1934, p. 1; Reid 2008a, p. 79) indicate that the species was

able to persist in those streams even through a prolonged and severe drought. Modoc suckers have persisted throughout the species' historical range since the time it was listed in 1985, even though the region has experienced several pronounced droughts as well as heavy-precipitation, high-water years (for example, 2011), indicating that the species is at least somewhat resilient to weather and hydrologic fluctuations. Therefore, we have determined that delisting objective 3 has been met.

The 1992 Recovery Plan was based on the best scientific and commercial information available at the time. In evaluating the extent to which recovery objectives have been met, we must also assess new information that has become available since the species was listed and the 1992 Recovery Plan adopted. As noted above, research and new information since the time of listing and the completion of the 1992 Recovery Plan indicate that hybridization and introgression with Sacramento sucker is not a substantial threat to Modoc suckers. Additionally, Modoc suckers were found occupying areas they were not known to occupy at the time of listing. This new information alters the extent to which the recovery objectives related to hybridization and establishing new populations need to be met. In the case of hybridization and genetic introgression, we find that this objective is no longer relevant given the lack of threat to the species. With regard to the objective to establish new populations, we find that the discovery of additional populations has substantially met the intent of the objective to provide for population redundancy so that reestablishing two additional populations is no longer needed.

Additionally, we have assessed whether the 1992 Recovery Plan adequately

addresses all the factors affecting the species. The recovery objectives did not directly address predation by brown trout (*Salmo trutta*) and other nonnative fish or the point at which that threat would be ameliorated, although actions to address these threats were included in the plan. Since the time of listing, additional predatory nonnative fish have been recorded in streams containing Modoc suckers. Actions to address nonnative predatory species and an assessment of their impact are discussed below. While not specific to predatory nonnative fish, attainment of delisting objective 3, indicating that Modoc sucker populations have sustained themselves since listing in 1985, provides some indication that nonnative predatory fish are no longer a serious threat to the species' persistence. Effects of climate change is an additional threat identified since listing and preparation of the 1992 Recovery Plan. All threats, including those identified since listing and preparation of the 1992 Recovery Plan, are discussed further later in this rule. Based on our analysis of the best available information, we conclude that the downlisting and delisting objectives have been substantially met. Additional threats not directly addressed in the recovery objectives are discussed below. Additional information on recovery and the 1992 Recovery Plan's implementation is described in the "Recovery" section of the Species Report (Service 2015a, pp. 30–33).

### **Summary of Factors Affecting the Species**

Section 4 of the Act and its implementing regulations (50 CFR part 424) set forth the procedures for listing species, reclassifying species, or removing species from listed status. "Species" is defined by the Act as including any species or subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or

wildlife which interbreeds when mature (16 U.S.C. 1532(16)). A species may be determined to be an endangered or threatened species because of any one or a combination of the five factors described in section 4(a)(1) of the Act: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or human-made factors affecting its continued existence. A species may be reclassified or delisted on the same basis.

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

A species is an "endangered species" for purposes of the Act if it is in danger of extinction throughout all or a significant portion of its range and is a "threatened species" if it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The Act does not define the term "foreseeable future." For the purposes of this rule, we define the "foreseeable future" to be the extent



to which, given the amount and substance of available data, we can anticipate events or effects, or reliably extrapolate threat trends, such that we reasonably believe that reliable predictions can be made concerning the future as it relates to the status of Modoc sucker. Specifically, for Modoc sucker, we consider two factors: the management of threats and the response of the species to management. First, as described below, the threats to the species have been successfully ameliorated, largely due to management plans that are currently in place, being fully implemented, expected to stay in place, and expected to successfully continue to control potential threats (USFS 1989, entire; USFS 1991, entire). Management plans that consider natural resources are required by law for all Federal lands on which Modoc sucker occurs, which encompass greater than 50 percent of the species' range. Management plans are required to be in effect at all times and to be in compliance with various Federal regulations. Additionally, efforts to promote conservation of Modoc sucker habitat on private lands have been successful and are expected to continue into the future. Second, the Modoc sucker has demonstrated a quick positive response to management over the past 28 years since the species was listed; based on this, we anticipate being able to detect the species' response to any changes in the management that may occur because of a plan amendment. Therefore, in consideration of Modoc sucker's positive response to management and our partners' commitment to continued management, as we describe below, we do not foresee that management practices will change, and we anticipate that threats to the Modoc sucker will remain ameliorated into the foreseeable future.

The word "range" in the significant portion of its range phrase refers to the range

in which the species currently exists. For the purposes of this analysis, we first evaluate the status of the species throughout all its range, then consider whether the species is in danger of extinction or likely to become so in any significant portion of its range.

At the time of listing, the primary threats to Modoc sucker were from habitat degradation and loss due to activities (such as overgrazing by cattle) that cause erosion and siltation, and elimination of natural barriers that resulted in loss of genetic integrity of the species due to hybridization with Sacramento suckers. Predation by the nonnative brown trout was also identified as a threat to Modoc sucker.

A thorough analysis and discussion of the current status of the Modoc sucker and stressors faced by the species is detailed in the Species Report (Service 2015a, entire). The following sections provide a summary of the past, current, and potential future threats impacting the Modoc sucker. These threats include activities (such as overgrazing) that cause erosion and siltation (Factor A); elimination of natural barriers (Factor A); effects of climate change and drought (Factor A); predation by nonnative species (Factors C); and hybridization and genetic introgression (infiltration of genes of another species) (Factor E).

### *Erosion and Cattle Grazing*

The 1985 listing rule (50 FR 24526; June 11, 1985) stated that activities (such as overgrazing) that cause a reduction in riparian vegetation, which then leads to stream

erosion, siltation, and incision, were a threat to the species. An increase in silt from eroding banks may fill in the preferred pool habitat of Modoc suckers and can cover gravel substrate used for spawning (50 FR 24526, June 11, 1985; Moyle 2002, p. 190). Sediment introduced into streams can adversely affect fish populations by inducing embryo mortality, affecting primary productivity, and reducing available habitat for macroinvertebrates that Modoc suckers feed upon (Moyle 2002, p. 191). However, land and resource management, as guided through regulations and policies, can effectively reduce or control threats to Modoc sucker.

#### Federal Management

The National Forest Management Act (NFMA; 16 U.S.C. 1600 et seq.) and regulations and policies implementing the NFMA are the main regulatory mechanisms that guide land management on the Fremont-Winema and Modoc National Forests, which contain about 51 percent of the Modoc sucker's range. Since listing, the Fremont-Winema National Forest (USFS 1989, entire) and Modoc National Forest (USFS 1991, entire) have each addressed the Modoc sucker and its habitat in their resource management plans. These plans are required by NFMA and the Federal Land Policy and Management Act of 1976 (FLPMA; 43 U.S.C. 1701 et seq.). The NFMA requires revision of the plans every 15 years; however, plans may be amended or revised as needed. Management plans are required to be in effect at all times (in other words, if the revision does not occur, the previous plan remains in effect) and to be in compliance with various Federal regulations. The plans direct these national forests to maintain or

increase the status of populations of federally endangered or threatened species and their habitats. In addition, these plans guide riparian management with a goal of restoring and maintaining aquatic and riparian ecosystems to their desired management potential (USFS 1989, Appendix p. 86; USFS 1991, pp. 4–26, Appendix pp. M-1–M-2).

Management direction for grazing on Forest-managed lands is provided through allotment management plans and permits, which stipulate various grazing strategies that will minimize adverse effects to the watershed and listed species. The allotment management plans outline grazing management goals that dictate rangeland management should maintain productive riparian habitat for endangered, threatened, and sensitive species (USFS 1995, p. 1). These grazing permits are valid for 10 years, but operating instructions for these permits are issued on an annual basis. Also, as Federal agencies, the Fremont-Winema and Modoc National Forests comply with the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.) process when evaluating potential land-disturbing projects or changes in National Forest management. Federal agency compliance with NEPA allows the public to comment on Federal actions that may impact the natural environment and thus allow for, in some circumstances, implementation of those actions that may have less environmental impact.

#### State and Private Land Management

In California, the California Fish and Game Code affords some protection to stream habitats for all perennial, intermittent, and ephemeral rivers and streams by

minimizing impacts. In Oregon, the Oregon Department of Land Conservation and Development requires local land use planning ordinances to protect natural resources, including riparian and wetland habitats. In addition to State protections, extensive landowner outreach and improved grazing management practices in Modoc and Lassen Counties have also resulted in improved protection of riparian corridors on private lands.

Improved livestock grazing management practices on Federal, State, and private lands as a result of Federal, State, and private landowner management efforts have greatly reduced impacts to Modoc sucker habitat from poor livestock grazing practices since the Modoc sucker's listing in 1985. Since listing, some of the Modoc sucker streams on public and private land have been fenced to exclude or actively manage livestock grazing for the benefit of Modoc sucker conservation (Reid 2008a, pp. 34–36, 85). Riparian fencing along occupied streams to exclude cattle during the past 25 years has resulted in continued improvements in riparian vegetative corridors, in-stream cover, and channel morphology.

In 2012, the most recent habitat assessment, the Klamath Falls Fish and Wildlife Office completed habitat surveys in Washington Creek, Garden Gulch Creek, Coffee Mill Creek, Dutch Flat Creek, Turner Creek, Hulbert Creek, and Johnson Creek within the Ash Creek and Turner Creek sub-basins. Data collected indicated that the average percent bank erosion was low (less than 40 percent) at Garden Gulch Creek, Coffee Mill Creek, Hulbert Creek, Washington Creek, and Johnson Creek. Bank erosion appeared moderate at the Dutch Flat Creek site (49 percent) and was highest at the Turner Creek site (75 percent). Bank erosion along these creeks has resulted in an introduction of silt,

which can cover gravel substrate used for spawning by Modoc suckers (Moyle 2002, p. 191). However, these two degraded reaches (Dutch Flat Creek and Turner Creek) combined amount to only 4.1 percent (1.76 mi/42.5 mi) of the Modoc sucker's total occupied habitat. These results indicate that management efforts have substantially reduced erosion throughout the range of the species, with the exception of two sites comprising a small percentage of the species' range.

Land management practices employed on public and private lands since the early 1980s are expected to continue, or improve, thereby maintaining upward habitat trends as documented by survey data. On public lands, the resource management plans are required by NFMA and FLPMA, and continue to be in effect until revised. Continued commitment to protection of resources, including the Modoc sucker and riparian areas, in future revisions is expected. As an example, within the Fremont-Winema National Forest, Thomas Creek is a Priority Watershed under their Watershed Condition Framework, and Fremont-Winema National Forest is currently working on a watershed restoration action plan. The action plan will identify individual projects such as fish passage, instream restoration, and road treatments/closures. The California Fish and Game Code affords some protection to stream habitats for all perennial, intermittent, and ephemeral rivers and streams in California. The Oregon Department of Land Conservation and Development requires local land use planning ordinances to protect natural resources, including riparian and wetland habitats. There are no formalized agreements in place with private landowners that specifically establish protection of Modoc sucker habitat, although continued outreach and technical assistance, along with

other partnerships and management efforts, is expected to continue into the future (e.g., through the Service's Partners for Fish and Wildlife Program) that may result in benefits to Modoc sucker habitat.

Although the 2012 habitat surveys indicate that livestock grazing still results in stream bank erosion along a small percentage of streams occupied by Modoc suckers, these surveys and the 2008 and 2012 fish surveys indicate that livestock grazing management has improved greatly, and as a result of reduced impact to habitat, there has been no reduction in the distribution of Modoc suckers. Management plans that consider natural resources are required by law for all Federal lands on which Modoc sucker occurs. Management plans are required to be in effect at all times (in other words, if the revision does not occur, the previous plan remains in effect) and to be in compliance with various Federal regulations. Further, several organizations have partnered with private landowners to complete habitat restoration on the private land parcels to benefit fish passage and riparian habitat. Therefore, based on the best available information and expectation that current management practices will continue into the future, we conclude that livestock grazing and erosion do not constitute substantial threats to the Modoc sucker now and are not expected to in the future.

#### *Elimination of Natural Barriers*

The 1985 listing rule (50 FR 24526; June 11, 1985) stated that natural passage barriers in streams occupied by Modoc suckers had been eliminated by human activities,

allowing hybridization between the Modoc and Sacramento suckers (see *Hybridization and Genetic Introgression*, below). The lack of barriers was also thought to provide exposure to nonnative predatory fishes (see *Predation by Nonnative Species*, below). However, surveys completed since the time of listing reveal no evidence of historical natural barriers that would have acted as a physical barriers to fish movement. This is particularly true during higher springtime flows, when Sacramento suckers make their upstream spawning migrations (Moyle 2002, p. 187). The source of this misunderstanding appears to have been a purely conjectural discussion by Moyle and Marciochi (1975, p. 559) that was subsequently accepted without validation, and Moyle makes no mention of it in his most recent account of Modoc sucker status (Moyle 2002, pp. 190–191). Since our current understanding is that the elimination of passage barriers did not occur, we conclude that elimination of passage barriers was incorrectly identified as a threat, and we no longer consider it a threat to Modoc sucker.

#### *Predation by Nonnative Species*

The 1985 listing rule (50 FR 24526; June 11, 1985) identified predation by nonnative brown trout as a threat to Modoc suckers. Since the time of listing, the following additional predatory nonnative fish species have been recorded in streams containing Modoc suckers (Service 2009): largemouth bass, sunfish (green and bluegill), and brown bullheads. Two of the three known sub-basins with Modoc suckers contain introduced predatory fishes. The Ash Creek sub-basin contains brown trout and possibly largemouth bass in downstream reaches of Ash Creek. The Turner Creek sub-basin



contains a number of warm-water predatory fish. The Goose Lake sub-basin was previously stocked with brook trout (*Salvelinus fontinalis*), and they still occur in the Cottonwood Creek drainage, a tributary to Goose Lake. However, we do not consider the brook trout to be a concern at this time, as they do not coexist with Modoc sucker.

The Ash Creek sub-basin contains brown trout, which have co-existed with Modoc suckers for over 70 years, but may suppress local native fish populations in small streams. In 2009 and 2010, a substantial eradication effort in Johnson Creek, within the Ash Creek sub-basin, removed most brown trout from occupied Modoc sucker habitat (Reid 2010, p. 2). There are no sources of largemouth bass upstream of Modoc sucker populations in the Ash Creek basin, although they may be present downstream in warmer, low-gradient reaches of Ash Creek proper.

The Turner Creek sub-basin contains largemouth bass, sunfish (green and bluegill), and brown bullheads, of which only the bass are considered a significant predator on Modoc suckers. Bass do not appear to reproduce or establish stable populations in Turner Creek because the creek's cool-water habitat is generally unsuitable for supporting largemouth bass populations. Since 2005, the Service has supported a successful program of active management for nonnative fishes in the Turner Creek basin, targeting bass and sunfishes with selective angling and hand-removal methods that do not adversely impact native fish populations (Reid 2008b, p. 1).

Redband trout (*Oncorhynchus mykiss newberri*), the only native potential predator

of Modoc sucker, also occupies upper Thomas Creek, but there are no nonnative fishes there (Scheerer *et al.* 2010, pp. 278, 281). The upper reaches of Thomas Creek occupied by Modoc suckers are unlikely to be invaded by nonnative fishes given the lack of upstream source populations and presence of a natural waterfall barrier in the lowest reach.

While Modoc suckers may be negatively impacted by introduced predatory fishes, such as brown trout and largemouth bass, they have persisted in the presence of nonnative predators, and populations have remained relatively stable in the Ash Creek and Turner Creek sub-basins (the two sub-basins with documented nonnative predatory fish), prior to and since the time of listing. The separation of the three known basins containing Modoc suckers further reduces the probability that a new or existing nonnative predator would impact all three basins simultaneously. In some instances, natural constraints, such as cool-water habitat, limit the distribution of nonnative predators. In other cases, natural or manmade barriers limit potential introductions, as do policies and regulations within Oregon and California. State regulations and fish stocking policies, in both California and Oregon, prohibit transfer of fish from one water body to another. Regulations prohibiting transfer of fish between water bodies discourage the spread of predatory fish species such as brown trout and largemouth bass throughout the Modoc sucker's range. In addition, CDFW has discontinued stocking of the predatory brown trout into streams in the Pit River basin, and the ODFW does not stock brown trout in the Goose Lake sub-basin. Based on current policies and regulations, we do not expect additional predatory fish to be introduced into Modoc sucker habitat in the future.

Therefore, based on the best available information, we conclude that introduced predators do not constitute a substantial threat to the Modoc sucker now or in the future.

### *Climate Change and Drought*

Our analyses under the Act include consideration of ongoing and projected changes in climate. The terms “climate” and “climate change” are defined by the Intergovernmental Panel on Climate Change (IPCC). The term “climate” refers to the mean and variability of different types of weather conditions over time, with 30 years being a typical period for such measurements (IPCC 2013, p. 1450). The term “climate change” thus refers to a change in the mean or variability of one or more measures of climate (for example, temperature or precipitation) that persists for an extended period, whether the change is due to natural variability or human activity (IPCC 2013, p. 1450). Various changes in climate may have direct or indirect effects on species. These effects may be positive, neutral, or negative, and they may change over time, depending on the species and other relevant considerations, such as threats in combination and interactions of climate with other variables (for example, habitat fragmentation) (IPCC 2014, pp. 4–11). In our analyses, we use our expert judgment to weigh relevant information, including uncertainty, in our consideration of various aspects of climate change.

The 1985 listing rule did not identify the effects of drought or climate change as threats to the continued existence of the Modoc sucker. However, the northwestern corner of the Great Basin is naturally subject to extended droughts, during which streams

and even the larger water bodies such as Goose Lake have dried up (Laird 1971, pp. 57–58). Regional droughts have occurred every 10 to 20 years in the last century, and Goose Lake went dry as recently as 1992 and 2010 (Reid 2008a, pp. 43–44; R. Larson, KFFWO, personal communication). We have no records of how frequently Modoc sucker streams went dry. Some reaches of occupied streams have been observed to dry up (or flow goes subsurface through the gravel instead of over the surface) nearly every summer under current climatic conditions (Reid 2008, p. 42), indicating that headwater reaches did stop flowing. In extreme droughts, the suckers may have withdrawn to permanent main-stem streams, such as Rush, Ash, and Turner Creeks, and later recolonized the tributaries. Suckers also take refuge in natural spring-fed headwater reaches and in deeper, headwater pools that receive subsurface flow even when most of the stream channel is dry (Reid 2008, p. 43). Collections of Modoc suckers from Rush Creek and Thomas Creek near the end of the “dustbowl” drought (Hubbs 1934, p. 1; Reid 2008a, p. 79) and the continued persistence of Modoc suckers throughout their known range through substantial local drought years since 1985, including up to the present, demonstrate the resiliency of Modoc sucker populations to drought.

Human-induced climate change could exacerbate low-flow conditions in Modoc sucker habitat during future droughts. A warming trend in the mountains of western North America is expected to decrease snowpack, hasten spring runoff, reduce summer stream flows, and increase summer water temperatures (Poff *et al.* 2002, p. 11; Koopman *et al.* 2009, p. 3; PRBO Conservation Science 2011, p. 15). Lower flows as a result of smaller snowpack could reduce sucker habitat, which might adversely affect Modoc

sucker reproduction and survival. Warmer water temperatures could lead to physiological stress and could also benefit nonnative fishes that prey on or compete with Modoc suckers. Increases in the number and size of forest fires could also result from climate change (Westerling *et al.* 2006, p. 940) and could adversely affect watershed function resulting in faster runoff, lower base flows during the summer and fall, and increased sedimentation rates. It is possible that lower flows may result in increased groundwater withdrawal for agricultural purposes and thus reduced water availability in certain stream reaches occupied by Modoc suckers. While these are all possible scenarios, we have no data on which to predict the likelihood or magnitude of these outcomes. However, improved habitat conditions may also offset some of the potential effects of climate change. Increased riparian vegetation, increased instream cover, and improved channel morphology (including deeper pools) may help to moderate water temperatures, reduce erosion and sedimentation, and improve water retention for refugia during droughts.

In summary, droughts may be a concern because they could likely constrict the amount of available habitat and reduce access to spawning habitat. However, the species has not declined in distribution since the time of listing in 1985, even though during this time the region where the species exists has experienced several pronounced droughts when total annual precipitation was approximately half of the long-term average (Western Regional Climate Center, <http://www.wrcc.dri.edu/cgi-bin/cliMONtpre.pl?ca0161>, accessed December 20, 2013). Because we are unable at this time to predict how climate change may exacerbate the effects of drought within the

Modoc sucker's range, we cannot make meaningful projections on how the species may react to climate change or how its habitat may be affected. Also, although we cannot predict future climatic conditions accurately, the persistence of Modoc sucker across its range through the substantial droughts of the last century suggests that the species is resilient to drought and reduced water availability. In addition, improved habitat conditions may increase the resiliency of both the Modoc sucker and its habitat to the effects of climate change. Therefore, based on the best available information, we conclude that the effects of droughts and climate change, while likely affecting Modoc sucker populations, do not constitute substantial threats to Modoc sucker now and are not expected to in the future.

#### *Hybridization and Genetic Introgression*

The 1985 listing rule (50 FR 24526; June 11, 1985) identified hybridization with the Sacramento sucker as a threat to the Modoc sucker. Hybridization can be cause for concern in a species with restricted distribution, particularly when a closely related, nonnative species is introduced into its range, which can lead to loss of genetic integrity or even extinction (Rhymer and Simberloff 1996, p. 83). At the time of listing, it was assumed that hybridization between Modoc suckers and Sacramento suckers had been prevented in the past by the presence of natural physical barriers, but that the loss of these stream barriers was allowing interaction and hybridization between the two species (see *Elimination of Natural Barriers*, above). However, the assumption that extensive hybridization was occurring was based solely on the two species occurring in the same

streams, and the identification of a few specimens exhibiting what were thought to be intermediate morphological characters. At the time of listing in 1985, genetic and complete morphological information to assess this assumption were not available.

The morphological evidence for hybridization in the 1985 listing rule was based on a limited understanding of morphological variation in Modoc suckers and Sacramento suckers, derived from the small number of specimens available at that time. The actual number of specimens identified as apparent hybrids by earlier authors was very small, and many of these specimens came from streams without established Modoc sucker populations. Subsequent evaluation of variability in the two species was based on a larger number of specimens. It showed that the overlapping characteristics (primarily lateral line and dorsal ray counts) that had been interpreted by earlier authors as evidence of hybridization are actually part of the natural meristic (involving counts of body parts such as fins and scales) range for the two species. As a result, this variability is no longer thought to be the result of genetic introgression between the two species (Kettrata 2001, pp. 52–53).

In 1999, we initiated a study to examine the genetics of suckers in the Pit River basin and determine the extent and role of hybridization between the Modoc and Sacramento suckers using both nuclear and mitochondrial genes (Palmerston *et al.* 2001, p. 2; Wagman and Markle 2000, p. 2; Dowling 2005, p. 3; Topinka 2006, p. 50). The two species are genetically similar, suggesting that they are relatively recently differentiated or have a history of introgression throughout their ranges that has obscured their

differences (Dowling 2005, p. 9; Topinka 2006, p. 65). Although the available evidence cannot differentiate between the two hypotheses, the genetic similarity in all three sub-basins, including those populations shown to be free of introgression based on species-specific genetic markers (Topinka 2006, pp. 64–65), suggests that introgression has occurred on a broad temporal and geographic scale and is not a localized or recent phenomenon. Consequently, the genetic data suggest that introgression is natural and is not caused or measurably affected by human activities.

In a later study, Topinka (2006, p. 50) analyzed nuclear DNA from each of the two species and identified species-specific markers indicating low levels of introgression by Sacramento sucker alleles into most Modoc sucker populations. However, there was no evidence of first generation hybrids, and it is not clear whether introgression occurred due to local hybridization or through immigration by individual Modoc suckers carrying Sacramento alleles from other areas where hybridization had occurred.

Scientists who have studied suckers in western North America consider that, throughout their evolutionary history, hybridization among sympatric native fishes is not unusual and may provide an adaptive advantage (Dowling and Secor 1997, pp. 612–613; Dowling 2005, p. 10; Topinka 2006, p. 73; Tranah and May 2006, p. 313). Further, despite any hybridization that has occurred in the past, the Modoc sucker maintains its morphological and ecological distinctiveness, even in populations showing low levels of introgression, and is clearly distinguishable in its morphological characteristics from the Sacramento sucker (Kettratad 2001, p. 3; Smith *et al.* 2011, pp. 79–83). The low levels



of observed introgression by Sacramento suckers in streams dominated by Modoc suckers, even when there are no physical barriers between the two species, suggests that ecological differences, selective pressures, or other natural reproductive-isolating mechanisms are sufficient to maintain the integrity of the species, even after more than a century of habitat alteration by human activities. Therefore, given the low levels of observed introgression in streams dominated by Modoc suckers, the lack of evidence of first-generation hybrids, the fact that Modoc suckers and Sacramento suckers are naturally sympatric, and the continued ecological and morphological integrity of Modoc sucker populations, we conclude that hybridization and genetic introgression do not constitute threats to the Modoc sucker now and are not expected to in the future.

#### *Overall Summary of Factors Affecting the Modoc Sucker*

Threats to the Modoc sucker that were considered in the 1985 listing rule (50 FR 24526; June 11, 1985) included habitat loss and degradation, hybridization with Sacramento sucker due to loss of natural barriers, and predation by nonnative brown trout. Climate change, drought, and predation by additional nonnative fish species are threats identified since listing. We summarize our evaluation of these threats below.

In our evaluation of the threat of habitat loss and degradation as a result of land management practices, we find that habitat conditions on both public and private lands have improved since the time of listing as a result of improved livestock grazing management practices and construction of fencing to exclude cattle from riparian areas

on several of the streams occupied by Modoc suckers. We expect habitat conditions to remain stable or improve. Although recent habitat surveys indicate erosion continues to be a problem along lower Turner Creek and in Dutch Flat Creek, these areas represent only 4.1 percent (1.76 mi/42.5 mi) of Modoc sucker's total occupied habitat. Habitat threats are addressed through multiple Federal and State regulations, including NFMA, California and Oregon State water regulations, and the California Fish and Game Code. Therefore, these impacts are not considered a substantial threat to the species.

We also evaluated whether several introduced nonnative fish species that could be potential predators may be a threat to Modoc suckers. Modoc suckers have coexisted with brown trout for more than 70 years in the Ash Creek sub-basin. For other species, we found that the overlap in distribution of largemouth bass and Modoc suckers is limited because bass are warm-water fish that occur in lower elevation reaches downstream of many of the reaches occupied by Modoc sucker, and reservoir outflows have been screened to reduce the risk of bass being flushed into streams occupied by Modoc sucker. Brook trout occur in a tributary of the Goose Lake sub-basin but do not overlap with the range of the species. Further, State regulations in both California and Oregon prohibit transfer of fish from one water body to another. Thus, introduced predators are not a significant risk to Modoc sucker populations.

We also evaluated new information regarding hybridization of Modoc sucker with Sacramento sucker. As discussed above, a greater understanding of the genetic relationships and natural gene flow between the Modoc sucker and Sacramento sucker

has reduced concerns over hybridization between the two naturally sympatric species.

Threats to the Modoc sucker that were considered in the 1985 listing rule, including habitat loss and degradation, hybridization with Sacramento sucker due to loss of natural barriers, and predation by nonnative brown trout, have been reduced or ameliorated, or are no longer considered to have been actual threats at the time of listing. Further, climate change and drought are not considered substantial threats.

Although none of the factors discussed above is having a major impact on Modoc sucker, a combination of factors could potentially have a greater effect. For example, effects of erosion on habitat resulting from poor livestock grazing management practices could worsen during periods of prolonged, severe drought when some water sources may dry up, resulting in greater pressure from cattle on the remaining available water sources, which would likely degrade Modoc sucker habitat. However, the impacts of livestock grazing on Modoc sucker habitat have been greatly reduced or eliminated by improved grazing management practices and management plans, which are not expected to change. Although the types, magnitude, or extent of cumulative impacts are difficult to predict, we are not aware of any combination of factors that has not already been addressed, or would not be addressed, through ongoing conservation measures. Based on this assessment of factors potentially impacting the species, we consider the Modoc sucker to have no substantial threats now or in the future (see “Summary of Factors Affecting the Species” section of the Species Report (Service 2015a, pp. 14–30)).

## **Summary of Comments and Recommendations**

In the proposed rule published on February 13, 2014 (79 FR 8656), and in the document reopening the comment period published on February 13, 2015 (80 FR 8053), in the **Federal Register**, we requested that all interested parties submit written comments on the proposal by April 14, 2014, and March 16, 2015, respectively. We also contacted appropriate Federal and State agencies, Tribal entities, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. A newspaper notice inviting general public comment was published in the Herald and News of Klamath Falls, Oregon. We did not receive any requests for a public hearing. All substantive information provided during comment periods has either been incorporated directly into this final determination or is addressed below.

### *Peer Reviewer Comments*

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinion from three knowledgeable individuals with scientific expertise that included familiarity with the Modoc sucker and its habitat, biological needs, and threats. We received responses from all three of the peer reviewers.

We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding the status of the Modoc sucker. The peer reviewers generally concurred with our methods and conclusions, and provided additional information, clarifications, and suggestions to improve the final rule. This information

has been incorporated into the final rule or species report as appropriate. The peer reviewer comments are addressed in the following summary.

*Comments from Peer Reviewers*

(1) *Comment:* One peer reviewer noted the status of the Modoc sucker in Dutch Flat Creek (California) was not addressed adequately within the **Recovery and Recovery Plan Implementation** section of the proposed rule and provided additional information. In the downlisting and delisting objectives that were listed under the **Recovery and Recovery Plan Implementation** section of the proposed rule, the peer reviewer indicated that Dutch Flat Creek should be added to the text in several of the discussions of recovery objectives.

*Our Response:* We did not specifically include Dutch Flat Creek in our discussions of how each objective had been met because the objectives as written did not specifically include Dutch Flat Creek. While the proposed and final rules contain only a general summary discussion, our overall assessment of the species status and its progress toward recovery considered all streams occupied by the Modoc sucker, including those previously not known to be occupied. The Species Report includes Dutch Flat Creek in its assessment and contains numerous references to the status of Modoc suckers and their habitat in Dutch Flat Creek.

(2) *Comment:* One peer reviewer provided additional citations within the **Summary of Factors Affecting Species** section for amendments to the Forest Plans of the Fremont-Winema and Modoc National Forests. Both amendments provided habitat conservation measures within riparian areas, primarily by prescribing riparian conservation area widths.

*Our Response:* We appreciate the reviewer providing additional citations further supporting that the threats to the species have been successfully ameliorated. We incorporated this information into the revised Species Report (Service 2015a).

(3) *Comment:* One peer reviewer provided an additional reference that included additional information related to nonnative fish removal in the Turner Creek sub-basin.

*Our Response:* We appreciate the reviewer providing a citation with additional background information on nonnative fish removal from the Turner Creek sub-basin. We incorporated this information into the revised Species Report (Service 2015a).

(4) *Comment:* One peer reviewer noted that the statement that Modoc suckers are present in only 3.4 mi (5.5 km) of available habitat Washington Creek, citing Reid 2008a (Conservation Review), is somewhat inaccurate. It is true that they were encountered in only 3.4 mi (5.5 km) during surveys carried out in July 2008, when higher reaches were naturally dry; however, as mentioned in the same survey report, young of the year (indicative of local spawning) have been found (2006) as far upstream as near Loveness

Road, the upper limit of potential habitat, earlier in the year when the stream channel still has water, indicating that Modoc suckers are actually using the entire reach.

*Our Response:* The Service has noted this comment and made corrections to the Species Report to reflect this clarification.

(5) *Comment:* Recent Oregon survey data by USFS (2013) were not included in the draft Species Report (Service 2013).

*Our Response:* We did not include data from 2013 in the draft Species Report (Service 2013) or proposed rule due to the required timelines involved with preparation of the proposed rule. The information did not change the distribution, but reaffirmed the presence of the Modoc sucker in upper Thomas Creek, above Cox Flat. We reviewed these data and determined that they indicate no change in the status of the species from information provided in the proposed rule. We included the information in the revised Species Report (Service 2015a).

(6) *Comment:* One peer reviewer stated that the proposed rule suggests that continued grazing is causing erosion on Turner Creek and represents an adverse effect on sucker populations and that there no scientific evidence provided to support this conclusion. This reach has steadily improved in condition over the last 15 years under current management. The down-cutting observed in the meadow is apparently a legacy effect from a major storm in the 1940s and 1950s, and the creek is slowly healing in a

steady upward trend, albeit less rapidly than it would without grazing. The reviewer also noted extreme downcutting in Dutch Flat is also a legacy effect (of ditching to dry out the meadow), but that erosion does still occur at failed points in the cattle fencing.

*Our Response:* We agree with the peer reviewer that erosion due to grazing effects on Modoc sucker habitat is generally a legacy effect from historic grazing practices. The Service has noted this comment and made corrections to the Species Report to reflect this clarification.

(7) *Comment:* An additional reference (Smith *et al.* 2011, pp. 72–84) was provided to support the conclusion under Factor E that hybridization between Modoc and Sacramento suckers is not a threat.

*Our Response:* We appreciate the reviewer providing a citation that further supports that hybridization between the Modoc sucker and the Sacramento sucker is not a threat to the Modoc sucker. We have incorporated this reference into the Species Report and this final rule.

#### *Comments from Federal Agencies*

(8) *Comment:* The USFS (Fremont-Winema National Forest) noted that the “dustbowl” drought was more than 80 years ago and the Goose Lake basin has changed since that time. There is more pressure on fish habitat now than there was 80 years ago,



so we cannot assume that the effects of drought conditions are the same now as they were back then.

*Our Response:* The northwestern corner of the Great Basin is naturally subject to extended droughts, during which streams and even the larger water bodies such as Goose Lake have dried up. The Service agrees droughts may be a concern because they could likely constrict the amount of available habitat and reduce access to spawning habitat. However, the species has not declined in distribution since the time of listing in 1985, even though the region where it exists has experienced several pronounced droughts (when total annual precipitation was approximately half of the long-term average) since then. Although the Service cannot predict future climatic conditions with certainty, the persistence of the Modoc sucker across its range through the substantial droughts of the last century suggests that the species is resilient to drought and reduced water availability. Additionally, while there is some uncertainty regarding how the Modoc sucker may respond to future droughts, continued monitoring and management through the post-delisting monitoring plan (Service 2015b) are designed to detect any unanticipated changes in the species' status and habitat conditions. We also expect continued monitoring and management through implementation of Federal and State management plans and through riparian restoration and management efforts on private lands.

(9) *Comment:* The USFS noted an incorrect citation for their management plan that has successfully ameliorated threats to the Modoc sucker for the Fremont-Winema National Forest. The correct citation for the Fremont National Forest Land and Resource

Management Plan should be: U.S Forest Service. 1989. Land and Resource Management Plan.

*Our Response:* The Service has noted this correction and has updated the references cited document supporting this rule to reflect the change.

(10) *Comment:* The Fremont-Winema National Forest noted the most significant USFS regulatory mechanism to successfully ameliorate threats to the Modoc sucker was the Inland Native Fish Strategy (InFish) amendment to the Fremont National Forest Land and Resource Management Plan. InFish was developed as an ecosystem-based, interim strategy designed to arrest the degradation of habitat and begin restoration of in-stream and riparian habitats on lands administered by the USFS in eastern Oregon.

*Our Response:* The Service has noted this comment and made changes to the Species Report to reflect this additional information.

(11) *Comment:* The Fremont-Winema National Forest noted that in the *Erosion and Cattle Grazing* discussion in the **Summary of Factors Affecting the Species** section in the proposed rule (79 FR 8656; February 13, 2014), the Service failed to mention work completed and proposed by the Lake County Umbrella Watershed Council to improve fish habitat throughout the Goose Lake sub-basin, including upper and lower Thomas Creek, and the historic work done by the Goose Lake fishes working group.

*Our Response:* We recognize that land management practices employed on public and private lands by a diverse group of entities are expected to continue, or improve, thereby maintaining upward instream and riparian habitat trends. We noted efforts of the Fremont-Winema National Forest to restore habitat as one example in the proposed rule. We now also acknowledge and include reference to such groups in the revised Species Report, to recognize that many groups (including private landowners and State agencies) have, and are continuing, to complete restoration for the benefit of Modoc sucker and other native fishes.

(12) *Comment:* The Fremont-Winema National Forest indicated in the *Predation by Nonnative Species* discussion in the **Summary of Factors Affecting the Species** section in the proposed rule (79 FR 8656; February 13, 2014) that what was described as a natural waterfall barrier at the downstream end of Modoc sucker distribution in Thomas Creek may be navigable by brook trout (*Salvelinus fontinalis*), and therefore Thomas Creek is susceptible to invasion of nonnative species that could prey on Modoc suckers.

*Our Response:* The Service has determined that the natural waterfall is likely a barrier to upstream movement by nonnative species, such as brook trout, as surveys since at least 2007 have not documented nonnative species upstream from the waterfall. Further, Sheerer *et al.* (2010) indicate no brook trout occur downstream of habitat occupied by Modoc sucker in Thomas Creek.

(13) *Comment:* The Fremont-Winema National Forest noted that brook trout had been stocked in the Goose Lake basin in the past and they still occur in the Cottonwood Creek drainage, a tributary to Goose Lake.

*Our Response:* The Service has noted this comment and made reference to this in the revised Species Report.

(14) *Comment:* In the *Climate Change and Drought* discussion of the **Summary of Factors Affecting the Species** section of the proposed rule, the Fremont-Winema National Forest noted there is a lack of data to support future impacts of climate change on the Modoc sucker, particularly without a baseline level of monitoring.

*Our Response:* As stated in the proposed rule (79 FR 8656; February 13, 2014), we cannot predict future climatic conditions with certainty or their effects on the Modoc sucker, but the persistence of the Modoc sucker across its range through the substantial droughts of the last century suggests that the species is resilient to drought and reduced water availability. Because we are unable at this time to predict how climate change will exacerbate the effects of drought within the Modoc sucker's range, we cannot make meaningful projections on how the species may react to climate change or how its habitat may be affected. However, we believe continued monitoring and management can detect any unanticipated changes in the species' status and habitat conditions.

*Comments from Tribes*

(15) *Comment:* The Pit River Tribe opposes the delisting of Modoc sucker because the delisting would allow the Pit River to continue to be degraded and polluted.

*Our Response:* The Modoc sucker occupies habitat in the Turner Creek and Ash Creek sub-basins in northeastern California, which are tributaries of the Pit River. However, the Modoc sucker does not occupy the mainstem Pit River. Therefore, delisting the Modoc sucker will not change activities in the Pit River. Moreover, we do not have direct regulatory authority over the water management within the Pit River. However, the California Fish and Game Code affords some protection to stream habitats for all perennial, intermittent, and ephemeral rivers and streams. Under the California Fish and Game Code, any person, State or local governmental agency, or public utility must notify CDFW prior to conducting activities that would divert or obstruct stream flow, use or alter streambed and stream bank materials, or dispose of debris that may enter streams (California Fish and Game Code section 1602). This section of the California Fish and Game Code provides some level of protection to the mainstem Pit River.

*Comments from States*

(16) *Comment:* Both the CDFW and ODFW responded in support of the proposed delisting of Modoc sucker.

*Our Response:* We appreciate the review and feedback provided by both State agencies.

*Public Comments*

(17) *Comment:* Three commenters were opposed to the delisting of the Modoc sucker, in part due to the perceived threat from drought.

*Our Response:* At the time of listing in 1985, the Service, CDFG, and USFS were in the process of developing an action plan for the recovery of the Modoc sucker. In 1992, the Service adopted this action plan as the recovery plan for the Modoc sucker. Three downlisting objectives and three delisting objectives were identified in the 1992 Recovery Plan, which included a delisting objective related to drought. Because we are unable at this time to predict to what extent climate change will exacerbate the effects of drought within the Modoc sucker's range, we cannot make meaningful projections on how the species may react to climate change or how its habitat may be affected. However, Modoc suckers have persisted throughout the species' historical range since the time the species was listed in 1985, even though the region has experienced several pronounced droughts, indicating that the species is at least somewhat resilient to weather and hydrologic fluctuations. Therefore, we have determined that this delisting objective has been met and that the best available information does not indicate that the current level of drought is a threat to the species.

**Determination**

An assessment of the need for a species' protection under the Act is based on whether a species is in danger of extinction or likely to become so because of any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. As required by section 4(a)(1) of the Act, we conducted a review of the status of this species and assessed the five factors to evaluate whether the Modoc sucker is in danger of extinction, or likely to become so throughout all of its range. We examined the best scientific and commercial information available regarding the past, present, and future threats faced by the species. We reviewed information presented in the 2011 petition, information available in our files and gathered through our 90-day finding in response to this petition, and other available published and unpublished information. We also consulted with species experts and land management staff with the USFS, CDFW, and ODFW, who are actively managing for the conservation of the Modoc sucker.

In considering what factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the exposure causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine how significant the threat is. If the threat is significant, it may drive, or contribute to, the risk of

extinction of the species such that the species warrants listing as endangered or threatened as those terms are defined by the Act. This determination does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could impact a species negatively is not sufficient to compel a finding that listing is appropriate; we require evidence that these factors are operative threats that act on the species to the point that the species meets the definition of an endangered species or threatened species under the Act.

Significant impacts at the time of listing (50 FR 24526; June 11, 1985) that could have resulted in the extirpation of all or parts of populations have been eliminated or reduced since listing. We conclude that the previously recognized impacts to Modoc sucker from the present or threatened destruction, modification, or curtailment of its habitat or range (specifically, erosion due to poor cattle grazing management) (Factor A); elimination of natural barriers (Factor A); predation by nonnative species (Factor C); hybridization or genetic introgression (specifically, from Sacramento sucker) (Factor E); and the effects of drought and climate change (Factor E) do not rise to a level of significance, such that the species is in danger of extinction throughout all its range now or in the foreseeable future.

As a result of the discovery of five populations not known at the time of listing and the documentation of the genetic integrity of populations considered in the 1985 listing rule that were believed to have been lost due to hybridization, the known range of



the Modoc sucker has increased, and it currently occupies its entire known historical range. Additionally, the distribution of occupied stream habitat for populations known at the time of listing has remained stable or expanded slightly since the time of listing, even though the region has experienced several droughts during this time period. Additionally, the relevant recovery objectives outlined in the 1992 Recovery Plan have been met, indicating sustainable populations exist throughout the species' range. Finally, our assessment of all potential stressors that may be impacting the species now or in the future did not reveal any significant threats to the species or its habitat. We have carefully assessed the best scientific and commercial data available and determined that Modoc sucker is no longer in danger of extinction throughout all of its range, nor is it likely to become so in the future.

#### *Significant Portion of the Range*

Having examined the status of Modoc sucker throughout all its range, we next examine whether the species is in danger of extinction, or likely to become so, in a significant portion of its range. Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so throughout all or a significant portion of its range. The Act defines “endangered species” as any species which is “in danger of extinction throughout all or a significant portion of its range,” and “threatened species” as any species which is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” The term “species” includes “any subspecies of fish or wildlife or plants, and

any distinct population segment [DPS] of any species of vertebrate fish or wildlife which interbreeds when mature.” We published a final policy interpreting the phrase “significant portion of its range” (SPR) (79 FR 37578; July 1, 2014). The final policy states that (1) if a species is found to be endangered or threatened throughout a significant portion of its range, the entire species is listed as an endangered species or a threatened species, respectively, and the Act’s protections apply to all individuals of the species wherever found; (2) a portion of the range of a species is “significant” if the species is not currently endangered or threatened throughout all of its range, but the portion’s contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range; (3) the range of a species is considered to be the general geographical area within which that species can be found at the time the Service or the National Marine Fisheries Service (NMFS) makes any particular status determination; and (4) if a vertebrate species is endangered or threatened throughout an SPR, and the population in that significant portion is a valid DPS, we will list the DPS rather than the entire taxonomic species or subspecies.

The SPR policy is applied to all status determinations, including analyses for the purposes of making listing, delisting, and reclassification determinations. The procedure for analyzing whether any portion is an SPR is similar, regardless of the type of status determination we are making. The first step in our analysis of the status of a species is to determine its status throughout all of its range. If we determine that the species is in danger of extinction, or likely to become so in the foreseeable future, throughout all of its

range, we list the species as an endangered (or threatened) species and no SPR analysis will be required. If the species is neither in danger of extinction, nor likely to become so, throughout all of its range, we determine whether the species is in danger of extinction or likely to become so throughout a significant portion of its range. If it is, we list the species as an endangered species or a threatened species, respectively; if it is not, we conclude that listing the species is not warranted.

When we conduct an SPR analysis, we first identify any portions of the species' range that warrant further consideration. The range of a species can theoretically be divided into portions in an infinite number of ways. However, there is no purpose to analyzing portions of the range that are not reasonably likely to be significant and endangered or threatened. To identify only those portions that warrant further consideration, we determine whether there is substantial information indicating that (1) the portions may be significant and (2) the species may be in danger of extinction in those portions or likely to become so within the foreseeable future. We emphasize that answering these questions in the affirmative is not a determination that the species is endangered or threatened throughout a significant portion of its range—rather, it is a step in determining whether a more detailed analysis of the issue is required. In practice, a key part of this analysis is whether the threats are geographically concentrated in some way. If the threats to the species are affecting it uniformly throughout its range, no portion is likely to warrant further consideration. Moreover, if any concentration of threats apply only to portions of the range that clearly do not meet the biologically based definition of “significant” (i.e., the loss of that portion clearly would not be expected to

increase the vulnerability to extinction of the entire species), those portions will not warrant further consideration.

If we identify any portions that may be both (1) significant and (2) endangered or threatened, we engage in a more detailed analysis to determine whether these standards are indeed met. The identification of an SPR does not create a presumption, prejudice, or other determination as to whether the species in that identified SPR is endangered or threatened. We must go through a separate analysis to determine whether the species is endangered or threatened in the SPR. To determine whether a species is endangered or threatened throughout an SPR, we will use the same standards and methodology that we use to determine if a species is endangered or threatened throughout its range.

Depending on the biology of the species, its range, and the threats it faces, it may be more efficient to address the “significant” question first, or the status question first. Thus, if we determine that a portion of the range is not “significant,” we do not need to determine whether the species is endangered or threatened there; if we determine that the species is not endangered or threatened in a portion of its range, we do not need to determine if that portion is “significant.”

For the Modoc sucker, we examined whether any of the identified threats acting on the species or its habitat are geographically concentrated to indicate that the species could be endangered or threatened in that area. As stated earlier, we consider the “range” of Modoc sucker to include an estimated 42.5 mi (68.4 km) of occupied habitat in 12

streams in the Turner Creek, Ash Creek, and Goose Lake sub-basins of the Pit River. This distribution represents its entire known historical range, with the exception of Willow Creek within the Ash Creek sub-basin.

We considered whether any portions of the Modoc sucker range might be both significant and in danger of extinction or likely to become so in the foreseeable future. To identify whether any portions warrant further consideration, we first determine whether there is substantial information indicating that (1) the portions may be significant and (2) the species may be in danger of extinction in those portions or likely to become so within the foreseeable future. One way to identify portions that may be significant would be to identify natural divisions within the range that might be of biological or conservation importance. Modoc sucker inhabit three sub-basins of the Pit River, one of which, the Goose Lake sub-basin, is disjointed from the other two sub-basins (Turner Creek and Ash Creek sub-basins). These sub-basins have the potential to be significant areas to the species due to potential geographic isolation. Although the sub-basins have the potential to be significant, as described above, threats to populations of the species within each of the sub-basins have been ameliorated through restoration and active management as discussed above. Surveys indicate that Modoc sucker populations have been maintained and are well-established and remaining factors that may affect the Modoc sucker occur at similarly low levels throughout each sub-basin. There is no substantial information indicating the species is likely to be threatened or endangered throughout any of the sub-basins. Therefore, these portions, the three sub-basins do not warrant further consideration to determine whether the species may be endangered or

threatened in a significant portion of its range.

Another way to identify portions for further consideration would be to consider whether there is substantial information to indicate any threats are geographically concentrated in some way that would indicate the species could be threatened or endangered in that area. With the exception of erosion at some locations, we have determined that threats have been ameliorated through restoration and active management as discussed above. Some factors may continue to affect Modoc sucker, such as drought, but would do so at uniformly low levels across the species range such that they are unlikely to result in adverse effects to populations of the species and do not represent a concentration of threats that may indicate the species could be threatened or endangered in a particular area. As noted above, erosion due to past poor grazing management still occurs at two sites that make up approximately 4.1 percent of the Modoc sucker range, and has the potential to adversely affect Modoc sucker in those areas. These two areas where erosion is still occurring are within different sub-basins and, both collectively and per sub-basin, represent a very small fraction of the Modoc sucker's range. These areas, individually or collectively, are therefore unlikely to constitute a significant portion of the species' range. No other natural divisions occur, and no other potential remaining threats have been identified that may be likely to cause the species to be threatened or endangered in any particular area. We did not identify any portions that may be both (1) significant and (2) endangered or threatened. Therefore, no portion warrants further consideration to determine whether the species may be endangered or threatened in a significant portion of its range.

We have carefully assessed the best scientific and commercial data available and determined that the Modoc sucker is no longer in danger of extinction throughout all or significant portions of its range, nor is it likely to become so in the foreseeable future. As a consequence of this determination, we are removing this species from the Federal List of Endangered and Threatened Wildlife.

### **Future Conservation Measures**

Section 4(g)(1) of the Act requires us, in cooperation with the States, to implement a monitoring program for not less than 5 years for all species that have been recovered and delisted. The purpose of this post-delisting monitoring (PDM) is to verify that a species remains secure from risk of extinction after the protections of the Act are removed, by developing a program that detects the failure of any delisted species to sustain itself. If, at any time during the monitoring period, data indicate that protective status under the Act should be reinstated, we can initiate listing procedures, including, if appropriate, emergency listing under section 4(b)(7) of the Act.

### *Post-Delisting Monitoring Plan*

The Service has developed a final post-delisting monitoring (PDM) plan (Service 2015b). In addition, the USFS, CDFW, and ODFW have agreed to partner with us in the implementation of the PDM plan. The PDM plan is designed to verify that the Modoc sucker remains secure from risk of extinction after removal from the Federal List of

Endangered and Threatened Wildlife by detecting changes in its status and habitat throughout its known range. The final PDM plan consists of: (1) A summary of the species' status at the time of delisting; (2) a summary of the roles of PDM cooperators; (3) an outline of the frequency and duration of monitoring; (4) a description of monitoring methods and locations; (5) a definition of thresholds or triggers for potential monitoring outcomes and conclusions of the PDM effort; and (6) an outline of data compilation and reporting procedures.

A multi-state occupancy approach (MacKenzie *et al.* 2009, entire) will be used to estimate the proportion of sites occupied, change in site occupancy, and change in abundance of Modoc suckers. Surveys for Modoc suckers will be completed following a modified version of a sampling protocol developed for Modoc sucker (Reid 2008b) that is consistent with the approach used in surveys conducted since 2008. This approach will allow for monitoring population status over time as it permits the estimation of the proportion of sites (within a stream and among all streams) that are occupied and that are in each state of abundance (low and high). During occupancy and abundance surveys, we will also monitor threats and recruitment. To measure recruitment, we will estimate the size of individuals to the nearest centimeter. Examination of fish sizes will allow a determination to be made if recruitment is occurring over time. Ideally, survey results will indicate in diverse size classes of fish, indicating recruitment is occurring. Threats, both biotic (for example, nonnative predatory fish) and abiotic (for example, excessive sedimentation), will also be assessed during surveys (both day and night). Prior to completing surveys, sites (pools) within streams will be landmarked and georeferenced to



allow relocation for subsequent surveys.

Although the Act has a minimum PDM requirement of 5 years, we will monitor Modoc sucker for a 10-year monitoring period to account for environmental variability (for example, drought) that may affect the condition of habitat and to provide for a sufficient number of surveys to document any changes in the abundance of the species. Based on the life history of the Modoc sucker, in which individuals mature at age 2+ years, a complete survey of previously surveyed areas should be conducted every 2 years within the 10-year monitoring period. This will allow us to assess changes in abundance or the extent of the species' range over time, changes in the level of recruitment of reproducing fish into the population, and any potential changes in threats to the species. However, if a decline in abundance is observed or a substantial new threat arises, PDM may be extended or modified.

After each complete survey (conducted once every 2 years), the Service and its partners will compare the results with those from previous surveys and consider the implication of any observed reductions in abundance or changes in threats to the species. Within 1 year of the end of the PDM period, the Service will conduct a final internal review and prepare (or contract with an outside entity) a final report summarizing the results of monitoring. This report will include: (1) A summary of the results from the surveys of Modoc sucker occupancy, states of abundance, recruitment, and change in distribution; and (2) recommendations for any actions and plans for the future. The final report will include a discussion of whether monitoring should continue beyond the 10-

year period for any reason.

The final PDM plan and any future revisions will be available on our national website (<http://endangered.fws.gov>) and on the Klamath Falls Fish and Wildlife Office's website (<http://www.fws.gov/klamathfallsfwo/>).

### **Required Determinations**

#### *National Environmental Policy Act (42 U.S.C. 4321 et seq.)*

We have determined that environmental assessments and environmental impact statements, as defined under the authority of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), need not be prepared in connection with listing or reclassification of a species as an endangered or threatened species under the Endangered Species Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

#### *Government-to-Government Relationship with Tribes*

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities,

and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes. Two tribes are near the range of the Modoc sucker: The Klamath Tribe and the Pitt River Tribe. The Klamath Tribe does not have an interest in this species, as it does not inhabit their historic reservation lands. We provided the proposed rule to the Pit River Tribe for comment. We received the Pit River Tribe's comments regarding the delisting of the Modoc sucker, and they disagree that the species should be delisted. The Pit River Tribe stated that the Pit River and habitat for the Modoc sucker continues to be degraded. We disagree with the Tribe's comments regarding the habitat for the species. See the *Comments from Tribes* section, above, for a summary of their comments and our response.

### **References Cited**

A complete list of references cited in this rulemaking is available on the Internet at <http://www.regulations.gov> under Docket No. FWS-R8-ES-2013-0133 or upon request from the Klamath Falls Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

### **Authors**

The primary authors of this final rule are staff members of the Pacific Southwest Regional Office in Sacramento, California, in coordination with the Klamath Falls Fish and Wildlife Office in Klamath Falls, Oregon.

**List of Subjects in 50 CFR Part 17**

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

**Regulation Promulgation**

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

**PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS**

1. The authority citation for part 17 continues to read as follows:

**Authority:** 16 U.S.C. 1361–1407; 1531–1544; 4201–4245, unless otherwise noted.

**§ 17.11 [Amended]**

2. Amend § 17.11(h) by removing the entry for “Sucker, Modoc” under FISHES in the List of Endangered and Threatened Wildlife.

**§ 17.95 [Amended]**

3. Amend § 17.95(e) by removing the entry for “Modoc Sucker (*Catostomus microps*)”.

Dated: November 30, 2015

Signed: Stephen D. Guertin

Acting Director, U.S. Fish and Wildlife Service

Billing Code 4333-15-P

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