DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants: 90-Day Finding on a Petition To List the Mountain Yellow-legged Frog as Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 90-day petition finding.

SUMMARY: The U.S. Fish and Wildlife Service (Service) announces a 90-day finding on a petition to list the mountain yellow-legged frog (*Rana muscosa*) as endangered, under the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). We believe that the petition presents substantial information indicating that listing the species may be warranted. A status review is initiated.

DATES: The finding announced in this document was made on October 5, 2000. To be considered in the 12-month finding for this petition, comments and information should be submitted to the Service by December 11, 2000.

ADDRESSES: Data, information, comments, or questions concerning this petition should be submitted to the Field Supervisor; Sacramento Fish and Wildlife Office; Sacramento Fish and Wildlife Office; 2800 Cottage Way, Room W–2605; Sacramento, California 95825. The petition finding, supporting data and comments are available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Jason Davis or Maria Boroja at the Sacramento Fish and Wildlife Office (see **ADDRESSES** section above), or at (916) 414–6600.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*), requires that the Service make a finding on whether a petition to list, delist, or reclassify a species presents substantial information indicating that the petitioned action may be warranted. To the maximum extent practicable, this finding is to be made within 90 days of the receipt of the petition, and the finding is to be published promptly in the **Federal Register**. If the finding is that substantial information was presented, the Service will commence a review of the status of the involved species. This finding is based on information contained in the petition, supporting information submitted with the petition, and otherwise available to the Service at the time the finding was made.

The processing of this petition conforms with our final listing priority guidance published in the **Federal Register** on October 22, 1999 (64 FR 57114). The guidance clarifies the order in which we will process rulemakings. Highest priority is processing emergency listing rules for any species determined to face a significant and imminent risk to its well-being (Priority 1). Second priority (Priority 2) is processing final determinations on proposed additions to the lists of endangered and threatened wildlife and plants. Third priority (Priority 3) is processing new proposals to add species to the lists. The processing of administrative petition findings (petitions filed under section 4 of the Act) is the fourth priority. The processing of critical habitat determinations (prudency and determinability decisions) and proposed or final designations of critical habitat will be funded separately from other section 4 listing actions and will no longer be subject to prioritization under the listing priority guidance. The processing of this petition finding is a Priority 4 action.

We have made a 90-day finding on a petition to list the mountain yellow-legged frog (*Rana muscosa*) as an endangered species. On February 10, 2000, we received a petition, dated February 8, 2000, to list the Sierra Nevada Mountain population of the mountain yellow-legged frog as an endangered species. The petition was submitted by the Center for Biological Diversity and Pacific Rivers Council. The letter clearly identified itself as a petition, and contained the names, signatures, and addresses of the two parties submitting the petition. The petitioners argued that the ''Sierra Nevada population of the mountain yellow-legged frog'' qualifies for listing under our Distinct Vertebrate Population Segment Policy (61 FR 4722). Included in the petition was supporting information relating to the species' taxonomy and ecology, adequacy of existing regulatory mechanisms for the species, and the historic and present distribution, current status, and potential causes of decline. This notice constitutes the 90-day finding for the February 10, 2000, petition.

On July 10, 1995, we were petitioned to list the southern California population of the mountain yellow-legged frog a distinct population segment (DPS) of the mountain yellow-legged frog. The southern California population is isolated from the main part of the species' range, in the Sierra Nevada Mountains, by the Tehachapi Mountains and a distance of 225 kilometers (km) (140 miles(mi)). On December 22, 1999, we published a proposed rule to list the Southern California DPS of the mountain yellow-legged frog as an endangered species (64 FR 71714). In the proposed rule we recognized the southern population according to our policy on distinct vertebrate population segments (61 FR 4722). On March 20, 2000, we published a notice in the **Federal Register** to reopen the comment period on the proposal to list the southern California DPS of the mountain yellow-legged frog as endangered for a 30-day period.

As the present petition (and this finding) addresses the remainder of the species' range, in the Sierra Nevada from Tulare County, California, in the south to Plumas County, California, in the north, we find no reason to recognize mountain yellow-legged frogs that occur in the Sierra Nevada as a DPS. Throughout the rest of this finding we refer to the petitioned entity, all mountain yellow-legged frogs that occur north of the Tehachapi Mountains in the Sierra Nevada, as the mountain yellow-legged frog.

The petition and accompanying documentation state that the species qualifies for listing pursuant to the Act due to potential habitat destruction and modification, the presence of disease in combination with natural predation, the inadequacy of existing regulatory mechanisms, and other natural or human-caused factors affecting its continued existence. The petitioners contend that natural and human-induced changes to mountain yellow-legged frog habitats, including (1) nonnative fish introductions, (2) contaminant introductions, (3) livestock grazing, (4) acidification from atmospheric deposition, (5) nitrate deposition, (6) ultraviolet radiation, (7) drought, and (8) other factors, separately and in combination are responsible for an estimated 70 to 90 percent decline in mountain yellow-legged frog populations throughout the historic range of the species in the Sierra Nevada Mountains.

The introduction of nonnative fish, including rainbow trout (Oncorhynchus mykiss), is one the best documented causes of decline of Sierra Nevada Mountain populations of mountain yellow-legged frogs. Careful study of the distributions of introduced trout and mountain yellow-legged frogs for several years has shown conclusively that

introduced trout have had negative impacts on mountain yellow-legged frogs over much of the Sierra Nevada Mountains (Bradford 1989; Knapp 1996). Bradford (1989) and Bradford *et al.* (1994) concluded that introduced trout have eliminated many populations of mountain yellow-legged frogs. In addition, the presence of trout in intervening streams sufficiently isolates other frog populations so recolonization after stochastic (random, naturally occurring) local extinctions is essentially impossible. This mechanism is sufficient to explain the elimination of mountain yellow-legged frogs from the majority of sites they once inhabited in the Sierra Nevada Mountains.

Several studies have shown that significant levels of contaminants have been deposited in high Sierran aquatic ecosystems from pesticide drift, acid precipitation, and smog drift (Seiber *et al.* 1998; Aston and Seiber 1997; Cahill *et al.* 1996; Miller 1996; Byron and Goldman 1991; Nikolaidis 1991; Laird *et al.* 1986). The petitioners present general evidence that the presence of contaminants in water, sediment, and aquatic vegetation can harm frog populations through lethal and sublethal effects including delayed metamorphosis, reduced breeding and feeding activity (Berrill *et al.* 1993, 1994, 1995, 1998; Boyer and Grue 1995; Beaties and Tyler-Jones 1992; Corn and Vertucci 1992; Hall and Henry 1992). In addition, contaminant introduction may weaken the immune systems of frogs rendering them more susceptible to disease such as chytrid fungus and red-legged disease (Carey *et al.* 1993, 1995, 1999; Jennings 1996; Drost and Fellers 1996; Sherman and Morton 1993). The petitioners cite recent work by Carlos Davidson (U.C. Davis, unpublished manuscript) that shows a positive relationship between amphibian declines in the Sierra Nevada Mountains that occur upwind from areas in California's Central Valley that apply large amounts of wind-borne agrochemicals. In particular, Davidson found agricultural land use to be twice as high downwind of sites where mountain yellow-legged frogs had disappeared compared to sites where the species is still present (Davidson, unpublished manuscript).

Livestock grazing can directly impact mountain yellow-legged frogs through trampling of individuals. Indirectly, livestock can have a significant effect on frog populations by: (1) Altering the hydrology and morphology of high mountain streams and ponds, (2) trampling of cover and vegetation along the periphery of wetland systems that are important egg laying and larval rearing areas, and (3) introducing nitrates into breeding areas resulting in elevated levels of bacteria (Armour *et al.* 1994; Duff 1977; Bohn and Buckhouse 1985; Kauffman and Krueger 1984; Kauffman *et al.* 1983; Marlow and Pogacnik 1985; Meehan and Platts 1978; Stephenson and Street 1978; U.S. Forest Service 2000).

Acidification, nitrate deposition, and ultraviolet radiation have been implicated as other factors that may contribute to the range wide decline of mountain yellow-legged frogs. The petitioners state these factors may have negative effects on mountain yellow-legged frogs that include reduced growth rates, reduced feeding activity, disequilibrium, physical abnormalities, paralysis, embryonic failure, and even death among tadpoles and young frogs (Blaustein *et al.* 1994, Bradford and Gordon 1993, Carey *et al.* 1999, Clark and LaZerte 1985, Freda 1990, Marco *et al.* 1999, Marco and Blaustein 1999).

During periods of prolonged drought, amphibians find refugial habitat in deeper, permanent sources of water which are also suited for fish. These refugial habitats allow for repopulation of more peripheral areas during wetter years (Bradford *et al.* 1993; Knapp 1996; Drost and Fellers 1996). The presence of nonnative fish has eliminated many of the permanent sources of refugial habitat from the mountain yellow-legged frog, thus rendering frog populations more vulnerable to drought-related extinction events (Bradford *et al.* 1993; Knapp 1996; Drost and Fellers 1996).

The petitioners state that disease likely plays a significant role in the widespread decline of mountain yellow-legged frogs. Two diseases potentially affecting mountain yellow-legged frogs are red-legged disease (Aeromonas hydrophila), which is caused by a freshwater bacteria, and chytrid fungus. The petitioners cite an article by Bradford (1991) reporting the loss of a mountain yellow-legged frog population in the Sierra Nevada due to red-legged frog disease and predation by Brewer's blackbirds (Euphagus cyanocephalus). In addition, they cite studies reporting mortality of adult Yosemite toads (Bufo canorus) in the Sierra Nevada and boreal toads (Bufo boreas boreas) in the Rocky Mountains due to red-legged disease (Sherman and Morton 1993; Carey 1993). Chytrid fungus, an aquatic pathogen discovered after 1993, has led to the mortality of many amphibian species in the United States and worldwide. The chytrid fungus attacks the mouthparts of tadpoles affecting their ability to feed. Chytrids have recently been discovered in larval mountain yellow-legged frogs in the Sierra Nevada (Gary Fellers, U.S. Geologic Survey, pers. comm. 1999). Roland Knapp (Sierra Nevada Aquatic Research Lab, pers. comm. 2000) reported a significant decline of mountain yellow-legged frogs at Dry Creek near Mono Lake, a site that had thriving population in 1998. He attributed the population crash to the chytrid fungus after detecting deformed mouthparts in several tadpoles at the site. The petitioners also cite a personal communication with Vance Vredenburg (University of California, Berkeley, Museum of Vertebrate Zoology, pers. comm. 2000) who reported the complete loss of another mountain yellow-legged frog population in the Emigrant Wilderness due to the chytrid fungus. There have been reports of chytrid fungus attacking other Sierra Nevada amphibians, including the Yosemite toad. An investigation of museum specimens of Yosemite toads collected by Sherman and Morton at Tioga Pass during a 1977–1978 die-off found those toads to be infected with chytrid fungus (Carey *et al.* 1999). The petitioners state that there is significant information yet to be discovered regarding aquatic pathogens and their relationship to the ecology of mountain yellow-legged frogs. Should evidence indicate that mountain yellow-legged frogs have evolved with aquatic pathogens, then other stressors including contaminant introductions and UV-radiation may be reducing the ability of frogs to fight off infection from these pathogens (Sherman and Morton 1993; Drost and Fellers 1996; Carey *et al.* 1993, 1995, 1999; Jennings 1996; Taylor *et al.* 1999).

Up to the 1960s, the mountain yellow-legged frog was widely distributed and abundant across the Sierra Nevada (Zwefel 1955; Cory *et al.* 1970, Jennings and Hayes 1994). Since then, however, the overall population has declined dramatically. The most pronounced declines have occurred within the northernmost 125 km (78 mi) of the range, north of Lake Tahoe, and the southernmost 50 km (31 mi) of the range, below Sequoia and Kings Canyon National Parks, where only a few populations remain (Jennings and Hayes 1994; Fellers 1999). Jennings and Hayes (1994) noted a 50 percent decline in the species across the Sierra Nevada based on sampling historic mountain yellow-legged frog locations conducted before the 1970s. Knapp and Matthews (2000) noted that the 50 percent decline may be conservative, as the sampling conducted by Jennings and Hayes took place in Sequoia and Kings Canyon National Parks, where mountain yellow-

legged frog populations are larger and more abundant compared to populations north of the Sierra National Forest.

However, even in the protected areas of Sequoia and Kings Canyon National Parks, mountain yellow-legged frog populations have undergone significant declines. Bradford *et al.* (1994) published results of two separate studies which resurveyed historic sites where mountain yellow-legged frogs were documented between 1959 and 1979 in Sequoia and Kings Canyon National Parks. They found mountain yellow-legged frogs at only 12 of 49 sites surveyed in 1989 and 1990. In addition, mountain yellow-legged frogs had disappeared from one of these 12 sites by 1991.

Outside of Sequoia and Kings Canyon National Parks, Bradford *et al.* (1994) reported the absence of mountain yellow-legged frogs at 21 of 24 historic sites. In another study, Drost and Fellers (1996) resurveyed 14 sites originally surveyed in 1915 by Grinnell and Storer (1924), and found only two now occupied by the mountain yellow-legged frog. These surveys all strongly suggest that the mountain yellow-legged frog has systematically declined throughout its range.

We have reviewed the petition and other information available in the Service's files. Based upon this review, we believe that substantial evidence exists that listing the mountain yellow-legged frog as endangered may be warranted. When we make a positive finding, we also are required to promptly commence a review of the status of the species. Based upon available and any newly obtained information, we will issue a 12-month finding as required by section 4(b)(3)(B) of the Act. Petitioners also requested that critical habitat be designated for the Sierra Nevada population of the mountain yellow-legged frog. The 12-month finding will address this issue.

Public Information Requested

The Service hereby announces its formal review of the species' status pursuant to this 90-day petition finding. We request any additional data, comments, and suggestions from the public, other concerned government agencies, the scientific community, industry, and any other interested parties concerning the status of the mountain yellow-legged frog. Of particular interest is information regarding: (1) The existence and status of additional subpopulations, (2) the impact of nonnative fish introductions, contaminants, livestock grazing, acidification from atmospheric deposition, nitrate deposition, ultraviolet radiation, drought, disease, and other factors that may be responsible for the range-wide decline of the species, (3) the implementation of any actions that are benefitting the species, and (4) genetic variability in known subpopulations.

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

References Cited

A complete list of all references cited herein is available on request from the Sacramento Fish and Wildlife Office, (See **ADDRESSES** section).

Author: The primary author of this document is Jason Davis, Sacramento Fish and Wildlife Office (see **ADDRESSES** section).

Authority

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

Dated: October 5, 2000.

Jamie Rappaport Clark,

Director, Fish and Wildlife Service.

[FR Doc. 00–26179 Filed 10–11–00; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants: 90-Day Finding on a Petition to List the California Spotted Owl as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 90-day petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list the California spotted owl (*Strix occidentalis occidentalis*) as threatened or endangered, under the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). We find that the petition presents substantial information indicating that listing the species may be warranted. A status review is initiated.

DATES: The finding announced in this document was made on October 5, 2000. To be considered in the 12-month finding for this petition, comments and information should be submitted to the Service by December 11, 2000.

ADDRESSES: Data, information, comments, or questions concerning this petition should be submitted to the Field Supervisor; Sacramento Fish and Wildlife Office; Sacramento Fish and Wildlife Office; 2800 Cottage Way, Room W–2605; Sacramento, California 95825. The petition finding, supporting literature, and comments are available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Catherine Hibbard or Maria Boroja at the Sacramento Fish and Wildlife Office (see **ADDRESSES** section above), or at (916) 414–6600.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*), requires that the Service make a finding on whether a petition to list, delist, or reclassify a species presents substantial information indicating that the petitioned action may be warranted. This finding is based on information contained in the petition, supporting information submitted with the petition, and information otherwise available to us at the time we make the finding. To the maximum extent practicable, we make this finding within 90 days of the