



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2014–0007]

[FXES11130900000-156-FF09E42000]

RIN 1018–AY82

Endangered and Threatened Wildlife and Plants; Withdrawal of Proposed Rule to Reclassify the Arroyo Toad as Threatened

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; withdrawal.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), withdraw the proposed rule to reclassify the arroyo toad (*Anaxyrus californicus*) as threatened under the Endangered Species Act of 1973, as amended (Act). This withdrawal is based on our conclusion that the types of threats to the arroyo toad remain the same as at the time of listing and are ongoing, and new threats have been identified. Some conservation efforts are ongoing in most populations to help manage and reduce impacts to arroyo toads from many ongoing threats; however, the species has not yet responded to an extent that would allow a change in listing status. The intent of the reclassification criteria in the recovery plan (Service 1999) has not been met. We have therefore determined that reclassification of this species is not appropriate at this time.

DATES: The March 27, 2014 (79 FR 17106), proposed rule to reclassify the arroyo toad as threatened is withdrawn as of **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: This withdrawal, comments on our March 27, 2014, proposed rule (79 FR 17106), and supplementary documents are available on the Internet at <http://www.regulations.gov> at Docket No. FWS–R8–ES–2014–0007. Comments and materials received, as well as supporting documentation used in the preparation of this withdrawal, are also available for public inspection, by appointment, during normal business hours at: U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, CA 93003; telephone 805–644–1766; or facsimile 805–644–3958.

FOR FURTHER INFORMATION CONTACT: Stephen P. Henry, Field Supervisor, Ventura Fish and Wildlife Office (see **ADDRESSES**). If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Previous Federal Actions

Please refer to the proposed reclassification rule for the arroyo toad (79 FR 17106; March 27, 2014) for a detailed description of the Federal actions concerning this species that occurred prior to publication of the proposed reclassification rule. We accepted submission of new information and comments on the proposed reclassification for a 60-day comment period, ending May 27, 2014. In order to ensure that the public had an adequate opportunity to review and comment on our proposed rule, we reopened the comment period for an additional 30 days on October 17, 2014 (79 FR 62408).

Background

A scientific analysis was completed and presented in detail within the arroyo toad

species report (Service 2014, entire), which was available on <http://www.regulations.gov> at Docket Number FWS–R8–ES–2014–0007 after the publication of the proposed reclassification. The species report was updated to include the information we received from public and peer review comments, and the final species report (Service 2015, entire) is available at <http://www.regulations.gov> at Docket Number FWS–R8–ES–2014–0007. The species report was prepared by Service biologists to provide thorough discussion of the species' ecology, biological needs, and an analysis of the threats that may be impacting the species. The species report includes discussion of the species' life history, taxonomy, habitat requirements, range, distribution, abundance, threats, and progress towards recovery. This detailed information is summarized in the following paragraphs of this **Background** section and the **Summary of Factors Affecting the Species** section.

Arroyo toads are found in low gradient, medium-to-large streams and rivers with intermittent and perennial flow in coastal and desert drainages in central and southern California, and Baja California, Mexico. Arroyo toads occupy aquatic, riparian, and upland habitats in the remaining suitable drainages within its range. Arroyo toads are breeding habitat specialists that need slow-moving streams that are composed of sandy soils with sandy streamside terraces (Sweet 1992, pp. 23–28). Reproduction is dependent upon the availability of very shallow, still, or low-flow pools in which breeding, egg-laying, and tadpole development occur. Suitable habitat for arroyo toads is created and maintained by periodic flooding and scouring that modify stream channels, redistribute channel sediments, and alter pool location and form. These habitat requirements are largely dependent upon natural hydrological cycles and scouring events (Madden-Smith et al. 2003, p. 3).

Arroyo toads were once relatively abundant in coastal central and southern California. Arroyo toads historically were known to occur in coastal drainages in southern California from the upper Salinas River system in Monterey and San Luis Obispo Counties; south through the Santa Maria and Santa Ynez River basins in Santa Barbara County; the Santa Clara River basin in Ventura County; the Los Angeles River basin in Los Angeles County; the coastal drainages of Orange, Riverside, and San Diego Counties; and south to the Arroyo San Simeon system in Baja California, México (Sweet 1992, p. 18; Service 1999, p. 12). Jennings and Hayes (1994, p. 57) are most commonly cited as documenting a decline of 76 percent of arroyo toad populations throughout the species' range due to loss of habitat and hydrological alterations to stream systems as a result of dam construction and flood control. This 76 percent decline was based on studies done in the early 1990s by Sam Sweet (Jennings and Hayes 1994, p. 57) that addressed the natural history and status of arroyo toad populations on a portion of the species' range on the Los Padres National Forest.

Currently, arroyo toads are limited to isolated populations found primarily in the headwaters of coastal streams along the central and southern coast of California and southward to Rio Santa Maria near San Quintin in northwestern Baja California, México (Lovich 2009, p. 62). Arroyo toads are still extant within the range they occupied historically and at the time of listing, but new data indicate that the species has continued to decline in numbers and in area occupied within its current range (Hancock 2007-2014, entire; Hollingsworth *in litt.* 2014; USGS *in litt.* 2014; Sweet 2015, pers. comm.; USGS 2015, pers. comm.). Overall, we recognize 25 river basins in the United States and an

additional 10 river basins in Baja California, Mexico, as containing at least one extant population of arroyo toads (Service 2015, Table 1).

A thorough review of the taxonomy, life history, and ecology of the arroyo toad is presented in the final species report (Service 2015) (the species report and other materials relating to this withdrawal can be found on <http://www.regulations.gov> at Docket Number FWS–R8–ES–2014–0007).

Summary of Basis for This Withdrawal

Based upon our review of the public comments, agency comments, peer review comments, and new relevant information that became available since the March 27, 2014, publication of the reclassification proposed rule (79 FR 17106), we reevaluated our proposed rule. Other than minor clarifications and incorporation of additional information on the species' biology and populations, this determination differs from the proposal in the following ways:

(1) As in the proposed rule, we find that the types of threats to arroyo toads remain the same as at the time of listing and are ongoing; in addition, new threats have been identified. The threats of urbanization, dams and water diversions, introduced predators, and drought have current and ongoing, high impacts to arroyo toads and their habitat. New threats include invasive, nonnative plants and effects of climate change. Some conservation efforts are ongoing in most populations to help manage and reduce impacts to arroyo toads from many ongoing threats. However, we have now determined that the best available scientific data do not currently support a determination that the

species has responded to conservation actions such that a change in listing status is warranted (see numbers (2) and (3), below).

(2) Based on our evaluation of peer review and public comments and on additional population data received during the comment periods, we have determined that the intent of the reclassification criteria in the recovery plan (Service 1999) has not been met. The downlisting recovery criteria state that for arroyo toads to be reclassified to threatened, management plans must have been approved and implemented on federally managed lands, and at least 20 self-sustaining metapopulations or populations at specified locations on Federal lands must be maintained. At the time of our proposed reclassification rule, as well as currently, there were no long-term population trend data available that demonstrate that arroyo toad populations have stabilized or are increasing. However, the Service is required by section 4(b)(1) of the Act (16 U.S.C. 1531 et seq.) to make determinations regarding the status of a species solely on the basis of the best scientific and commercial data available. We must make a determination based on the available information even when data that are lacking would be more desirable. In other words, we cannot delay or decline to make a determination because we lack data that would be more ideal. In the March 27, 2014, proposed rule, we stated that current available information indicates that arroyo toads are persisting or are presumed to be persisting on Federal lands in 17 river basin occurrences and 5 additional occurrences on non-Federal lands, for a total of 22 extant or presumed extant occurrences in California. Because we lacked long-term population trend data, this constituted the best available information on the status of arroyo toad populations. As the only population data available, we used this information as a proxy measure in attempting to determine

whether populations were stable or increasing. We stated that this information supported our conclusion that the occurrences are self-sustaining (79 FR 17106; March 27, 2014), and, therefore, that the intent of the criteria identified in the arroyo toad recovery plan for downlisting had been met.

Since we published the proposed rule to downlist the arroyo toad, however, we have received additional information through the peer review and public comment process that refutes our finding that the intent of the recovery criteria has been met. First, we reevaluated our use of extant or presumed extant populations as a proxy for self-sustaining populations. While these kind of data do indicate that some level of reproduction and recruitment is occurring, we now agree with commenters that these data cannot be used to infer that arroyo toad populations are self-sustaining in the long term, and we conclude it is scientifically inaccurate to do so. Self-sustaining is clearly defined in the recovery plan as populations that have stabilized or are increasing. No long-term population trend data for arroyo toads demonstrate that populations have stabilized or are increasing anywhere within the species' range. Second, although arroyo toads are still persisting within the range they occupied historically and at the time of listing, new data indicate that the species has continued to decline in numbers and in area occupied within its current range (Hancock 2007-2014, entire; Hollingsworth *in litt.* 2014; USGS *in litt.* 2014; Sweet 2015, pers. comm.; USGS 2015, pers. comm.). At least three occurrences in the Northern Recovery Unit (Salinas River Basin, Santa Ynez River Basin, and Santa Clara River Basin) (Hancock 2007-2014, entire; Sweet 2015, pers. comm.) and at least eight occurrences in the Southern Recovery Unit (Lower Santa Margarita River Basin, Upper San Luis Rey River Basin, Upper and Lower Santa Ysabel Creek Basins, Upper

San Diego River Basin, Upper Sweetwater River Basin, and Upper and Lower Cottonwood Creek Basins) (USGS *in litt.* 2014; USGS 2015, pers. comm.) have shown recent declines.

(3) Because no information indicates that populations have stabilized or are increasing, and new information suggests several occurrences are in decline, we have determined that downlisting the arroyo toad is not appropriate at this time. As a result, this document withdraws the proposed rule published on March 27, 2014 (79 FR 17106).

Summary of Factors Affecting the Species

Section 4 of the Act and its implementing regulations (50 CFR 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 species 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 on the same basis.

Determining whether the status of a species has improved to the point that it can be downlisted or delisted 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 species 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 word "range" in the definitions of "endangered species" and "threatened species" 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, if we determine that the species is neither in danger of extinction nor likely to become so, we next consider whether the species is in danger of extinction or likely to become so in any significant portion of its range.

A threats analysis for the arroyo toad is included in the final species report (Service 2015, entire) associated with this document (and available at <http://www.regulations.gov> under Docket No. FWS-R8-ES-2014-0007). All potential threats that are acting upon arroyo toads currently or in the future (and consistent with the five listing factors identified above) were evaluated and addressed in the final species report, and are summarized in the following paragraphs.

At the time of listing, the primary threats to arroyo toads were urban development, agricultural conversion, operations of dams and water flow, roads and road

maintenance, recreational activities, introduced predator species, and drought (59 FR 64859; December 16, 1994). Other threats identified in 1994 included livestock grazing, mining and prospecting, and alteration of the natural fire regime (59 FR 64859).

Current and potential future threats to arroyo toads include urban development (Factors A and E), agriculture (Factors A and E), operation of dams and water diversions (Factor A), mining and prospecting (Factors A and E), livestock grazing (Factor A), roads and road maintenance (Factors A and E), recreation (Factors A and E), invasive, nonnative plants (Factor A), disease (Factor C), introduced predator species (Factor C), drought (Factor E), fire and fire suppression (Factors A and E), and climate change (Factor E).

Please see the “Threats” section of the final species report for a thorough discussion of all potential and current threats (Service 2015, pp. 29–91). In the final species report, we use threat impact categories to reflect the magnitude to which arroyo toads are affected by the threat. Impact categories are: (1) High: likely to have a major impact on local populations or habitat that rises to a species-level effect; (2) medium: likely to have a moderate impact on local population numbers or habitat, but populations in other locations may not be impacted such that the effect does not rise to the species level; and (3) low: likely to have minimal impacts on local population numbers or habitat such that the effect does not rise above the individual level. Timing is used to characterize the period of the available data and determine the general timeframe over which we can make reliable predictions about how threats will affect arroyo toads. In general, we have information about effects of threats on arroyo toads since time of listing, approximately 20 years ago. Therefore, the timeframe we are comfortable predicting into

the future for most threats is also 20 years. The following sections provide a summary of the current and potential future threats that are impacting or may impact arroyo toads.

Urban Development

At the time of listing, habitat loss from development projects in riparian wetlands caused permanent losses of riparian habitats. Urban development was the most conspicuous factor in the decline of arroyo toads at the time of listing because the loss of arroyo toad breeding habitat was permanent. By the time the arroyo toad was listed in 1994, development and urban sprawl had already resulted in conversion to urban and suburban use of nearly 40 percent of the riparian areas along the coast from Ventura County to the Mexican border (CDFG 2005). The trend toward increasing urbanization in California continues to the present day.

Existing urban development currently affects 25 out of 32 river basins (3 unknown) where arroyo toads are known to occur and has a serious effect on arroyo toads and their habitats. While this threat has been somewhat reduced at 10 occurrences, we categorize the threat of urban development as having a high level of impact to the species throughout its range. Decline in number of populations of arroyo toads has already occurred (Jennings and Hayes 1994, p. 57), and new data indicate that the species has continued to decline in numbers and in area occupied within its current range (Hancock 2007-2014, entire; Hollingsworth *in litt.* 2014; USGS *in litt.* 2014; Sweet 2015, pers. comm.; USGS 2015, pers. comm.). In addition, increases in human population and urban development pressures will, through time, continue to cause new loss of arroyo toad populations and reduce opportunities for conservation and enhancement of existing

populations; they will also reduce the potential for reintroduction of the species, and likely further reduce the genetic variation found in this species (Lovich 2009, p. 91). While impacts from development have been reduced at 10 occurrences through current conservation measures, over the next 20 years urban development is expected to continue to have a high level of impact to arroyo toads.

Agriculture

At the time of listing, habitat loss from agricultural development projects in riparian wetlands also had caused permanent losses of riparian habitats. Agricultural development currently affects 20 out of 35 river basins where arroyo toads are known to occur and has a moderate effect on arroyo toads and their habitats. While this threat has been reduced at two occurrences, we categorize the threat of agriculture as having a medium level of impact to the species throughout its range. Because arroyo toads use both aquatic and terrestrial environments, they are impacted both by agricultural activities that subject their habitats to increased fragmentation and by decreased habitat quality from groundwater pumping, water diversions, and contaminated runoff. Additionally, arroyo toads are attracted to open areas of farm fields to find foraging and burrowing sites, and thus are vulnerable to being run over by farm equipment or trampled by field workers. Where chemicals are used, arroyo toads are exposed to residues that can collect in soils where they burrow or in pools where they breed. Overall, over the next 20 years, agriculture is expected to continue to have a medium level of impact to arroyo toads.

Operation of Dams and Water Diversions

At the time of listing, short- and long-term changes in river hydrology, including construction of dams and water diversions, were responsible for the loss of 40 percent of the estimated original range of the species, and nearly half of historical extirpations prior to listing are attributed to impacts from original dam construction and operation (Sweet 1992, pp. 4–5; Ramirez 2003, p. 7). These changes are a result of dam construction and operation because the original construction of a dam: (1) Effectively fragments a watershed by slowing rivers and blocking the natural flow of water and sediments; (2) inundates large areas of arroyo toad habitat; and (3) blocks in-stream movement of arroyo toads, which effectively isolates populations upstream and downstream of dams and may preclude recolonization of areas formerly occupied by arroyo toads (Campbell *et al.* 1996, p. 18).

Dams and water diversions currently affect 19 out of 26 river basins (9 unknown) where arroyo toads are known to occur and have a serious effect on arroyo toads and their habitats. While this threat has been reduced at four occurrences, we categorize the threat of the operation of dams and water diversions as having a high level of impact to the species throughout its range. Dam construction results in the immediate destruction of habitat above the dam through inundation, destroying both arroyo toad breeding and upland habitats. Downstream habitat is eliminated by regulated stream flows that: Destroy sand bars used during the breeding season; reconfigure, and in some cases eliminate, suitable breeding pools; and disrupt clutch and larval development (Ramirez 2005, p. 2). The initial downstream effects of a dam will modify and degrade breeding habitat for arroyo toads, but in the long term will eventually eliminate it (Madden-Smith *et al.* 2005, p. 23). Impacts from unseasonal water releases have been minimized at three

occurrences at the Santa Clara River Basin, Lower Sweetwater River Basin, and Lower Cottonwood Creek Basin, and have been partially minimized at the Upper San Diego River Basin occurrence. Although the threat is reduced in these areas, other impacts from dams and water diversions, such as reduction of sediments and nutrients, and increased desiccation, vegetation density, and presence of aquatic predators, still exist. Overall, over the next 20 years, operation of dams and water diversions are expected to continue to have a high level of impact to arroyo toads.

Mining and Prospecting

At the time of listing, habitat loss through recreational suction dredge mining for gold was considered an additional threat to the species. For example, in 1991, during the Memorial Day weekend, four small dredges operating on Piru Creek in the Los Padres National Forest produced sedimentation visible more than 0.8 miles (mi) (1 kilometer (km)) downstream and adversely affected 40,000 to 60,000 arroyo toad larvae. Subsequent surveys revealed an almost total loss of the species in this stream section; fewer than 100 larvae survived, and only four juvenile toads were located (Sweet 1992, pp. 180–187). Currently, the California Department of Fish and Wildlife has prohibited suction dredge mining in Class A streams; only one occurrence is located outside Class A streams in the United States (24 total occurrences).

Mining and prospecting currently affect 8 out of 27 river basins (8 unknown) where arroyo toads are known to occur and have minimal impacts on local population numbers or habitat and their habitats. Therefore, we categorize this threat as having a low level of impact to the species throughout its range. Sand and gravel mining remain a

threat at five occurrences in the United States and two occurrences in Baja California, Mexico, and gold prospecting is a threat at one occurrence in the United States. Overall, over the next 20 years, mining and prospecting are expected to continue to have a low level of impact to arroyo toads.

Livestock Grazing

At the time of listing, overgrazing caused mortality to arroyo toads if horses or cattle were allowed to graze in riparian areas. The effects of livestock grazing on arroyo toads included directly crushing individuals and burrows; trampling stream banks, resulting in soil compaction, loss or reduction in vegetative bank cover, stream bank collapse, and increased in-stream water temperatures from loss of shade; and excess sedimentation entering stream segments at crossings or other stream areas used by livestock for watering or grazing on riparian vegetation.

Livestock grazing currently affects 20 out of 35 river basins where arroyo toads are known to occur and has a moderate effect on arroyo toads and their habitats. While this threat has been reduced at four occurrences, we categorize the threat of livestock grazing as having a medium level of impact to the species throughout its range. Due to their fragile nature, even occasional use of riparian corridors by cattle can cause harm to the riparian and aquatic habitats. Concentrated grazing by cattle will, over time, reduce or eliminate the under- and mid-story components of vegetation. Evidence of livestock overgrazing is seen in the lack of breeding pool habitat, sloughed and trampled stream-banks, and a stressed riparian plant community where desirable species such as sedges (*Carex* spp.) and young willows (*Salix* spp.) are becoming scarce and undesirable species

such as tamarisk (*Tamarix* spp.) are increasing. Livestock grazing on Federal lands has been reduced to some extent through section 7 consultation and the addition of minimization measures to grazing allotment permits issued by Los Padres and Cleveland National Forests. Overall, over the next 20 years, livestock grazing is expected to continue to have a medium level of impact to arroyo toads.

Roads and Road Maintenance

At the time of listing, the use of heavy equipment in yearly reconstruction of roads and stream crossings in the National Forests had a significant and repeated impact to arroyo toads and their habitat. Conversion of streams and stream terraces to roads eliminates foraging and burrowing habitat for arroyo toads. Toads are crushed by equipment on the roads or when vehicles use the low water crossings during normal daytime project activities. For example, as described in the listing rule (59 FR 64859; December 16, 1994), grading in Mono Creek for Ogilvy Ranch Road destroyed habitat and likely killed individual toads; maintenance of the road continues to depress populations of toads in Mono Creek.

Roads and road maintenance currently affect 30 out of 35 river basins where arroyo toads are known to occur and have a moderate effect on arroyo toads and their habitats. While this threat has been reduced at three occurrences, we categorize the threat of roads and road maintenance as having a medium level of impact to the species throughout its range. Overall, over the next 20 years, roads and road maintenance are expected to continue to have a medium level of impact to arroyo toads.

Recreation

At the time of listing, recreational activities in riparian wetlands had substantial negative effects on arroyo toad habitat and individuals. Streamside campgrounds in southern California National Forests were frequently located adjacent to arroyo toad habitat (Sweet 1992). With nearly 20 million people living within driving distance of the National Forests and other public lands in southern California, recreational access and its subsequent effects are an ongoing concern (CDFG 2005). Numerous studies have documented the effects of recreation on vegetation and soils, and document results of human trampling caused by hiking, camping, fishing, and nature study. Significantly fewer studies report the consequences of horse and bicycle riding or that of off-road vehicles (OHV) and snowmobiles (Cole and Landres 1995).

Recreational activities are currently known to affect 22 out of 25 river basins (10 unknown) where arroyo toad are known to occur and have a moderate effect on arroyo toads and their habitats. While this threat has been reduced at six occurrences, we categorize this threat as having a medium level of impact to the species throughout its range. Many of the recreational activities described above may result in the loss and fragmentation of arroyo toad habitat. Roads, trails, OHV use, recreational facilities, and water impoundments can replace natural habitat, and this destruction can displace arroyo toad populations (Maxell and Hokit 1999, p. 2.15). The U.S. Forest Service (Forest Service) has been proactive in reducing or eliminating some of these threats on their lands. To help control recreational activities, the Forest Service has closed campgrounds seasonally or permanently, installed road and interpretive signs, erected barriers, re-routed trails and trailheads, and implemented seasonal road closures in six occurrences on

Federal lands. However, impacts have not been reduced at the remaining recreational sites on National Forests. Overall, over the next 20 years, recreational activities are expected to continue to have a medium level of impact to arroyo toads.

Invasive, Nonnative Plants

At the time of listing, invasive, nonnative plants were not identified as a threat to arroyo toads. Since then, invasive, nonnative plants have had a negative effect on arroyo toads and their habitat. Nonnative plant species, particularly tamarisk and giant reed (*Arundo donax*), alter the natural hydrology of stream drainages by eliminating sandbars, breeding pools, and upland habitats.

Invasive, nonnative plants are known to currently affect 16 out of 25 river basins (10 unknown) where arroyo toads are known to occur and have a moderate effect on arroyo toad habitats. While this threat has been reduced at six occurrences, we categorize the threat of invasive, nonnative plants as having a medium level of impact to the species throughout its range. Invasive, nonnative plants such as tamarisk and giant reed alter the natural hydrology and habitat features of watersheds occupied by arroyo toad. Large riparian corridors have historically acted as natural firebreaks in southern California because of their low-lying topography and relative absence of flammable fuels. However, the highly flammable tamarisk and giant reed have altered this situation and pose a serious problem for management because they vigorously resprout after burning. Management of invasive plants and weeds with chemical herbicides and pesticides can also have impacts to arroyo toads. Management of invasive plants that minimizes impacts to arroyo toads is currently limited to proactive control and minimizing habitat

disturbances that permit some invasive species to become established. Overall, over the next 20 years, invasive, nonnative plants are expected to continue to have a medium level of impact to arroyo toads.

Disease

Disease was not considered a threat to arroyo toads at the time of listing in 1994. However, during the last several decades, significant declines in populations of amphibians have been observed worldwide (Beebee and Griffiths 2005, p. 273). Since the arroyo toad was listed, chytridiomycosis, an infectious amphibian disease caused by the fungus *Batrachochytrium dendrobatidis* (Bd), has been clearly linked to these amphibian declines and extinctions worldwide. Bullfrogs (*Rana catesbeiana*), an introduced predator, may also carry the pathogen without showing clinical signs of the disease (Beebee and Griffiths 2005, p. 273). Infection caused by Bd would likely have a major effect to arroyo toads because the available information indicates that arroyo toads are susceptible to the disease. However, it is not currently known to occur in any populations. We therefore do not consider disease to be a threat currently affecting the species, although it could be a potential future threat that should be monitored.

Introduced Predator Species

At the time of listing, nonnative predators had caused substantial reductions in the sizes of extant populations of arroyo toads, and nonnative predators have caused arroyo toads to disappear from large portions of historically occupied habitat (Jennings and Hayes 1994, p. 57).

Introduced predators currently affect 26 out of 35 river basins where arroyo toads are known to occur and have a serious effect on arroyo toads and their habitats. While this threat has been somewhat reduced at five occurrences, we categorize the threat of introduced predators as having a high level of impact to the species throughout its range. Introduced fishes and bullfrogs prey on arroyo toad larvae, juveniles, and adults. These predator species pose a continuing threat to almost all arroyo toad populations and have essentially become residents of the ecosystem. In reality, bullfrogs, green sunfish (*Lepomis cyanellus*), and other exotic predatory fishes are not well-adapted to be permanent residents of the portions of streams occupied by arroyo toads; they die off during droughts, or are washed out by moderate flooding (Sweet 1992, p. 156). However, they thrive in reservoirs and need only part of one season to reinvade upstream. Additionally, the deep pools formed below dams provide refuge for these introduced predators and allow them to rapidly recolonize downstream areas (Sweet 1992, p. 156). Modeling has indicated that arroyo toad populations are not self-sustaining in the presence of nonnative predators, but rather are dependent upon continued aquatic invasive species management (USGS *in litt.* 2014). Overall, over the next 20 years, introduced predators are expected to continue to have a high level of impact to arroyo toads.

Drought

At the time of listing, drought and the resultant deterioration of riparian habitats was considered to be the most significant natural factor adversely affecting arroyo toads. Although drought is a recurring phenomenon in southern California, there is no doubt

that this natural event combined with the many manmade factors negatively affects arroyo toad survival.

Drought continues to have negative effects on arroyo toads. Drought tends to be regional in scale, and thus we expect Baja California, Mexico, to experience similar effects to southern California. Therefore, drought currently affects 35 out of 35 river basins where arroyo toads are known to occur and has a serious effect on arroyo toads and their habitats. Most arroyo toad occurrences are small and occur in ephemeral streams at high elevations. At lower elevations, impacts from drought on arroyo toad occurrences are exacerbated by alteration of hydrology from dams, water diversions, and groundwater extraction due to urbanization and agriculture. Arroyo toads' lifespan averages approximately 5 years; if drought persists longer than 6 years, entire populations could be extirpated for lack of water necessary to reproduce and complete their life cycle (Sweet 1992, p. 147; USGS *in litt.* 2014). Drought is certainly not unusual in southern California and arroyo toad populations have withstood such episodes in the past, such that no occurrences have become extirpated since listing; however, the 2014-2015 rainy season was part of the driest 4-year stretch ever recorded in California history. Overall, over the next 20 years, episodes of drought are expected to have a high level of impact to arroyo toads.

Periodic Fire and Fire Suppression

At the time of listing and at present, periodic fires are considered a threat to arroyo toads because fires can cause direct mortality of arroyo toads, destroy streamside vegetation, or eliminate vegetation that sustains the watershed. Direct mortality to arroyo

toads can also result from construction of fuel breaks and safety zones in stream terraces where arroyo toads are burrowed. Bulldozing operations for construction of fuel breaks can severely degrade other essential upland habitats. In recent decades, large fires in the West have become more frequent, more widespread, and potentially more deadly to wildlife (Joint Fire Science Program 2007, entire). There has been a shift to more severe fires on the Los Padres National Forest, including the Day and Zaca Fires.

Periodic fire and fire suppression activities could potentially affect 22 out of 25 river basins (10 unknown) where arroyo toads are known to occur and have a moderate effect on arroyo toads and their habitats. This threat has been reduced at none of the occurrences, and we categorize this threat as having a medium level of impact to the species throughout its range. Overall, over the next 20 years, periodic fire and fire suppression activities are expected to continue to have a medium level of impact to arroyo toads.

Climate Change

Climate change is a new threat identified since listing. Climate change currently affects 35 out of 35 river basins where arroyo toads are known to occur; however, the impact of climate change on arroyo toad populations or habitat throughout the species' range remains unknown. Over the next 35 to 55 years, the key risk factor for climate change impacts to arroyo toads is likely the interaction between: (1) Reduced water levels limiting breeding and larval development or causing direct mortality; (2) reduction or loss of breeding and upland habitat; and (3) the relative inability of individuals to disperse longer distances in order to occupy more favorable habitat conditions (*i.e.*, move up and

down stream corridors, or across river basins). This reduced adaptive capacity for arroyo toad is a function of its highly specialized habitat requirements, the dynamic nature of its habitat, natural barriers such as steep topography at higher elevations, and extensive fragmentation (unnatural barriers) within and between river basins from reservoirs, urbanization, agriculture, roads, and the introduction of nonnative plants and predators. The potential loss of breeding and foraging habitats due to climate change can work in combination with and exacerbate the effects of the other threats. Overall, climate change is a current and future threat with an unknown impact to arroyo toads.

Cumulative and Synergistic Effects of Threats

Threats working in combination with one another have the ability to negatively impact species to a greater degree than individual threats operating alone (IPCC 2002, p. 22; IPCC 2014, pp. 4–15; Boone *et al.* 2003, pp. 138–143; Westerman *et al.* 2003, pp. 90–91; Opdam and Wascher 2004, pp. 285–297; Boone *et al.* 2007, pp. 293–297; Vredenburg and Wake 2007, p. 7; Lawler *et al.* 2010, p. 47; Miller *et al.* 2011, pp. 2360–2361). Combinations of threats impede dispersal of arroyo toads, which could affect the long-term viability of individual occurrences. Should arroyo toad occurrences become extirpated, recolonization of these localities may not be possible when occurrences are isolated by physical barriers that may be too large or difficult to cross. Threats such as urbanization, agriculture (including road infrastructure), and dams and reservoirs create unnatural barriers that have already eliminated habitat that arroyo toads used for dispersal within and between river basins. In addition, drought-caused population bottlenecks may be more severe when coupled with habitat loss and degradation in the range of the arroyo

toad, and while being impacted by introduced predators, water releases, and other anthropogenic activities. If the effects of climate change become more severe as predicted, these disturbances could increase, along with the potential spread or change in virulence of Bd, and these effects could further reduce dispersal habitat for arroyo toads.

Geographic Distribution of Threats

We also examined the distribution of threats across the range of the species to assist in determining whether the status and the threats affecting the species might vary across its range.

Northern Recovery Unit

Threats in the northern portion of the arroyo toad's range (five occurrences in Monterey, Santa Barbara, Ventura, and Los Angeles Counties) that are likely to impact some of the river basins in the Northern Recovery Unit are characterized as medium to high in impact; impacts primarily involve roads and road maintenance, recreation, urbanization, nonnative plants, introduced predator species, and fire and fire suppression on Forest Service lands. All five occurrences in the Northern Recovery Unit are afforded some protection that contributes to the management of arroyo toads or their habitat through existing land management plans or an integrated natural resources management plan (INRMP) on Federal lands.

Southern Recovery Unit

In the central/southern portion of the species' range (18 occurrences in Orange,

Riverside, San Bernardino, and San Diego Counties), threat impacts are medium to high, and are expected to continue to increase as the demand for water and suitable development sites continues. Threats here primarily involve urban development, agriculture, roads, operation of dams and water diversions, recreation, nonnative plants, introduced predator species, fire and fire suppression, and drought. As the human population grows, the negative effects from increased water needs and recreational activities will put more pressure on the remaining habitats, even those sites receiving some protection. Most occurrences (12 of 18) are restricted to ephemeral or low-order streams, and of these, most (10 of 12) are unnaturally restricted to these areas because habitat downstream was destroyed by large reservoirs, urbanization, or agriculture, thereby reducing the ability of arroyo toads to act in response to dynamic habitat conditions and increased threats, especially drought, climate change effects, roads, recreation, agriculture, and introduced predators. Five habitat conservation plans (HCPs) were developed to minimize impacts to arroyo toad at eight occurrences from development and associated infrastructure. There are also large areas of Federal lands, such as the Marine Corps Base Camp Pendleton, Naval Weapons Station Seal Beach Detachment Fallbrook, and the Remote Training Site Warner Springs, where arroyo toads are managed under the military's INRMPs, and 11 of 18 occurrences within the Southern Recovery Unit are on Forest Service lands or are partly on Forest Service lands and benefit from land management plans.

Desert Recovery Unit

In the desert portion of the species' range (two occurrences in Los Angeles and

San Bernardino Counties), threats are moderate in impact, and result primarily from recreation, urban development, agriculture, overgrazing, and dam operations. Portions of both occurrences are afforded some management through Forest Service land management plans.

Baja California, Mexico

There are 10 occurrences in Baja California, Mexico, for which we have limited to no information concerning the scope or degree of impact from each threat. Urban development, agriculture, livestock grazing, roads, introduced predators, drought, and climate change are the threats known or suspected to impact arroyo toads within these 10 occurrences.

Summary of Geographic Distribution of Threats

Although the specific threats affecting the species may be different at individual sites or in different parts of the arroyo toad's range, on the whole threats are occurring throughout the species' range, and the severity of threats and their effects on arroyo toad populations are similar. We conclude that all populations throughout the species' range and all recovery units are experiencing similar levels of threats.

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. Under section 4(f)(1)(B)(ii),

recovery plans must, to the maximum extent practicable, include “objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of [section 4 of the Act], that the species be removed from the list.” However, revisions to the list (adding, removing, or reclassifying a species) must reflect determinations made in accordance with sections 4(a)(1) and 4(b) of the Act. Section 4(a)(1) requires that the Secretary determine whether a species is endangered or threatened (or not) because of one or more of five threat factors. Section 4(b) of the Act requires that the determination be made “solely on the basis of the best scientific and commercial data available.” Therefore, recovery criteria should indicate when a species is no longer an endangered species or threatened species because of any of the five statutory factors. Thus, while recovery plans provide important guidance to the Service, States, and other partners on methods of minimizing threats to listed species and measurable objectives against which to measure progress towards recovery, they are not regulatory documents and cannot substitute for the determinations and promulgation of regulations required under section 4(a)(1) of the Act.

The Service finalized a recovery plan for the arroyo toad in 1999 (Service 1999, pp. 1–119). The intent of the arroyo toad recovery plan was to prescribe recovery criteria that would at least demonstrate population stability and good habitat management over a period of years, which would indicate a substantially improved situation for arroyo toads. The overall objectives of the recovery plan are to prevent further loss of individuals, populations, and habitat critical for the survival of the species; and to recover existing populations to normal reproductive capacity to ensure viability in the long term, prevent extinction, maintain genetic viability, and improve conservation status (Service 1999, p.

108). The general aim in species' recovery is to establish sufficient self-sustaining healthy populations for the species to be no longer considered as an endangered or threatened species.

The recovery plan describes 22 river basins in the coastal and desert areas of nine U.S. counties along the central and southern coast of California, and the recovery plan divides the range of the arroyo toad into three large recovery units: Northern, Southern, and Desert. These recovery units were established to reflect the ecological and geographic distribution of the species and its current and historic range (Service 1999, p. 71–72) within the United States. The recovery plan did not address the species' range in Mexico. In the recovery plan, the downlisting recovery criteria state that for the arroyo toad to be reclassified to threatened, management plans must have been approved and implemented on federally managed lands, and at least 20 self-sustaining metapopulations or populations at specified locations must be maintained (Service 1999, pp. 75-77). Self-sustaining is defined in the recovery plan as populations that have successful recruitment equal to 20 percent or more of the average number of breeding adults in 7 of 10 years of average to above-average rainfall amounts with normal rainfall patterns. Such recruitment would be documented by statistically valid trend data indicating stable or increasing populations.

In our analysis of the status of the arroyo toad, we found that we lack long-term population trend data for arroyo toads demonstrating that populations have stabilized or are increasing anywhere within the species' range. Although arroyo toads are presumed to be persisting on Federal lands in 18 river basin occurrences and 4 additional occurrences on non-Federal lands, for a total of 22 extant or presumed extant occurrences

in California, and management plans have been approved and are being implemented to help conserve, maintain, and restore habitat on Federal lands, the available data indicate that the species has continued to decline in numbers and in area occupied within its current range (Hancock 2007-2014, entire; Hollingsworth *in litt.* 2014; USGS *in litt.* 2014; Sweet 2015, pers. comm.; USGS 2015, pers. comm.). At least three occurrences in the Northern Recovery Unit (Salinas River Basin, Santa Ynez River Basin, and Santa Clara River Basin) (Hancock 2006, 2007-2014; Sweet 2015, pers. comm.) and at least eight occurrences in the Southern Recovery Unit (Lower Santa Margarita River Basin, Upper San Luis Rey River Basin, Upper and Lower Santa Ysabel Creek Basins, Upper San Diego River Basin, Upper Sweetwater River Basin, and Upper and Lower Cottonwood Creek Basins) (USGS *in litt.* 2014; USGS 2015, pers. comm.) have shown recent declines.

These and other data that we have analyzed indicate that the downlisting criteria have not been met for the arroyo toad. The types of threats to arroyo toads remain the same as at the time of listing and are ongoing, and new threats have been identified. Some conservation efforts are ongoing in most populations to help manage and reduce impacts to arroyo toads from many ongoing threats; however, we have not yet documented a response to these ongoing conservation actions that would indicate a change in the species' listing status is warranted.

Summary of Comments and Recommendations

In the proposed rule published on March 27, 2014 (79 FR 17106), we requested that all interested parties submit written comments on the proposal by May 27, 2014. We

reopened the comment period on the proposed rule on October 17, 2014, for an additional 30 days (79 FR 62408). We also contacted appropriate Federal and State agencies, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. We did not receive any comments from States or Tribes. We also did not receive any requests for a public hearing. All substantive information provided during the comment periods has 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 received expert opinion from four knowledgeable individuals with scientific expertise that included familiarity with arroyo toads and their habitat, biological needs, and threats.

We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding the proposed downlisting of the arroyo toad. The peer reviewers generally disagreed with our finding in the proposed rule and provided additional information, clarifications, and suggestions to improve the final rule. Peer reviewer comments are addressed in the following summary and incorporated into the final determination as appropriate.

(1) Comment: Two peer reviewers and several public comments did not agree that we met the intent of the recovery criteria; they stated that arroyo toads are extant in only 17 river

basins on Federal lands and the currently available data do not support that arroyo toad populations are self-sustaining.

Our Response: We agree with the peer reviewers and commenters that the intent of the reclassification criteria in the recovery plan (Service 1999) has not been met at this time. We have revised our analysis accordingly (see **Summary of Basis for This Withdrawal and Recovery and Recovery Plan Implementation**). We are withdrawing the proposed rule to downlist the arroyo toad from an endangered to a threatened species under the Act.

(2) *Comment:* Two peer reviewers provided new threat information. One peer reviewer provided new information on the threats of drought, introduced predator species, livestock grazing, and operation of dams and water diversions; another peer reviewer provided new information regarding threats affecting arroyo toad occurrences in Baja California, Mexico.

Our Response: We incorporated this new information into the final species report where applicable and summarized those changes in this document (see **Summary of Basis for This Withdrawal and Summary of Factors Affecting the Species**).

(3) *Comment:* Several peer reviewers provided new population survey information and information on recent years of reproductive failure and adult mortality.

Our Response: We incorporated this new information into the final species report where applicable; see **Summary of Basis for This Withdrawal and Recovery and Recovery Plan Implementation**.

(4) Comment: One peer reviewer suggested that we reclassify each threat in light of either the lack of information for the 10 Baja California river basins or the available information present in the literature or from personal communications from biologists in the United States and Mexico who work in the Baja California region.

Our Response: Within our final species report, we recognize and account for uncertainty in the scope of each threat, defined as the proportion of arroyo toad occurrences that are affected by the threat, particularly when considering the occurrences in Baja California, Mexico. We now include occurrences in the scope determination only when we have information regarding the threat at that occurrence. For 6 of the 13 threats we evaluate, we do not have adequate information to assess whether the threat is impacting occurrences of arroyo toads in Baja California, Mexico; we therefore categorize these occurrences as “unknown” and exclude them from our determination of scope for that threat.

(5) Comment: Several peer reviewers and public comments pointed out that our conclusion in the proposed rule failed to account for current events because arroyo toads were listed at the end of a serious drought and we are now in the worst drought on record.

Our Response: We incorporated this new information into the final species report where applicable and summarized those changes in this document (see the *Drought* section under **Summary of Factors Affecting the Species**, above).

(6) *Comment:* One peer reviewer and public comment expressed concern that the increasing prevalence of chytrid fungus will severely impact the few remaining populations because arroyo toads are sensitive to infection and likely mortality from this pathogen.

Our Response: Please see the *Disease* section under **Summary of Factors Affecting the Species**, above, for a discussion of impacts of chytridiomycosis on the arroyo toad.

(7) *Comment:* One peer reviewer asked for information on how we have implemented the recovery strategy and objectives, specifically:

- Identify and secure additional suitable arroyo toad habitat and populations;
- Conduct research to obtain data to guide management efforts and determine the best methods for reducing threats; and
- Develop and implement an outreach program.

Our Response: We have continued to work with our partners to protect arroyo toads, and some arroyo toad habitat has been acquired since the time of listing at three occurrences on non-Federal land (Lower and Middle San Luis Rey River, Upper Santa Ysabel Creek, and Lower Cottonwood Creek basins) through HCPs or other mechanisms such as grants and section 7 consultations. Additionally, the Lower Sweetwater River Basin occurrence (non-Federal land) is partially within the County Subarea Plan under the San Diego Multiple Species Conservation Plan, and some areas could be placed in reserves in the future. Some research is being conducted to guide management efforts, particularly research by the U.S. Geological Survey (USGS), much of which is described in their peer review. We have not developed or implemented an outreach program.

(8) *Comment:* A peer reviewer recommended that climate change predictions and changes from historical patterns be considered or incorporated into the downlisting criteria. Because self-sustaining populations are currently defined by positive recruitment of arroyo toad individuals during average or above-average rainfall years, we are assuming that the frequency of average or above-average rainfall years would be consistent with historical patterns.

Our Response: When we drafted the recovery plan for the arroyo toad in 1999, we did not consider climate change and its potential influence on recovery or the formation of the recovery criteria. Though we are not currently revising the recovery plan for the arroyo toad, we did take future climate change projections into account when evaluating potential threats in the final species report. Any future revisions of the recovery plan would consider new information, including effects of climate change.

(9) *Comment:* One peer reviewer commented that recovery units should be reassessed to only include Northern and Southern Recovery Units and not include the Desert Recovery Unit, given that research shows desert unit haplotypes are virtually identical to those in the Northern Recovery Unit.

Our Response: Arroyo toads survive in areas that are ecologically and geographically distinct from one another, and the threats in those areas differ to some degree (Service 1999, p. 70). To address the recovery needs of arroyo toads in each of these areas, we established the three recovery units, identified as Northern, Southern, and Desert, that reflect the ecological and geographic separations and cover the known and historical

range of the species within the United States (Service 1999, p. 70). We did not identify the three recovery units (Northern, Southern, and Desert) based solely on genetics. Thus, stabilizing and expanding the populations in these units will preserve the species' genetic diversity as well as the distinct ecological environments in which the species is found (Service 1999, p. 70).

(10) Comment: One peer reviewer commented that we discuss Camp Pendleton and Fort Hunter Liggett as military lands with INRMPs, but do not mention Naval Weapons Station Seal Beach, Detachment Fallbrook, and the Navy installation at Remote Training Site Warner Springs. These installations also have INRMPs that include arroyo toads, and they spend a lot of money on arroyo toads at these installations.

Our Response: We incorporated this new information into the final species report where applicable (see **Geographic Breakdown of Threats: Southern Recovery Unit** (Service 2015, pp. 93-94) and **Achievement of Downlisting Criteria: Criterion 1 – Approved and Implemented Management Plans on Federal Lands** (Service 2015, p. 98)).

(11) Comment: One peer reviewer pointed out that the Conjunctive Use Project for the Santa Margarita River is currently being planned and will involve increased water diversions and groundwater pumping from the lower Santa Margarita River Basin (MCB Camp Pendleton 2012, 2013). The portion of the River downstream from the water diversion represents the most stable area of arroyo toad breeding and recruitment on Camp Pendleton. Although the direct and indirect impacts are still being reviewed, this

project has the potential to result in extremely severe impacts to the arroyo toad population along the lower Santa Margarita River.

Our Response: The Service is currently in formal consultation with Camp Pendleton on the Conjunctive Use Project, and we are working with the U.S. Marine Corps to review and address those impacts.

Federal Agency Comments

(12) Comment: One comment from Camp Pendleton expressed gratification that their INRMP has contributed to the recovery and conservation goals for arroyo toad. The base will continue to implement management conservation programs and projects through their INRMP.

Our Response: We appreciate Camp Pendleton's willingness to work with the Service to help conserve arroyo toads. The Sikes Act (16 U.S.C. 670a et seq.) requires the Department of Defense to develop and implement INRMPs for military installations across the United States. INRMPs are prepared in cooperation with the Service and State fish and wildlife agencies to ensure proper consideration of fish, wildlife, and habitat needs. We look forward to continued collaboration with Camp Pendleton in implementing conservation measures that contribute to the recovery of the arroyo toad.

(13) Comment: The Angeles, Cleveland, Los Padres, and San Bernardino National Forests expressed concern that human-caused threats could be increasing as the presence of Forest Service recreation staff and fire prevention officers has been decreasing.

Our Response: We recognize that lack of resources can affect the ability to implement conservation actions. We will work with the Forest Service through our consultations to determine whether changes in resources may impact arroyo toads.

(14) Comment: One comment pointed out that attempts to remove introduced predators on Los Padres National Forest in the past have proved to be inadequate in scope and duration despite a focused effort because of the extensive distribution of these predators across jurisdictional boundaries and their ability to reproduce rapidly.

Our Response: We commend the Forest Service for their efforts to remove introduced predators to improve arroyo toad habitat. The Forest Service, on the four National Forests that contain arroyo toads, implements conservation measures for sensitive species under their land and resource management plans, which outline management direction, including desired future conditions, suitable uses, monitoring requirements, goals and objectives, and standards and guidelines. Additionally, through section 7 of the Act, Federal agencies such as the Forest Service are required to use their authorities to carry out programs for the conservation of listed species and to consult with the Service when a Federal action may have an effect on listed species. We acknowledge the difficulty of removing introduced predators from arroyo toad habitat, which we recognize is one of the most serious threats to the survival of arroyo toads. This conservation measure to improve the status of arroyo toads is a long-term management action and will require ongoing efforts to remove or reduce the level of predation from introduced predators in order to recover arroyo toads.

Public Comments

(15) Comment: Several commenters pointed out that while there have been some successes in mitigating the negative impacts of some threats to arroyo toads, others will grow in severity in the future due to growing populations and greater water needs, leading to additional stresses on the populations of the arroyo toad.

Our Response: We state in the final species report that as the human population grows, the negative effects from increased water needs and recreational activities, in the Southern Recovery Unit in particular, will put more pressure on the remaining arroyo toad habitat, even those sites receiving some protection (Service 2015, p. 93).

Additionally, we acknowledge that threats such as drought and climate change will place added stress on available water supplies throughout the species' range and may work in combination with other threats to impact arroyo toad populations. As noted in the final species report and earlier in the *Geographic Distribution of Threats* section under the **Summary of Factors Affecting the Species**, large-scale conservation planning efforts and land management plans for Federal lands include measures to benefit arroyo toad. Therefore, while we recognize the impact that a growing human population and increased water needs in California and Baja California, Mexico, would have on arroyo toads, we anticipate that these large-scale management plans will help buffer arroyo toads from the impact of these threats to some degree.

(16) Comment: Several public commenters stated that there is little to no diminishment in many of the threats that caused the arroyo toad's widespread population decline. In

particular, comments point to development of low-gradient river margins, OHVs, disruption of natural flow regimes, incompatible land uses, inappropriate vegetation treatments intended to reduce fires, drought, and no serious effort to reduce threats posed by nonnative, invasive species and invasive riparian plants.

Our Response: As noted above, we conclude that the types of threats to arroyo toads remain the same as at the time of listing and are ongoing; in addition, new threats have been identified. However, while we conclude that threats have not been ameliorated sufficiently such that the species can be reclassified, conservation efforts, including HCPs, land and resource management plans, and INRMPs, are ongoing in most populations to reduce impacts from 9 of the 13 currently identified threats that affect arroyo toads. These plans have helped to manage and reduce impacts to arroyo toads from many ongoing threats. While we conclude that we have not yet achieved downlisting criteria for the species and that reclassifying arroyo toad is not warranted at this time, such conservation actions have prevented the extirpation of populations, and arroyo toads continue to persist and occupy the same range as they did at the time of listing.

(17) Comment: One commenter stated that the original listing of the arroyo toad as endangered was intended to restrict public access to National Forests. Campgrounds and OHV riding areas at Littlerock Dam were closed; Hardluck Campground was closed; and all campgrounds were closed and trout stocking stopped in Big Tujunga Canyon. Even though heavy use occurred and lots of taxpayer dollars have been spent on facilities in these areas, arroyo toads were still found, and these areas will never be reopened.

Our Response: Areas within Forest Service lands were closed to public access for recreational purposes to facilitate recovery of the arroyo toad. Land and resource management plans (LRMPs) provide guidance for activities carried out on National Forest lands. Each National Forest is governed by a LRMP in accordance with the National Forest Management Act (16 U.S.C. 1600 et seq.), which outlines management direction, including desired future conditions, suitable uses, monitoring requirements, goals and objectives, and standards and guidelines. Additionally, through section 7 of the Act, Federal agencies, such as the Forest Service, are required to use their authorities to carry out programs for the conservation of listed species and to consult with us (Service) when a Federal action may have an effect on listed species. Therefore, the Forest Service, in consultation with the Service under section 7 of the Act, proposed LRMPs for the four National Forests in which arroyo toad occurs that include land use priorities and fish and wildlife standards. For example, biological zones or wilderness areas such as Upper Big Tujunga and Little Rock Creeks are subject to fish and wildlife standards that direct activities in these areas to be neutral or beneficial to arroyo toads. Therefore, because recreational activities are known to negatively affect the arroyo toad and its habitat, certain recreational activities at identified locations are prohibited to avoid and minimize impacts to arroyo toad and its habitat.

(18) Comment: One commenter noted that public access and recreation has been restricted at Hardluck Campground but it has been opened to environmental groups (i.e., Habitat Works) that are eradicating tamarisk. The public pays, but Habitat Works with the support of the Forest Service get to recreate where the public is not allowed.

Our Response: The Forest Service has taken a number of steps to improve the status of arroyo toads. They initiated several nonnative and pest eradication programs, including efforts to eradicate yellow-star thistle (*Centaurea solstitialis*), giant reed, and tamarisk, and have proposed the National Forests of Southern California Weed Management Strategy under Appendix M of the LRMP. According to Standards 12, 13, and 47 of that LRMP, future pest and nonnative species control projects will be beneficial for the recovery of listed and candidate species and their critical habitats. Moreover, Forest Service staff and volunteers conduct annual tamarisk removal in Los Padres National Forest along portions of Piru Creek, Sisquoc River, Santa Ynez River, and Sespe Creek to protect and restore arroyo toad habitat. Habitat Works is an environmental stewardship action group performing volunteer projects to improve wildlife habitat in southern California (Habitat Works 2015). Therefore, while Habitat Works is able to access locations that the public is not, the goal of volunteer restoration groups is to implement projects that improve wildlife habitat for the benefit of species such as the arroyo toad and not to access a site for recreational purposes.

(19) Comment: One commenter acknowledged the Service, Forest Service, California Department of Fish and Wildlife, and other agencies involved with the species recovery program for their efforts in implementing various measures to help protect the species. As an example, suction dredging is now prohibited in Class A streams.

Our Response: We appreciate the comment recognizing the hard work of the Service and our partners who are working to help recover the arroyo toad.

(20) *Comment:* One commenter pointed out that since listing, new populations have been found, but none of these appears to be thriving, and in some populations there is evidence to suggest recruitment has plummeted.

Our Response: Since the arroyo toad was listed as an endangered species, several new populations have been found within the extant range due to increased survey efforts. As summarized in the final species report (Service 2015, pp. 13–15), at the time of listing in 1994, arroyo toads were believed to be extant in 22 populations within 8 drainages in the United States; specific populations in Mexico were not discussed (59 FR 64859; December 16, 1994). Subsequent to listing, arroyo toads were discovered in Monterey County on the San Antonio River at Fort Hunter Liggett Military Reservation in 1996 (Hancock 2009a, p. 9). In Riverside County, a small population was detected within Murrieta Creek basin in 2001 (WRCRCA 2006, p. 5). In Baja California, Mexico, surveys have identified several newly recognized populations and the first records of the species in the Rio Las Palmas, Rio El Zorillo, and Rio Santo Tomas (Lovich 2009, pp. 74–97).

Regarding evidence of plummeting recruitment, for most populations of arroyo toads, we do not have long-term trend data. However, we received information from peer reviewers that indicates that at least three occurrences in the Northern Recovery Unit (Salinas River Basin, Santa Ynez River Basin, and Santa Clara River Basin) (Hancock 2006, 2007-2014; Sweet 2015, pers. comm.) and at least eight occurrences in the Southern Recovery Unit (Lower Santa Margarita River Basin, Upper San Luis Rey River Basin, Upper and Lower Santa Ysabel Creek Basins, Upper San Diego River Basin, Upper Sweetwater River Basin, and Upper and Lower Cottonwood Creek Basins) (USGS

in litt. 2014; USGS 2015, pers. comm.) have shown recent declines. This new information has been added to our final species report.

(21) Comment: One commenter implements the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), and the arroyo toad is one of the covered species. They appreciate that the ongoing efforts to conserve arroyo toads and their habitat, including their own efforts, are contributing to the species' recovery.

Our Response: We appreciate the efforts by the Western Riverside County MSHCP to help conserve arroyo toads and their habitat by addressing impacts to arroyo toads from new development and associated infrastructure.

Determination

As required by the Act, we considered the five factors listed in section 4(a)(1) of the Act in assessing whether the arroyo toad warrants downlisting at this time. We examined the best scientific and commercial information available regarding the past, present, and foreseeable future threats faced by the species. For the purposes of this determination, we consider the foreseeable future to be 20 years. In general, we have information about effects of threats on arroyo toads since time of listing, approximately 20 years ago. Therefore, the timeframe we are comfortable predicting into the future for most threats is also 20 years (as described under the various threats analysis discussions in the final species report (Service 2015, pp. 29–91)).

Current and potential future threats to arroyo toads include urban development (Factors A and E), agriculture (Factors A and E), operation of dams and water diversions

(Factor A), mining and prospecting (Factors A and E), livestock grazing (Factor A), roads and road maintenance (Factors A and E), recreation (Factors A and E), invasive, nonnative plants (Factor A), disease (Factor C), introduced predator species (Factor C), drought (Factor E), fire and fire suppression (Factors A and E), and climate change (Factor E). Some factors known to pose a threat to arroyo toads and their habitat at the time of listing are no longer of concern (for example, new dam construction or collection for scientific or commercial purposes). Conservation activities and preservation of habitat have further reduced threats from mining and prospecting, livestock overgrazing, roads and road maintenance, and recreation.

Overall, we find that four threats (introduced predator species, drought, urban development, and operation of dams and water diversions) continue to pose a significant threat to the continued existence of the arroyo toad, such that these threats are likely to have a major impact on local populations or habitat that rises to a species-level effect. In particular, introduced predators pose a threat to the continued survival of arroyo toads. Other factors, such as operation of dams and increased drought, can increase the ability of introduced predators to invade and persist in habitats where arroyo toads are found. These predators can have a significant impact on the breeding success and survival of arroyo toad populations, and if not controlled, could result in the extirpation of entire populations of the species. Urban development, drought, and operation of dams and water diversions, and potentially climate change, also pose a threat to the continued existence of arroyo toads; all of these factors have the potential to alter the natural flow regime in creeks and streams that support arroyo toads. Because arroyo toads have specialized life-history needs and habitat requirements, they are especially sensitive to such changes in

habitat. Furthermore, conservation actions that would be sufficient to ameliorate the effects of factors such as climate change and drought have not been implemented.

Arroyo toads also continue to be impacted by threats from agriculture; livestock grazing; roads and road maintenance; recreation; invasive, nonnative plants; and fire and fire suppression. These threats are likely to have a moderate impact on local population numbers or habitat. However, populations in other locations may not be impacted. Therefore, the effects of these threats do not rise to the species level.

Management efforts are being implemented in approximately 18 arroyo toad occurrences on Federal lands through the LRMPs for each of the four southern California National Forests (Los Padres, Angeles, San Bernardino, and Cleveland), and through the INRMPs on Fort Hunter Liggett, Naval Weapons Station Seal Beach, Camp Pendleton, and Naval Base Coronado. As a result, very few populations of arroyo toads have been extirpated since the time of listing, and the species continues to persist throughout the range known at the time of listing. However, data indicate that the species has continued to decline in numbers and in area occupied within its current range (Hancock 2007-2014, entire; Hollingsworth *in litt.* 2014; USGS *in litt.* 2014; Sweet 2015, pers. comm.). Therefore, although some conservation efforts are ongoing in most populations to help manage and reduce impacts to arroyo toads from many ongoing threats, we have not yet documented a species response to conservation actions that would indicate a change in listing status is warranted at this time.

We examined the downlisting criteria provided in the recovery plan for the arroyo toad (Service 1999). Self-sustaining is defined in the recovery plan as populations which have stabilized or are increasing. We lack long-term population trend data for arroyo

toads that demonstrate that populations have stabilized or are increasing anywhere within the species' range. Although arroyo toads are still extant within the range they occupied historically and at the time of listing, data indicate that the species has continued to decline (Hancock 2007-2014, entire; Hollingsworth *in litt.* 2014; USGS *in litt.* 2014; Sweet 2015, pers. comm.). At least three occurrences in the Northern Recovery Unit (Salinas River Basin, Santa Ynez River Basin, and Santa Clara River Basin) (Hancock 2006, 2007-2014; Sweet 2015, pers. comm.) and at least eight occurrences in the Southern Recovery Unit (Lower Santa Margarita River Basin, Upper San Luis Rey River Basin, Upper and Lower Santa Ysabel Creek Basins, Upper San Diego River Basin, Upper Sweetwater River Basin, and Upper and Lower Cottonwood Creek Basins) (USGS *in litt.* 2014; USGS 2015, pers. comm.) have shown recent declines. Because no information indicates that populations have stabilized or are increasing, and new information suggests several occurrences are declining, we have determined that the intent of the downlisting criteria has not been met.

In conclusion, we have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species. After review of the information pertaining to the five statutory factors, we determined that the types of threats to arroyo toads remain the same as at the time of listing and are ongoing, and new threats have been identified. Some conservation efforts are ongoing in most populations to help manage and reduce impacts to arroyo toads from many ongoing threats; however, we have not yet documented a species response to conservation actions that would indicate a change in status is warranted. We conclude that the intent of the reclassification criteria in the recovery plan (Service 1999, pp. 75-77) has not been met

and that ongoing threats continue to put all populations of arroyo at risk of extinction such that the species is in danger of extinction throughout all its range.

Because we have determined that the arroyo toad is in danger of extinction throughout all its range, no portion of its range can be “significant” for purposes of the Act’s definitions of “endangered species” and “threatened species.” See the Service’s final policy interpreting the phrase “significant portion of its range” (SPR) (79 FR 37578; July 1, 2014).

Based on the analysis above, we conclude the arroyo toad meets the Act’s definition of an endangered species in that it is in danger of extinction throughout all of its range. We therefore conclude that reclassification of this species is not warranted at this time. As a result, this document withdraws the proposed rule published on March 27, 2014, at 79 FR 17106.

References Cited

A complete list of all references cited in this document is available on the Internet at <http://www.regulations.gov> at Docket No. FWS–R8–ES–2014–0007 or upon request from the Field Supervisor, Ventura Fish and Wildlife Office (see **ADDRESSES**).

Authors

The primary authors of this document are the staff members of the Pacific Southwest Regional Office and Ventura Fish and Wildlife Office (see **ADDRESSES**).

Authority

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

Dated: December 10, 2015

Stephen Guertin

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

Billing Code 4333-15-P

[FR Doc. 2015-32075 Filed: 12/22/2015 8:45 am; Publication Date: 12/23/2015]