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

Dated:July 9, 2010

**Wendi Weber,**

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

[FR Doc. 2010–17650 Filed 7–19– 10; 8:45 am]

**BILLING CODE S**

## DEPARTMENT OF THE INTERIOR

## Fish and Wildlife Service

## 50 CFR Part 17

**[FWS–R8–ES–2009–0047]**
**[92210–1111–0000 B2]**

## Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to List the Amargosa Toad as Threatened or Endangered

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

**ACTION:** Notice of 12–month petition finding.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), announce a 12–month finding on a petition to list the Amargosa toad (*Anaxyrus nelsoni*) as threatened or endangered and to designate critical habitat under the Endangered Species Act of 1973, as amended. After review of all available scientific and commercial information, we find that listing the Amargosa toad is not warranted at this time. However, we ask the public to submit to us any new information that becomes available concerning the threats to the Amargosa toad or its habitat at any time.

**DATES:** The finding announced in this document was made on July 20, 2010.

**ADDRESSES:** This finding is available on the Internet at *http://www.regulations.gov* at Docket Number FWS–R8–ES–2009–0047. Supporting documentation we used in preparing this finding is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office, 4701 N. Torrey Pines Dr., Las Vegas, NV. Please submit any new information, materials, comments, or questions concerning this finding to the above address.

**FOR FURTHER INFORMATION CONTACT:** Robert D. Williams, State Supervisor, Nevada Fish and Wildlife Office; by mail (see ADDRESSES); by telephone at 775–861–6300; or by facsimile at 775–861–6301*mailto:*. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

**SUPPLEMENTARY INFORMATION:**

### Background

Section 4(b)(3)(B) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*) requires that, for any petition to revise the Federal Lists of Endangered and Threatened Species that contains substantial scientific or commercial information that listing the species may be warranted, we make a finding within 12 months of the date of receipt of the petition. In this finding, we will determine that the petitioned action is: (1) Not warranted, (2) warranted, or (3) warranted, but the immediate proposal of a regulation implementing the petitioned action is precluded by other pending proposals to determine whether species are threatened or endangered, and expeditious progress is being made to add or remove qualified species from the Federal Lists of Endangered and Threatened Species. Section 4(b)(3)(C) of the Act requires that we treat a petition for which the requested action is found to be warranted but precluded as though resubmitted on the date of such finding, that is, requiring a subsequent finding to be made within 12 months. We must publish these 12–month findings in the **Federal Register.**

### Previous Federal Actions

On August 2, 1977, the Service included the Amargosa toad on a list of amphibians that we were reviewing to determine whether those species should be proposed for listing as endangered or threatened (42 FR 39121). Subsequently, we assigned the Amargosa toad as a category 1 candidate species under the Act in 1982 (47 FR 58454, December 30, 1982) and 1994 (59 FR 58982, November 15, 1994); and designated it as a category 2 candidate in 1985 (50 FR 37958, September 18, 1985); 1989 (54 FR 554, January 6, 1989); and 1991 (56 FR 58804, November 21, 1991). A category 1 species was a taxon for which the Service has substantial information on hand to support the biological appropriateness of proposing to list as endangered or threatened under the Act. A category 2 species was a taxon for which the Service has information indicating that proposing to list the species as endangered or threatened is possibly appropriate, but that information is not conclusive data on biological vulnerability or threats that would support a proposed listing.

On September 21, 1994, the Service received a petition from the Biodiversity Legal Foundation of Boulder, Colorado, requesting emergency listing of the Amargosa toad as endangered. At the time we received the petition, the Amargosa toad was a category 1 candidate species. On March 23, 1995, we announced our 90–day finding that the petitioned action may be warranted and initiated a status review of the species (60 FR 15280). On July 26, 1995, the Service recommended removal of the Amargosa toad from category 1 candidate status based on information we obtained during the status review. On February 28, 1996 (61 FR 7596), we removed the Amargosa toad from candidate status. On March 1, 1996, we announced our 12–month finding that listing the Amargosa toad as endangered or threatened was not warranted (61 FR 8018).

On February 27, 2008, we received a petition from the Center for Biological Diversity (CBD) and Public Employees for Environmental Responsibility (PEER), hereinafter referred to as "petitioners," requesting that the Amargosa toad be listed as endangered or threatened and that critical habitat be designated under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioners, as required in 50 CFR 424.14(a). In a letter to the petitioners dated May 1, 2008, we responded that we had reviewed the petition and found that an emergency listing was not warranted and we anticipated making an initial finding on the petition during Fiscal Year 2008. On March 11, 2009, we received a 60–day notice of intent to sue from CBD alleging violations of the Act because we did not publish our 12–month finding within 12 months of receiving the petition. On September 10, 2009, we published a 90–day finding stating the petition contained substantial information to indicate the petitioned action may be warranted, and we announced the initiation of a status review of the species (74 FR 46551).

On April 26, 2010, CBD amended its Complaint in *Center for Biological Diversity* v. *Salazar, U.S. Fish and Wildlife Service*, Case No.: 1:10–cv–230–PLF (D.D.C.), adding an allegation that the Service failed to issue its 12–month petition finding on the Amargosa toad within the mandatory statutory timeframe. This notice constitutes the 12–month finding on the February 27, 2008, petition to list the Amargosa toad as threatened or endangered with critical habitat.

### Species Information

In addition to the information provided below, refer to the 90–day finding (74 FR 46551) for additional information on the Amargosa toad.

*Taxonomy and Species Description*

The Amargosa toad is a member of the family Bufonidae, which includes North American true toads. Stejneger (1893, cited in Lannoo 2005, p. 427) described the Amargosa toad as *Bufo boreas nelsoni*, a subspecies of the western toad (*Bufo boreas*). Savage (1959, pp. 251–254) was the first to refer to the Amargosa toad as *Bufo nelsoni* in accordance with the rules of the International Code of Zoological Nomenclature. Feder (1997, cited in Lannoo 2005, p. 428) diagnosed *Bufo nelsoni* by allozymic data and concluded that the Amargosa toad warrants species status. Mitochondrial DNA analyses by Goebel (1996, cited in Lannoo 2005, p. 429) are consistent with species status for the Amargosa toad. In 2002, *Bufo nelsoni* was listed as a full species in the Integrated Taxonomic Information System database compiled by the Smithsonian Institution, with the highest credibility rating by their Taxonomic Working Group (Lannoo 2005, p. 427). Frost *et al.* (2006) moved North American toads from *Bufo* to *Anaxyrus* (Tschudi 1845, cited in Frost *et al.* 2006, p. 363), which was accepted in 2008 by the Committee on Standard and Scientific Names (Committee; Crother 2008, pp. 2–4). The Committee, sanctioned by the Society for the Study of Amphibians and Reptiles, the American Society of Ichthyologists and Herpetologists, and The Herpetologists' League, is tasked to develop standard English names and publish a list of the current scientific names of North American herpetofauna. This is considered the official list for those societies.

Adult male Amargosa toads typically have a snout-vent length of 1.6 to 2.7 inches (in.) (42 to 68 millimeters (mm)); for females it is typically 1.8 to 3.5 in. (46 to 89 mm) (Nevada Department of Wildlife (NDOW) 2000, p. A–2). The dorsal body of the Amargosa toad has three paired rows of wart-like skin projections called tubercles. Their backs have black speckling or asymmetrical spots. Background coloration ranges from almost black to brownish or pale yellow-brown or olive, and may vary considerably among individual toads in the same population. A light mid-dorsal stripe occurs along the backbone. The large, wart-like parotid glands located behind the eye are tawny to olive. Underneath, the Amargosa toad is whitish or pale olive, with scattered black spots that merge above the legs to form the appearance of "pants."

*Current and Historic Ranges*

Amargosa toads are endemic to the Amargosa River drainage in southwestern Nevada (Goebel *et al.* 2009, p. 210). Available historic accounts (Maciolek 1983a, p. 11) do not provide any specific indication of wider distribution. Toads that occur in downstream reaches of the Amargosa River corridor (e.g., Ash Meadows area) anecdotally exhibit some taxonomic similarities; however, they have not been identified as Amargosa toads. The area occupied by the Amargosa toad is isolated, with no known or probable connections to members of the western toad complex (NDOW 2000, p. A–1). The nearest known record for a western toad is approximately 35 linear miles (mi) (56 kilometers (km)) away at Furnace Creek in Death Valley National Park, California, where an introduced population of western toad occurs. The historical and current range of the Amargosa toad occurs within Oasis Valley, along an approximately 10-mi (16–km) stretch of the Amargosa River and nearby spring systems, roughly between the towns of Springdale and Beatty. Oasis Valley occurs along U.S. Highway 95 between Bullfrog Hills and the Nevada Test Site.

In 2007, the Amargosa Toad Working Group (ATWG) prepared a map of all known and potential habitat for the species, including potential movement corridors, and posted the map on the Internet at: *http://www.fws.gov/nevada/nv_species/amargosa_toad.html*. The total amount of known and potential Amargosa toad habitat delineated by the ATWG is approximately 8,440 acres (ac) (3,416 hectares (ha)).

*Life History and Ecology*

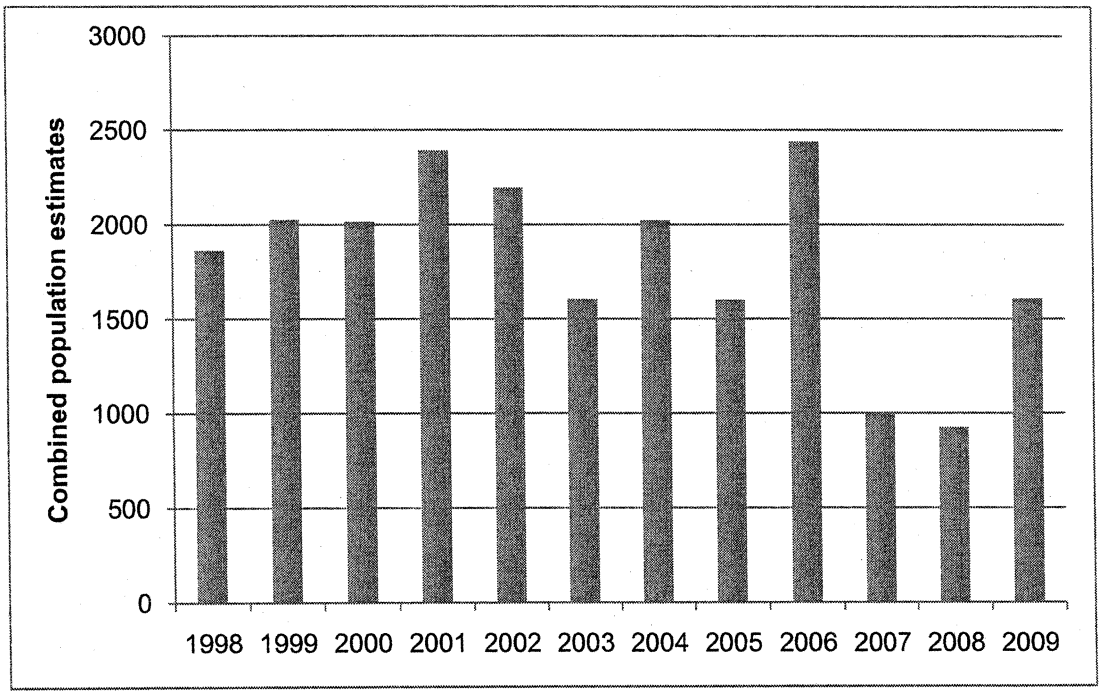
Amargosa toad habitat requirements for breeding and population recruitment include the presence of open, ponded, or flowing water, with riparian vegetative cover in an early-to-intermediate successional stage to form a partial canopy for shade with minimal emergent vegetation at the water's edges. Immature (metamorphs or toadlets) and adult Amargosa toads are dependent upon the areas described above, as well as areas they can use for shelter, including burrows, debris piles, spaces under logs or rocks, and areas of dense vegetation (NDOW 2000, p. A–2). Adult toads also require adjacent vegetated uplands for nocturnal foraging. Dense vegetation and advanced successional stages of riparian vegetation appear to limit habitat suitability and occupancy by all life stages, particularly where open water is not present (NDOW 2000, p. A–2). Toads can be abundant in irrigated and disturbed areas.

The breeding season for the Amargosa toad begins in mid-February and may extend into July, during which time adults congregate at breeding sites. A female toad may produce over 6,000 eggs in a single reproduction event (Altig 1987, p. 277; Heinrich 1995, p. 2). Amargosa toad tadpoles require relatively open water that persists long enough for the completion of metamorphosis and development into toadlets, which occur over approximately 30 days. Predation and early desiccation of wetlands needed for breeding may destroy an entire breeding effort. Although Amargosa toads typically live 4 to 5 years, individual toads are known to live up to 17 years based on data from NDOW's population monitoring program (Hobbs 2010, p. 1.).

*Population Status and Trends*

In 1998, NDOW initiated a long-term population monitoring program for the Amargosa toad using mark-recapture methods at 11 sites of the 18 known sites occupied by toads. The 11 sites are grouped into 4 spatial areas described below (see distribution map available at *http://www.fws.gov/nevada/nv_species/amargosa_toad.html*). The monitoring program was identified in the Amargosa Toad Conservation Agreement and Strategy (CAS) as an conservation action (NDOW 2000, p. A–11) and involves capture and marking (with implanted tags) of all juvenile to adult age-class Amargosa toads found that are 2 in. (50 mm) or greater in length. The NDOW maintains a database on Amargosa toad population monitoring data as prescribed in the CAS (NDOW 2000, pp. A–12 and 13). As of November 2009, a total of 6,739 Amargosa toads had been captured and tagged. In 2009, captures increased 77 percent over 2008, with a total of 768 toads captured and tagged, 519 of which were captured for the first time. The 2009 population estimate for monitored sites is 1,623, which is 13.6 percent less than the average of 1,826 for the period 1998 through 2008 (Hobbs 2009, p. 1). Unsuitable weather conditions during the 2007 and 2008 surveys may have resulted in lower than average toad activity (Figure 1; Hobbs 2009, p. 2). Habitat improvements and disturbance of aquatic systems at monitored sites have resulted in increases in toad captures and reproduction (Hobbs 2009, pp. 2–4; Saving Toads thru Off-Road Racing, Ranching, and Mining in Oasis Valley (STORM–OV) 2009b, p. 1).

*Figure 1. Amargosa toad population estimates for all surveyed sites.*




Simandle (2006, p. 42) determined that Amargosa toads meet the criteria and expectations of metapopulations. This means that occupied habitats, unoccupied but suitable habitats, and intervening habitat that may be occasionally used during infrequent migration events should all be considered as conservation priorities. Metapopulations can be expected to have local extirpations in some patches, resulting in the existence of empty but suitable habitat that subsequently may be recolonized in the future (Simandle 2006, p. 8). Events such as floods may simultaneously destroy existing occupied habitat, create new suitable habitat, and facilitate infrequent movement among different sites. Habitat conditions and the number of toads that occur at specific sites and metapopulations change from year to year, thus requiring site-specific management strategies.

Population Groups

The 11 monitored sites occupied by the Amargosa toad occur in three groups: Harlan-Keal, Amargosa River, and Spicer/Mullin/Torrance; and Angel's, a single site outside the three groups. The sites associated with each group are discussed below.

*Harlan-Keal Group*

The Harlan-Keal Group consists of four sites: 5 ac (2 ha) of private land (Harlan-Keal), including an irrigated garden area and 200-square foot ($ft^2$) (18.6-square meter ($m^2$)) pond; a spring and associated pond (Crystal Spring); and two seeps named Trespass and Wild Burro. Crystal Spring and the two seeps occur on lands administered by the BLM.

The Harlan-Keal pond was restored in 2003–2004, and has early successional habitat where toad reproduction occurs and may serve as a source population. The 2009 population estimate for the Harlan-Keal Group was 156, which was 22 percent below the 12–year average for this group of sites (Hobbs 2009, p. 2). Because of its elevation, ambient air temperatures at this site are always cooler than at other sites. This will likely affect the number of toads captured during surveys.

The Crystal Spring site consists of a spring, pond, and outflow on BLM land. In 1995, a wild burro exclosure was constructed around Crystal Spring to reduce trampling and overuse of the spring. This caused an increase in emergent vegetation that has reduced the extent of open water, which in turn resulted in few toads remaining at the site. Historically, this site was maintained by ranchers and other private efforts which removed sediment and excess vegetation that maintained open water in the pond. Planning is under way to rehabilitate this site in 2010 to benefit Amargosa toads (STORM–OV 2009a, pp. 1–3).

Trespass Seep is a low-flow spring site without any substantial ponded area that has never supported many toads. During surveys, the highest number of toads captured at Trespass Seep was 12 in 1998. In August 2009, improvements were made to Trespass Seep by a private landowner that resulted in a substantial increase in ponded surface water and toad habitat. Within a few weeks after improvements to the seep, Amargosa tadpoles were observed at the site (STORM–OV 2009b, p. 1).

Wild Burro seep consists of a low-flow spring, an excavation with groundwater exposed, and wet meadow. In 1998, 12 ac (4.9 ha) surrounding the seep was fenced by BLM to exclude wild burros that overused the site. Currently this site provides little habitat for the Amargosa toad, with only a few toads documented at this site each year. In November 2009, STORM–OV submitted a plan to the BLM to create and enhance toad habitat at this site (STORM–OV, 2009c, pp. 1–6). STORM–OV is a local nonprofit organization representing the off-road, ranching, and mining interests, dedicated to Amargosa toad conservation projects.

*Amargosa River Group*

The Amargosa River consists of three monitored segments characterized by riparian vegetation interspersed with flowing, open water. Amargosa toad population monitoring occurs along a 2-mi (3.2-km) section of the Amargosa

River that is mostly perennial, from just north of the Stagecoach Casino and Hotel to the Narrows, south of Beatty, Nevada (see distribution map available at *http://www.fws.gov/nevada/nv_species/amargosa_toad.html*). Land ownership is a mosaic of private, local, and Federal (BLM) lands. Most habitat for the Amargosa toad exists along this monitored section of the river, and most toads are found along the river corridor where perennial water occurs and bullfrogs (*Lithobates (=Rana) catesbeiana*) and crayfish (*Procambarus* sp.) are few or absent. In a typical year, tens or hundreds of thousands of Amargosa toad tadpoles are produced within the Amargosa River. The 2009 population estimate for this group was 14 percent lower than the 12–year average (Hobbs 2009, p. 3). This lower population estimate for the Amargosa River may be the result of low detectability of Amargosa toads due to dense vegetation, no substantial habitat improvements during the last few years, and predation from bullfrogs and crayfish.

*Spicer/Mullin/Torrance Group*

This group consists of three privately held properties which include the Spicer site (320 ac; 129 ha); Mullin site (80 ac; 32 ha); and Torrance Ranch (130 ac; 52 ha). The Torrance Ranch was purchased by The Nature Conservancy (TNC) in 1999 to protect the Amargosa toad and to provide a site for experimental habitat management to benefit the Amargosa toad. All three sites are contiguous or in close proximity to each other, which allows movement of Amargosa toads among all three sites. The 2009 population estimate for this group was 86 percent above the 12–year average for these sites. All three property owners are conservation partners with the Service and NDOW, and have accomplished or cooperated on numerous toad habitat improvement projects.

*Angel's Site*

This 296-ac (120-ha) site consists of a single location on private property. A spring-fed, cement lined pond that has an outflow to a wetland pasture provides breeding and oviposition habitat for the Amargosa toad. No habitat changes have been observed in at this site since monitoring efforts began in the mid-1990s. The pond was dry in 2007 and no evidence of reproduction was observed in 2008. The population estimate for this site declined 33 percent in 2009 compared to 2008, and 23 percent below the 12–year average for this site (Hobbs 2009, p. 5). Crayfish and bullfrogs occur at this site.

*Other Sites*

A 2.6 mi (4.2 km) stretch of the *Amargosa River north of the Stagecoach Hotel and Casino*, has intermittent and perennial flow in sections, mostly associated with spring outflow. Land ownership is a mosaic of private and BLM lands. Cursory surveys conducted in this area by NDOW biologists have detected Amargosa toads. Several private properties are known to have suitable Amargosa toad habitat. Surveys have not been conducted on these properties; however, anecdotal observations of toads have been reported (Maciolek 1983a, pp. 9–10; 1983b, pp. 4, A1–4). In 1993 and 1994, Heinrich (1995, p. 8) documented toads at eight sites, including the *Manley* property (spring and outflow), *Parker Ranch* (Ute Spring), and *LaFleur Spring* site (Roberts Field). No population size estimates or trends have been made for these other sites. Amargosa toads at these sites are not included in the rangewide population estimates.

*LaFleur Spring* is a historic site for Amargosa toads near the northern range limit of the species. Altig (1987, p. 277) found up to 74 toads at this site during 5 visits to the site in 1981. Altig further concluded that the toad population at the LaFleur site is small, with no recruitment observed in 1980 or 1981. No surveys have been conducted at this site since the 1980s. The Springdale site provides approximately 1 ac of (2.5 ha) toad habitat; toads were reported to be present in July and August 1983 by Maciolek (1983a, p. 8). Habitat improvements have occurred, including the removal of salt cedar. The Springdale site is not included in the population monitoring program for Amargosa toads.

*Parker Ranch* (24 ac; 212 ha) was purchased by TNC in December 2000, with assistance from the State of Nevada, the National Fish and Wildlife Foundation, and the U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS), to protect and restore unique biological resources, including Amargosa toad habitat. Parker Ranch is approximately 4 mi (6.4 km) north of Beatty and includes Ute Spring. Parker Ranch is currently being grazed by 74 cattle by a local rancher to reduce the amount of emergent wetland vegetation to increase open water areas (Moore 2010, p. 3). The spring source was fenced off and outflow stream channels were reconstructed in recent years to prevent damage to stream banks (Moore 2010, p. 3). The NRCS is monitoring the vegetation condition to determine when cattle should be moved to other properties in Oasis Valley. The newly constructed stream channel and toad pond system has been dry for almost 2 years due to insufficient water and overgrowth of emergent wetland vegetation near the spring. Amargosa toads continue to breed in the fenced-off spring and outflow channel on the 6-ac (2.5-ha) private inholding. No population estimates are available for this area.

The *Indian Springs Complex* consists of Upper, Middle, and Lower Indian Springs. Lower Indian Spring consists of two springs, Lower Indian and Cave Springs. Upper Indian Spring is the location of a municipal well that provides water to the town of Beatty. Middle Indian Spring is mostly dry, with several mature cottonwood trees. Little if any toad habitat currently occurs at either Upper or Middle Indian Springs. At Lower Indian Spring, an approximate 10-ac (4-ha) wild burro/livestock exclosure that surrounds two springs was constructed by the BLM in 1994, along with a water pipe and trough outside the exclosure to provide water to burros, livestock, and wildlife. Currently, this site is nearly dry, with no water exiting the exclosure. Toads have been captured at Lower Indian Spring as recently as 1996. No population estimates are available for this area. Attempts to restore toad habitat at this site in 1998 were unsuccessful, but new techniques have been developed, and the ATWG proposed habitat rehabilitation in 2010.

Other private lands have been or could be occupied by Amargosa toads. *Revert Spring* (303 ac; 123 ha) is privately owned by the owner of the Stagecoach Hotel and Casino. Revert Spring is an important water source for Amargosa toad habitat in the river. Although Maciolek (1983a, p. 10) documented Amargosa toads at Revert Spring in July and August 1983, the current status of toads at the Revert Spring site is unknown. *Coffer Ranch* (900 ac; 364 ha) occurs at the northernmost edge of the range of the Amargosa toad and is owned and managed by a cattle company. Maciolek (1983b, p. A–1) reported that Amargosa toads were present at the Coffer Ranch, and suitable Amargosa toad habitat was present. However, no population estimates are available for these or other privately owned lands where Amargosa toads may occur.

*Amargosa Toad Working Group (ATWG) and Amargosa Toad Conservation Agreement and Strategy (CAS)*

In 1996, the ATWG was organized to provide recommendations for

management and conservation of the Amargosa toad. The ATWG consists of representatives of the Service, NDOW, TNC, Nevada Department of Conservation and Natural Resources, Bureau of Land Management (BLM), Nye County, Beatty Town Board, Beatty Habitat Committee, The Amargosa Conservancy, private landowners in the Beatty community, the University of Nevada at Reno, and others. The ATWG meets semiannually to present and exchange information on the toad and its habitat, including the status of habitat conditions and ongoing habitat projects, potential threats to the toad, and population monitoring data, and to identify new conservation tasks.

In 2000, the ATWG completed the Amargosa Toad CAS (NDOW 2000, pp. 1–12), which provides management and conservation guidance for the Amargosa toad. The CAS informs management of the conservation needs of the toad, prioritizes tasks, and provides an implementation schedule. The ATWG is currently updating the CAS to include accomplishments and updated conservation needs for the toad.

The CAS was developed to expedite toad conservation over a period of 10 years by providing guidance and a framework for implementation of cooperative long-term conservation actions to benefit the toad and co-occurring species. Signatories to the CAS include NDOW, Nye County Department of Natural Resources, the Service, BLM, TNC, the Nevada Natural Heritage Program, and the University of Nevada at Reno. The signatories provide representatives to the ATWG. The signatories and ATWG are committed to implementing specific conservation actions (tasks) which identify, reduce, or eliminate threats to the species, and maintain and enhance a properly functioning ecosystem for the Amargosa toad and other indigenous species of Oasis Valley. The ATWG meets semiannually to plan Amargosa toad conservation actions. Most conservation actions in the CAS are implemented by local private land owners, and land and resource managers.

Many of the conservation actions implemented by the ATWG and its various partners are a direct result of the commitments made in the CAS for the Amargosa toad (NDOW 2000, pp. 1–12). The goals of the CAS are to manage threats, maintain habitats, monitor populations, and test and evaluate habitat manipulations. Completed conservation actions identified in the CAS have addressed threats identified in Factors A, B, C, and E (see below). We consider the CAS successful if considerable progress is made towards achieving these goals. CAS accomplishments that have contributed towards success include 12 years of population monitoring and maintaining population data in a database; salt cedar removal; habitat rehabilitation and enhancement; research; public education and outreach; and habitat acquisition as discussed in Factor A. Other CAS accomplishments include control of predators through habitat manipulation and work with the local community to achieve conservation such as an open space plan. The CAS signatories and the ATWG, in cooperation with local landowners, have planned and initiated multiple projects to protect, restore, and enhance toad habitat, and create new habitat. Overall success is measured by population monitoring data that show that rangewide, Amargosa toad populations are relatively stable and respond promptly and positively to habitat improvements. Previous habitat improvements on the Amargosa River, Harlan-Keal, Mullin, and Spicer sites have all resulted in substantial population increases of toads. In 2005, vegetation was removed by NDOT at the U.S. 95 Highway bridge over the Amargosa River in Beatty. This resulted in a positive response by toads as shown by a large reproductive event and a 2006 population estimate of 1,854 for the river which was the highest on record (ATWG 2005, p. 2; Wixson 2006, p. 3). Again in 2005, vegetation was cleared from the pond at the Harlan-Keal site with funding from the Service and NDOW which resulted in an estimated 90 percent increase in the population in 2006 over the 2005 estimate (Wixson 2006, p. 2).

The ATWG is in the process of updating the CAS and anticipates a revised CAS by the end of 2010. The revised CAS will acknowledge accomplishments and identify the conservation needs of the toad for the next 10 years. The revised CAS will operate in a similar manner as the existing one. The CAS has proven, based on its 10 year track record, to be an effective tool in furthering the long-term conservation of the species.

## Summary of Information Pertaining to the Five Factors

Section 4 of the Act (16 U.S.C. 1533) and implementing regulations (50 CFR part 424) set forth procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a)(1) of the Act, a species may be determined to be endangered or threatened based on any of the following five factors:

(1) The present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) the inadequacy of existing regulatory mechanisms; or (5) other natural or manmade factors affecting its continued existence. In making this finding, information pertaining to the Amargosa toad in relation to the five factors provided in section 4(a)(1) of the Act is discussed below.

In making our 12–month finding on a petition to list the Amargosa toad, we considered and evaluated the best available scientific and commercial information. The analysis of potential threats to the Amargosa toad discussed below includes those identified in the petition and those that we considered to be substantial in our 90–day finding (74 FR 46551).

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

#### Private Land Development

The petition identified several potential residential or commercial developments on private land that could adversely affect the Amargosa toad or its habitat. However, based on information provided by TNC during our review (Moore 2010, pp. 1–3), none of the proposed developments appear to be viable. Real estate and development markets in nearby Pahrump and Las Vegas influence markets in the Beatty area, and each of these three areas have experienced a downturn in both the general economy and the housing market. Plans for a shooting range across from Torrance Ranch have been abandoned and the property was recently sold to an individual who plans to build a home on the 40-ac (16-ha) site (Moore 2010, p. 3). A geothermal project at a hot spring on private lands identified by CBD as a threat (2009, p. 2) has been abandoned (Moore 2010, pp. 1–3). Although development may occur within the range of the Amargosa toad over the near term, it is difficult to predict the scope of that development based on the available information. Furthermore, humans and Amargosa toads have coexisted in the Beatty area since the early 1900s. Amargosa toads at the Harlan-Keal site and other sites where residential or commercial development and toads co-occur demonstrate that toad and human interface can be compatible. Toads occur in most disturbed and developed areas with surface water and may be locally abundant. During our review, we

found no indication that the economic growth of Beatty will change substantially in the foreseeable future. Due to the absence of potential developments identified in the petition and the ability of toads to coexist with humans in developed and disturbed areas, we conclude habitat loss as a result of development on private land is not a substantial threat to the Amargosa toad now or in the foreseeable future.

Groundwater Development and Extraction

The petitioners provided information that claimed existing and future water uses and developments are important threats that reduce surface water available for Amargosa toads in Oasis Valley and that result in habitat loss. The majority of water right allocations within the basin are spring diversions for irrigation and livestock watering. Priority dates for groundwater rights, including those of Beatty Water and Sanitation District (BWSD), range from the 1920s to 1996, with the majority dating to the late 1980s or earlier. The priority dates are the dates the application are submitted and determine the seniority of the water right relative to other water rights in the affected basin. Spring diversions are located primarily along or near the Amargosa River channel. Groundwater rights are limited to approximately one sixth of water right allocations in the valley (by volume), 85 percent of which are held by the BWSD as a source of supply for homes and businesses in the town of Beatty. The BWSD holds water rights for three wells in the town of Beatty and two wells several miles northwest of town (including one at Indian Springs), in addition to a groundwater right at the Barrick Mine in Amargosa Valley (Nevada Division of Water Resources, *http://water.nv.gov/*). Other groundwater rights in Oasis Valley (a total of 8) are for irrigation, recreation, livestock watering, and minor commercial and mining activities, most in the amount of 20 acre-feet per year (afy) or less.

Currently, TNC is negotiating purchase of the water rights (500 afy) at Revert Spring with the owner of the Stagecoach Hotel and Casino to establish long-term protection measures for the water flowing from the spring source into the Amargosa River. Acquisition of this important water source can reduce the threat of its use for commercial purposes and enable TNC to meet its commitment in the CAS to work with private landowners to pursue conservation actions such as acquisitions and easements (NDOW 2000, p. A–20). However, we recognize that this transaction has yet to be completed, and cannot be certain that these rights will be secured.

Groundwater level records for Oasis Valley, which are both recent and long enough to assess trends (e.g., over the last 10 years or more), are limited to monthly and bimonthly measurements collected by the U.S. Geological Survey (USGS) for the U.S. Department of Energy (USDOE) as part of the USDOE Environmental Restoration Program (USGS/U.S. DOE Cooperative Studies in Nevada, http://nevada.usgs.gov/doe_nv/). Specifically, groundwater level measurements are available for seven wells or nested wells along or near the Amargosa River channel in Oasis Valley and a number of additional wells to the north and east within the valley and up gradient basins for the period 1998 to late 2009. The wells range in depth from 200 ft (61 m) or less in consolidated sedimentary deposits to thousands of feet in the volcanic rock aquifer. Trends in groundwater levels along the Amargosa River channel from 1998 to 2009 are mixed, some increasing moderately, some decreasing moderately, and some relatively constant on an annual basis. Water levels in two of the seven monitoring wells located along or near the Amargosa River channel (well ER–OV–03 and the Beatty Wash Terrace Well) decreased 1.3 to 1.5 ft (0.4 to 0.5 m) from 2000 to late 2009. However, these declines occurred in no clear relation to permitted or certificated groundwater rights (pumping at permitted supply wells). Rather, they may be indicative of local evapotranspiration responses. Elsewhere along the river channel, groundwater levels were unchanged, or increased a few tenths of a foot from 2000 to late 2009 (ER–OV04a, Springdale Upper Well, ER–OV–02, ER–OV–05, and ER–OV–06a).

In areas to the north and east which supply groundwater to the vicinity of the Amargosa River channel and Amargosa toad habitat in Oasis Valley, specifically northeastern Oasis Valley and the area of Pahute Mesa (the latter located in the Gold Flat and Forty mile Canyon-Buckboard Mesa basins) (Laczniak *et al.* 1996, pp. 18–19; Reiner *et al.* 2002, pp. 8–9; Fenelon *et al.* 2010, pp. 22–23 and Plate 5), water levels in USDOE Environment Restoration Program wells increased a few tenths of a foot to approximately 1.5 ft over this same period.

No groundwater level data are available for the vicinity of the BWSD supply wells. As such, the effects of BWSD pumping on surface water resources cannot be evaluated at this time except as they may be judged from the results of biannual Amargosa toad surveys. This suggests that any reduction in population is limited to the area of Indian Springs. BWSD pumping at the Indian Springs well has decreased since the late 1990s, but Indian Springs remains one of three primary supply wells in Oasis Valley for the town of Beatty. With respect to the potential for additional groundwater pumping in Oasis Valley, actual groundwater withdrawals by the BWSD have been limited to approximately 10 to 15 percent of their existing rights over most of the last decade (Eng 2010, p. 1). Whereas substantially more groundwater could be pumped for municipal purposes under existing BWSD rights, their pumping within Oasis Valley has been fairly constant. Overall demand has decreased approximately 25 percent (coupled with a decrease in pumping at the Barrick Mine) over this same period of time based on pumping inventories provided by the Nevada State Engineer (NSE). Additionally, BWSD demand varies seasonally, with demand at a minimum from December through March, the latter of which coincides with the beginning of the Amargosa toad breeding season. Moreover, the NSE has ruled that the degree of hydraulic connection between groundwater and surface water in Oasis Valley is such that they constitute a single source (NSE Ruling 4669, 1998) and that no unappropriated water existed in the basin as of 1995 (NSE Ruling 4174, 1995), making additional allocations, groundwater or surface water, unlikely.

Excessive groundwater withdrawals have the potential to affect springs and rivers that depend on groundwater for recharge or base flows. Field reconnaissance and Nevada Division of Water Resources well drilling records identified approximately 15 springs and 20 nonmunicipal wells that supply water to individual homes and ranches in Oasis Valley (Reiner *et al.* 2002, p. 33). A reasonable estimate of groundwater withdrawal consumed from each of these sources is 1 afy (Reiner *et al.* 2002, p. 33). Based on this consumption rate and the number of supply sources, a reasonable estimate of the nonmunicipal use of groundwater from Oasis Valley is 35 afy. Estimates of the total annual groundwater withdrawal from Oasis Valley, computed by combining municipal and non-municipal estimates, declined from 440 afy in 1996, when Beatty's human population was 2,068, which was the highest during the period 1991–2007 (Stantec 2009, p. 22), to 210 afy in 1999, when Beatty's population declined to 1,703.

The population estimates for Beatty in 2007 indicate a resident base of approximately 1,068 persons (Stantec Consulting 2009, p. 22). This estimate reflects a declining population trend during the period 1991–2007. While the future population size of Beatty is unknown, we found no indication that the human population will increase beyond historic levels and we do not anticipate an increase in use of groundwater to support new residential development. We conclude that future human population effects on the Amargosa toad are driven by the economic status and growth of the Beatty. Since there is no indication that growth will increase, we conclude that demand for groundwater is not likely to rise.

The petitioners submitted comments that identified a proposed solar energy project in Amargosa Valley requiring 3,000 afy of groundwater for wet-cooling and operation (CBD 2009, pp. 1–2). This energy project remains proposed but has been modified to use dry-cooling that would reduce groundwater use to 400 afy. The 400 afy of groundwater proposed for the project is currently used for agriculture and, therefore this level of groundwater use is not anticipated to significantly affect existing groundwater levels in the up gradient areas where Amargosa toads occur (Peterson 2010, p. 1).

The petitioners also identified 11 Department of Energy (DOE) applications for water rights in Oasis Valley as a potential threat to the toad through groundwater withdrawal effects (CBD 2009, p. 2). The DOE applications were submitted for construction of a railroad to a proposed nuclear waste repository and were protested by the petitioners and others. The Service recommended that DOE transport water needed for this project from sources other than those associated with the Amargosa toad, Ash Meadows, and Devils Hole. In February 2010, DOE withdrew their applications for water rights in the Oasis Valley.

Based on the available information on volume, timing, and location of groundwater withdrawals, historic use of groundwater, and water-level measurements, we conclude that water use and development in Oasis Valley is not a substantial threat to the Amargosa toad at this time or in the foreseeable future. No declines in groundwater or toad numbers have been observed at monitored sites as a result of pumping. The current and foreseeable demand for groundwater in Oasis Valley remains consistent with historical uses.

Inadequate Habitat Enhancement Planning and Implementation

The petitioners state that BLM failed to initiate planning for habitat enhancement projects including Wild Burro Seep and Upper Cave Spring in the Lower Indian Spring system (CBD 2009, p. 20). In fall 2009, STORM–OV, in cooperation with BLM and the ATWG, modified Wild Burro Seep and greatly increased the extent of surface water and toad habitat at the site. STORM–OV and BLM developed plans to restore Lower Indian Springs and Crystal Spring in 2010 and 2011 (STORM–OV 2009a, pp. 1–3; Spicer 2009, pp. 1–5). Habitat enhancement is a conservation action in the CAS (NDOW 2000, p. A–11).

The Stagecoach Hotel and Casino owner is a conservation partner with TNC and the Service. In 2001, the Service's Partners for Fish and Wildlife Program funded habitat improvements in the vicinity of the Stagecoach to benefit the Amargosa toad. The owner and TNC continue to improve habitat along the river behind the property, which is part of a parcel identified as a fee-title donation to TNC for conservation purposes pursuant to prescribed conservation actions in the CAS. In addition, TNC and the Nevada Department of Transportation (NDOT) are working to remove debris from the riverbank, which should improve habitat for the Amargosa toad.

In 2007, 30 ac (12 ha) of nonnative trees were removed from the Mullin site and replaced with native willows and cottonwoods as prescribed in the CAS (NDOW 2000, p. A–11). During the 2009 survey, 137 Amargosa toads larger than 2 in (50 mm) were captured on the Mullin site. This was the highest number of captures for this site (Hobbs 2009, p. 4).

Three springs on the Spicer site have been enhanced for the Amargosa toad by the landowner. Surface water is distributed on the Spicer site through a system of pipes which provides most of the water for toad habitat. Manipulation of the distribution pipes provides a habitat management tool to allow ponds to be created, or dried to remove crayfish and bullfrogs as prescribed in the CAS (NDOW 2000, pp. A–11 and A–12). Amargosa toads responded positively to the habitat improvements in 2009, increasing by 300 percent of captured and marked toads since 2008 (Hobbs 2009, p. 4).

The Amargosa River Planning Team was formed in October 2009 as a result of a recommendation by the ATWG that was included in the CAS (NDOW 2000, p. A–14). The team consists of ATWG representatives including the Service, NDOW, Nye County, BLM, and TNC, but also local landowners. The purpose of the team is to monitor habitat conditions of the river, develop management recommendations, and coordinate habitat improvement with landowners and managers on behalf of the signatories of the CAS and the ATWG.

The overall habitat suitability of individual sites varies from year to year depending on conditions and may become unsuitable for toads. Because the Amargosa toad occurs as metapopulations, toads will move back into these sites from neighboring sites once the habitat becomes more suitable. In the absence of natural disturbance such as flood events and wildfires, toad habitat will likely require periodic manipulation or other forms of disturbance such as burro or cattle use to sustain toad populations. Based on the metapopulation structure of the toad, successful habitat projects and disturbance by burros and cattle, we anticipate that habitat planning and implementation have resulted in positive responses by toads. We expect the Amargosa River Planning Team, TNC, BLM, Service, and private landowners to continue their efforts to maintain and improve toad habitat into the foreseeable future in accordance with the CAS. We expect members of the ATWG and private landowners to continue their current efforts to maintain and improve toad habitat, as they have in the past, in accordance with the CAS into the future. As a result, we have determined that habitat planning and implementation is not a threat to the Amargosa toad now, nor is it expected to be so in the foreseeable future.

Vegetation Overgrowth

Overgrowth of vegetation in aquatic habitats is an ongoing management objective for the Amargosa toad as specified in the CAS (NDOW 2000, pp. A–11 and A–16). Habitat for Amargosa toads at several spring sites including Torrance Ranch, Lower Indian Spring, and Crystal Spring, has degraded as a result of overgrowth of emergent vegetation and loss of open water. Overgrowth of vegetation occurs mostly at small spring sites and in the absence of disturbance or management. Although Lower Indian Spring and Crystal Spring are small spring sites and represent only a small fraction of the species' individuals and distribution, the ATWG considers vegetation management a priority for these sites. Mechanical removal, controlled burns, and grazing are proven tools to manage vegetation in spring systems at Harlan-Keal (ATWG 2004, p. 3) and Torrance Ranch (ATWG 2007, attachment 1, p. 1).

Spring-supplied ponds typically require disturbance or periodic removal of vegetation to maintain suitable habitat conditions (e.g., open water) for the Amargosa toad. Local ranchers historically managed Crystal Spring and other springs to maintain open water (Spicer 2010, p. 1). Limited use by livestock or feral burros provides disturbance that benefits toads; however, excessive use by livestock or feral burros result in degradation of habitat. Current and future habitat projects at spring sites are designed to minimize vegetation growth, compensate for potential reductions in spring flow due to overgrowth of vegetation, and maintain proper habitat conditions for the toad. Currently, excess vegetation conditions occur at Crystal and Lower Indian Springs, but habitat modification proposed for 2010 and 2011 at these sites (STORM–OV 2009a, pp. 1–3; Spicer 2009, pp. 1–5) is anticipated to substantially improve habitat conditions for the toad. As stated previously, we expect the efforts to maintain and improve toad habitat which includes control of vegetation to continue in accordance with the CAS. Therefore vegetation overgrowth is not a significant threat to the Amargosa toad now, nor is it expected to be so into the foreseeable future.

Grazing and Trampling

The petitioners state that use of springs by feral burros and cattle may result in degraded habitat and reduced numbers of Amargosa toads (CBD and PEER 2008, pp. 17–18, 21 and 23–25). The current level of burro occurrence in Amargosa toad habitat varies by site and ranges from zero to moderate with most use along the Amargosa River. Cattle use of Amargosa toad habitat is limited to the northern sites where a cattle operation is located (Coffer Ranch) and sites targeted for vegetation reduction. While burros and livestock (ungulates) may trample Amargosa toad eggs and larvae, light to moderate disturbance is important to the Amargosa toad which is a disturbance-dependant species (ATWG 2005, p. 2). In the absence of disturbance, vegetation grows uncontrolled and reduces open areas necessary for the toads. Intensive and uncontrolled use of Amargosa toad habitat by ungulates may threaten the species by degrading habitat and killing individual toads; however, light to moderate use is known to be beneficial to the Amargosa toad. Complete removal of ungulates could lead to overgrowth of vegetation, and may pose a more serious threat to the Amargosa toad than moderate ungulate use. Fencing installed at the Crystal and Indian spring sites to exclude feral burros most likely has contributed to declines in toad populations at these sites by reducing habitat disturbance. BLM manages the burro population and conducts burro "gathers" when the burro numbers exceed the appropriate management level for the area in accordance with the CAS (NDOW 2000, p. A–16). Most feral burro use of monitored sites occurs along the river. We conclude that light to moderate ungulate use is not a substantial threat to the toad and likely provides some benefit to the Amargosa toad. Although the number of feral burros fluctuates, we do not anticipate the level of burro use in Amargosa toad habitat to increase so that it would affect toad populations in the foreseeable future.

Recreation and Off-Highway Vehicle (OHV) Activity

OHV activity affects Amargosa toads most during the breeding season and during the especially vulnerable egg and tadpole stages of development. OHV effects are only known to be a concern along the Amargosa River near the Stagecoach Hotel and Casino. TNC biologists have observed small isolated pools containing egg strands or tadpoles in various stages of development that were affected by OHVs in the riverbed within the Town of Beatty. The local nonprofit group, STORM–OV, is attempting to educate the OHV users about the need to avoid ponded water during the toad breeding season, a conservation action prescribed in the CAS (NDOW 2000, p. A–18). In addition, TNC plans to use its river properties behind the Stagecoach Hotel and Casino and northward in educational opportunities. These two groups propose to conduct town meetings to inform Beatty residents of the need to avoid damaging toad breeding pools during the defined breeding season. While localized OHV use may cause a relatively small number of eggs or tadpoles to be removed from the affected population, this level of loss is not substantial in the context of the potentially tens or hundreds of thousands of Amargosa toad eggs and tadpoles produced in a typical year.

No landowners or managers have identified, nor are we aware of any spring sites that are substantially affected by OHV activity. The petitioners identified an OHV race that passes near Crystal Spring as a potential threat to the toad. In 2008, BLM chose an alternate route away from toad habitat for OHV events near Crystal Spring and continues to consider the toad during OHV permitting actions. Due to the absence of substantial effects resulting from recreation or OHV use in toad habitat and the location of many of the spring sites on private land that have no OHV use, we do not expect effects from recreation and OHV use to increase or become a threat to the toad in the foreseeable future.

Invasive Plant Species

The petitioners assert that introduced invasive trees have become established along stretches of the Amargosa River and springs, which may reduce prey and microhabitat available for the Amargosa toad (CBD and PEER 2008, pp. 24 and 26).

Salt cedar is an exotic, invasive species that grows in shrub form to medium tree size and is native to Eurasia. Removal of salt cedar is identified as a conservation action in the CAS (NDOW 2000, p. A–11). Native aquatic and wetland herpetofauna may be negatively impacted in areas where salt cedar draws down surface water (Shafroth *et al.* 2005, pp. 237–238). Water-use studies indicate that increases in water yield following salt cedar control are likely to occur only when a salt cedar stand containing high leaf area is replaced by vegetation with a lower leaf area (Shafroth *et al.* 2005, pp. 237–238). The native vegetation in Oasis Valley requires more water than is provided by local rainfall. As a result of high evapotranspiration rates during the summer, these plants must rely on local groundwater for sustenance (Reiner *et al.* 2002, p. 42). Anderson *et al.* (2004, cited in Shafroth *et al.* 2005, pp. 237–238) present data from the lower Colorado River suggesting that abundances of several of the most common insect families in riparian areas occur in comparable or greater abundance on salt cedar than on most native vegetation. Efforts to remove salt cedar and other nonnative, invasive plants from the Amargosa River watershed have occurred since 2003. Replacing salt cedar with native vegetation may result in lower evapotranspiration rates. Eleven grants provided $118,500 for salt cedar removal from 11 private properties and BLM, NDOT, and BWSD-managed land. Salt cedar has been removed from approximately 1,895 ac (767 ha) of Amargosa toad habitat, and salt cedar removal efforts will likely continue. Amargosa toad population monitoring data may be used to assess and measure the effect of salt cedar removal on the toad. We do not believe salt cedar is a significant threat to the Amargosa toad now or in the foreseeable future because salt cedar has been removed from toad habitat and those efforts continue in accordance with the CAS.

Failure of the CAS to Protect Toads and Habitat

The petitioners claim that the CAS failed to protect Amargosa toads and increase toad populations. The CAS is a voluntary, non-regulatory agreement. The CAS was developed to expedite Amargosa toad conservation over a period of 10 years by providing guidance and a framework for implementation of cooperative long-term conservation actions to benefit the toad and co-occurring species. Signatories to the CAS include NDOW, Nye County Department of Natural Resources, the Service, BLM, TNC, the Nevada Natural Heritage Program, and the University of Nevada at Reno. The signatories provide representatives to the ATWG. The signatories and ATWG are committed to implementing specific conservation actions (tasks) which identify, reduce, or eliminate threats to the species, and maintain and enhance a properly functioning ecosystem for the Amargosa toad and other indigenous species of Oasis Valley. The ATWG meets semi-annually to assess the conservation needs of the toad and plan Amargosa toad conservation actions. Most conservation actions in the CAS are implemented by local private land owners, and land and resource managers.

Many of the conservation actions implemented by the ATWG and its various partners are a direct result of the commitments made in the CAS for the Amargosa toad (NDOW 2000, pp. 1–12). The goals of the CAS are to manage threats, maintain habitats, monitor populations, and test and evaluate habitat manipulations. Completed conservation actions in the CAS have addressed threats identified in Factors A, C, and E. We consider the CAS successful as considerable progress has been made towards achieving these goals. The CAS accomplishments that have contributed towards success include 12 years of population monitoring and maintaining population data in a database; burro management through monitoring and gathers; salt cedar removal; habitat rehabilitation and enhancement; research; public education and outreach; and habitat acquisition as discussed above in this factor. Other CAS accomplishments include control of predators through habitat manipulation and work with the local community to achieve conservation such as an open space plan. The CAS signatories and the ATWG in cooperation with local landowners have planned and initiated multiple projects to protect, restore, and enhance toad habitat, and create new habitat. Overall success is measured by population monitoring data that show that rangewide, Amargosa toad populations are relatively stable and respond promptly and positively to habitat improvements. Previous habitat improvements on the Amargosa River, Harlan-Keal, Mullin, and Spicer sites have all resulted in substantial population increases of toads. In 2005, vegetation was removed by NDOT at the U.S. 95 Highway bridge over the Amargosa River in Beatty. This resulted in a positive response by Amargosa toads as shown by a large reproductive event and a 2006 population estimate of 1,854 for the river which was the highest on record (ATWG 2005, p. 2; Wixson 2006, p. 3). In 2005, vegetation was cleared from the pond at the Harlan-Keal site with funding from the Service and NDOW which resulted in an estimated 90 percent increase in the population in 2006 over the 2005 estimate (Wixson 2006, p. 2).

The ATWG is in the process of updating the CAS and the group anticipates a revised CAS by the end of 2010. The revised CAS will acknowledge accomplishments and identify the conservation needs of the Amargosa toad for the next 10 years. The existing CAS and revision will function similarly. Although the CAS is a voluntary, non-regulatory agreement, we conclude that the CAS efforts have been very successful in establishing a coalition of partners, including State and Federal agencies, local government, private landowners, and conservation organizations committed to reduce or eliminate the threats to the species and assure long-term conservation for the Amargosa toad. In the absence of the CAS, conservation progress would proceed at a reduced rate but would not result in the species becoming threatened. Therefore, based on implementation of various conservation actions resulting from the CAS as discussed in the factor above, we find that the existence and implementation of the CAS do not pose a threat to the species.

Summary of Factor A

Development on private lands and use of groundwater are not significant threats to the Amargosa toad. Most previously proposed developments have been abandoned. With potential development stalled, growth activity within Beatty is not expected to change substantially in the foreseeable future. Groundwater use in the Beatty area has decreased or remained constant, and groundwater levels have fluctuated but these fluctuations do not appear to affect Amargosa toad numbers or distribution. Habitat has been improved at several sites and improvements at other sites are planned for 2010 and 2011. Although some sites are affected by overgrowth of vegetation, past and ongoing conservation and management actions have improved toad habitat and contributed to stable Amargosa toad populations, as reflected in the 11 years of population monitoring. In one particular instance, a habitat manipulation project was developed and implemented, and was very successful in transforming a small seep into a new breeding site for toads (STORM–OV 2009a, p. 1). Amargosa toad population estimates are an indication of habitat quality at a given site, and in those areas where habitat improvements have been conducted, Amargosa toad populations have increased substantially. Grazing by cattle and feral burros may be locally excessive, but moderate use provides needed disturbance to the aquatic systems that improves Amargosa toad habitat. Some local areas are impacted by OHV use but not to the extent that population declines can be identified. There has been no apparent reduction in the current range of the Amargosa toad compared to the historical range. As a result of conservation efforts accomplished by TNC through habitat acquisition and improvements, and by various groups through other habitat improvement projects at Mullins, Harlan-Keal, Spicer, and Torrance, along the River, and at Parker Ranch and Trespass Seep, there has been an increase in habitat quality or quantity for the Amargosa toad at these sites. Additionally, private landowners have recently become and remain involved in conservation efforts. Salt cedar has been substantially removed from private and BLM land. Completed actions prescribed in the CAS to conserve the Amargosa toad have been shown to be successful in meeting the objectives in the CAS and reducing or eliminating the threats to the Amargosa toad under Factor A. We conclude that the present or threatened destruction, modification, or curtailment of the habitat or range of the Amargosa toad is not a significant threat to this species now or in the foreseeable future, due to the limited growth projected for Beatty, current and anticipated groundwater use and levels; completed and proposed habitat improvements including removal of salt cedar; continuing management of the Amargosa River and adjacent habitat under the direction of the Amargosa River Planning Team, a subcommittee of the ATWG; and continued implementation of conservation

measures in accordance with the revised CAS.

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

The petitioners provided no information regarding threats under this factor, nor do we have information on the potential threat of overcollection or overutilization for commercial, recreational, scientific, or educational purposes. There is no information to indicate this factor will become a threat to the species in the foreseeable future. We find overutilization for commercial, recreational, scientific, or educational purposes does not threaten the Amargosa toad. Based on a review of the best available scientific and commercial data, we find no indication that overutilization for commercial, recreational, scientific, or educational purposes is a threat to the Amargosa toad now or in the foreseeable future.

*Factor C. Disease or Predation*

Disease

Chytridiomycosis is an infectious disease of amphibians caused by the chytrid fungus *Batrachochytrium dendrobatidis*. Although the fungus has been detected in bullfrogs in the Oasis Valley, it has not been detected in Amargosa toad populations. Chytrid fungus has been identified in western toad (*Anaxyrus boreas*) populations in Colorado where western toad occurrence is restricted to high elevations (7,200 to 11,150 ft [2,200 to 3,400 m]; Muth *et al.* 2003, p. 358). The Service and NDOW have no evidence that chytrid or other diseases are affecting or will affect the Amargosa toad population. No sign of chytrid fungus or other disease has been observed in the hundreds of Amargosa toads captured and inspected rangewide every year since 1995. Further, no ill or dying toads have been reported by landowners or agency biologists. Population monitoring data do not indicate a decline in Amargosa toad numbers. Therefore, we find disease is not a threat to the Amargosa toad now or in the foreseeable future.

Predation

Predation of all life stages of the Amargosa toad by nonnative crayfish and bullfrogs is a threat to the Amargosa toad at the metapopulation level. However, metapopulations of a species allow for the coexistence of predators and prey, or coexistence of competitors. While local extinctions may occur, the species may persist regionally if the metapopulation structure ensures that predator and prey are not present in all occupied patches all of the time (Simandle 2006, p. 9).

Currently, the most promising management tool for nonnative predators involves manipulating and enhancing habitat for Amargosa toads while making habitat less suitable for bullfrogs and crayfish, as prescribed in the CAS (NDOW 2000, p. A–12). This is accomplished by drawing down ponded areas that contain nonnative predators and allowing them to be dry for a period of time long enough to kill the nonnative predators and cause toads to move to nearby sites. Recently completed and proposed habitat projects have incorporated the capability of adding or removing water to allow sites to dry to remove or reduce numbers of bullfrogs and crayfish, and are designed to provide an advantage to Amargosa toads including substrate selection and water depth. One of the goals of the CAS is to manage threats to the Amargosa toad. We consider the CAS successful as considerable progress has been made towards achieving this goal and addressing threats to the Amargosa toad under Factor C.

The life history of the toads further reduces the threat of nonnative predators. Under average conditions, toads produce tens or hundreds of thousands of eggs, larvae, and toadlets each year, most of which will not survive to adults with or without predatory pressure.

Although bullfrogs are known to occur at 10 of 18 sites occupied by Amargosa toads, the monitoring data do not indicate a declining toad population trend. We have documented Amargosa toads in the stomach contents of bullfrogs (ATWG 2003, p. 2). While there is no coordinated control effort, bullfrogs are removed from the Amargosa River and other sites occupied by Amargosa toads during population surveys. All toad habitat improvement projects consider the needs of the toad and select against bullfrogs. Bullfrogs generally require deeper, impounded perennial waters, which are more limited than shallow stream and spring outflow habitat in Oasis Valley. Observation and removal of bullfrogs from stream and spring outflows can be very effective in controlling bullfrog numbers.

Since their introduction in the mid-1980s, nonnative crayfish have become established along most of the Amargosa River and at seven spring sites occupied by the Amargosa toad. We have no Amargosa toad population data prior to the introduction of crayfish, bullfrogs, or other nonnative Amargosa toad predators into Oasis Valley; therefore, we cannot assess the potential impact of predators on the Amargosa toad population. However, we do have Amargosa toad survey data collected since 1998 for sites occupied and unoccupied by bullfrogs and crayfish. Population numbers at sites with predators and without predators have fluctuated in a similar manner, which indicates there is no population level of effect that can be attributed to predation. This is consistent with the way in which a metapopulation structure of interconnected populations functions; thus, in certain areas Amargosa toads may become extirpated, but repopulate those areas at a later time. The capability of toads to move among these sites in response to threats and habitat condition allows toads to coexist with nonnative predators. For instance, the population estimate for the Spicer property in 2009 increased from 53 to 167, even though it is a site where crayfish and bullfrogs are abundant. The increase in Amargosa toad numbers in 2009 at the Spicer site is most likely a result of habitat improvements, which demonstrates the success of habitat condition. We are unaware of any extirpations that can be attributed to crayfish or bullfrogs, but Amargosa toads have been extirpated or nearly extirpated from Lower Indian Spring and Crystal Spring as a result of poor habitat conditions mostly due to overgrowth of vegetation.

In 2009, NDOW, TNC World Wide Office, and Arizona Game and Fish Department provided funding to TNC to develop crayfish removal strategies which included habitat characterization, crayfish distribution, and control techniques in a five-state effort (AZ, NM, CA, UT, and NV). These studies are currently under contract; the first phase is to be completed by June 30, 2010.

We expect the current level of predation by crayfish and bullfrogs to continue into the foreseeable future, but do not consider this level of predation a significant threat due to the life history characteristics of the Amargosa toad and their ability to coexist with nonnative predators and move among metapopulations. This determination is based on the Amargosa toad metapopulation structure; habitat projects that select for toads; the life history of the toad; and 12 years of toad population monitoring data that shows toads can coexist with nonnative predators.

Predation by Fish Species

The majority of habitats in Oasis Valley supporting Amargosa toad populations are not structurally capable of supporting the large-bodied predatory

fish that would be capable of significant predation on Amargosa toads (NDOW 2009, p. 4). Largemouth bass (*Micropterus salmoides*) are known to occur in at least one pond on private property in Oasis Valley, but Amargosa toads are not a primary component of their diet. Black bullhead catfish (*Ictalurus melas*) and Amargosa toads have co-occurred at one pond on private land at the Harlan-Keal site for at least 10 years; however, the pond dried during the summer 2009, and catfish are not expected to persist at this site. Therefore, we do not consider largemouth bass or catfish to be a significant threat to the Amargosa toad now or in the foreseeable future.

Mosquito fish (*Gambusia affinis*) have been introduced into waters of Oasis Valley and occur at most sites occupied by toads. Mosquito fish have been observed to prey on eggs of the arroyo toad (*Anaxyrus* (=*Bufo) californicus*; Lannoo 2005, p. 399) and may also prey on Amargosa toad eggs. During our review of the status of the Amargosa toad, no information was available that suggests mosquito fish are important predators of toad eggs. No observations of mosquito fish preying on toad eggs have been reported during the 12 years of population monitoring. NDOW is actively working with a variety of partners, including Nye County, to limit the use and distribution of mosquito fish in the Oasis Valley and to develop alternative vector control strategies that do not use mosquito fish as the control agent. We have no information to indicate that the presence of, or predation by, mosquito fish is a significant threat to the Amargosa toad or that such predation will become a threat in the foreseeable future.

Summary of Factor C

Based on a review of the best available scientific and commercial data, we find no indication of a potential threat of disease. We have no reason to conclude disease is currently or will become a threat to the species in the foreseeable future, due to an absence of sign of disease in Amargosa toads. Predation by bullfrogs, crayfish, and mosquito fish continues to affect Amargosa toad populations but not to an extent that threatens the species. Largemouth bass do generally occur in waters occupied by toads and do not substantially affect the toad. Based on the best scientific information available, there is no indication that predation is resulting in negative population wide effects. Completed actions prescribed in the CAS to conserve the Amargosa toad have been shown to be successful in meeting the objectives in the CAS and reducing or eliminating the threats to the Amargosa toad under Factor C. Therefore, after a review of the best scientific and commercial information, we conclude disease and predation are not significant threats to the Amargosa toad and are not likely to become significant threats in the foreseeable future. This determination is based on the absence of signs of disease; Amargosa toad metapopulation structure; habitat projects that select for toads; the life history of the toad; and 12 years of toad population monitoring data that shows toads can coexist with nonnative predators.

*Factor D. The Inadequacy of Existing Regulatory Mechanisms*

The petitioners claim the existing regulatory mechanisms, including Nevada State law protections, have been ineffective in preventing the decline of and mitigating the principal threats to the species. The petitioners claim that the State of Nevada fails to provide adequate protection for the Amargosa toad through existing statutes, particularly regarding permit exemptions for residential groundwater use up to 1,800 gallons per day (CBD and PEER 2008, pp. 20 and 28). Generally, domestic wells that draw less than 1,800 gallons per day do not require a permit (NRS 534.180). However, the NSE may require the registration of domestic wells in certain groundwater basins that it designates and may limit the amount of groundwater extracted from a permitted well to an amount below the full permitted amount under certain conditions. No declines in groundwater levels or toad numbers have been observed at monitored sites as a result of groundwater pumping. In our review in Factor A, we concluded that Amargosa toad populations have not been affected and are not likely to become affected by groundwater extraction. Groundwater use is currently consistent with historic use and will not likely increase due to lack of growth in the area.

The Amargosa toad was classified as a protected amphibian by the State of Nevada through an action of the Nevada Board of Wildlife Commissioners in 1998, under authority of NAC 503.075, and NAC 503.090 provides that no open season shall be designated for species of resident wildlife classified as protected which includes collection or possession. Through NDOW, the State plays an important role in ensuring conservation actions are achieved for this species under these and other authorities.

The Amargosa toad is designated by the BLM Nevada State Director as a BLM sensitive species. This requires BLM to ensure that actions they authorize, fund, or carry out do not contribute to the need to list the species as threatened or endangered (BLM Manual section 6840.06 C). The BLM's Tonopah Resource Management Plan and Record of Decision (RMP) determined that habitat for BLM sensitive species be managed to maintain or increase current populations of these species (BLM 1997, p. 9).

The petitioners identified privately owned Amargosa toad habitat and the lack of a final master plan for the Oasis Valley as potential threats to the toad. Considering the limited extent and use of private lands in Oasis Valley, a master plan would likely be unnecessary to guide development. However, on November 3, 2009, the Nye County Board of County Commissioners approved the Beatty Open Space Plan (Stantec Consulting 2009, pp. 1–45 plus appendices). This final plan provides the framework by which the County may pursue more specific actions to preserve BLM land for the benefit of the Town of Beatty and private land for the preservation of Amargosa toad habitat and a walking trail along the Amargosa River. Open space in the plan is defined as land that is not intensively developed for residential, commercial, industrial, or institutional use. The plan identifies 26,778 ac (10,837 ha) of land administered by the BLM as open space, which includes most of the range of the Amargosa toad (Stantec Consulting 2009, Appendix A). The broad goals for the Beatty Open Space Plan as defined by the stakeholders include: Install signage and implement a community-wide education program on the importance of staying out of the riverbed, particularly with ATVs, to protect the toad habitat; protect sensitive habitats; and identify appropriate activities in Amargosa toad habitat (Stantec Consulting 2009, p. 24). As a signatory to the CAS, Nye County committed to coordinate conservation with the local community such as development of the open space plan (NDOW 2000, p. A–15). We conclude that the completion of a final open space plan is an important conservation achievement that demonstrates the cooperative relationship and strong partnership among all levels of government, Beatty landowners, and the Beatty community. Adoption of an open space plan and BLM's protection of Amargosa toad habitat through implementation of the Tonopah RMP provide some mechanisms that reduce the potential threats to the species.

Summary of Factor D

We have reviewed the best available scientific and commercial information, and conclude that the Amargosa toad is not threatened by the existence of inadequate regulatory mechanisms. There are no significant threats to the species, and Amargosa toad populations are stable based on annual population estimates.

*Factor E. Other Natural or Manmade Factors Affecting Its Continued Existence*

In our 90–day finding, we concluded that natural or manmade factors, particularly small populations, small range size, and environmental changes due to climate change, could exacerbate threats identified under Factor A. In this 12–month finding, we determined that no significant threats were found under Factor A.

Small Range and Population Size

The range of the Amargosa toad is approximately 8,440 ac (3,416 ha) and the rangewide total number of adult toads is estimated at 2,500 to 4,000 toads. No reductions in the range of the Amargosa toad have been documented. Although no historic estimates of population size are known (NDOW 2009, p. 1), there is also no indication that historical population levels were significantly higher than current levels. Population data collected over the past 12 years show 5 years of population increases, 6 years of declines, and data for 2000 was essentially the same as 1999; no declines occurred over any consecutive 3–year period (Hobbs 2009, p. 2). Amargosa toad data collected by NDOW as prescribed in the CAS (NDOW 2000, p. A–13), and as part of the mark-recapture program document individual toad movements among metapopulations and across dry desert uplands to remote Trespass Seep and from the Harlan-Keal site to the river south of Beatty (approximately 8 mi (13 km)). Amargosa toad metapopulations are mostly limited by habitat conditions. Amargosa toads disperse among sites when habitat conditions are suitable, and Amargosa toad numbers at any given site can range from historic lows to record highs in one year (Hobbs 2009, pp. 1–6). Small population and small range sizes are not necessarily threats to a species. With the ability to move across large expanses of unsuitable habitat, and recolonize suitable habitat patches, the Amargosa toad exhibits a classic and strong metapopulation structure. This allows the Amargosa toad to take advantage of newly available resources, or quickly rebound after localized population extirpations. Therefore, we conclude that the small range and population size of the species is not a significant threat to the species, nor do we expect the range or population size to decrease in the foreseeable future due for the reasons stated above.

Climate Change

The Intergovernmental Panel on Climate Change (IPCC) has high confidence in predictions that extreme weather events, warmer temperatures, and regional drought are very likely to increase in the northern hemisphere as a result of climate change (IPCC 2007, pp. 15–16). Climate models show the southwestern United States has transitioned into a more arid climate of drought that is predicted to continue into the next century (Seager *et al.* 2007, p. 1181). In the past 60 years, the frequency of storms with extreme precipitation has increased in Nevada by 29 percent (Madsen and Figdor 2007, p. 37). Changes in local southern Nevada climatic patterns cannot be definitively tied to global climate change; however, they appear to be consistent with IPCC-predicted patterns of extreme precipitation, warmer than average temperatures, and drought. Information on specific effects from climate change to the Amargosa toad and to individual habitats and aquatic systems is not available, and effects are difficult to predict and likely to vary from site to site over time. However, as detailed under Factor A, previous habitat improvements on the Amargosa River, Harlan-Keal, Mullin, and Spicer sites have all resulted in substantial positive responses by Amargosa toads. To meet objectives under the CAS, Amargosa toad conservation partners have implemented design strategies and are continuing to develop and implement appropriate strategies that build resiliency into habitat projects. We conclude that continuing to maintain and actively manage the matrix of habitats that support the population of the Amargosa toad reduces the potential threat of climate change to the toad to the extent that Amargosa toads will continue to occupy most sites currently occupied by the species which will continue into the foreseeable future. In the absence of active management, several spring sites may become degraded; however, the river and larger spring sites are expected to maintain their function to provide the ecological needs for the species.

Stochastic Events

The petitioners claim stochastic events such as drought, floods, and fires are threats to the Amargosa toad because of the limited distribution of the toad. Major flood events have occurred in the Amargosa River; however, Amargosa toads continue to occur in the river and may benefit from the disturbance created by such events. Although floods may result in short-term adverse effects to the Amargosa toad, the disturbance created by flooding events may scour dense emergent vegetation and create and increase open water pools that are preferred by the species.

Some studies suggest that amphibian responses to fire and associated habitat alteration are species-specific, incompletely understood, and variable among habitats and regions (Pilliod *et al.* 2003, p. 165). We found no information that any wildfire occurred in Amargosa toad habitat in recent history. However, controlled burns on TNC properties have resulted in positive responses by toads by reducing emergent aquatic vegetation and providing open water (ATWG 2009, p. 3) that is beneficial to the species.

The metapopulation structure of the Amargosa toad allows local extirpations and recolonization following stochastic events. Such fluctuation in Amargosa toad numbers has been observed after prescribed burns and habitat improvement projects that resulted in disturbance to Amargosa toad habitat. Drought effects on the Amargosa toad may include a reduction of surface water, prey, and wetland habitat; however, we found no evidence of long-term effects to the Amargosa toad as a result of drought. We expect stochastic events to occur periodically in the future; however toads may benefit from the disturbance. If the number of toads at a given site is reduced or toads become extirpated from a site, we expect recolonization to occur from other metapopulations. Therefore, we do not expect stochastic events to be a threat to the toad in the foreseeable future.

Contaminants

Radiation poisoning through groundwater contamination from atomic testing on the Nevada Test Site (NTS) was cited as a threat by the petitioners (CBD and PEER 2008, p. 21). The movement of radiation in groundwater in Oasis Valley is currently being studied. Geologic faults allow alluvial groundwater connection between the Amargosa River and the Pahute Mesa aquifer, which includes areas used for atomic testing (Reiner *et al.* 2002, p. 61). There have been no reports of abnormal toads, reduced reproduction, or death of multiple toads at any given site that would suggest radiation or contaminant

effects. In 2006, DOE contracted sampling of nine wells and three springs in Oasis Valley wells for radioactivity (tritium) in groundwater (DOE 2006, pp. 4.1–4.30). The investigators concluded that no groundwater (wells or springs) sampled downgradient of the NTS, including Oasis Valley where Amargosa toads occur, had been impacted by NTS nuclear test operations as of 2006. In all cases, measured tritium levels in wells and springs sampled in Oasis Valley were below or just above the laboratory detection limit, and three orders of magnitude less than the U.S. Environmental Protection Agency established maximum contaminant level for drinking water. Because the Town of Beatty uses groundwater from the Oasis Valley, monitoring for potential contaminants in groundwater will continue for human health. Based on the available information, there is no indication that radioactive groundwater is a concern for the Amargosa toad, or that radioactive groundwater from the Pahute Mesa aquifer will become a threat to the toad in the foreseeable future.

The petitioners also assert that pollution of unknown levels on private land is a threat to the Amargosa toad (CBD and PEER 2008, p. 25). During monitoring of toad populations from 1998 to 2009 as prescribed in the CAS, no environmental evidence was observed to suggest that contaminants from private lands are affecting Amargosa toads. Although Amargosa toads have not been examined to assess contaminant levels, no Amargosa toad developmental anomalies or die-offs have been reported. Due to the high level of monitoring and close proximity to residents who consistently communicate with the Service on the Amargosa toad, we believe any detrimental environmental effects would be observed and reported. Therefore, we conclude that contaminants are not a threat to the toad. We do not anticipate that contaminants will become a threat to the toad in the foreseeable future due to our expectation that the metapopulation structure will persist and monitoring will continue which would detect any effects of contaminants at the level of the individual or population.

The petitioners claim that the CAS failed to protect Amargosa toads and increase toad populations. The CAS is a voluntary and non-regulatory agreement. As discussed above, the CAS has proven to be an effective tool in furthering the long term conservation of the species, as well as reducing or eliminating the threats to the species. Please see our discussion for specific information regarding the CAS in the background section of this finding. Based on implementation of various conservation actions resulting from the CAS as discussed in the factors above, we find that the existence and implementation of the CAS do not pose a threat to the species.

Summary of Factor E

We have reviewed the best available scientific and commercial information and find that small range and population size, climate change, stochastic events, or contaminants are not significant threats to the species. While we have no Amargosa toad population estimates prior to the mid-1990s, the best available information indicates that the historic range of the toad approximates its current range. Based on 12 years of population monitoring data, toad populations estimates are stable. The range and population numbers will not decrease in the foreseeable future in consideration of the habitat improvements identified in Factor A and overall absence of significant threats to the species. While climate change effects are mostly uncertain, we conclude that sufficient resiliency has been provided to the toad through project that established of a matrix of habitats and metapopulations. Stochastic events will continue but will benefit the toads by providing disturbance or result in recolonization from adjacent populations. Monitoring and oversight by the signatories of the CAS, ATWG, and local landowners will continue and detect any impacts to the toad that may result from contaminants. Therefore, we conclude that other natural or manmade factors are not affecting the continued existence of the Amargosa toad, now or in the foreseeable future.

**Finding**

As required by the Act, we considered the five factors in assessing whether the Amargosa toad is threatened or endangered throughout all or a significant portion of its range. We examined the best scientific and commercial information available regarding the past, present, and future threats faced by the Amargosa toad. We reviewed the petition, information available in our files and other available published and unpublished information, and we consulted with recognized Amargosa toad experts and other Federal, State, local agencies, and nongovernment organizations. In considering what factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the species responds to the factor in a way that causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine how significant a threat it is. If the threat is significant, it may drive or contribute to the risk of extinction of the species such that the species warrants listing as threatened or endangered as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The identification of factors that could impact a species negatively is not sufficient to compel a finding that listing is appropriate; we require evidence that these factors are operative threats that act on the species to the point that the species meets the definition of threatened or endangered under the Act.

We analyzed the potential threats to the Amargosa toad including: Private land development resulting in habitat loss and water use; groundwater development/extraction; habitat degradation including overgrowth of vegetation; grazing and trampling by livestock; recreation and OHV activity; invasive plants species; disease; predation by nonnative bullfrogs, crayfish, and fishes; lack of regulatory control of residential groundwater withdrawal; inadequate protection on privately owned land including lack of a final master plan for the Oasis Valley; small range and population size; climate change; stochastic events; and contaminants.

We found that habitat loss as a result of development on private land is not a substantial threat to the Amargosa toad, and we do not believe that the toad population is declining rangewide. In addition, we found no indication that the human population will increase beyond historic levels, and we do not anticipate an increase in future use of groundwater to support new residential development in the Town of Beatty and Oasis Valley. Based on the volume, timing, and location of groundwater withdrawal; historic use of groundwater, and water-level measurements, we concluded that water use and development in Oasis Valley are not a substantial threat to the Amargosa toad. Overgrowth of vegetation in aquatic habitats is an ongoing management concern for the Amargosa toad because it can result in degraded habitat. However, various tools, such as habitat improvement and

enhancement projects, have been and continue to be implemented to manage this potential threat to the Amargosa toad. Continued implementation of conservation actions as outlined in the CAS by regulatory agencies and a coalition of partners has reduced and continues to minimize threats to the Amargosa toad. Light to moderate ungulate grazing and trampling are not a substantial threat to the toad and likely provide some benefit to the habitat for the Amargosa toad. Excessive ungulate grazing in Amargosa toad habitat is localized and mostly occurs in the Amargosa River channel south of Beatty. Use by OHVs, particularly in wet areas (along the Amargosa River), can be an issue, especially when Amargosa toad eggs and tadpoles are present. However, efforts have been undertaken (e.g., rerouting of OHV races out of habitat) or are proposed to reduce OHV use in these areas so that OHV use is not a significant threat to the species. In addition, no spring sites have been identified that are substantially affected by OHV activity. Efforts to remove salt cedar and other nonnative, invasive plants from the Amargosa River watershed have occurred since 2003. Efforts will continue to remove salt cedar and replace it with native shrubs and trees, which may improve toad habitat and increase toad numbers. We conclude that the present or threatened destruction, modification, or curtailment of toad habitat or its range is not a significant threat to the Amargosa toad now or in the foreseeable future.

We found no information that overcollection or overutilization for commercial, recreational, scientific, or educational purposes is a threat or will become a threat to the species in the future. Therefore, we find overutilization for commercial, recreational, scientific, or educational purposes does not threaten the Amargosa toad now or in the foreseeable future.

We also found no evidence that chytrid or other diseases are affecting the Amargosa toad population, and therefore, disease does not threaten the Amargosa toad. Predation by nonnative species has affected, and will continue to affect Amargosa toad populations; however, metapopulations are allowing the coexistence of the Amargosa toad with predators and competitors. Amargosa toad populations appear to be generally stable over the long-term, including sites where toads coexist with nonnative predators and competitors. Habitat projects have been designed and constructed to provide an advantage to Amargosa toads and reduce numbers of nonnative predators. Therefore, we conclude that disease or predation are not significant threats to the Amargosa toad now or in the foreseeable future.

The Amargosa toad is classified as a protected amphibian by the State of Nevada under authority of NAC 503.075, and it is also designated as a BLM sensitive species in Nevada. Completion of a final open space plan for the Oasis Valley, approved by the Nye County Board of Commissioners, indicates a cooperative conservation effort among all levels of government, Beatty landowners, and the Beatty community to protect Amargosa toad habitat.

The current range of the Amargosa toad is approximately the same, and possibly larger, than its historical range as a result of conservation efforts accomplished by the various entities working to ensure long-term conservation of the Amargosa toad. In summary, we concluded that inadequate regulatory mechanisms are not a threat to the Amargosa toad now or in the foreseeable future.

The range and small population size of the toad have characterized the species during modern times with no significant changes. Current monitoring efforts will continue and inform the ATWG and others of any habitat improvement needs for the species. Climate change is likely to continue for the foreseeable future, but there is substantial uncertainty as to how climate change will affect the Amargosa toad and its habitat. We found no information to suggest that climate change will result in an altered landscape to the extent that it will negatively affect Amargosa toads. Stochastic events (such as floods, fire and drought) have occurred on the landscape where Amargosa toads occur in Oasis Valley. The metapopulation structure of the Amargosa toad would allow local extirpations as a result of these stochastic events, but also recolonization following the events. Controlled burns have resulted in positive responses by Amargosa toads by reducing vegetation and providing open water. By maintaining and actively managing the matrix of habitats that support the population of the Amargosa toad, the uncertainties and threats of climate change and stochastic events should be reduced. The ability to modify site conditions where Amargosa toads occur in response to environmental changes has been demonstrated as a significant management tool for Amargosa toad conservation efforts to address various threats, including stochastic events and invasive species, as well as possible changed conditions from climate change in the future. No environmental evidence has been observed to suggest that contaminants from private lands are affecting Amargosa toads. We believe any detrimental environmental effects would be observed and reported to the Service or NDOW. Continued implementation of conservation actions as outlined in the 2000 CAS by NDOW, other signatories, and a coalition of partners has reduced and continues to minimize threats to the Amargosa toad. We conclude that other natural or manmade factors are not significant threats to the Amargosa toad now or in the foreseeable future.

Based on our review of the best available scientific and commercial information pertaining to the five factors, we find that the threats are not of sufficient imminence, intensity, or magnitude to indicate that the Amargosa toad is in danger of extinction (endangered), or likely to become endangered within the foreseeable future (threatened). Therefore, we find that listing the Amargosa toad as a threatened or endangered species is not warranted.

**Evaluation of Distinct Population Segment (DPS)**

Having determined that the Amargosa toad does not meet the definition of a threatened or endangered species, we must next consider whether there are any segments within the population that meet the Service's DPS policy. Under the DPS policy (61 FR 4722; February 7, 1996), three elements are considered in the decision concerning the establishment and classification of a possible DPS. These are applied similarly for additions to or removal from the Federal List of Endangered and Threatened Wildlife. These elements include:

(1) The discreteness of a population in relation to the remainder of the species to which it belongs;

(2) The significance of the population segment to the species to which it belongs; and

(3) The population segment's conservation status in relation to the Act's standards for listing, delisting, or reclassification (i.e., is the population segment endangered or threatened).

Under the DPS Policy, we must first determine whether the population qualifies as a DPS; this requires a finding that the population is both: (1) Discrete in relation to the remainder of the species to which it belongs; and (2) biologically and ecologically significant to the species to which it belongs. If the population meets the first two criteria under the DPS policy, we then proceed

to the third element in the process, which is to evaluate the population segment's conservation status in relation to the Act's standards for listing as an endangered or threatened species. The DPS evaluation in this finding concerns the Amargosa toad that we were petitioned to list as threatened or endangered.

*Discreteness*

Under the DPS Policy, a population segment of a vertebrate taxon may be considered discrete if it satisfies either one of the following conditions:

(1) It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation. (2) It is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

*Markedly Separated From Other Populations of the Taxon*

As described previously (see Species Information above), the Amargosa toad is characterized by metapopulations across its range. Individual Amargosa toads move among these metapopulations, and there is no indication that physical, physiological, ecological, or behavioral barriers exist that would render any portions of the species' range markedly separate from other portions. Furthermore, we have no quantitative data such as genetic information to suggest any portions of the species to be markedly separate from others. Therefore, we conclude there are no portions of the species' range that meet the discreteness criterion of the Service's DPS policy. Since both discreteness and significance are required to satisfy the DPS policy, we have determined that there are no populations of the Amargosa toad that qualify as a DPS under our policy. As a result, no further analysis under the DPS policy is necessary.

**Significant Portion of the Range**

Having determined that the Amargosa toad does not meet the definition of a threatened or endangered species, we must next consider whether there are any significant portions of the range where the Amargosa toad is in danger of extinction or is likely to become endangered in the foreseeable future.

We considered whether any portions of the Amargosa toad's range warrant further consideration. We found that there is no area within the range of the Amargosa toad where the potential threat of development or groundwater withdrawal is significantly concentrated or may be substantially greater than in other portions of the range. Some sites including Crystal and Lower Indian Springs may become overgrown with vegetation and cause the site to become unsuitable and require rehabilitation. Cattle and feral burros may provide the necessary disturbance to improve and maintain Amargosa toad habitat but may cause short-term overuse of some sites. Use by OHVs may cause localized impacts but we do not anticipate these effects to result in population declines. Although nonnative toad predators such as crayfish, bullfrogs, and mosquito fish occur throughout much of the range of the toad and likely impact the toad to some extent, we have found that toads have, and will continue to coexist with these predators. There is no indication that stochastic events, climate change, or environmental contaminants differentially affect any given site.

On the basis of our review, we found no areas within the species' range where threats are geographically concentrated. The species is characterized by metapopulations across its range which allows for an individual site to be extirpated and become repopulated from neighboring populations. The factors affecting the species are essentially uniform throughout its range, indicating that no portion of the Amargosa toad's range warrants further consideration of possible threatened or endangered status.

We do not find that the Amargosa toad is in danger of extinction now, nor is it likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Therefore, listing the Amargosa toad as threatened or endangered under the Act is not warranted throughout all or a significant portion of its range at this time.

We request that you submit any new information concerning the status of, or threats to, the Armargosa toad to our Nevada Fish and Wildlife Office (see **ADDRESSES** section) whenever it becomes available. New information will help us monitor the Amargosa toad and encourage its conservation. If an emergency situation develops for the Amargosa toad, we will act to provide immediate protection.

**References Cited**

A complete list of references cited is available on the Internet at *http://www.regulations.gov* and upon request from the Nevada Fish and Wildlife Office (see **ADDRESSES** section).

**Author(s)**

The primary authors of this notice are staff with the Nevada Fish and Wildlife Office, Las Vegas.

**Authority**

The authority for this section is section 4 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: July 9, 2010

**Wendi Weber,**

*Acting Director, Fish and Wildlife Service.*

[FR Doc. 2010–17647 Filed 7–19– 10; 8:45 am]

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**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**[Docket No. FWS–R8–ES–2009–0073] [92210–1117–0000–B4]**

**RIN 1018–AW54**

## Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for *Brodiaea filifolia* (Thread-leaved Brodiaea)

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

**ACTION:** Proposed rule; reopening of comment period.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), announce the reopening of the public comment period on our December 8, 2009, proposed revised designation of critical habitat for *Brodiaea filifolia* (thread-leaved brodiaea) under the Endangered Species Act of 1973, as amended. We also announce the availability of a draft economic analysis (DEA) and an amended required determinations section of the proposal. We are reopening the comment period for an additional 30 days to allow all interested parties an opportunity to comment on all of the above. If you submitted comments previously, you do not need to resubmit them because we have already incorporated them into the public record and will fully consider them in our final determination.

**DATES:** We will consider public comments received on or before August 19, 2010. Any comments that we receive after the closing date may not be considered in the final decision on this action.

**ADDRESSES:** You may submit comments by one of the following methods: