



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R2–ES–2021–0153; FF09E21000 FXES1111090FEDR 223]

Endangered and Threatened Wildlife and Plants; 12-Month Finding for the Sonoran Desert Tortoise

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notification of finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list the Sonoran desert tortoise (*Gopherus morafkai*) as an endangered or threatened species under the Endangered Species Act of 1973, as amended (Act). After a thorough review of the best available scientific and commercial information, we find that it is not warranted at this time to list the Sonoran desert tortoise. However, we ask the public to submit to us at any time any new information relevant to the status of the Sonoran desert tortoise or its habitat.

DATES: The finding in this document was made on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: A detailed description of the basis for this finding is available on the Internet at <https://www.regulations.gov> under Docket No. FWS–R2–ES–2021–0153.

Supporting information used to prepare this finding is available by contacting the person listed under **FOR FURTHER INFORMATION CONTACT**. Please submit any new information, materials, comments, or questions concerning this finding to the person listed under **FOR FURTHER INFORMATION CONTACT**.

FOR FURTHER INFORMATION CONTACT: Mark Lamb, Arizona Ecological Services Field Office, 9828 North 31st Ave. C3, Phoenix, AZ 85051–2517; telephone 602–242–

0210. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Background

Under section 4(b)(3)(B) of the Act (16 U.S.C. 1531 *et seq.*), we are required to make a finding whether or not a petitioned action is warranted within 12 months after receiving any petition for which we have determined contains substantial scientific or commercial information indicating that the petitioned action may be warranted (“12-month finding”). We must make a finding that the petitioned action is: (1) Not warranted; (2) warranted; or (3) warranted but precluded. We must publish a notice of these 12-month findings in the *Federal Register*.

Summary of Information Pertaining to the Five Factors

Section 4 of the Act (16 U.S.C. 1533) and the implementing regulations (50 CFR part 424) set forth procedures for adding species to, removing species from, or reclassifying species on the Lists of Endangered and Threatened Wildlife and Plants (Lists). The Act states that the term “species” includes any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature (16 U.S.C. 1532(16)). The Act defines an “endangered species” as any species that is in danger of extinction throughout all or a significant portion of its range (16 U.S.C. 1532(6)), and a “threatened species” as any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (16 U.S.C. 1532(20)). The Act requires that we determine whether any species is an endangered species or a threatened species because of any of the following factors:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;

(D) The inadequacy of existing regulatory mechanisms; or

(E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

We use the term “threat” to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term “threat” includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term “threat” may encompass—either together or separately—the source of the action or condition or the action or condition itself. However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an “endangered species” or a “threatened species.” In determining whether a species meets either definition, we must evaluate all identified threats by considering the expected response by the species, and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species, such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an “endangered species” or a “threatened species” only after conducting this cumulative analysis and describing the expected effect on the species now and in the foreseeable future.

The Act does not define the term “foreseeable future,” which appears in the statutory definition of “threatened species.” Our implementing regulations at 50 CFR 424.11(d) set forth a

framework for evaluating the foreseeable future on a case-by-case basis. The term “foreseeable future” extends only so far into the future as the Service can reasonably determine that both the future threats and the species’ responses to those threats are likely. In other words, the foreseeable future is the period of time in which we can make reliable predictions. “Reliable” does not mean “certain”; it means sufficient to provide a reasonable degree of confidence in the prediction. Thus, a prediction is reliable if it is reasonable to depend on it when making decisions.

It is not always possible or necessary to define foreseeable future as a particular number of years. Analysis of the foreseeable future uses the best scientific and commercial data available and should consider the timeframes applicable to the relevant threats and to the species’ likely responses to those threats in view of its life-history characteristics. Data that are typically relevant to assessing the species’ biological response include species-specific factors such as lifespan, reproductive rates or productivity, certain behaviors, and other demographic factors.

In conducting our evaluation of the five factors provided in section 4(a)(1) of the Act to determine whether the Sonoran desert tortoise meets the definition of an endangered species or a threatened species, we considered and thoroughly evaluated the best scientific and commercial information available regarding the past, present, and future stressors and threats. We reviewed the petition, information available in our files, and other available published and unpublished information. Our evaluation may include information from recognized experts; Federal, State, and Tribal governments; academic institutions; foreign governments; private entities; and other members of the public.

The species assessment form for the species contains more detailed biological information, a thorough analysis of the listing factors, a list of literature cited, and an explanation of why we determined that the species does not meet the Act’s definition of an endangered species or a threatened species. A thorough review of the taxonomy, life history, ecology, and stressors to the Sonoran desert tortoise is presented in the species status assessment report

(USFWS 2021, entire). This supporting information can be found on the Internet at <https://www.regulations.gov> under Docket No. FWS–R2–ES–2021–0153. The following is an informational summary for the finding in this document.

Previous Federal Actions

On December 30, 1982, the Service published in the *Federal Register* (47 FR 58454) a notice of review that determined the desert tortoise (*Gopherus agassizii*) throughout its range in the United States and Mexico to be a Category 2 candidate species. Category 2 candidate species were taxa for which the Service had in its possession information that indicated that proposing to list the species as endangered or threatened was possibly appropriate, but for which substantial biological data were not available to support a proposed rule. On April 2, 1990, we published in the *Federal Register* (55 FR 12178) a final rule designating the Mojave population of the desert tortoise (occurring north and west of the Colorado River) as a threatened species under the Act. Currently, the Mojave population of the desert tortoise is recognized as a distinct population segment (DPS) under the Act.

On October 15, 2008, we received a petition dated October 9, 2008, from WildEarth Guardians and Western Watersheds Project (petitioners) requesting that the Sonoran population of the desert tortoise be listed under the Act as a distinct population segment (DPS) and that the DPS be listed as endangered or threatened range-wide (in the United States and Mexico). The petitioners also requested that critical habitat be designated for the DPS. On August 28, 2009, we published in the *Federal Register* (74 FR 44335) our 90-day finding that the petition presented substantial scientific information indicating that listing the Sonoran population of the desert tortoise may be warranted. That document also initiated a status review of the Sonoran population of the desert tortoise.

On December 14, 2010, we published in the *Federal Register* (75 FR 78094) our 12-month finding that listing the Sonoran DPS of the desert tortoise was warranted, but precluded by other higher priority actions, and the entity was added to our list of candidate species. In

2012, new information was assessed that elevated the Sonoran population of the desert tortoise to a full species (*Gopherus morafkai*). We noted this taxonomic change in the 2012 candidate notice of review (CNOR) and revised its accepted nomenclature to “Sonoran desert tortoise” (77 FR 69994; November 21, 2012). We also reaffirmed its candidate status in the CNORs published in 2012 (77 FR 69994; November 21, 2012), 2013 (78 FR 70104; November 22, 2013), and 2014 (79 FR 72450; December 5, 2014), reaffirming that it was warranted for listing but remained precluded by higher priority actions. After completing a species status assessment, we published in the *Federal Register* (80 FR 60321; October 6, 2015) a 12-month petition finding that listing the Sonoran desert tortoise as endangered or threatened under the Act was not warranted.

The petitioners filed a complaint on September 5, 2019, challenging our 2015 not-warranted finding for the Sonoran desert tortoise and alleging violations of the Act. We reached a settlement agreement with the petitioners that was approved by the U.S. District Court on August 3, 2020, to reconsider our not-warranted finding and to develop a new 12-month finding as to whether the Sonoran desert tortoise warrants listing as an endangered or threatened species under the Act. As a result of that agreement, we returned the Sonoran desert tortoise to the candidate list (see 85 FR 73164; November 16, 2020). This document constitutes our new 12-month finding.

Summary of Finding

The Sonoran desert tortoise occurs in the Sonoran Desert ecoregion of Arizona in the United States and Sonora in Mexico. It is patchily distributed across a large range that covers roughly 68,600 square miles (177,673 square kilometers). Adapted to arid environments, Sonoran desert tortoises spend most of their time in below-ground shelter-sites, with emergence timed to resource availability such as precipitation or forage. Precipitation, particularly the summer monsoons, encourages new vegetative growth that is consumed by Sonoran desert tortoises. Typical habitat consists of rocky slopes and incised washes that support shelter sites. The amount and distribution of this habitat is important to maintain the species’ viability.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the Sonoran desert tortoise, and we evaluated all relevant factors under the five listing factors, including any regulatory mechanisms and conservation measures addressing these threats. We identified several threats that could reduce the viability of the species. Some, such as nonnative vegetation and altered wildfire regimes, have the potential to affect the Sonoran desert tortoise on localized scales and the best available information suggests these threats are unlikely to affect long-term viability of the species. Human development can degrade or remove Sonoran desert tortoise habitat and contribute to reduced survival rates due to human-tortoise interactions and incidental mortality. Suitable Sonoran desert tortoise habitat in portions of the species' range, particularly in Arizona, has been converted to human development. Drought has a measurable effect on the Sonoran desert tortoise's survival rates and may become more frequent and severe into the future due to climate change. Changes in precipitation and temperature patterns may also affect the amount and suitability of Sonoran desert tortoise habitat. Several Federal, State, and county agencies have been implementing conservation measures through best management practices, specific to the Sonoran desert tortoise, to help sustain the species and its habitat where possible.

Currently, we estimate that the Sonoran desert tortoise occupies much of its historical range and is abundant in Arizona and Sonora, on the order of hundreds of thousands of extant adults. Population monitoring data collected for approximately 20 to 30 years on 17 plots located on Bureau of Land Management (BLM) land in portions of the species' range in Arizona have not indicated substantial declines or extirpations. Habitat modeling indicates an estimated 49,222 square miles (127,484 square kilometers) of suitable Sonoran desert tortoise habitat occurs in Arizona and Sonora, with 24 percent of that considered high suitability. In Arizona, 29 percent of the species' range is on publicly-owned lands managed specifically for the benefit of wildlife, including the Sonoran desert tortoise.

Upon examining the current trends and a range of future scenarios, we expect that human

development and climate change will have the greatest impact on the Sonoran desert tortoise's viability due to its effects on habitat and survival rates. Urban expansion may result in the loss of Sonoran desert tortoise habitat, and adult survival rates have been shown to decrease in proximity to urban areas. Drought, a primary stressor shown to result in population crashes over abbreviated time frames, significantly reduces survival rates and may become more common and severe with climate change. The amount and distribution of habitat may also shift due to changes in precipitation and temperature patterns driven by climate change. In our species status assessment report, we modeled these effects to project Sonoran desert tortoise population trends into the future (USFWS 2021, pp. 59–71).

Even with the projected effects of urban expansion and climate change, ample amounts of habitat capable of supporting Sonoran desert tortoises are expected to remain by the end of the century. Although declines in survival are anticipated near urban areas, we found these effects are not enough to significantly reduce viability of the species as a whole, and the affected areas only cover a relatively small portion of the species' range (17 percent). Our modeling projects that future drought is expected to result in a negative growth rate by the end of century and likely declines in overall abundance. The magnitude of these declines varies depending on the assumptions of future environmental changes. However, our modeling indicates that the risk of quasi-extinction by end of century is less than 1 percent regardless of the scenario. Due to high current estimated population sizes and a large area of suitable habitat, even with the projected declines, we anticipate the Sonoran desert tortoise will continue to occupy the majority of currently suitable habitat in sufficient numbers such that the species maintains viability. After evaluating the best available scientific and commercial information on potential threats acting individually or in combination, we find that Sonoran desert tortoise populations are expected to maintain resiliency, redundancy, and representation in the foreseeable future throughout all or a significant portion of the species' range.

Our review of the best available scientific and commercial information regarding the

past, present, and future threats to the species indicates that the Sonoran desert tortoise is not in danger of extinction nor likely to become endangered within the foreseeable future throughout all or a significant portion of its range and does not meet the definition of an endangered species or a threatened species under the Act. Therefore, we find that listing the Sonoran desert tortoise as an endangered or threatened species under the Act is not warranted at this time. A detailed discussion of the basis for this finding can be found in the Sonoran desert tortoise species assessment form, which outlines in more detail the rationale for our decision, and the revised species status assessment report (USFWS 2021, entire), and other supporting documents (see **ADDRESSES**, above), which capture the scientific information upon which our decision was based.

New Information

We request that you submit any new information concerning the taxonomy of, biology of, ecology of, status of, or stressors to the Sonoran desert tortoise to the person listed above under **FOR FURTHER INFORMATION CONTACT**, whenever it becomes available. New information will help us monitor this species and make appropriate decisions about its conservation and status. We encourage local agencies and stakeholders to continue cooperative monitoring and conservation efforts.

References Cited

A list of the references cited in this document is available on the Internet at <https://www.regulations.gov> under Docket No. FWS-R2-ES-2021-0153 in the species assessment form, or upon request from the person listed above under **FOR FURTHER INFORMATION CONTACT**.

Authors

The primary authors of this document are the staff members of the Species Assessment Team, Ecological Services Program.

Authority

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

Martha Williams,
Principal Deputy Director,
Exercising the Delegated Authority of the Director,
U.S. Fish and Wildlife Service.

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