



DESERT TORTOISE COUNCIL

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Via email only

18 July 2021

Kellie Berry, U.S. Fish and Wildlife Service
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Las Vegas, NV 89130
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RE: Endangered and Threatened Wildlife and Plants; Initiation of 5-Year Status Reviews of 76 Species in California and Nevada

Dear Ms. Berry,

The Desert Tortoise Council (Council) is a non-profit organization comprised of hundreds of professionals and laypersons who share a common concern for wild desert tortoises and a commitment to advancing the public's understanding of desert tortoise species. Established in 1975 to promote conservation of tortoises in the deserts of the southwestern United States and Mexico, the Council routinely provides information and other forms of assistance to individuals, organizations, and regulatory agencies on matters potentially affecting desert tortoises within their geographic ranges.

Background Information. The summary given in the May 20, 2021 Federal Register Notice (Vol. 86, No. 96) read as follows: "We, the U.S. Fish and Wildlife Service, are initiating 5-year status reviews of 76 species in California and Nevada under the Endangered Species Act. A 5-year review is based on the best scientific and commercial data available at the time of the review; therefore, we are requesting submission of any new information on these species that has become available since the last review." We note that, whereas the status for an unknown number of these species may have been reviewed in the last five years, results of the last status review for Agassiz's desert tortoise, *Gopherus agassizii* was September 30, 2010 ([Species Profile for Desert tortoise\(Gopherus agassizii\)](https://www.fws.gov/species-profiles/species-profile-for-desert-tortoise-gopherus-agassizii) (fws.gov) <https://ecos.fws.gov/ecp/species/4481>). As such, we feel that it is prudent to provide pertinent research for the last 11 years rather than the last 5 years only.

Our intent is to provide information as identified in the section of the Federal Register Notice, “What information do we consider in our review?”

“A 5-year review considers all new information available at the time of the review. In conducting these reviews, we consider the best scientific and commercial data that have become available since the listing determination or most recent status review [e.g., since September 2010], such as:

“(A) Species biology, including but not limited to population trends, distribution, abundance, demographics, and genetics;

“(B) Habitat conditions, including but not limited to amount, distribution, and suitability;

“(C) Conservation measures that have been implemented to benefit the species;

“(D) Threat status and trends in relation to the five listing factors (as defined in section 4(a)(1) of the Act); and

“(E) Other new information, data, or corrections, including but not limited to taxonomic or nomenclatural changes, identification of erroneous information contained in the List, and improved analytical methods.

“Any new information will be considered during the 5-year review and will also be useful in evaluating the ongoing recovery programs for the species.”

Council’s Response. Given the available list of subject species and our organization’s mission statement, our focus is limited to the Mojave desert tortoise, synonymous with Agassiz’s desert tortoise, *Gopherus agassizii*.

Literature from 1991 through 2015. The Council found that the 2010 five-year evaluation for the desert tortoise, prepared by Catherine Darst, was a quality report. But we are overly concerned that despite the significant declines reported by the USFWS in 2014, the 2015-scheduled status review was not performed. Had that review been completed, we would have limited our submissions of new literature to the time period between 2015 and 2021. However, given the delinquency of the review, we are submitting data that precede those dates. In 2016, Berry et al. (2016)¹ produced an annotated bibliography of peer-reviewed literature published between 1991 and 2015 (i.e., no unpublished literature was included). We therefore submit this annotated bibliography with the understanding that USFWS will be able to select the pertinent literature published since the latest, 2010 status review.

Literature from 2016 through 2021. With a few exceptions, most of the new literature references (i.e., publications within the last five years, between 2017 and 2021) are included in the Literature Cited section of this letter. Once this letter was substantially complete, one of our Board members provided a list of 92, mostly-peer-reviewed references², that unlike the literature listed

¹ <https://www.dropbox.com/s/mpnxgasdj6z6wgo/%23Berry%27s%20Annotated%20Bibliography.2016.pdf?dl=0>

² <https://www.dropbox.com/s/jxnzk17un6lxi0e/USFWS%20five-year%20status%20review.92%20references.docx?dl=0>

at the end of this letter, are not accompanied by links to those articles, but are certainly appropriate for the status review. Given these factors, we have included this separate reference list in Attachment 1. Although we assume that some of this literature is well known to the USFWS (i.e., those references nominally attributed to the USFWS or to individual USFWS staff), in the interest of providing a comprehensive bibliography, we have included them in the attached list. In addition to the references, where available we have also provided links to the literature to facilitate your review.

Petition to Up-list *Gopherus agassizii* from Threatened to Endangered in California. It is the consensus of our 15-member Board of Directors that *Gopherus agassizii* should be federally-listed as Endangered rather than Threatened. We believe that much of the recent literature given in the attached list, including references attributed to the USFWS, and the following petition to the California Fish and Game Commission support this conclusion.

Importantly, in 2019 the Defenders of Wildlife, Council, and Desert Tortoise Preserve Committee (Aardahl et al. 2019) petitioned the California Fish and Game Commission to up-list *Gopherus agassizii* from Threatened to Endangered in California.

On 20 August 2020, the California Fish and Game Commission (2020a) formally accepted the petition, with the following finding: “In completing its Petition Evaluation, the [California] Department [of Fish and Wildlife = CDFW] has determined the Petition provides sufficient scientific information to indicate that the petitioned action to change the status of the Mohave Desert Tortoise from threatened to endangered **may be warranted** [emphasis added]. Therefore, the Department recommends the Commission accept the Petition for further consideration under CESA [California Endangered Species Act].

On 14 October 2020, the California Fish and Game Commission (2020b) in its Notice of Findings: “Notice is hereby given that, pursuant to the provisions of Section 2074.2 of the Fish and Game Code, the California Fish and Game Commission (Commission), at its October 14, 2020 meeting, accepted for consideration the petition submitted to change the status of the Mohave [sic] desert tortoise (also known as Agassiz’s desert tortoise; *Gopherus agassizii*) **from threatened to endangered under the California Endangered Species Act** [emphasis added].

And “Pursuant to subdivision (e)(2) of Section 2074.2 of the Fish and Game Code, the Commission determined that the amount of information contained in the petition, when considered in light of the California Department of Fish and Wildlife’s (Department) written evaluation report, the comments received, and the remainder of the administrative record, **would lead a reasonable person to conclude there is a substantial possibility the requested listing could occur** [emphasis added].

Finally, “Based on that finding and the acceptance of the petition, the Commission is also providing notice that the Mohave [sic] desert tortoise is a candidate species as defined by Section 2068 of the Fish and Game Code.” Accordingly, until the final determination is made in October 2021, the Mojave desert tortoise is to be treated as if it were already listed in California as Endangered; i.e., as a Candidate species for listing in California.

The Council provides the following findings of the California Fish and Game Commission (2020a) as substantive information pertinent to USFWS' consideration of the federal up-listing of *Gopherus agassizii* from Threatened to Endangered:

- *Population Trend.* The information in the Petition is sufficient to indicate the Mohave desert tortoise population in California has declined substantially from historical levels and has continued to trend downward since the species was listed as a threatened species by the Commission in 1989.
- *Abundance.* The Petition provides sufficient information to indicate substantial reductions in Mohave desert tortoise abundance have occurred in large areas of their range, and that the abundance has continued to decline since the species was listed as threatened in California in 1989.
- *Factors Affecting the Ability to Survive and Reproduce.* The Petition presents a list of the factors that affect the survival and reproduction of the Mohave desert tortoise, including land uses (ranching, mining, agriculture, urbanization, military operations, transportation networks, recreation, and utility corridors), weather impacts (storms, drought, availability of natural water), predation from artificially high predator populations, and factors associated with climate change.
- *Recommendations for Future Recovery Management.* The Petition includes potential monitoring suggestions, management actions, and additional protective measures that would benefit Mohave desert populations.

Cumulative impacts. The USFWS' status review must consider detailed, range-wide anthropogenic impacts to desert tortoise habitat. The geographic information system (GIS) layers produced by the University of Redlands are outdated and therefore incomplete. Although experts from the military, U.S. Bureau of Land Management (BLM), U.S. Geological Survey (USGS), and the CDFW requested specific changes to correct the errors, the Redlands staff refused to do so, saying the layers were under copyright, and could not be changed.

Existing and future environmental assessments, environmental impact statements, and management plans, including recovery plans, will be seriously deficient without professionally-developed GIS layers (with quality control and assurance) and analysis, time-dated, and including historical and current information. Examples include the use and decommissioning of railroads, width of rights-of-way in transmission corridors, footprints of solar and wind energy disturbances, detailed evaluations of widths of the Old Spanish Trail, Mojave Road, Manix Trail, years of Barstow to Vegas start areas and width of that race route, locations and effects of watering sites for livestock, high-bermed dirt roads, military tank use areas in critical habitat, and authorized and unauthorized off highway vehicle use. The Council recommends that USFWS utilize newer information available within Department of the Interior agencies rather than the University of Redlands GIS. This research should be of the highest priority, because without it, habitat and populations, including those in critical habitat units, are being lost and degraded by development projects.

Concerns with USFWS-funded studies. The USFWS Recovery Office has funded numerous research projects, but support of applied science projects was minimal, and when funds were available, the projects were not officially announced to allow bidding by more than one firm or

agency. Instead, funds appear to have been transferred to a few preferred entities and individuals, including USFWS employees in the Recovery Office who subsequently authored the research. The independence and professionalism essential to good science were often lacking due to this bidding process. In addition, most projects funded by the USFWS Recovery Office have been conducted in and for Nevada, to such an extent that analogous studies in California have not been funded and are therefore lacking. Instead of funding theoretical research projects, we recommend that the Recovery Office fund recovery projects whose findings can be applied.

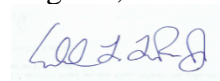
Translocation projects. The USFWS released more than 9,000 unwanted, captive and displaced tortoises into the long-term study site near Jean and throughout southern Nevada. These mass translocations occurred despite numerous publications from the 1980s and 1990s describing the importance of research designs, long-term monitoring, basic knowledge about behaviors and requirements of displaced animals, which were not reflected in the adopted translocation methodologies. Although two projects were funded or partially-so (Field et al. 2007, *Biological Conservation* 136:232–245; Nussear et al. 2012, *Journal of Wildlife Management* 76:1341–1353), monitoring was for only two to three years, which was too brief to meet repeated and recommended guidelines (see attached list of issue-specific references providing guidance for conducting translocations). The three recent publications in *Science* do not alleviate this serious deficiency.

The USFWS has yet to encourage and fund behavioral studies on adult, hard-released translocated wild tortoises. Publications by Stamps and Swaisgood (2007) and Berger-Tal et al. (2020) discuss why translocations fail (dispersal from release sites, rejection of release site, lack of retention on release sites), and what is essential to prevent dispersal from and adoption of release sites. The Recovery Office needs to consider this in future planning. See attached list of issue-specific references noted here.

Inclusion of Black Mountains, Arizona Tortoise Population in the Listed Mojave Population of *Gopherus agassizii*. Whereas we understand the intent of the current five-year status review by the USFWS is to evaluate new information to consider the federal up-listing of *Gopherus agassizii* from Threatened to Endangered status, we believe that it is equally important that the small population of *Gopherus agassizii* that occurs in Arizona, in the Black Mountains east of the Colorado River, be included within the listed Mojave population of the desert tortoise determined by the USFWS (1990). Recent studies (Edwards et al 2015) have demonstrated that these tortoises, which were not included in the federally-listed population in 1990, are *Gopherus agassizii* and should be included within the listed population.

We appreciate this opportunity to provide input and trust that our information will help the USFWS assess the need to upgrade the federal listing of this imperiled species from Threatened to Endangered and to include the Black Mountains population of *Gopherus agassizii* in the listed population.

Regards,



Edward L. LaRue, Jr., M.S.
Desert Tortoise Council, Ecosystems Advisory Committee, Chairperson

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Attachments

92 additional references (minus links) for USFWS five-year status review:

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