

DESERT TORTOISE COUNCIL

3807 Sierra Hwy. #6-4514

Acton, California 93510

www.deserttortoise.org

eac@deserttortoise.org

Via email only

June 29, 2022

Ray Bransfield

U.S. Fish and Wildlife Service

Carlsbad Fish and Wildlife Office

2177 Salk Avenue, Suite 250

Carlsbad, California 92008

[USFWS Desert Tortoise GCP EIS Virtual Public Meeting: Public Input Form —](#)

www.virtualpublicmeeting.com

Palm Springs Fish and Wildlife Office

777 E. Tahquitz Canyon Way, Suite 208

Palm Springs, California 92262

ray_bransfield@fws.gov

RE: Information Gathering from the Public to Prepare a General Conservation Plan for the Mojave Desert Tortoise (*Gopherus agassizii*) in California

Dear Mr. Bransfield,

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.

We appreciate this opportunity to provide comments on the above-referenced project during the "pre-scoping" phase. Given the location of the proposed project in habitats known to be occupied by Mojave desert tortoise (*Gopherus agassizii*) (synonymous with Agassiz's desert tortoise), our comments pertain to enhancing protection of this species during activities funded, authorized, or

carried out by the U.S. Fish and Wildlife Service (USFWS) and cooperating agencies, which we assume will be added to the Decision Record. Please accept, carefully review, and include in the relevant project file the Council's following comments and attachments for the proposed project.

The Mojave desert tortoise is among the top 50 species on the list of the world's most endangered tortoises and freshwater turtles. The International Union for Conservation of Nature's (IUCN) Species Survival Commission, Tortoise and Freshwater Turtle Specialist Group, now considers the Mojave desert tortoise to be Critically Endangered (Berry et al. 2021), as it is a "species that possess an extremely high risk of extinction as a result of rapid population declines of 80 to more than 90 percent over the previous 10 years (or three generations), population size fewer than 50 individuals, other factors." It is one of three turtle and tortoise species in the United States to be critically endangered. This status, in part, prompted the Council to join Defenders of Wildlife and Desert Tortoise Preserve Committee (Desert Tortoise Council 2020) to petition the California Fish and Game Commission in March 2020 to elevate the listing of the Mojave desert tortoise from threatened to endangered in California¹.

Proposed Action: The USFWS Palm Springs Field Office (PSFO) is proposing to develop a General Conservation Plan (GCP) for the Mojave desert tortoise in California. A GCP is a "streamlined process" for developing a landscape-scale Habitat Conservation Plan (HCP) with one or a few covered activities. It is not a replacement for a regional HCP. With a GCP, the USFWS, rather than the Applicant or individual landowner, develops the equivalent of an HCP. In coordination with others, the USFWS determines "which specific activities need to be covered by the GCP, ... which species are likely to be affected by them, and the geographic area to be included" (USFWS 2007).

Before developing a GCP, the USFWS must have a conservation strategy for the target species. The USFWS provided such a strategy in the 1994 and 2011 recovery plans for the Mojave desert tortoise and in the linkage habitats needed to provide connectivity among the populations and recovery units of the tortoise (Averill-Murray et al. 2021).

The USFWS will develop a GCP that is consistent with the conservation strategy that has been developed at a landscape level for the target species. This strategy is used "to determine when and how the best conservation can be obtained for each target species thus contributing to its recovery and removal from the Threatened and Endangered Species list" (USFWS 2007). The GCP will include "the amount of take anticipated, avoidance and minimization measures, required mitigation, and any other measures necessary to meet the issuance criteria" for an incidental take permit (ITP) (USFWS 2007). A GCP includes "everything a traditional HCP has except the names of an applicant or a future permittee" (USFWS 2007).

The GCP and issuance of ITPs would require compliance with the Federal Endangered Species Act (FESA) and National Environmental Policy Act (NEPA), their implementing regulations, and policies. In addition, as a cooperating agency, the Bureau of Land Management (BLM) is considering identifying areas that could be used for relocation/translocation of desert tortoises that may be displaced by covered activities.

¹ https://www.dropbox.com/s/ucg70ncgycli5bo/Desert%20Tortoise%20Petition%203_20_2020%20Final.pdf?dl=0

To help the USFWS with this effort, they invited the public to submit “pre-scoping” comments. Below are the comments from the Council regarding the proposed action.

We support the development of a GCP for the Mojave desert tortoise in California, provided that, when implemented, it will contribute to the conservation and recovery of the species and that it follows the HCP Handbook (USFWS and NMFS 2016), specifically the chapters on Covered Activities and Alternatives to the Taking, the HCP (or in this case, the GCP) Conservation Strategy, Monitoring and Adaptive Management, Implementation Costs and Funding, Net Effects and Permit Duration, and NEPA Compliance.

The Council believes the conservation measures for the tortoise that should be implemented as part of the GCP Conservation Strategy, and are listed in the HCP Handbook, include, with a few added modifications:

- restoration of degraded habitat to natural condition/function, or to a condition likely to be resilient to projected changes (e.g., in response to ongoing and projected climate change effects), with scientific-based monitoring to facilitate successes of those efforts;
- land preservation (e.g., buy and protect, place conservation easements on land) of areas threatened by development, and maintain such lands for conservation purposes in perpetuity and are not threatened by a multiple-use mandate;
- enhancement of habitat (e.g., increase specific function of habitat);
- threat reduction or elimination of predatory species, particularly common ravens and feral or roving dogs;
- translocation of affected individuals or family groups to establish new or augment existing populations in areas that are known to be below carrying capacity; and,
- repatriation of species (or important resources), including head-starting efforts, to formerly occupied and still suitable or enhanced habitats.

We request that the goal of the GCP “should be to fully offset the impacts of take resulting from the covered activities, minimize and mitigate the impacts of take to the maximum extent practicable; contribute to the recovery of the species and provide a net conservation benefit” (USFWS & NMFS 2016).

Streamlining the ITP Process – California Endangered Species Act: One of the purposes of a GCP is to streamline the process of obtaining an ITP from the USFWS for a landowner. Additionally, in California, the landowner must comply with the California Endangered Species Act (CESA) and obtain an ITP from CDFW under section 2081 of the California Fish and Game Code in addition to complying with FESA. To truly streamline the process for the landowner and the wildlife agencies, the GCP must include the requirements and facilitate the process of obtaining an ITP from CDFW (California Fish and Game Code section 783.2) or a Natural Communities Conservation Plan (NCCP) to comply with CESA and California Fish and Game Code. This combination would streamline the process for obtaining an ITP from the USFWS and CDFW. Absent the inclusion of the process to obtain an ITP from CDFW, the landowner must develop an individual 2081 permit application, apply to CDFW, and wait for the take permit. There is no currently available streamlining process for the landowner for the latter process. We recommend incorporating the USFWS’s GCP process with the CDFW’s ITP/NCCP process.

Additional Covered Species: Currently, the USFWS is proposing one covered species, the Mojave desert tortoise. We recommend that the Mohave ground squirrel (*Xerospermophilus mohavensis*) be added. This species is listed as threatened under CESA. Recent data indicate that its distribution and numbers have declined substantially and its age structure shows little recruitment (Leitner 2015, 2020). In addition, Esque et al. (2013) developed models showing that drought/climate change will have an increasing significant adverse impact on the species by 2030 and more so by 2080. These data indicate that the Mohave ground squirrel may have already met the definition of threatened under the FESA and will likely meet the definition of endangered in the foreseeable future.

Although much of the range of the tortoise and Mohave ground squirrel overlap, their habitat and connectivity needs differ. Consequently, developing a GCP for the tortoise does not automatically include the conservation needs of the Mohave ground squirrel. For these reasons, we recommend that the Mohave ground squirrel be included as a covered species so the GCP provides a streamlined process for covered activities for both species.

Permit Area/Plan Area: The USFWS has proposed a map of the permit area, including where take would be authorized. It appears to include most of the private land in the Western Mojave Recovery Unit for the tortoise (i.e., Antelope Valley, Victor Valley, Indian Wells Valley, Lucerne Valley, south slope of the San Gabriel Mountains, I-15 corridor between Victorville and Barstow east to Daggett and Yermo, and Morongo Basin); Colorado Desert Recovery Unit (i.e., including tribal lands in southeastern Imperial County); and Anza Borrego State Park, which has tortoises but is outside the mapped boundaries of the three Mojave desert tortoise recovery units in California (USFWS 2011).

The USFWS's 1994 and 2011 recovery plans for the Mojave desert tortoise and numerous scientific papers and reports clearly show that the threats to and conservation needs of the tortoise vary in different recovery units and Tortoise Conservation Areas (TCAs). In the Western Mojave Recovery Unit, they are numerous and complex. We suggest the USFWS's primary focus be on the immediate conservation needs within the Western Mojave Recovery Unit for the tortoise in California with secondary focuses on other areas proposed on the map. This approach is supported by the USFWS policy which says that the "GCP is not a substitute for a regional, multiple action HCP."

We found no map of the Plan Area that identifies the area where the mitigation would be implemented. We suggest USFWS propose certain areas for mitigation and presume they would be located within the critical habitat boundaries for the tortoise. We also suggest that USFWS work with Mojave Desert Land Trust, Desert Tortoise Preserve Committee, and Transitions Habitat Conservancy, among others, to ensure that wildlife corridors and other existing protected areas benefit from the GCP planning exercise. For the Mohave ground squirrel, these would include the Core Areas identified by Leitner (2008) and formally endorsed in CDFW's (2019) Conservation Strategy.

Covered Activities: Covered activities in the GCP should include restoration of tortoise habitat from unauthorized/illegal activities such as unauthorized OHV use, illegal grading, unpermitted development, and illegal cannabis grow farms as well as past authorized activities. These restoration activities would be considered as mitigation for legal development elsewhere. To be clear, habitat restoration means restoring the ecological functions and values of the habitat prior to its disturbance. It does not mean recontouring the land or using methods to discourage future incursions. Restoration may use these methods as part of the process to restore the functions and values of the habitat but these measures alone do not result in restoration.

“Habitat restoration is a countermeasure to many of the impacts [to the tortoise] ... such as grazing, military operations, off-highway vehicle use, roads and trails, construction, mining, horses and burros, invasive species, fire, environmental contaminants, and utility corridors. As such, this action is highly prioritized within the Western Mojave and Colorado Desert recovery units” (USFWS 2011). Any property that has been degraded, and that will not be legally and permanently developed, must be evaluated for adverse effects and then restored to a clean and revegetated state appropriate to the area.

Hence, we recommend that activities that result in the loss of habitat (e.g., grading for residential, commercial, or industrial developments, new/improved access routes, mining, etc.) be among the covered activities in this GCP. Once the CGP is completed and implementation initiated, the USFWS and CDFW would pursue covered activities that degrade habitat quality. Since drought/climate change will be an overarching threat for any covered activity, it should be analyzed and mitigated to the maximum extent practicable in the USFWS/CDFW ITP process and NEPA/CEQA documents.

Mitigation on Federal Land: As mentioned above, BLM is participating in the development of the GCP to evaluate providing relocation/translocation sites for desert tortoises displaced by covered activities. We have several concerns regarding this approach.

First: For the TCAs in California there are three in the Western Mojave Recovery Unit, three in the Colorado Desert Recovery, and one in the Eastern Mojave Recovery Unit. All are believed to be below the threshold for population viability for the tortoise (see USFWS 2015, 2016, 2018, 2019, 2020, 2022a, 2022b). The Council considers extensive, ubiquitous declines in tortoise populations throughout California to be an unacceptable change compared to when the tortoise was listed (USFWS 1990), revealing through distance sampling efforts that more than half of the tortoises have disappeared from the Western Mojave Recovery Unit in the intervening years since the studies were initiated in 2000 (Allison and McLuckie 2018, USFWS 2022a, 2022b).

We suggest that BLM demonstrate they are implementing effective on-the-ground management actions for the tortoise before tortoises are put on public lands managed by that agency. We believe that translocation can be an effective mitigation measure to help conserve the tortoise, so recipient sites for displaced tortoises must be carefully considered and effectively managed for this purpose.

Second: Because BLM lands are managed for multiple use, there needs to be a guarantee that any site used for a translocation will not be used and developed for future activities that are incompatible with tortoise conservation. The John D. Dingell, Jr. Conservation, Management, And

Recreation Act of 2019 allows BLM to remove some multiple use activities that adversely impact the tortoise from lands that are used as mitigation for HCP, GCPs, and NCCPs. We are concerned that, despite extensive evidence of tortoise declines throughout the Western Mojave Recovery Unit, BLM used this act to expand three recreational vehicle open areas (Johnson Valley, El Mirage, and Spangler Hills) into desert tortoise critical habitat. Thus, these BLM lands now have heavier recreational uses that adversely impact the tortoise. These tortoises could be relocated/translocated again or killed during authorized activities approved at a relocation/translocation site. BLM needs to provide legal assurances that relocation/translocation sites are mitigation lands to be prioritized for the conservation of the tortoise. The permanent development of non-federal lands should be offset with permanent mitigation (see “**Minimize and Mitigate to the Maximum Extent Practicable**”).

Third, as a federal agency BLM is not required to be a signatory to any ITP issued by the USFWS. Therefore, there is no requirement that legally binds BLM to effectively implement this mitigation for a non-federal entity (the Permittees of the ITPs) and preserve the site for tortoise conservation or to fund its management for tortoise conservation. The courts have ruled that the USFWS cannot rely on mitigation provided by a federal agency in making its “maximum extent practicable” finding under FESA section 10(a)(2)(B)(ii), as this violates the requirement that only mitigation and other conservation measures provided by the applicant may be considered in making the finding.

Fourth, Congress has the authority to change land ownership and management of BLM lands, and has done so in the past in the CDCA to the detriment of the tortoise (e.g., expansion of China Lake Naval Air Weapons Station, Fort Irwin, and Twentynine Palms Marine Corps Base, etc.). Consequently, we are reluctant, and we think USFWS should be reluctant, to use BLM lands as translocation sites until BLM can demonstrate that, because the translocation sites are mitigation, they would be managed permanently for the benefit of the tortoise. For now, we would support placing translocated tortoises on non-federal lands such as those managed by an NGO for conservation purposes, CDFW with a conservation easement in perpetuity, or possibly the National Park Service, until which time BLM can demonstrate its legal authority and “on-the-ground” management ability for the tortoise that cannot be changed by BLM management, Department of the Interior, or Congress.

Fifth, the Permittees have no control over how the translocation sites would be managed if located on BLM land. Consequently, this part of the GCP could not be enforced by the Permittees or the USFWS.

Minimize and Mitigate to the Maximum Extent Practicable: One of the conditions for issuance of an ITP by the USFWS is that the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of the takings. “If habitat will be permanently lost, alternative habitat must be protected in perpetuity to offset the loss and the appropriate habitat conditions at the mitigation site must be maintained in perpetuity” (USFWS & NMFS 2016).

Because there have been several court rulings against the USFWS on this condition for ITP issuance by the USFWS, the USFWS should ensure that the GCP provides a thorough discussion and documentation of what is “the maximum extent practicable” and that the measures to minimize

and mitigate will be effective in conserving the covered species. The court ruled that USFWS may not simply accept an applicant's assertion that a lesser-impact alternative is impracticable. In addition, the court ruled against the USFWS when issuing an ITP, when they relied on mitigation measures that were ineffective.

Changed Circumstances: Given the breadth of data on the threats and their impacts to the tortoise, there should be an extensive identification and discussion of changed circumstances including new diseases, megadrought, new invasive species, more frequent fire, increased predation, climate change, and increased human activities/development resulting in increased take of tortoises and loss, degradation, and fragmentation of habitat.

Funding: One of the conditions for issuance of a federal ITP is “[t]he applicant will ensure that adequate funding for the conservation plan and procedures to deal with unforeseen circumstances will be provided.” Because the USFWS does not know who the applicants are, how many there would be, or their financial status, how will USFWS determine how the funding will be provided and ensure this condition is met for permit issuance?

In one case, the court held that the USFWS had not fulfilled its duty to determine that the habitat conservation plan would mitigate impacts to covered species to the maximum extent practicable where the mitigation fees were set “at the minimum amount necessary to meet the minimum biological necessities of the covered species,” and where the record was “devoid” of evidence that the USFWS conducted its own examination of the practicability of the proposed fee base or “attempted to determine if a higher fee base would also be practicable.” 128 F. Supp. 2d at 1292-1293. The court also held that the Permittee had not ensured adequate funding, as required by FESA Section 10(a)(2)(B)(iii), because the Permittee had not guaranteed that adequate funding would be available, but instead relied on funds to be provided by subsequent participants. The court stated that while it was not clear that a funding mechanism not backed by the applicant's guarantee would ever meet the “ensure” funding requirement, “where the adequacy of funding depends on whether third parties decide to participate in the Plan, the statute requires the applicant's guarantee.”

The HCP Handbook cautions about using in lieu fees for mitigation because of numerous unknown factors including those listed above. We concur that this approach should not be used especially for a GCP when the number of permittees and their financial status is unknown.

We request that in the GCP, the USFWS (1) provide documentation of the costs of implementing the GCP annually for the proposed permit term; (2) ensure that inflation and other relevant factors are included in the explanation of the calculations for the cost of implementing the GCP; and (3) explain how the GCP plan would be fully funded including research, management, monitoring, adaptive management, and unforeseen circumstances. This request applies especially to the fees paid to the raven management fund that should be reassessed for implementation costs (research, management, monitoring, and adaptive management) and inflation annually.

We further request that the USFWS explain in the GCP, Implementing Agreement, and ITP, how the USFWS will ensure that all issued ITPs under the GCP “will be severable, that is, that the conservation benefits of the GCP will not be dependent on any one permittee” (USFWS 2007).

The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild: For the Mojave desert tortoise, the issuance of any ITP in California may reduce its likelihood of survival and recovery. The USFWS’s monitoring data on tortoise densities for the nine tortoise populations monitored in California show that seven populations are at densities below the population viability level, one is at the threshold between populating viability and non-viability, and one is above. Thus, additional authorized take of the tortoise especially in the Western Mojave Recovery Unit without appreciable increases in densities will continue the downward trend on tortoise densities that have been below the viability level since before 2014 (see USFWS 2015, 2016, 2018, 2019, 2020, 2022a, and 2022b). Thus, it is imperative that the GCP have a robust and effective conservation plan that will be implemented to reverse this downward trend on tortoise densities and numbers. In addition, recovery of the tortoise is not likely unless the tortoise population in each recovery unit is recovered.

NEPA Compliance

Cumulative Impacts: In the cumulative effects analysis of the Draft Environmental Impact Statement, please ensure that the CEQs “Considering Cumulative Effects under the National Environmental Policy Act” (1997) are followed, including the eight principles, when analyzing cumulative effects of the proposed action to the tortoise and its habitats:

1. Cumulative effects are caused by the aggregate of past, present, and reasonable future actions.

The effects of a proposed action on a given resource, ecosystem, and human community, include the present and future effects added to the effects that have taken place in the past. Such cumulative effects must also be added to the effects (past, present, and future) caused by all other actions that affect the same resource.

2. Cumulative effects are the total effect, including both direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken, no matter who (federal, non-federal, or private) has taken the actions.

Individual effects from disparate activities may add up or interact to cause additional effects not apparent when looking at the individual effect at one time. The additional effects contributed by actions unrelated to the proposed action must be included in the analysis of cumulative effects.

3. Cumulative effects need to be analyzed in terms of the specific resource, ecosystem, and human community being affected.

Environmental effects are often evaluated from the perspective of the proposed action. Analyzing cumulative effects requires focusing on the resources, ecosystem, and human community that may be affected and developing an adequate understanding of how the resources are susceptible to effects.

4. It is not practical to analyze the cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful.

For cumulative effects analysis to help the decision maker and inform interested parties, it must be limited through scoping to effects that can be evaluated meaningfully. The boundaries for evaluating cumulative effects should be expanded to the point at which the resource is no longer affected significantly or the effects are no longer of interest to the affected parties.

5. Cumulative effects on a given resource, ecosystem, and human community are rarely aligned with political or administrative boundaries.

Resources are typically demarcated according to agency responsibilities, county lines, grazing allotments, or other administrative boundaries. Because natural and sociocultural resources are not usually so aligned, each political entity actually manages only a piece of the affected resource or ecosystem. Cumulative effects analysis on natural systems must use natural ecological boundaries and analysis of human communities must use actual sociocultural boundaries to ensure including all effects.

6. Cumulative effects may result from the accumulation of similar effects or the synergistic interaction of different effects.

Repeated actions may cause effects to build up through simple addition (more and more of the same type of effect), and the same or different actions may produce effects that interact to produce cumulative effects greater than the sum of the effects.

7. Cumulative effects may last for many years beyond the life of the action that caused the effects.

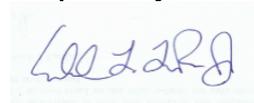
Some actions cause damage lasting far longer than the life of the action itself (e.g., acid mine damage, radioactive waste contamination, species extinctions). Cumulative effects analysis need to apply the best science and forecasting techniques to assess potential catastrophic consequences in the future.

8. Each affected resource, ecosystem, and human community must be analyzed in terms of its capacity to accommodate additional effects, based on its own time and space parameters.

Analysts tend to think in terms of how the resource, ecosystem, and human community will be modified given the action's development needs. The most effective cumulative effects analysis focuses on what is needed to ensure long-term productivity or sustainability of the resource.

We appreciate this opportunity to provide comments on this project and trust they will help protect tortoises during any resulting authorized activities. Herein, we reiterate that the Desert Tortoise Council wants to be identified as an Affected Interest for this and all other projects funded, authorized, or carried out by the USFWS that may affect species of desert tortoises, and that any subsequent environmental documentation for this project is provided to us at the contact information listed above.

Respectfully,



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

Literature Cited

- Allison, L.J. and A.M. McLuckie. 2018. Population trends in Mojave desert tortoises (*Gopherus agassizii*). *Herpetological Conservation and Biology* 13(2):433–452.
- Averill-Murray, R.C., Esque, T.C., Allison, L.J., Bassett, S., Carter, S.K., Dutcher, K.E., Hromada, S.J., Nussear, K.E., and Shoemaker, K., 2021, Connectivity of Mojave Desert tortoise populations—Management implications for maintaining a viable recovery network: U.S. Geological Survey Open-File Report 2021–1033, 23 p., <https://doi.org/10.3133/ofr20211033>.
- Berry, K.H., L.J. Allison, A.M. McLuckie, M. Vaughn, and R.W. Murphy. 2021. *Gopherus agassizii*. The IUCN Red List of Threatened Species 2021: e.T97246272A3150871. <https://dx.doi.org/10.2305/IUCN.UK.2021-2.RLTS.T97246272A3150871.en>
- [CDFW] California Department of Fish and Wildlife. 2019. A Conservation Strategy for the Mohave ground squirrel (*Xerospermophilus mohavensis*). Dated July 2019, 128 pp.
- [Council] Desert Tortoise Council. 2020. A Petition to the State of California Fish and Game Commission to change the status of *Gopherus agassizii* from Threatened to Endangered. Formal petition submitted on 11 March 2020.
- Esque, T.C., K.E. Nussear, R.D. Inman, M.D. Matocq, P.J. Weisberg, T.E. Dilts, and P. Leitner. 2013. Habitat modeling, landscape genetics, and habitat connectivity for the Mohave ground squirrel to guide renewable energy development. Prepared by the United States Geological Survey and Univ. of Reno for the California Energy Commission. CEC-500-2014-003. 154 pp. <http://www.energy.ca.gov/2014publications/CEC-500-2014-003/CEC-500-2014-003.pdf>.
- Leitner, P. 2008. Current status of the Mohave ground squirrel. *Trans. Western Section Wildlife Society*, 44:208. 29pp. https://www.wildlifeprofessional.org/western/transactions/transactions_2008_3.pdf
- [USFWS] U.S. Fish and Wildlife Service. 2007. Final General Conservation Plan Policy. Washington, D.C. October 5, 2007.
- Leitner, P. 2015. Current status of the Mohave ground squirrel (*Xerospermophilus mohavensis*): A five-year update (2008–2012). Endangered Species Recovery Program, California State University, Stanislaus, One University Circle, Turlock, California 95382. Published in *Western Wildlife* 2: 9–22.
- Leitner, P. 2021. Current status of the Mohave ground squirrel: an update covering the period 2013-2020. *California Fish and Wildlife Special CESA Issue*:300-316.
- [USFWS] U.S. Fish and Wildlife Service (USFWS). 1990. Endangered and threatened wildlife and plants; determination of threatened status for the Mojave population of the desert tortoise. *Federal Register* 55(63):12178-12191.

- [USFWS] U.S. Fish and Wildlife Service. 2015. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2013 and 2014 Annual Reports. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.
- [USFWS] U.S. Fish and Wildlife Service. 2016. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2015 and 2016 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.
- [USFWS] U.S. Fish and Wildlife Service. 2018. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2017 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.
- [USFWS] U.S. Fish and Wildlife Service. 2019. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2018 Annual Reporting DRAFT. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.
- [USFWS] U.S. Fish and Wildlife Service. 2020. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2019 Annual Reporting DRAFT. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada. 42 pages.
- [USFWS] U.S. Fish and Wildlife Service. 2022a. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2020 Annual Reporting DRAFT. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.
- [USFWS] U.S. Fish and Wildlife Service. 2022b. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2021 Annual Reporting DRAFT. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.
- [USFWS & NMFS] U.S. Fish and Wildlife Service & National Marine Fisheries Service. 2016. Habitat Conservation Planning and Incidental Take Permit Processing Handbook. December 21, 2016.