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Submitted via https://www.regulations.gov

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Martha Williams, Director
Gary Frazer, Assistant Director, Ecological Services
Attn: Docket No. FWS-R8-ES-2023-0084
U.S. Fish and Wildlife Service
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RE: Notice of Intent to Prepare a Draft Environmental Impact Statement for the Desert Tortoise General Conservation Plan, CA (Docket No. FWS-R8-ES-2023-0084)

Dear Director Williams and Mr. Frazer,

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.

Both our physical and email addresses are provided above in our letterhead for your use when providing future correspondence to us. When given a choice, we prefer to receive emails for future correspondence, as mail delivered via the U.S. Postal Service may take several days to be delivered. Email is an "environmentally friendlier way" of receiving correspondence and documents rather than "snail mail."

We appreciate this opportunity to provide comments on the U.S. Fish and Wildlife Service's (USFWS) proposal to prepare and implement a General Conservation Plan for the Mojave Desert Tortoise (GCP or Plan) in California. Given the location of the proposed GCP 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 authorized by the USFWS. We presume these comments will be added to the Decision Record for this GCP. Please accept, carefully review, and include in the relevant project file the Council's following comments 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), "… based on population reduction (decreasing density), habit loss of over 80% over three generations (90 years), including past reductions and predicted future declines, as well as the effects of disease (upper respiratory tract disease/mycoplasmosis). *Gopherus agassizii* (sensu stricto) comprises tortoises in the most well-studied 30% of the larger range; this portion of the original range has seen the most human impacts and is where the largest past population losses had been documented. A recent rigorous rangewide population reassessment of *G. agassizii* (sensu stricto) has demonstrated continued adult population and density declines of about 90% over three generations (two in the past and one ongoing) in four of the five *G. agassizii* recovery units and inadequate recruitment with decreasing percentages of juveniles in all five recovery units."

This status, in part, prompted the Council to join Defenders of Wildlife and Desert Tortoise Preserve Committee (Defenders of Wildlife et al. 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 California. The final determination is pending.

We thank the U.S. Fish and Wildlife Service (USFWS) for inviting the Council to attend a pre-scoping meeting for the proposed development of the General Conservation Plan (GCP). In addition, we appreciate that the USFWS informed the Council of the publication of the Notice of Intent to Prepare a Draft Environmental Impact Statement for the Desert Tortoise GCP, CA (NOI) and associated opening of the public comment period for the scoping phase of this National Environmental Policy Act (NEPA) document. The NOI was published in the *Federal Register* on July 17, 2023.

Scoping Comments on the U.S. Fish and Wildlife Service's Proposal to Develop a Draft General Conservation Plan for the Mojave Desert Tortoise

Background

In its publication of the NOI to prepare the GCP and environmental impact statement (EIS), the USFWS also released a preliminary draft of the GCP and requested comments on it. The release of a draft document during the scoping phase is an unusual occurrence, but the USFWS did so to assist the public in evaluating their proposed action, which would be approval of the GCP. In addition, the USFWS requested data, comments, views, arguments, new information, analysis, new alternatives, or suggestions on the proposed action from the public. Specifically, the USFWS requested:

"1. Biological information, analysis and relevant data concerning the desert tortoise and other wildlife;
2. Potential effects that the GCP could have on the desert tortoise and its associated ecological communities or habitats;
3. Potential effects that the GCP could have on other aspects of the human environment, including ecological, aesthetic, historic, cultural, economic, social, environmental justice, or health effects;

4. Other possible reasonable alternatives to the proposed action that the Service should consider, including additional or alternative avoidance, minimization, and mitigation measures;
5. The presence of historic properties—including archaeological sites, buildings and structures, historic events, sacred and traditional areas, and other historic preservation concerns—in the proposed permit area, which are required to be considered in project planning by the National Historic Preservation Act;
6. Information on other current or planned activities in, or in the vicinity of, the plan area and their possible impacts on the desert tortoise, including any connected actions that are closely related and should be discussed in the same draft EIS; and
7. Other information relevant to the GCP and its impacts on the human environment."

Below are the Council's comments on the *Federal Register* Notice and the preliminary draft GCP.

Federal Register **Notice**

The Council supports the USFWS's efforts to increase efficiency and standardize compliance for incidental take permits (ITPs) for activities on non-federal lands in the plan area that have the potential to incidentally take desert tortoises. Approval of a GCP has the potential to "(1) streamline this process for desert tortoise incidental take permits, (2) provide specific direction to applicants to incorporate the most current measures to minimize the take of desert tortoises into their applications, and (3) better incorporate mitigation from incidental take permits into a comprehensive strategy that contributes to recovery of the desert tortoise."

The USFWS must ensure that the GCP is developed using the latest research and follows the regulations and Habitat Conservation Planning (HCP) Handbook (USFWS and NMFS 2016). It must use science to inform decisions, implement effective methods, and monitor results to effectively contribute to the recovery of the tortoise. It must follow the HCP Handbook and document this process in the GCP to provide clarity to the public and permit applicants and avoid successful legal challenges.

In this NOI document, the USFWS says "the primary purpose of the scoping process is for the public and other parties to assist in developing the draft EIS by identifying important issues and alternatives that should be considered." The Council identifies the following issues for the USFWS to consider, describe, and analyze in the draft EIS.

- Covered Activities: In addition to specific development/construction projects, human activities should be identified and included in the GCP. These activities would include the operation and maintenance activities of non-federal entities in the permit area for new projects, operation and maintenance activities for existing projects, and certain activities that are not associated with development/construction projects. [e.g., public works agencies, off-highway vehicle (OHV) events, OHV use in State Recreation Areas, etc.].

  Examples - any non-federal entity sponsoring off-highway or off-road vehicle (ORV) recreation should be included as a covered activity.

California City, which has an active OHV/ORV recreation program and includes the sales of permits to operate ORVs, should be included as a covered activity.

Organized events on the 25,000-acre Onyx Ranch, which was purchased by the Off-Highway Motor Vehicle Recreation (OHMVR) Division of California State Parks that overlaps the range of the tortoise, should be included as a covered activity. The plan at Onyx Ranch is to inventory the area for desert tortoises to establish a baseline and then monitor the effects of OHV/ORV use during the next few years.

Red Rock Canyon State Park is another non-federal entity that allows motorized vehicle use on designated routes within desert tortoise habitat. This should be a covered activity.

Grazing on non-federal land should be included as a covered activity.

- Size of the Plan Area: The USFWS should consider increasing the plan area (permit area and mitigation area) to include the current range of the listed population of the Mojave desert tortoise. This approach would more effectively incorporate mitigation from incidental take permits into a comprehensive strategy that contributes to recovery of the desert tortoise. A majority of the range of the tortoise occurs in California with the remaining areas in Arizona, Nevada, and Utah. Currently, we are not aware of a rangewide comprehensive strategy that is being implemented for the issuance of incidental take permits. Expanding the GCP to include the entire range of the listed species would make this happen. The current approach gives the appearance that the limitation to a California-only GCP is based on political determinations and not biological determinations or needs of the species.

- NEPA action alternatives: According to the USFWS, GCP alternatives would likely "include variations in the duration of the general conservation plan, the size and locations of permit and mitigation areas, potential translocation areas for desert tortoises found on project sites, and the types of effectiveness monitoring."

  As mentioned above, another action alternative would be to expand the plan area to include the entire range of the federally-listed population of the Mojave desert tortoise. This would be an expanded variation on the size and locations of the permits and mitigation areas.

  The USFWS has proposed a GCP with a duration of 10 years. The duration of the GCP depends on the time required to implement the mitigation effectively. This construct is in the HCP Handbook and should be followed and cited in the GPC. For example, if the GCP were limited to 10 years and ITPs were issued for construction projects that take 3 to 5 years to build but the mitigation would take 50 years to implement (e.g., vegetation restoration), the USFWS would not necessarily know that the mitigation would be successful at the end of the 10 years. Please determine the duration of the GCP on a time frame sufficiently large to determine the effectiveness of the mitigation and not an arbitrary time.

Types of effectiveness monitoring should be science-based and tailored to answer questions about the effectiveness of achieving the specific objectives of the issued ITPs. According to the USFWS HCP Handbook (2016), these biological objectives should be specific, measurable, achievable, result-oriented, and time-fixed. Thus, the biological objectives of the GCP should be broad and general to encompass the range of specific objectives. Consequently, modifying effectiveness monitoring to develop different action alternatives for NEPA would not be an appropriate alternative for the GCP.

For other alternatives, we suggest the USFWS consider the addition of other covered species. The California state-threatened Mohave ground squirrel (*Xerospermophilus mohavensis*) would be one species to add to the GCP, as it occurs in the proposed permit area and is listed under the California Endangered Species Act (CESA). Its range overlaps the tortoise's range in the western portion of the Mojave Desert. Coordination with California Department of Fish and Wildlife (CDFW) is needed for the GCP because the tortoise is listed under CESA. In addition, recent research indicates the status of the species continues to decline (Leitner 2015, 2021) and climate change will have a substantial impact on the species' habitat in the foreseeable future (Esque et al. 2013).

In the NOI, the USFWS says it "proposes to approve a GCP that provides specific direction regarding how to best minimize, mitigate, and monitor the effects of incidental take to applicants seeking ESA section 10(a)(1)(B) permits for the desert tortoise within a defined permit area." When we read the draft GCP, we do not find specific direction on how to best minimize, mitigate, and monitor the impacts of the taking. Rather we find suggested options from which a permit applicant could make choices. The actions to minimize the impacts of the taking are mostly limited to new projects during the construction phase. We do not find minimization actions described for non-construction projects or for the operation and maintenance phases of existing projects or new ones following the construction phase. Below in our specific comments on the GCP, we address this issue in more detail and suggest solutions that will provide specific direction to applicants.

Under "Covered Activities," the USFWS says they "propose to cover commercial, agricultural, residential, industrial, and infrastructure development within the planning area that a federal agency does not fund, authorize, or carry out. The GCP would also cover the operations and maintenance of existing facilities, such as utilities' transmission and distribution lines." Please clarify if this would include construction and maintenance of local and private roads.

The Council requests that examples of these types of activities be provided so the public and the USFWS have a clear understanding of the activities that are covered in the GCP and those that are not (please see section 5.5 of the HCP Handbook). As written, there is ambiguity regarding the activities that are covered.

As mentioned above, we request that covered activities include sponsored OHV and ORV activities, and OHV/ORV uses in State Parks and State Vehicular Recreation Areas (SVRAs).

In the *Federal Register* Notice, the USFWS says, "[t]he applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking." However, later in the Notice, the USFWS says, "The biological goals of the GCP focus on minimizing the amount of take of desert tortoises." We believe the USFWS should say the biological goals focus on minimizing the *impacts of the taking* [emphasis added], as this is broader in its application than the amount of take. It reflects the wording in the Federal Endangered Species Act (FESA).

Also in the NOI, the USFWS says, "[w]e anticipate that incidental take permits under the GCP would result in the take of few desert tortoises. We have reached that conclusion because, since the listing of the desert tortoise in 1990, we have issued 14 incidental take permits for the desert tortoise in California that have resulted in the translocation of approximately 43 desert tortoises. We are unaware of any desert tortoises that died during permitted activities."

While this statement may be true and based on the monitoring data USFWS required to be collected, it does not reveal the locations of these ITPs, equates mortality during construction and translocation with take when take has a much broader definition and may occur during other phases of project implementation, and does not describe the monitoring requirements, if there were any, for translocated tortoises during the multi-year permit terms. We recommend that this conclusion be removed from future documents authored by the USFWS unless data are provided that fully support this statement about the amount and monitoring of take.

Preliminary Draft General Conservation Plan

The Council supports the concept of a GCP for the Mojave desert tortoise and appreciates the efforts by the USFWS to develop it. The comments provided below are intended to ensure the GCP is biologically sound, supported by research, follows USFWS regulations and policies, is not arbitrary in decisions made and conclusions reached in the development or implementation of the GCP, and will effectively contribute to the conservation of the tortoise.

We appreciate that the USFWS provided a preliminary draft of the GCP for the public to review. This approach provides a concrete document for the public to review rather than the typical approach that federal agencies use, which is to provide the purpose of the proposed action and general concepts of implementation. For many people, this typical approach of providing concepts makes it difficult to understand the proposed action, develop and suggest alternatives, and comprehend the potential impacts from implementation. We recommend that USFWS continue using this approach for future documents provided to the public for review.

The Council recommends the USFWS revise Covered Activities (Chapter 2) in the GCP (please see our comments above), and using this as a foundation, revise its Biological Impacts and Take Assessment (Chapter 4), followed by revisions to the Conservation Program/Measures to Minimize and Mitigate for Impacts (Chapter 5), Permit Processing and Implementation (Chapter 6), and Funding (Chapter 7). Each succeeding chapter is built on the information in the preceding chapter, which is why the USFWS should start with Chapter 2 and revise the chapters that follow it in the GCP.

In reviewing the court cases on HCPs and incidental take permits, the courts have relied on the HCP Handbook as providing direction for the issuance of ITPs. We request that USFWS demonstrate throughout the GCP how it complies with the HCP Handbook, particularly in Chapter 7 - Identifying HCP Species and Information Needs, Chapter 8 – Calculating Take from Land and Water Use Activities, Chapter 9 – HCP Conservation Strategy, Chapter 10 – Monitoring and Adaptive Management, Chapter 11 – Implementation Costs and Funding, and Chapter 12 – Net Effects and Permit Duration. Following the HCP Handbook in the preparation of the GCP and citing relevant sections will ensure transparency and help document the reasons the GCP has certain requirements. Reliance on the HCP Handbook should result in a legally sound GCP.

Climate Change: We did not find climate change mentioned in the GCP. We request the HCP Handbook be consulted on how to consider climate change in the development of the GCP and climate change be addressed especially to the effects, biological objectives, mitigation, monitoring, adaptive management, changed circumstances, and funding sections of the GCP.

National Environmental Policy Act

Earlier in this letter we suggested alternatives for the GCP. We request that these alternatives be analyzed in the NEPA document. Issues that should be analyzed in the NEPA document include cumulative, interactive, and synergistic impacts (CEQ 1997) to the tortoise – both adverse and beneficial.

Please refer to the Council's July 29, 2022 letter (attached) for additional issues that should be addressed in the NEPA document. Data on demographic status and trend for the tortoise by population, recovery unit, and rangewide should be presented, along with a description of the life history strategy of the tortoise for survival, the growing number and threats to the tortoise, and the effectiveness of mitigation measures implemented to date at offsetting or improving the survival and recovery of the tortoise. This establishes the baseline that the USFWS would use in its NEPA analysis of the implementation of actions under the GCP.

The NEPA document should comply with Guidance for Federal Departments and Agencies on Ecological Connectivity and Wildlife Corridors (CEQ 2023).

Specific Comments on the GCP

The Council understands that the GCP provided to the public for this review is a preliminary draft document. The specific comments provided below are intended to help ensure clarity, consistency, compliance with regulations and the HCP Handbook, and ultimately a document supported by scientific data and results and recommendations made by researchers.

Page iv: Pre-project surveys - "They may consist of the standard protocol surveys developed by the Service or other methods of detecting desert tortoises developed in cooperation with the Service for specific circumstances." Please change to read "…or other *science-based* methods…"

Page vi: Non-federal lands. Please add Tribal lands to this definition.

Page viii: Covered Activities – "The Plan covers otherwise lawful commercial, agricultural, residential, industrial, and infrastructure development. It will also cover operations and maintenance of these activities."

The mitigation activities that may result in take should also be among covered activities. Please ensure that this information is provided at all relevant locations in the GCP.

Planning Area – "Mitigation associated with implementation of the Plan would occur within desert tortoise conservation areas…" Please explain these are priority areas for mitigation even though areas that provide connectivity between populations are necessary for survival and recovery. Adding a citation to reinforce this decision would be helpful.

Coordination with CDFW – "In almost every situation where an applicant is seeking a section 10(a)(1)(B) permit from the Service, they would need to comply with [Section 2080-2081 of] the California Endangered Species Act. We envision that, at every step in the process of applying for a federal incidental take permit, the applicant would engage the Department [CDFW] at the same time. We did not insert this important concept throughout this document…" Please insert this requirement at all appropriate locations throughout the GCP. Many people, do not read the entire document, but use the Table of Contents to find the specific information they are looking for. Ideally the Final GCP would be coordinated with CDFW and the science-supported methods used to determine impacts of the taking; processes/methodologies to determine minimization, mitigation, and monitoring to fully offset the impacts; and guaranteed funding would be something the USFWS and CDFW could agree on.

Pages viii, 1, and Chapter 2: Covered Activities – "The Plan covers otherwise lawful commercial, agricultural, residential, industrial, and infrastructure development. It will also cover operations and maintenance of these activities." The GCP should cover recreational activities and operations and maintenance of existing development that is likely to result in take. Examples of each type of activity should be provided as currently these broad terms are not clear as to what activities would be covered, and each person is going to assume different activities are covered or not. In addition, this information is needed to analyze the impacts of these activities for NEPA compliance and section 7 consultation.

Pages viii and ix: Amount of Incidental Taking – "Incidental take is likely to occur in the form of killing, wounding, harming, and capturing desert tortoises during the conduct of covered activities." We suggest rewording this sentence to say "…capturing desert tortoises while conducting covered activities."

Page ix: Monitoring Plan – "Each permittee will provide an annual report on March 31 each year that its incidental take permit is in effect or until the Service agrees that an annual report is no longer needed."

Please delete "…or until the Service agrees that an annual report is no longer needed." We are not sure why an annual report would no longer be needed during the term of the permit. Other USFWS permits require annual reporting even when no activity is conducted.

Page 2: Planning Area – Please ensure that the map of the planning area considers the impacts of climate change and includes areas higher in elevation and latitude where appropriate. This is needed especially if the GCP will be renewed or the permit term will be longer than a decade. This comment also applies to the map of the permit area and mitigation area.

Page 3: "…we intend to issue individual incidental take permits for desert tortoises, provided that the applicants meet the general issuance criteria in our regulations and the specific criteria described in this Plan. Annually, the Service will publish notices of individual incidental take permits that we have issued through this general conservation plan."

Please explain in the Final GCP how USFWS intends to comply with NEPA for each ITP issued.

Page 5: “The general conservation plan would not be available to applicants in [established] mitigation areas, even if the proposed action is on non-federal land.”

This statement should be highlighted and reiterated at the beginning of the document so project proponents know their development/activities that are likely to result in take should not be located in mitigation areas. We also think adding the word, “established,” clarifies the statement.

Page 7: “For example, if the proposed action would involve the incidental take of desert tortoises and the permittee can fully implement the mitigation and monitoring over a brief time, the duration of that incidental take permit would be relatively short. For projects where incidental take and the implementation of mitigation are likely to be require a long time, the incidental take permit for that project could extend for decades.”

We appreciate the inclusion of this statement and ask that a reference to the HCP Handbook be added to this statement. This statement with a reference to the HCP Handbook should be used throughout the GCP to support regulatory statements. This provides clarity and removes the appearance of arbitrary statements.

Page 8: Incidental Take Permit Process – The USFWS has briefly summarized much of the process here. We suggest referencing appropriate sections of the HCP Handbook here and throughout the GCP.

“During the second phase, the applicant prepares a plan that integrates the proposed project or action with conservation of listed species.” We suggest changing “listed species” to “covered species.”

Page 9: “Section 2080 of the California Endangered Species Act prohibits the take of state-listed endangered or threatened species but allows for the incidental take of such species resulting from otherwise lawful development projects under section 2081(a) and (b).”

Because a 2081 permit is required for a "project or activity," we suggest this sentence be rewritten to say “…resulting from otherwise lawful projects or activities" and delete "development." Some operations and/or maintenance activities may result in take and would be a violation of CESA unless the entity has an incidental take permit from CDFW.

Page 10: Covered Species – Please see our earlier comment about adding other species such as the Mohave ground squirrel. In addition, please provide information on how the GCP would deal with non-FESA-listed bird species under the Migratory Bird Treaty Act and compliance with the Bald and Golden Eagle Protection Act that may be taken during implementation of GCP covered activities (please see sections 7.4.1 and 7.4.2 in the HCP Handbook).

Page 11: “Also, desert tortoises move over time; an animal that is outside the project boundary during resource surveys may move to within the project’s boundary at the time of implementation.”

USFWS should provide citations from the scientific literature to support its statement, when available.

The Council appreciates that the USFWS acknowledges that a tortoise's lifetime home range can be quite large (Tracy et al 2004) and that tortoises make forays of several miles in a few weeks (Freilich et al. 2000, Berry 1986a, 1986b). It also means that tortoise signs may not be detected in a project area depending on the year/time of year that the tortoise survey is conducted. This is because home range size, number of different cover sites (e.g., burrows) used, average distances traveled per day, and levels of surface activity are significantly reduced during drought years (Duda et al. 1999). In the last few decades, a majority of the years have been drought years - an influence of climate change - thus restricting tortoise aboveground activity, movement, and associated tortoise sign until there is a year with much higher-than-average precipitation. The USFWS should incorporate this information on the tortoise's life history in its assessment of whether a proposed project/activity is likely to result in take of the tortoise, especially as most projects/activities have an expected life of several decades or are considered permanent.

Page 13: Climate – We found no information in this section on how climate is changing in the Colorado/Sonoran and Mojave deserts now, in the next decade (proposed GCP permit term), and foreseeable future according to climate scientists. Please add this information with citations.

Page 15: Five-Year Reviews – "For this reason, we are incorporating the 5-year review of the status of the desert tortoise (Service 2022) by reference to provide most of the information needed for this section of the biological opinion…"

We are unsure what "biological opinion" in this sentence refers to; e.g., is it referencing a future biological opinion for the GCP? Please clarify this statement.

In the 5-year review, the USFWS discusses the status of the desert tortoise as a single distinct population segment and summarizes that "… habitat occupied by the Mojave (distinct population segment) is relatively continuously distributed, and genetic differentiation within the (distinct population segment) is consistent with isolation-by-distance in a continuous-distribution model of gene flow."

The Council's understanding is that Dutcher et al. (2022) reported that data "support historical gene flow with isolation-by-resistance and reveal reduced genetic connectivity across two parallel linear features bisecting our study area (a railway and a highway). Our work demonstrates the potential for tortoises to use a range of habitats, spanning valleys to mountain passes, but also indicates habitat fragmentation limits connectivity with relatively rapid genetic consequences." Thus, Dutcher's findings do not align with the statement above by the USFWS in the GCP.

Page 16: "Wildfires fueled by invasive grasses have burned extensive areas of desert tortoise habitat."

Please add to this paragraph as an example the York Fire of August 2023 that burned more than 90,000 acres in the eastern Mojave Desert, much of which was tortoise habitat.

Pages 17 and 18: Factor E: Other Natural or Manmade Factors Affecting its Continued Existence – Please add to this section a discussion of climate change and the associated impacts.

Page 18: Synthesis – Please provide information in this section on how successful the implementation of the actions have been that are described in this section.

"The threats that led to the listing of the desert tortoise (i.e., the five-factor analysis required by section 4(a)(1) of the Endangered Species Act) continue. The status of the desert tortoise has continued to decline and most of the previously identified threats continue to affect populations. Given the reproductive ecology of the desert tortoise, measurable increases in the size of populations will require years."

We consider this last sentence by the USFS an understatement. Unfortunately, when the Council considers all the threats to the tortoise that are exacerbated by climate change and looks at the demographic data for the tortoise and its life history strategy, we see a more dire future for the survival of the tortoise (hence Defenders of Wildlife et al. 2020). Rather than refer to a summary document and not present data on the status and trend of the tortoise in the GCP, we request that the USFWS report the results of these findings by researchers in this section of the GCP. The Council has developed a document, Appendix A - Demographic Status and Trend of the Mojave Desert Tortoise including the Western Mojave Recovery Unit, that summarizes the density and abundance data for the tortoise using USFWS data through 2021, which is attached for addition to the GCP. Because the focus of the GCP is the tortoise in California, you can delete the data for Nevada, Arizona, and Utah, unless our previous recommendations for expanding the planning area are adopted.

It is noteworthy that reproduction levels are inconsequential to a species survival if recruitment is not occurring and at a level to fully replace adult mortality or exceed adult mortality when the goal is to increase population numbers and densities. Allison and McLuckie (2018) indicate in all recovery units "the odds of encountering a juvenile have declined since 2007." "Declining adult densities through 2014 have left the Western Mojave adult numbers at 49% and in the Eastern Mojave at 33% of their 2004 levels. Such steep declines in the density of adults are only sustainable if there were suitably large improvements in reproduction and juvenile growth and survival. However, the proportion of juveniles has not increased anywhere since 2007, and in these two recovery units the proportion of juveniles in 2014 has declined to 91% and 77% of their representation in 2004, respectively. This may be a continuation of ongoing population declines."

Also, recruitment is less likely to increase in the future because of the increasing speed at which climate change impacts are progressing. Many climate scientists have reported that desert species live on the edge of viability, and climate change is pushing many species beyond their physiological limits to survive in the future.

This information should be presented in the GCP and the EIS. as it is relevant to the significance of permitting additional take for tortoise populations that are below the viability threshold or on the edge with declining trends.

"In the 5-year review, the Service concluded by recommending that the status of the desert tortoise as a threatened species be maintained because of the large extent of its range and a total number in the hundreds of thousands of individuals (all size classes) at last estimation."

The Council disagrees with these reasons for recommending the status of the tortoise remain threatened. Species viability depends on a myriad of factors. If there is no recruitment to replace the adults, which the USFWS says is occurring and has stated this in the GCP, the species will be extirpated in one generation. We recommend this statement be removed from the GCP. In addition, we recommend the USFWS consult with several respected population ecologists and conservation biologists, provide them with the life history and survival strategy of the tortoise, the demographic data over time, the threats to the species, and ask them if the tortoise meets the definition of endangered.

Pages 19: "Through the consultation process, when determining whether a proposed action is likely to jeopardize the continued existence of a species, we are required to consider whether the action would reasonably be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 Code of Federal Regulations 402.02)."

While this may be a regulatory requirement to analyze survival and recovery of a listed wildlife species, it is biologically flawed. For the tortoise, reproduction may be occurring but there may be no recruitment. The number of animals may be many but the species may only be represented by older adults that are unlikely to survive much longer. Distribution may not change even though density has been substantially reduced thus affecting recruitment; populations have been fragmented leading to greater likelihood of experiencing substantial declines in population survival from genetic, demographic, and environmental stochasticity. - (e.g., extreme weather events driven by climate change is one example of environmental stochasticity). We recommend that the USFWS use the best available science to determine whether a proposed action is reasonably expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild. We reiterate our recommendation for the USFWS to consult with several respected population ecologists and conservation biologists before making this determination. Consideration of reproduction, numbers, and distribution would be part of the process but not limited to these factors.

Page 21: Distribution – "Attempting to quantify the amount of habitat lost is difficult…"

The Council agrees. However, with advanced remote imaging and computer analysis, we ask whether the USFWS has consulted with U.S. Geological Survey (USGS) scientists and/or university researchers recently to determine the best way to use available data and analyze it to determine changes that have occurred to tortoise habitat. This approach would seem appropriate rather than saying "the difficulties associated with determining areas that it actually occupies….quantifying its distribution with precision" are insurmountable. What level of precision is the USFWS seeking for its data on the tortoise? In addition, NEPA has requirements on obtaining data for preparation of an EIS (please see 40 CFR 1502.22).

Page 22: "[T]he management of acquired lands and the implementation of other mitigation activities (e.g., restoration of habitat, fencing of roads, etc.) have some potential to take limited numbers of desert tortoises and may be addressed through a recovery permitting process (i.e., section 10(a)(1)(A) of the Endangered Species Act) or consultation under section 7 of the Act associated with this Plan, through existing permits and consultations, or through separate project-specific processes."

We are confused. If these mitigation actions are required in an ITP as mitigation, please explain why they would not be covered activities under the permit? Why would a separate permit be needed?

Page 23: Biological Impacts and Take Assessment – "The development of land is likely to kill or injure any desert tortoises that reside in the area where work would occur."

Land development is one of several actions that are likely to result in take of the Mojave desert tortoise. It has been demonstrated that minimizing mortality during construction is effective when protective terms and conditions given in federal biological opinions are implemented (LaRue and Dougherty 1998). The operation and maintenance that follows the new development of these new projects may also result in take, as may the operation and maintenance of existing developments (e.g., mining operations, etc.) and vehicle use on roads and off roads. This chapter on Biological Impacts and Take Assessment (as the definition of take includes harm and harass as well as other forms of take) should be revised to include all human activities that are likely to result in take either directly or indirectly whether they are new activities or ongoing activities. Their consideration is not limited to discretionary actions, as take is prohibited by the FESA.

In addition, this chapter should discuss human subsidies provided for predators of desert tortoises and the impacts of these subsidies (e.g., common, ravens, coyotes, etc.) with respect to increased predation.

We suggest using Tracy et al. (2004; Chapter 5 - pages 108 to 120) as a starting point to describe the cumulative, interactive, and synergistic impacts of human activities that result in take and the impacts of this take.

"No one has studied the effects of moving desert tortoises from harm's way. We expect that the placement of the desert tortoise up to several hundred feet from its original location is not likely to adversely affect individuals because they are likely still within their home range."

The USFWS should provide citations from the scientific literature to support the conclusion in the second sentence. It has been our personal experience that, if tortoises are moved during very warm or very cold temperatures, they are either unable to reach a burrow for shelter from very warm temperatures because of the hundreds of feet or more they must travel to reach their burrow or they are unable to construct a new burrow (burrow construction would involve an additional expenditure of energy that a tortoise may not be able to afford) and this would result in take. During cold temperatures, tortoises would have a very slow metabolism and move slowly. They may not be able to reach a burrow for protection from predators in a short time because of their slow mobility or they would be unable to construct a new burrow making them susceptible to increased predation.

When the USFWS issues a biological opinion, our understanding is it has the authority to require monitoring of the effectiveness of terms and conditions to minimize take. We are surprised by the USFWS's revelation that it has not required monitoring of any tortoises moved from harm's way under a biological opinion to determine whether that form of take was successful in preventing mortality/injury or not.

Page 24: “The Service is currently working with the U.S. Geological Survey to identify specific augmentation sites that meet specific criteria” for translocation. “[P]rior to the establishment of specific augmentation sites, the Service would direct applicants to translocate desert tortoises to general areas that meet these criteria on a case-by-case basis, in coordination with the land manager.”

The Council requests the USFWS to provide in the GCP the criteria that the USFWS will use to determine whether a population would receive translocated tortoises, how many recipient tortoises it can support, and how the likelihood that this augmentation is successful can be calculated.

The locations where tortoise are translocated as a mitigation measure should be to lands that are managed for the conservation of the tortoise in perpetuity and not for multiple use. USFWS should provide in this section of the GCP the criteria and process that would be used to determine where to translocate tortoises so they would have the greatest success of surviving and recruiting young tortoises into the population. The criteria should include an analysis of the quality of the habitat to support additional tortoises in the translocation area along with the current and likely future impacts to this area. Monitoring the success of the translocation would also be required to determine its effectiveness in meeting the biological goals and objectives of the GCP and ITPs issued under it.

For research results on tortoise translocation the USFWS reports that “[i]n some cases (e.g., movement patterns), the behavior pattern of translocated desert tortoises resembled those of controls and residents after 2 to 3 years. Consequently, we conclude that translocation is an effective tool for protecting desert tortoises, if those conducting the translocation follow specific protocols designed to increase the chance of success.”

Absent from this summary is a study by Mulder et al. (2017) that discovered that translocated adult male tortoises had not produced offspring with resident or translocated female tortoises four years after the translocation. Thus, the translocated male tortoises were not contributing to the recruitment of new tortoises or the genetic diversity of the tortoise population. This is a serious demographic issue with respect to translocated tortoises that should be studied further to determine if this behavior can be changed so these animals contribute to recruitment and genetic diversity of the population.

Page 25: Augmentation of Depleted Populations – “[T]he Service considers population augmentation as a necessary recovery tool because of ‘appreciable declines of … populations across the range.’ We have proposed to approach this strategy experimentally.”

The Council applauds the USFWS's scientific approach to determining successful ways to augment depleted populations as a mitigation measure to fully offset the impacts of the taking of the tortoise. However, if the results are not successful, which means the mitigation does not fully offset the impacts of the taking or offset it to the level expected, the permittee would need to implement additional mitigation to comply with the issued permit. Please show how this situation would be addressed in the GCP following the process in the HCP Handbook, specifically sections 9.0 and 9.5 of the HCP Handbook.

“Table 2 depicts the incidental take permits that the Service issued that resulted in the take of desert tortoises. Most of the take was in the form of capture to move individuals from harm’s way or to translocate them.”

We ask whether the USFWS required other sources of take to be monitored and reported? Two likely sources would be the project/activities (1) provided nesting sites or subsidized food or water for ravens that then preyed on tortoises, or (2) reduced a tortoise's long-term home range that overlapped the project site such that its habitat needed for breeding or feeding were adversely impacted and it could no longer survive there. These indirect sources of take should be discussed in the GCP.

The USFWS expects “that incidental take permits issued through this Plan may cause an increase in the number of translocations to a small degree as developers use the expedited process to take desert tortoises, primarily in the form of capture, rather than altering project boundaries to avoid a few individuals.”

Please expand the discussion on impacts to include operations and maintenance of new and already implemented projects and other relevant activities (e.g., OHV recreation, etc.).

Page 27: The USFWS also anticipates “that most incidental take under the Plan would occur in the form of capture (i.e., capture is a form of take defined in the Act) when permittees translocate desert tortoises from project sites to conservation areas…”

and

The Service expects “that the implementation of projects under the Plan is likely to result in death or injury of few large desert tortoises because biologists find and translocate most of those individuals.”

These statements appear to apply to new construction projects and areas in the project footprint. They do not address the tortoises in adjacent areas (impacts of increased predation, invasive plant species, etc.) or ongoing operations and maintenance activities, both of which can result in "indirect" take of tortoises in adjacent areas through harm and increased access into otherwise remote areas that facilitates collection and vandalism. Projects and activities that cause surface disturbance create conditions for establishment, proliferation, and reseeding of invasive plant species that favor these species over native plants. This shift in plant composition has altered food availability for Mojave Desert tortoise (Drake et al. 2016). The "negative indirect effects of invasive grasses, such as red brome, in desert ecosystems, and provides definitive evidence of a larger negative consequence to health, survival, and ultimately population recruitment for Mojave desert tortoises.”

Page 28: “[T]he Service will track the amount of incidental take permitted for each activity under the Plan through the approval of incidental take permits. If five large desert tortoises die because of activities permitted under this Plan in any calendar year, the Service will first assess the adequacy of the minimization measures in the Plan and the individual incidental take permits. If modifying the minimization measures in the Plan and the individual incidental take permits is not practical, we will not approve additional incidental take permits unless it revises the Plan.”

Please provide data to support the selection of five large desert tortoises as the threshold the USFWS is using to take action. Absent these data on demographics, threshold number, period of time, and size class, this threshold appears to be arbitrary in its selection. In other words, we are asking USFWS to show the science and scientific process it used to determine that this metric is an appropriate threshold.

Page 29: Jeopardy Analysis – Please see our earlier comment on survival and recovery for the tortoise. We request this information be incorporated here in the jeopardy analysis.

Page 30: Biological Goals and Objectives – Please revise this section so it complies with the HCP Handbook. For example, under Objective 2.1, ensure that this objective complies with section 9.2 of the Handbook, including listing objectives that are specific, measurable, achievable, result-oriented, and time fixed.

"Goal 2: Mitigate the effects of take to help meet recovery criteria and/or support long-term viability of the desert tortoise."

Please add at the end of this sentence "in this recovery unit where the impacts of the taking would occur." Our intent is to ensure that, if take occurs in the West Mojave Recovery Unit, the mitigation would not occur in the Colorado Desert Recovery Unit, for example. Recovery unit boundaries have been delineated using genetic data.

Page 31: 5.3 Measures to Minimize Impacts – These measures address new construction projects. They do not address the ongoing take from operations and maintenance activities of these new projects, the operations and maintenance activities of existing projects, or the take from authorization of new or ongoing activities (e.g., vehicle use, etc.). Please revise this section of the GCP to include these projects/activities.

Page 34: Measures to Mitigate Impacts – When describing methods in this section, please follow Chapter 9 of the HCP Handbook. Some of the measures proposed in this section would not comply as currently written. For example, the HCP Handbook says, "[i]f 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."

"At a minimum, the amount of land acquisition will generally follow the guidelines in the Bureau's (2016; see Table 18) Desert Renewable Energy Conservation Plan."

As we recall, these BLM guidelines would not fully offset the impacts of the taking, which is the goal of an HCP according to the Handbook (USFWS and NMFS 2016). The DRECP did not have this requirement, as it was approved by the USFWS under section 7(a)(2) of FESA with only the requirement to minimize take.

We recommend the USFWS develop algorithms that calculate the impacts of the taking for the life of the project (including what we are calling indirect take), the value of these lost/modifier resources, and the value of the proposed mitigation so the USFWS, the applicant, and the public may clearly see how the impacts of the taking would be fully offset by implementation of the mitigation. These algorithms should be included in the Draft GCP for the public to review. We recommend the USFWS coordinate with USGS scientists and university researchers in the development of this algorithm.

“The permittee may choose to donate acquired lands to the Bureau or National Park Service. These agencies will follow relevant statutes, regulations, and land use plans, when accepting land donations.”

This paragraph does not state how these donated lands would be managed or for how long. In the previous paragraph, the USFWS stated that the "permittee must place acquired lands under a conservation easement and provide for long-term management and funding to ensure in-perpetuity conservation." We believe that the intended conservation could occur with the National Park Service but not with the BLM. BLM’s land management plans may be amended and funding reduced, so there are no assurances that these public lands would result in a conservation benefit for the tortoise to offset the impacts of the taking. Ultimately Congress can change the management status of federal lands and has recently done so in tortoise habitat. Consequently, we oppose this mitigation measure and strongly request that it be deleted.

“The permittee will either directly fund implementation of the project or place funds into a regional recovery account to provide for its implementation by an entity approved by the Service.”

This mitigation option is similar to the in-lieu fee measure in the HCP Handbook. In section 9.4.3 of the Handbook, the USFWS says, "If the funds paid to a sponsor do not result in on-the-ground conservation in advance or contemporaneously with impacts, there could be temporal impacts to the species and there is the possibility that the mitigation may not occur. Therefore, development of an in-lieu fee program agreement must be carefully crafted as a safety net for the species. The agreement should be time-limited. If the sponsor cannot get conservation on-the-ground according to the agreement, the sponsor must report this to the permittee and to the Services immediately. If the agreed-upon conservation cannot be accomplished in a timely fashion, the permittee may have to pay additional fees to offset those temporal impacts." In this case, the USFWS is the sponsor and it would be reporting to itself. This arrangement sounds like a conflict. We strongly recommend this mitigation method be removed from consideration in the GCP.

“If the Service and applicant are interested in pursuing a non-acquisition option on lands managed by the Bureau, they would work with the Bureau to find an area within California Desert National Conservation Lands [NCL] or an area of critical environmental concern [ACEC] within a mitigation area as defined by the Plan.”

In the GCP, the USFWS stated that the "permittee must place acquired lands under a conservation easement and provide for long-term management and funding to ensure in-perpetuity conservation." We do not believe this same level of assured conservation is possible on lands managed by the BLM as their management authorities allow multiple uses and surface disturbance. In addition, their land management plans may be amended and funding reduced, so there are no assurances that these lands would result in a conservation benefit for the tortoise to offset the impacts of the taking in perpetuity. Ultimately Congress can change the management status of federal lands and has recently done so in tortoise habitat. Consequently, we oppose this mitigation measure and strongly request that it be deleted.

We note that not all NCL- and ACEC-designated lands were intended to benefit tortoise conservation and promote recovery; i.e., there are ACECs managed to protect archaeological and cultural resources. So, if this measure is retained contrary to our recommendation that it be removed, please be sure to clarify NCL and ACEC lands specifically designated for tortoise conservation. We also recommend that these public lands occur within USFWS-designated critical habitat (USFWS 1994), as there are both NCL and ACEC lands outside designated critical habitat.

"The permittee could also provide funding to the recovery account for desert tortoises held by the National Fish and Wildlife Foundation, after determining the appropriate amount of funding with the Service. The National Fish and Wildlife Foundation would combine this funding from other sources and issue annual requests for proposals to implement recovery actions for the desert tortoise."

Please see our earlier comment on in-lieu fees as this scenario has similar issues. The mitigation needs to occur prior to the impacts of the taking. Again, we request that the USFWS closely follow the HCP Handbook in the development of this GCP and cite it throughout the GCP.

Pages 33 and 34: Monitoring – This section of the GCP appears to limit monitoring to construction projects, because it uses the term "post-construction compliance report." Please revise this section to state "post-activity compliance reports" as this term includes construction projects, operations and maintenance activities, and other activities that are likely to result in take. Please implement this revision throughout the GCP.

Pages 34 and 35: Adaptive Management Strategies – "The Service will monitor and analyze the effects of minimization and mitigation actions prescribed in this Plan to determine whether they are producing the anticipated results. If the desired results are not being achieved, we can use adaptive management to adjust minimization and mitigation measures to increase the conservation Plan's effectiveness for specific activities."

We request these sentences be revised to say, "The Service will monitor and analyze the effects of minimization and mitigation actions prescribed in this Plan *and the ITPs issued under it* to determine whether they are producing the anticipated results. If the desired results are not being achieved, we *will implement* adaptive management to adjust minimization and mitigation measures to increase the conservation Plan's effectiveness."

Pages 35 and 36: Changed Circumstances - For the two foreseeable changed circumstances presented (i.e., in the Plan area, new species listed/critical habitat designated and newly found listed species) please add a time frame in which the USFWS and the permittee must mutually agree.

In this section, we were unable to find the standard changed circumstances included in recently issued ITPs for the tortoise. These include new disease or variant, drought, changes in invasive species occurrence, wildfire, and development in an inholding of a mitigation area or adjacent to a mitigation area that impacts the mitigation area. Another changed circumstance is a delay in implementing the minimization and/or mitigation such that there are temporal impacts that were not calculated in the mitigation plan. Please add these changed circumstances to this section of the GCP.

Please follow and cite section 9.6.1 and relevant sections beginning with 9.6.4 of the HCP Handbook in the GCP's Changed Circumstances section. In addition, please add to the GCP a discussion of section 9.7 Considering Climate Change.

Pages 36 and 37: Unforeseen Circumstances – Please follow and cite section 9.6.2 of the HCP Handbook in this Unforeseen Circumstances section of the GCP.

Page 39: Funding Assurances – In the GCP, please cite and follow Chapter 11 - Implementation Costs and Funding Assurances of the HCP Handbook. Funding assurances is a complicated process and deserves more than one paragraph as a general description. Without funding assurances and "up front mitigation" the USFWS has no leverage to ensure that the minimization and mitigation measures are successfully implemented.

Page 40: "If the mitigation is not in place prior to when the incidental take is likely to occur, the permittee must provide assurance to the Service that the mitigation will occur and obtain the Service's approval before to initiating activities that are likely to result in take of desert tortoises."

If this situation arises, and it should occur rarely or not at all, please add to this requirement that the USFWS will require additional mitigation for the temporal impacts.

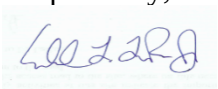
Page 45: Funding – In the GCP, please cite and follow Chapter 11 - Implementing Costs and Funding in the HCP Handbook. Without funding assurances and "up front mitigation" the USFWS has no leverage to ensure that the minimization and mitigation measures will be implemented.

In addition, we are resubmitting the Council's pre-scoping comment letter, because our comments on the NEPA document are relevant in response to the USFWS's publication of the NOI. Upon reviewing the draft GCP we discovered that many of our comments had not been incorporated into the GCP. We trust that some of our previous and current recommendations may still appear in the Final GCP.

We thank the USFWS for providing a preliminary draft of the GCP for public scrutiny. This approach provides a concrete document for the public to review rather than the typical approach that federal agencies use, which is to provide the purpose of the proposed action and general concepts of implementation. For many people, providing concepts makes it difficult to understand the proposed action, develop and suggest alternatives, and comprehend the potential impacts from implementation. We recommend that USFWS continue to provide preliminary draft documents to the public for review.

We appreciate this opportunity to provide comments on this preliminary draft GCP and NEPA document during the scoping phase and trust our comments 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 actions funded, authorized, or carried out by the USFWS that may affect species of desert tortoises, and that any subsequent environmental documentation for this GCP and associated NEPA document is provided to us at the contact information listed above. Additionally, we ask that you respond in an email that you have received this comment letter so we can be sure our concerns have been registered with the appropriate personnel and office for this project.

Respectfully,



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

Attachments: Desert Tortoise Council's June 29, 2022 letter to USFWS on Information Gathering from the Public to Prepare a General Conservation Plan for the Mojave Desert Tortoise (*Gopherus agassizii*) in California

Appendix A - Demographic Status and Trend of the Mojave Desert Tortoise including the Western Mojave Recovery Unit

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June 29, 2022

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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 likely 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.

Mojave desert tortoise is now on the list of the world's most endangered tortoises and freshwater turtles. It is in the top 50 species. The International Union for Conservation of Nature's (IUCN) Species Survival Commission, Tortoise and Freshwater Turtle Specialist Group, now considers 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), a current population size of fewer than 50 individuals, or other factors." It is one of three turtle and tortoise species in the United States to be critically endangered.

Proposed Action: The U.S. Fish and Wildlife Service's (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 has 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 FESA and NEPA, their implementing regulations, and policies. In addition, 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. We understand BLM is a cooperating agency.

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 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:

- 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)
- land preservation (e.g., buy and protect, place conservation easements on land) of areas threatened by development
- enhancement of habitat (e.g., increase specific function of habitat)
- threat reduction or elimination of predatory species
- translocation of affected individuals or family groups to establish new or augment existing populations
- repatriation of species (or important resources) to formerly occupied and still suitable or enhanced habitat.

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; ideally, 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. However, 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 should include the requirements 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 HCP, apply to CDFW, and wait for a permit. There is little streamlining for the landowner with 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. 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, that is, 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), Colorado Desert Recovery Unit (i.e., Morongo Basin and tribal land 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 are different in different recovery units and Tortoise Conservation Areas (TCAs). In the Western Mojave Recovery Unit, they are numerous and complex. We suggest the USFWS focus on the conservation needs within one recovery unit for the tortoise in California rather than the two plus recovery units currently 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, is 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. For the Mohave ground squirrel, these would likely be the core areas identified by Leitner (2008).

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 to 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).

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 covered activities in this GCP. Once the GCP is completed and implementation initiated, the USFWS with CDFW would pursue covered activities that degrade habitat quality. However, drought/climate change will be the overarching threat for any covered activity and should be analyzed and mitigated 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 possibly provide relocation/translocation sites for desert tortoises displaced by covered activities. We have several concerns regarding this approach.

First, current management of BLM lands in TCAs in California has not been effective. For the TCAs in California, three in the Western Mojave Recovery Unit, the three in the Colorado Desert Recovery, and one in the Eastern Mojave Recovery Unit, all are below the threshold for population viability for the tortoise (see USFWS 2015, 2016, 2018, 2019, 2020, 2022a, 2022b). This means that BLM is not providing effective on-the-ground management for the survival (emphasis added) of the tortoise. Until BLM can demonstrate they are implementing effective on-the-ground management actions for the tortoise, BLM should not receive translocated tortoises. Translocation is supposed to be an effective mitigation measure to help conserve the tortoise.

Second, because BLM lands are managed for multiple use, there is no guarantee that the sites will not be managed for activities that are not compatible with tortoise conservation in the future. Although 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, it did not remove all. Thus, the BLM lands with relocated/translocated tortoises now occur on lands with fewer multiple 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 managed for the conservation of the tortoise and no longer multiple use lands. 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 ESA 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, etc.). Consequently, we are reluctant, and we think USFWS should be reluctant, to use BLM lands as translocations 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 BLM can demonstrate its legal authority and "on-the-ground" management ability for the tortoise 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 are effective in conserving the covered species. The court ruled that FWS 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, it will be difficult to determine how the funding would be provided and this condition met for permit issuance.

In one court 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 FWS 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 unknowns including those listed above. We concur that this approach should not be used especially for a GCP when the number of permittees 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, (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 GSP will not be dependent on any one permittee" (USFWS 2007).

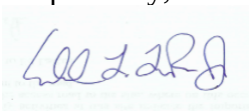
The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild: For the Mojave desert tortoise, the issuance of any ITP in California may reduce its likelihood of survival and recovery. The USFWS's monitoring data on tortoise densities for the nine tortoise 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 possible unless the tortoise in each recovery unit is recovered.

NEPA Compliance

Cumulative Impacts: In the cumulative effects analysis of the DEIS, please ensure that the CEQs "Considering Cumulative Effects under the National Environmental Policy Act" (1997) is followed, including the eight principles, when analyzing cumulative effects of the proposed action to the tortoise and its habitats.

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. Additionally, we ask that you respond in an email that you have received this comment letter so we can be sure our concerns have been registered with the appropriate personnel and office for this project.

Respectfully,



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Desert Tortoise Council, Ecosystems Advisory Committee, Chairperson

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Appendix A
Demographic Status and Trend of the Mojave Desert Tortoise
including the Western Mojave Recovery Unit

Status of the Population of the Mojave Desert Tortoise: The Council provides the following information for resource and land management agencies so that these data may be included and analyzed in their project and land management documents and aid them in making management decisions that affect the Mojave desert tortoise (tortoise).

There are 17 populations of Mojave desert tortoise described below that occur in Critical Habitat Units (CHUs) and Tortoise Conservation Areas (TCAs); 14 are on lands managed by the BLM; 8 of these are in the California Desert Conservation Area (CDCA).

As the primary land management entity in the range of the Mojave desert tortoise, the Bureau of Land Management's (BLM's) implementation of a conservation strategy for the Mojave desert tortoise in the CDCA through implementation of its Resource Management Plan and Amendments through 2014 has resulted in the following changes in the status for the tortoise throughout its range and in California from 2004 to 2014 (**Table 1**, **Table 2**; USFWS 2015, Allison and McLuckie 2018). The Council believes these data show that BLM and others have failed to implement an effective conservation strategy for the Mojave desert tortoise as described in the recovery plan (both USFWS 1994a and 2011), and have contributed to tortoise declines in density and abundance between 2004 to 2014 (**Table 1, Table 2**; USFWS 2015, Allison and McLuckie 2018) with declines or no improvement in population density from 2015 to 2021 (**Table 3**; USFWS 2016, 2018, 2019, 2020, 2022a, 2022b).

Important points from these tables include the following:

Change in Status for the Mojave Desert Tortoise Range-wide
● Ten of 17 populations of the Mojave desert tortoise declined from 2004 to 2014.

● Eleven of 17 populations of the Mojave desert tortoise are below the population viability threshold. These 11 populations represent 89.7 percent of the range-wide habitat in CHUs/TCAs.

Change is Status for the Western Mojave Recovery Unit – California
● This recovery unit had a 51 percent decline in tortoise density from 2004 to 2014.

● Tortoises in this recovery unit have densities that are below viability.

Change in Status for the Superior-Cronese Tortoise Population in the Western Mojave Recovery Unit.
● The population in this recovery unit experienced declines in densities of 61 percent from 2004 to 2014. In addition, there was a 51 percent decline in tortoise abundance.

● This population has densities less than needed for population viability (USFWS 1994a).

Table 1. Summary of 10-year trend data for the 5 Recovery Units and 17 CHUs/TCAs for Mojave desert tortoise. The table includes the area of each Recovery Unit and CHU/TCA, percent of total habitat for each Recovery Unit and CHU/TCA, density (number of breeding adults/km^2 and standard errors = SE), and the percent change in population density between 2004 and 2014. Populations below the viable level of 3.9 breeding individuals/km^2 (10 breeding individuals per mi^2) (assumes a 1:1 sex ratio) or showing a decline from 2004 to 2014 are in red.

Recovery Unit: Designated Critical Habitat Unit[1]/Tortoise Conservation Area	**Surveyed area (km^2)**	**% of total habitat area in Recovery Unit & CHU/TCA**	**2014 density/km^2 (SE)**	**% 10-year change (2004–2014)**
Western Mojave, CA	**6,294**	**24.51**	**2.8 (1.0)**	**–50.7 decline**
Fremont-Kramer	2,347	9.14	2.6 (1.0)	–50.6 decline
Ord-Rodman	852	3.32	3.6 (1.4)	–56.5 decline
Superior-Cronese	3,094	12.05	2.4 (0.9)	–61.5 decline
Colorado Desert, CA	**11,663**	**45.42**	**4.0 (1.4)**	**–36.25 decline**
Chocolate Mtn AGR, CA	713	2.78	7.2 (2.8)	–29.77 decline
Chuckwalla, CA	2,818	10.97	3.3 (1.3)	–37.43 decline
Chemehuevi, CA	3,763	14.65	2.8 (1.1)	–64.70 decline
Fenner, CA	1,782	6.94	4.8 (1.9)	–52.86 decline
Joshua Tree, CA	1,152	4.49	3.7 (1.5)	+178.62 increase
Pinto Mtn, CA	508	1.98	2.4 (1.0)	–60.30 decline
Piute Valley, NV	927	3.61	5.3 (2.1)	+162.36 increase
Northeastern Mojave	**4,160**	**16.2**	**4.5 (1.9)**	**+325.62 increase**
Beaver Dam Slope, NV, UT, AZ	750	2.92	6.2 (2.4)	+370.33 increase
Coyote Spring, NV	960	3.74	4.0 (1.6)	+ 265.06 increase
Gold Butte, NV & AZ	1,607	6.26	2.7 (1.0)	+ 384.37 increase
Mormon Mesa, NV	844	3.29	6.4 (2.5)	+ 217.80 increase
Eastern Mojave, NV & CA	**3,446**	**13.42**	**1.9 (0.7)**	**–67.26 decline**
El Dorado Valley, NV	999	3.89	1.5 (0.6)	–61.14 decline
Ivanpah Valley, CA	2,447	9.53	2.3 (0.9)	–56.05 decline
Upper Virgin River	**115**	**0.45**	**15.3 (6.0)**	**–26.57 decline**
Red Cliffs Desert	115	0.45	15.3 (6.0)	–26.57 decline
Range-wide Area of CHUs - TCAs/Range-wide Change in Population Status	**25,678**	**100.00**		**–32.18 decline**

[1] U.S. Fish and Wildlife Service. 1994b. Endangered and threatened wildlife and plants; determination of critical habitat for the Mojave population of the desert tortoise. *Federal Register* 55(26):5820-5866. Washington, D.C.

Table 2. Estimated change in abundance of adult Mojave desert tortoises in each recovery unit between 2004 and 2014 (Allison and McLuckie 2018). Decreases in abundance are in red.

Recovery Unit	Modeled Habitat (km^2)	2004 Abundance	2014 Abundance	Change in Abundance	Percent Change in Abundance
Western Mojave	23,139	131,540	64,871	-66,668	-51%
Colorado Desert	18,024	103,675	66,097	-37,578	-36%
Northeastern Mojave	10,664	12,610	46,701	34,091	270%
Eastern Mojave	16,061	75,342	24,664	-50,679	-67%
Upper Virgin River	613	13,226	10,010	-3,216	-24%
Total	**68,501**	**336,393**	**212,343**	**-124,050**	**-37%**

Table 3. Summary of data for Agassiz's desert tortoise, *Gopherus agassizii* (=Mojave desert tortoise) from 2004 to 2021 for the 5 Recovery Units and 17 Critical Habitat Units (CHUs)/Tortoise Conservation Areas (TCAs). The table includes the area of each Recovery Unit and CHU/TCA, percent of total habitat for each Recovery Unit and CHU/TCA, density (number of breeding adults/km^2 and standard errors = SE), and percent change in population density between 2004-2014 (USFWS 2015). Populations below the viable level of 3.9 breeding individuals/km^2 (10 breeding individuals per mi^2) (assumes a 1:1 sex ratio) (USFWS 1994a, 2015) or showing a decline from 2004 to 2014 are in **red.**

Recovery Unit: Designated CHU/TCA &	**% of total habitat area in Recovery Unit & CHU/TCA**	**2004 density/ km^2**	**2014 density/ km^2 (SE)**	**% 10-year change (2004–2014)**	**2015 density/ km^2**	**2016 density/ km^2**	**2017 density/ km^2**	**2018 density/ km^2**	**2019 density/ km^2**	**2020 density/ km^2**	**2021 density/ km^2**
Western Mojave, CA	**24.51**		**2.8 (1.0)**	**–50.7 decline**							
Fremont-Kramer	9.14		2.6 (1.0)	–50.6 decline	4.5	No data	4.1	No data	2.7	1.7	No data
Ord-Rodman	3.32		3.6 (1.4)	–56.5 decline	No data	No data	3.9	2.5/3.4*	2.1/2.5*	No data	1.9/2.5*
Superior-Cronese	12.05		2.4 (0.9)	–61.5 decline	2.6	3.6	1.7	No data	1.9	No data	No data
Colorado Desert, CA	**45.42**		**4.0 (1.4)**	**–36.25 decline**							
Chocolate Mtn AGR, CA	2.78		7.2 (2.8)	–29.77 decline	10.3	8.5	9.4	7.6	7.0	7.1	3.9
Chuckwalla, CA	10.97		3.3 (1.3)	–37.43 decline	No data	No data	4.3	No data	1.8	4.6	2.6
Chemehuevi, CA	14.65		2.8 (1.1)	–64.70 decline	No data	1.7	No data	2.9	No data	4.0	No data
Fenner, CA	6.94		4.8 (1.9)	–52.86 decline	No data	5.5	No data	6.0	2.8	No data	5.3
Joshua Tree, CA	4.49		3.7 (1.5)	+178.62 increase	No data	2.6	3.6	No data	3.1	3.9	No data
Pinto Mtn, CA	1.98		2.4 (1.0)	–60.30 decline	No data	2.1	2.3	No data	1.7	2.9	No data
Piute Valley, NV	3.61		5.3 (2.1)	+162.36 increase	No data	4.0	5.9	No data	No data	No data	3.9

Northeastern Mojave AZ, NV, & UT	**16.2**		**4.5 (1.9)**	**+325.62 increase**							
Beaver Dam Slope, NV, UT, & AZ	2.92		6.2 (2.4)	+370.33 increase	No data	5.6	1.3	5.1	2.0	No data	No data
Coyote Spring, NV	3.74		4.0 (1.6)	+ 265.06 increase	No data	4.2	No data	No data	3.2	No data	No data
Gold Butte, NV & AZ	6.26		2.7 (1.0)	+ 384.37 increase	No data	No data	1.9	2.3	No data	No data	2.4
Mormon Mesa, NV	3.29		6.4 (2.5)	+ 217.80 increase	No data	2.1	No data	3.6	No data	5.2	5.2
Eastern Mojave, NV & CA	**13.42**		**1.9 (0.7)**	**–67.26 decline**							
El Dorado Valley, NV	3.89		1.5 (0.6)	–61.14 decline	No data	2.7	5.6	No data	2.3	No data	No data
Ivanpah Valley, CA	9.53		2.3 (0.9)	–56.05 decline	1.9	No data	No data	3.7	2.6	No data	1.8
Upper Virgin River, UT & AZ	**0.45**		**15.3 (6.0)**	**–26.57 decline**							
Red Cliffs Desert**	0.45	29.1 (21.4-39.6)**	15.3 (6.0)	–26.57 decline	15.0	No data	19.1	No data	17.2	No data	
Rangewide Area of CHUs - TCAs/Rangewide Change in Population Status	**100.00**			**–32.18 decline**							

*This density includes the adult tortoises translocated from the expansion of the MCAGCC, that is resident adult tortoises and translocated adult tortoises.

**Methodology for collecting density data initiated in 1999.

Change in Status for the Mojave Desert Tortoise in California

- Eight of 10 populations of the Mojave desert tortoise in California declined from 29 to 64 percent from 2004 to 2014 with implementation of tortoise conservation measures in the Northern and Eastern Colorado Desert (NECO), Northern and Eastern Mojave Desert (NEMO), and Western Mojave Desert (WEMO) Plans.

- Eight of 10 populations of the Mojave desert tortoise in California are below the population viability threshold. These eight populations represent 87.45 percent of the habitat in California that is in CHU/TCAs.

- The two viable populations of the Mojave desert tortoise in California are declining. If their rates of decline from 2004 to 2014 continue, these two populations will no longer be viable by about 2030.

Change in Status for the Mojave Desert Tortoise on BLM Land in California

- Eight of eight populations of Mojave desert tortoise on lands managed by the BLM in California declined from 2004 to 2014.

- Seven of eight populations of Mojave desert tortoise on lands managed by the BLM in California are no longer viable.

Change in Status for Mojave Desert Tortoise Populations in California that Are Moving toward Meeting Recovery Criteria

- The only population of Mojave desert tortoise in California that is not declining is on land managed by the National Park Service, which has increased 178 percent in 10 years.

Important points to note from the data from 2015 to 2021 in Table 3 are:

Change in Status for the Mojave Desert Tortoise in the Western Mojave Recovery Unit:

- Density of tortoises continues to decline in the Western Mojave Recovery Unit
- Density of tortoises continues to fall below the density needed for population viability from 2015 to 2021

Change in Status for the Mojave Desert Tortoise in the Colorado Desert Recovery Unit:

- The population that had the highest density in this recovery unit had a continuous reduction in density since 2018 and fell substantially in 2021 to the minimum density needed for population viability.

Change in Status for the Mojave Desert Tortoise in the Northeastern Mojave Recovery Unit:

- Two of the three population with densities greater than needed for population viability declined to level below the minimum viability threshold.
- The most recent data from three of the four populations in this recovery unit have densities below the minimum density needed for population viability.
- The population that had the highest density in this recovery unit declined since 2014.

Change in Status for the Mojave Desert Tortoise in the Eastern Mojave Recovery Unit:
- Both populations in this recovery unit have densities below the minimum density needed for population viability.

Change in Status for the Mojave Desert Tortoise in the Upper Virgin River Recovery Unit:
- The one population in this recovery unit is small and appears to have stable densities.

The Endangered Mojave Desert Tortoise: The Council believes that the Mojave desert tortoise meets the definition of an endangered species. In the FESA, Congress defined an "endangered species" as "any species which is in danger of extinction throughout all or a significant portion of its range…" In the California Endangered Species Act (CESA), the California legislature defined an "endangered species" as a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant, which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes (California Fish and Game Code § 2062). Because most of the populations of the Mojave desert tortoise were non-viable in 2014, most are declining, and the threats to the Mojave desert tortoise are numerous and have not been substantially reduced throughout the species' range, the Council believes the Mojave desert tortoise should be designated as an endangered species by the USFWS and California Fish and Game Commission. Despite claims by USFWS (Averill-Murray and Field 2023) that a large number of individuals of a listed species and an increasing population trend in part of the range of the species prohibits it from meeting the definitions of endangered, we are reminded that the tenants of conservation biology include numerous factors when determining population viability. The number of individuals present is one of a myriad of factors (e.g., species distribution and density, survival strategy, sex ratio, recruitment, genetics, threats including climate change, etc.) used to determine population viability. In addition, a review of all the available data does not show an increasing population trend (please see Tables 1 and 3).

Literature Cited in Appendix on Status and Trend of the Mojave Desert Tortoise

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