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Via Regulations.gov

December 10, 2024

Martha Williams, Director
Jake Li, Assistant Director, Ecological Services
Public Comments Processing
Attn: Docket No. FWS–R8–ES–2023–0084
U.S. Fish and Wildlife Service
MS: PRB/3W
5275 Leesburg Pike
Falls Church, VA 22041–3803

RE: Draft General Conservation Plan for the Desert Tortoise in California and Draft Environmental Impact Statement (Docket No. FWS–R8–ES–2023–0084)

Dear Director Williams and Mr. Li,

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.

The Desert Tortoise Preserve Committee (DTPC) is a non-profit organization formed in 1974 to promote the welfare of the desert tortoise in its native wild state. DTPC members share a deep concern for the continued preservation of the tortoise and its habitat in the southwestern deserts and are dedicated to the recovery and conservation of the desert tortoise and other rare and endangered species inhabiting the Mojave and western Sonoran deserts. The DTPC has a long track record of protecting desert tortoises and their habitat through land acquisition, preserve management, mitigation land banking, and educational outreach.

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.”

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), habitat 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 have 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 DTPC (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. In its status review, California Department of Fish and Wildlife (CDFW) (2024) stated: “At its public meeting on October 14, 2020, the Commission considered the petition, and based in part on the Department’s [CDFW] petition evaluation and recommendation, found sufficient information exists to indicate the petitioned action may be warranted and accepted the petition for consideration. The Commission’s decision initiated this status review to inform the Commission’s decision on whether the change in status is warranted.”

Importantly, in their April 2024 meeting, the California Fish and Game Commission voted unanimously to accept the CDFW’s petition evaluation and recommendation to uplist the tortoise from threatened to endangered under the California Endangered Species Act based on the scientific data provided on the species’ status, declining trend, numerous threats, and lack of effective recovery implementation and land management. The Commission is expected to vote on uplisting the tortoise to endangered in the next few months.

Purpose and Need

“The purpose of the proposed General Conservation Plan (GCP) is to provide a mechanism by which the Service can increase efficiency and streamline compliance with section 10(a)(1)(B) of the ESA [Endangered Species Act] for activities on certain non-federal lands in the planning area that have the potential to incidentally take desert tortoises.” As opposed to a habitat conservation plan (HCP) that addresses conservation on a project-by-project basis in response to individual incidental take permit applications, a GCP establishes a framework under which covered activities are reviewed for compliance with the standardized GCP requirements as applications are submitted. This GCP would facilitate the issuance of incidental take permits for the desert tortoise for activities that occur on non-federal lands outside desert tortoise conservation areas and certain existing right of ways (ROWs) on federal lands where the federal agency no longer has discretionary authority. Mitigation required for the issuance of an incidental take permit would occur within the mitigation area, as defined in the GCP.

Description of Alternatives

The USFWS has analyzed two alternatives in the draft environmental impact statement (DEIS) in addition to the No Action Alternative. Below is a description on the alternatives as presented in the DEIS.

Alternative 1: This is the No Action Alternative. Under this alternative, the USFWS would continue to process applications for individual incidental take permits that include reviewing HCPs and preparing National Environmental Policy Act (NEPA) documents for each application.

Alternative 2: This is the USFWS’s Proposed Action. Under this alternative, the USFWS would implement the GCP for non-federal lands. Activities covered under the GCP include the construction, operations, and maintenance of commercial, agricultural, residential, industrial, and infrastructure development on non-federal lands in the GCP Permit Area and certain existing ROWs on federal land where the federal agency no longer has discretionary authority. The Planning Area encompasses 15.2 million acres in portions of Inyo, Kern, Los Angeles, San Bernardino, Riverside, San Diego, and Imperial counties in southern California. Within the Planning Area, about 2.6-million-acres would be in the Permit Area and subject to the GCP – these include non-federal lands outside of desert Tortoise Conservation Areas (TCAs). In addition, the USFWS identified approximately 8.6 million acres of mitigation area, which includes Bureau of Land Management (BLM) conservation lands, National Park Service (NPS) lands, and other conservation areas or easements managed for desert tortoises where mitigation resulting from issuance of incidental take permits under the GCP would occur.

Alternative 3: The USFWS calls this the Reduced Mitigation Areas Alternative. This action alternative is the same as Alternative 2 in the activities it would cover. However, mitigation would only occur on lands within desert tortoise conservation areas within NPS lands, California Desert National Conservation Lands administered by the BLM, and non-federal lands that either are in conservation management or that are acquired for conservation management (reduced to occurring within 7.7 million acres). Other lands included in the mitigation area for the proposed action, such as Areas of Critical Environmental Concern (ACEC), would not be eligible for mitigation.

The USFWS considered five other alternatives but dismissed them from further analysis. These alternatives were:

- Including recreation as a covered activity;
- Including additional covered species;
- Including take thresholds;
- Increasing the planning area to include the full range of the tortoise; and
- Reducing the mitigation area to only include private land acquisitions and conservation easements.

Comments on the DEIS

We support the concept of the GCP and that, if implemented using the best available science, it would help to slow down the downward trends of tortoise population numbers, densities, and recruitment. However, we disagree with the USFWS's statement that it would "contribute to the conservation of the tortoise." The Federal Endangered Species Act (FESA) and implementing regulations require that the impacts to the taking be minimized and mitigated to the maximum extent practicable. The USFWS in the HCP Handbook (2016) defined this as fully offsetting the impacts of the taking. Fully offsetting impacts from a project/activity would leave the tortoise at its current status; it would not improve its status = contribute to its conservation. Consequently, we request that this wording be modified to accurately reflect what the statute, regulations, and the Handbook mandate.

However, this modification would not be needed if the USFWS will require "other measures that the Service/Secretary may require" (from Section 10 of the FESA) and these measures improve the status of the tortoise thereby contributing to its recovery. Please include these "other measures" in the GCP and final environmental impact statement (FEIS) or provide additional information on why the USFWS claims the GCP would contribute to the conservation of the tortoise.

We do not consider Alternatives 2 and 3 to be substantially different alternatives. The USFWS's available data on the status of the tortoise do not indicate that BLM is effectively managing the TCAs, which are also ACECs, or other ACECs for the conservation of the tortoise

Pages ES-2 and 1-4 "conservation area": Although these areas are called conservation areas, they are not currently managed effectively for the conservation of the tortoise. The "conservation areas" that are located primarily on BLM land are managed for multiple use and have tortoise densities that are, for most part, below the density identified for viable populations of tortoises by the USFWS (1994). We refer the USFWS to the results of the tortoise rangewide monitoring with the current method initiated in 2004 and last conducted in 2021 (USFWS 2015, 2016, 2018, 2019, 2020, 2022a, 2022b). The population monitoring in TCAs clearly demonstrates that for the TCAs managed by the BLM tortoise numbers, densities, and occurrences of juvenile tortoises have declined substantially since 2004 (Allison and McLuckie 2018). Please see Appendix A (attached) for a summary of these data. Consequently, we believe using this name conveys incorrect information, although unintentionally, to the public by not explaining that this label represents a desired goal and not the status of the tortoise populations in these areas or how the lands are managed. We request that USFWS clarify the use of this term and add the densities of tortoises in these TCAs, available since 2004.

Page ES-5, Cultural Resources: “Compliance with section 106 of the National Historic Preservation Act (NHPA) would ensure that activities, including desert tortoise minimization and mitigation activities, would avoid or mitigate all impacts on potentially affected cultural resources.” We were unable to find in this section how USFWS would comply with section 106 of the NHPA. The projects that USFWS would be permitting would not occur on federal lands or through federal funding. Please add this information to the FEIS.

Pages ES-2 to ES-7, Summary of Environmental Consequences (for Resource Issues Analyzed) and Pages 1-10 to 1-11, External Regulatory and Consultation Requirements for Non-federal Covered Activities: For several of the resources issues in this section, USFWS says the agency approving or permitting the action would require measures that would mitigate these impacts (e.g., cultural resources, water resources, soil resources, air quality, cultural resources and Native American concerns, hazardous and solid waste, etc.). We presume that USFWS is referring to, in part, the implementation of the CEQA and associated state environmental requirements. While USFWS may believe this is true, from our experience in working with local agencies, in practice it is not. Unfortunately, many agencies in the range of the tortoise are not able to comply with CEQA before issuing permits for projects. They do not employ staff that are knowledgeable about these resource issues or if and how these resources would be affected by proposed actions. This absence of knowledge results in approval of projects with mitigation that is absent or has limited effectiveness. Even when relying on consultants to develop sections of CEQA documents, their analysis is often lacking in considering the indirect and cumulative effects to natural and cultural resources including the tortoise and other special status species.

In addition, CEQA requires an analysis of the impacts and how mitigation would offset those impacts. It does not require that the mitigation be implemented. If an EIR is approved, the approving agency may issue a condition of overriding considerations in which the agency explains why the beneficial aspects of the proposed project outweigh the unavoidable adverse environmental impacts. The statement of overriding considerations justifies the agency's decision to approve the project despite its adverse environmental effects. The USFWS should revise this section in the FEIS to reflect that CEQA and local permitting processes do not always require measures that would mitigate these impacts (e.g., cultural resources, water resources, soil resources, air quality, cultural resources and Native American concerns, hazardous and solid waste, etc.).

In the DEIS, USFWS says, “most non-federal covered activities would require compliance with the CEQA.” If a project meets the existing zoning requirements for the area, CEQA compliance would not be required. For many projects such as individual residential development (e.g., building permits), this is ministerial permit process with no CEQA compliance required. For example, every undeveloped residential lot in California City could be developed with no CEQA compliance. Consequently, USFWS should be working closely with local agencies to ensure that the issuance of all ministerial permits that result in surface disturbance in the range of the tortoise comply with the FESA and these permits are included in the description of the GCP process and this NEPA document. Please revise this wording in the FEIS to reflect that ministerial permit process and the absence of CEQA analysis of impacts to the tortoise/tortoise habitat.

Requirements for mitigation/best management practices may be included in local permits, but if no one is monitoring the implementation of the project to ensure that the measures are implemented correctly, then there is no documentation that the mitigation has been actualized. Given the workload of local agencies, this is frequently the situation for monitoring the implementation of mitigation for natural and cultural resource issues.

Consequently, we recommend that the USFWS revise its description of the environmental consequences section and not assume that the projects implemented in the range of the tortoise that are likely to result in take will have minimization and mitigation measures required and implemented for impacts to natural and cultural resources.

Page 1-3: “The GCP would require that proponents use minimization measures that have proven effective over time in reducing mortality of desert tortoises during various types of activities; these measures include the translocation of desert tortoises...”

We do not agree with this assessment of the effectiveness of translocation based on information reported in the scientific literature. Mack and Berry (2023) monitored translocated tortoises for 10 years. They reported that 17.7 percent of the tortoises survived, 65.8 percent died, 15.2 percent were missing, and 1.3 percent were removed from the study because they returned to the original site. Mortality was high during the first three years – more than 50 percent of the tortoises died primarily from predation. Thereafter, mortality declined but remained high. Although the translocation efforts by the Marine Corps at Twentynine Palms considered some of these factors, tortoise mortality from predation was high (Henen 2024). To minimize mortality to small tortoises, these animals have been brought into headstart facilities. The Marine Corps continues to monitor the translocated tortoises.

In another study Dickson et al. (2019) reported that several factors influence the survival of translocated tortoises. These included releasing tortoises within 500 m of their original home range, maximizing hydration (e.g., by soaking or offering drinking water) of individual tortoises just prior to their release, and not releasing tortoise during drought conditions.

In addition, mortality is not the only issue to consider when implementing measures to minimize and mitigate to the maximum extent practicable the impacts of the taking of the tortoise. Mulder (2017) studied translocated tortoises during the first four years and learned that male translocated tortoises did not produce offspring with resident or translocated female tortoises. This absence of successful mating at the translocation site is concerning, because it means their genes were not added to the population at the translocation site. Thus, the perceived benefits of genetic diversity from translocation are not fully realized.

Translocation is an experimental tool that is still being developed to determine the best methods to implement to achieve high survival and genetic integration for all age classes of tortoises. It is not a proven effective mitigation measure. There is also the public perception that the direct impacts of developing a given solar site or expanding a military base “is not so bad because the tortoises can be successfully translocated.” Such a perception discounts the severity of the impact of the project that has displaced the tortoises.

The “success” of translocation depends on a myriad of factors including the absence of drought, the carrying capacity of the translocation area to support additional tortoises (e.g., availability of native nutritious forage, etc.), social interactions between resident and translocated tortoises, the distance translocated tortoises are moved, effective management of translocation lands to eliminate human-caused threats, and managing tortoise predation.

At a minimum, a translocation plan for the tortoise should address the following questions:

- Where is the translocation site and what are the adjacent land ownership and uses (please include a map)?
- How far is the translocation site from the project area [translocation sites located close to the site from which tortoises are removed appear to contribute to higher tortoise survival (Dickson et al. 2019, Mack and Berry 2023)]?
- Who will manage the translocation site?
- How will it be managed once it becomes a mitigation site (e.g., if on BLM land, it should no longer be managed for multiple use, but managed solely for the benefit of the tortoise)?
- What time of year will tortoises be released (tortoises should not be released at the translocation site in years with less than average rainfall) (Mack and Berry 2023)?
- Where/how will tortoises be kept in the period between capture and release at the translocation site?
- What health/physiological status/energy balance parameters will a tortoise need to meet before being released (Henen 2002)?
- What are the results of tortoise surveys at the translocation site and of native vegetation surveys including annual vegetation?
- What other activities will be allowed to occur at the translocation site and adjacent areas [e.g., mining, grazing, off-highway vehicle (OHV) access, utility access, other activities that result in surface disturbance and spillover effects to the translocation site]?
- How will management of the translocation site be implemented and effectively enforced?
- How and when will monitoring of tortoises occur (monitoring schedule) and what environmental parameters besides tortoises will be monitored?
- How long will tortoises and environmental parameters be monitored – monitoring should occur for multiple years?
- What environmental parameters will be monitored (e.g., temperature, precipitation, the distribution and abundance of native annual vegetation needed by tortoises of all age classes for sufficient nutrition and water balance and distribution and abundance of non-native vegetation and changes over time should be monitored)?
- When monitoring indicates a change in management is needed, when and how will this change occur (adaptive management)?
- Who will fund the translocation plan and for how long?
- Will the translocation plan include management of tortoise predators?
- How will small tortoises be managed and monitored?

We contend the results of most translocation studies indicate that translocation of Mojave desert tortoises to date is not an effective or successful mitigation method. Thus, avoidance of impacts to tortoises/tortoise habitat should be the preferred solution when projects that may result in the loss of tortoises are proposed. Translocation should be a last mitigation choice, not the first one.

Because translocation is implemented as mitigation, the translocation site is a mitigation site, and BLM is obligated to remove it from multiple use management, and allow only those uses that are documented to be compatible with tortoise conservation. In addition, it is unlikely that the project site will be restored to tortoise habitat in the future. Because of this permanent loss of tortoise habitat, the translocation site should be managed in perpetuity for the tortoise.

Page 1-12, California Endangered Species Act : “During discussions with a proponent regarding the proponent’s project, the Service would coordinate with the CDFW to ensure protective measures for the desert tortoise and any State-listed plant and/or western Joshua tree do not conflict.”

We remind USFWS that CDFW may have listed or candidate species under the California Endangered Species Act (CESA) but not listed under FESA that would be affected by a proponent’s project. USFWS should commit to coordinating with CDFW for each proposed project to ensure protective measures for the desert tortoise do not conflict with listed or candidate species under CESA.

Page 2-4, Covered Activities in the Permit Area: “For the purposes of analysis, the Service assumed that proposed activities under the GCP would be likely to individually affect between approximately 120 and 8,600 acres based on the incidental take permits that the Service has issued to date (appendix A, table 2)...” We were unable to find a Table 2 in Appendix A for either the DEIS or the Draft GCP. Please include this table in the FEIS and the GCP.

We are aware of incidental take permit applications for projects in the range of the tortoise that are smaller in area than the minimal 120 acres mentioned in the DEIS. Some of these include the Churches Project (5 acres) and Gamebird Substation (18 acres). In addition, if the USFWS works with the state and local permitting agencies to provide coverage during the processing of ministerial permits, many of these projects would be less than 120 acres. Please revise the FEIS to reflect that many projects that could be applied under the GCP would include individual residential development projects that would be much smaller than 120 acres but numerous and collectively scattered throughout the range of the tortoise in California on private land in California.

Page 2-4, Covered Activities in the Permit Area: “Note that the Service does not have authority over the construction or operation of covered activities except as construction or operation pertains to incidental take permits for the desert tortoise.” This statement affirms our earlier statement that projects requiring ministerial permits are not subject to CEQA but if likely to result in take of the tortoise must comply with the FESA and obtain an incidental take permit. Consequently, in the USFWS’s description and analysis of the proposed action, USFWS should include all types of projects likely to result in take including those only needing a ministerial permit or no permit under state or local agency authority. Please add this information and conduct the appropriate analysis in the FEIS.

Page 2-5, Measures Related to Other Resources: “Examples of measures that are typically applied include ... and measures to avoid or minimize impacts on sensitive species.” In the last few years, we have commented on CEQA mitigated negative declarations for projects (one project was about 130 acres) in the range of the tortoise. Because no tortoises were seen during a one-day

reconnaissance site visit to the project site as described by the contracted biologist with no tortoise protocol surveys conducted, the permitting authority was not going to require tortoise protocol surveys or mitigation in the CEQA document. We believe these small projects on private lands under local jurisdictions “fall through the cracks” and the local jurisdictions do not coordinate with the USFWS to determine whether compliance with the FESA is needed, and if so, what these measures would be. USFWS’s experience with requests for incidental take permits appears to be mostly with large companies. We request that USFWS revise this section of the FEIS and the analysis section after researching the various projects approved by local jurisdictions in the range of the tortoise including projects approved under ministerial permits to determine how many included effective measures to avoid or minimize impacts to the tortoise.

Page 2-6, Table 2-3. Measures to Minimize Impacts on the Desert Tortoise: “... the proponent may also use the regional density as determined by the Service’s range-wide monitoring...” We oppose this approach. Tortoise are not uniformly distributed throughout their habitat. Mitchell (2020) reported that “implementing standard SCR [spatial capture recapture] models allowed us to generate spatially corrected estimates for a species where detectability and abundance are low” and these results “demonstrate the importance of accounting for spatial information as well as the value of understanding model specification when estimating density for the desert tortoise and have the potential to enhance the efficacy of long-term efforts to monitor population trends and inform recovery efforts.” Keith et al (2008) reported a similar approach to determine the patchy distribution of tortoises and where these “patches occur.” This information would be helpful in designing projects or developing appropriate mitigation to avoid these patches of tortoises.

Consequently, we recommend that SCR surveys and models be incorporated into the process of estimating tortoise density for the covered projects to obtain correct estimates of the take of tortoise from direct impacts, use this information to determine the estimates of take from indirect impacts, and allow the USFWS to conduct appropriate analysis of the impacts of the taking to the tortoise for each proposed project as required under the FESA. Please revise this section of the NEPA document to reflect this information in the scientific literature and apply it to the USFWS requirements for analysis of the impacts.

Under Measure 2, the USFWS says, “... at least one authorized biologist must have sufficient training and experience to conduct full health assessments and to implement the translocation according to the Service’s guidance.” Please revise this sentence to incorporate the bold font wording: “at least one authorized biologist must have sufficient training and experience to conduct full health assessments and to implement the translocation according to the Service’s guidance, **including the review of the Desert Tortoise Recovery Office.**” The Desert Tortoise Recovery Office (DTRO) contains the species lead for the tortoise. The DTRO is the office that had and continues to oversee the health assessments and develop translocation guidance for the tortoise and analyze its effectiveness. The Ecological Services Field Offices of the USFWS focus on implementing the regulatory aspects of the FESA, while the DTRO has traditionally focused on the science. Consequently, we recommend that the DTRO approve how this measure is implemented.

Page 2-7, Measure 3: "... desert tortoises in work areas would either be moved from harm's way into adjacent suitable habitat or translocated (moved to suitable protected habitat on public or designated conservation lands); the translocation sites may include regional augmentation sites ..."

We contend that moving a tortoise from a work area for the long term (i.e., permanent development of the project area) should require that the tortoise be placed in an area that is managed for the benefit of the tortoise for the long term. Tortoises should not be moved to lands that are managed for multiple use or any use that does not provide for the conservation of the tortoise/tortoise habitat. Please see our comments above relative to page 1-3 of the DEIS that discuss translocation.

"The proponent would mark all desert tortoises that it moves in a manner to be determined by the Service, unless the Service determines that marking is not needed in a specific situation." Please add "including the DTRO" after "Service" in both locations. Our reason for this request is stated above under page 2-6, Measure 2.

Page 2-7, Measure 4: "The proponent would implement measures to reduce the attractiveness of work sites to common ravens (*Corvus corax*) and other subsidized predators by controlling trash and educating workers." This measure is specific to the common raven. It does not address other tortoise predators. Drake (2024) reported that "[l]andscape changes over the last 35 years have provided omnipresent human subsidies dramatically increasing the abundance of some commonly known tortoise predators (coyotes and common ravens). Additionally, the American badger, kit fox, and mountain lion have more recently emerged as predators that can exert severe effects to tortoise populations at a local level." "[E]levated adult tortoise mortality (as high as 43%) is most pronounced in years following drought throughout the listed range of the species. Resource managers and associated groups such as the Desert Tortoise Management Oversight Group (MOG) have endorsed recovery actions for tortoises that include predator monitoring and targeted control in some areas as well as concerted efforts to meaningfully reduce predator subsidies" (Drake 2024). We request that efforts to monitor, target control of tortoise predators, and implement best management practices to reduce subsidies for tortoise predators be added to this measure.

This measure only addresses the project during the construction phase. It does not address measures that would be implemented during the use/operations and maintenance phases (or decommissioning phase, if there is one) to prevent or deter ravens and other tortoise predators. For example, if a restaurant is issued an incidental take permit under the GCP, once a restaurant is built and serving customers, how does the restaurant prevent tortoise predators from accessing the garbage/food waste generated by the restaurant and its patrons? This is an ongoing indirect impact to the tortoise that contributes to take but is not addressed by this measure.

Under this measure, "the proponent would convey the appropriate fee to the National Fish and Wildlife Foundation for the management program for common ravens, as described in the Service's incidental take permit issued for the project."

We have several issues with this wording. First, there is no description of what an appropriate fee is or how it would be calculated. The calculation should include a cost analysis that is updated at least annually and includes the costs of implementation for the life of the project/proposed action – similar to the process for calculating a Property Analysis Record, but for implementing and monitoring predator management actions rather than property management actions.

Second, the current fee does not include an annual inflation rate to cover increased costs of supplies and services to implement this measure and monitor its effectiveness for each project area/proposed action for the life of the project/action.

Third, there should be a mechanism to refund portions of the fee that were not needed to effectively implement this measure and monitor its effectiveness, if the fee overestimates the actual costs.

Fourth, the fee, as with all mitigation, should be paid/implemented in advance of implementing the taking and its impacts.

Please revise the FEIS and the GCP to incorporate these additions.

Page 2-7, Measure 7: “The proponent would also ensure the fencing and gates remain capable of excluding desert tortoises for the life of the activity unless otherwise notified by the Service.” The wording is confusing, “Activity” is used in Measure 2 for the first time in the following way – “The proponent would employ authorized biologists, monitors, and/or desert tortoise exclusionary fencing, as necessary and appropriate, to protect desert tortoises during implementation of the proposed project. Biologists requesting designation as authorized biologists for each activity must have sufficient training and experience to resolve any issue that may arise from the specific activity this measure for the first time but not defined.”

We are unsure whether activity refers to construction activity, which would exclude use/operations and maintenance activities (and decommissioning activities) or whether a series of activities comprise the construction phase. We recommend that the USFWS define its terms at the beginning of the list of mitigation measures and apply the terms consistently throughout the FEIS and GCP. We also believe it is more appropriate to exclude tortoises from residential, commercial, and industrial projects, so the term “activity” should apply to the project and for the life of the project. Please make these changes and clarifications in the FEIS and the GCP

Page 2-7, Measure 8: “The proponent would employ best management practices to reduce the likelihood that its actions would introduce nonnative, invasive plant species.”

We are unsure whether this measure will be implemented only during the construction phase or during all phases of the project/action. It should be all phases of the project/action. Please add this clarifying language to this measure in the FEIS and the GCP.

There are few places in the California desert where nonnative, invasive plants have not already become established. Consequently, as worded, this measure would result in little or no mitigation for the tortoise/tortoise habitat. Best management practices that should be implemented include those that would curtail any increase in the density and numbers of nonnative plants, those that reduce or eliminate existing nonnative plants, and *most important* those that effectively reestablish native plants. Native plants including native annual forbs provide the nutritional content tortoises need for energy and water balance (Henen 2002), protein (Drake et al. 2016), and other important nutritive components (Abella and Berry 2016, Oftedal et al. 2002) so that tortoises can survive, reproduce, and grow. Nonnative annuals do not provide for these needs (Drake et al. 2016). Please expand this measure to include these requirements for both nonnative plants and invasive native plants. Including the needs of all age classes of tortoises when curtailing nonnative invasive plants and re-establishing native annual forbs will facilitate recruitment of tortoises.

Page 2-7, Measure 9: This measure appears to be limited to the construction phase of a project. We request that this measure be expanded to describe the actions that would be implemented during the use/operations and maintenance phase of a project/proposed action and if applicable, the decommissioning phase. For example, if a project area is surrounded by tortoise exclusion fencing and the fence is damaged during the use/operations phase with a tortoise entering the project site, what would be the actions the permittee would implement? Please add this information to this measure including written notification of the incident to the USFWS and corrective actions to be taken.

Page 2-8, Measure 11: “For example, the translocation of few desert tortoises into an augmentation area may require only monthly wellness checks on translocated individuals for the first year. The translocation of many desert tortoises from a single project may require more extensive pre-translocation work and intensive monitoring for years after translocation.”

We were unable to find citations from the scientific literature that supported this difference in the monitoring of translocated desert tortoises based on the number of animals translocated. If six projects each translocated 15 tortoises to an augmentation site (resulting in 90 tortoises translocated to one site), please explain how this effect and importance to the resident and translocated tortoises is different than if 90 tortoises are translocated from one project to an augmentation site. The translocation of tortoises is part of the “minimize and mitigate to the maximum extent practicable” requirement in the FESA and implementing regulations in the incidental take permit issued to the proponent of the project/action. It is incumbent upon the proponent to ensure that the translocated and recipient tortoises survive during the life of the project to offset the impacts of the taking from project implementation. Please provide the scientific references that support the implementation of Measure 11.

Page 2-8, Measure 12: “The Service intends to develop a program to conduct long-term monitoring of translocated desert tortoises. The Service may discuss with proponents methods for their monitoring to contribute to this effort.”

The issuance of an ITP requires that the permittee/proponent implement effectiveness monitoring to determine how effective the minimization and mitigation has been. While the USFWS may standardize how the effectiveness monitoring for translocation efforts is implemented, it is the responsibility of the permittee/proponent to implement effectiveness monitoring for the life of the project. Please revise Measure 12 so it complies with the requirements in the FESA, implementing regulations, and the HCP Handbook.

In summary, for the 12 measures to minimize impacts to the tortoise listed on pages 2-6 through 2-8, we are not sure why USFWS continues to require the same measures for the past three decades, primarily directed at minimizing direct mortality and injury, while overlooking the indirect impacts of the taking to the tortoise. The numbers, densities, and recruitment of tortoises has declined during this time indicating that these measures are not effective. We assert this is partly because these measures focused and continue to focus on minimizing direct mortality and injury of the tortoise while ignoring all impacts of the taking, especially indirect impacts that result in mortality.

Tuma et al. (2016) reported that for the tortoise, threats more widely distributed in time and space within the Superior-Cronese TCA significantly limited tortoise population growth more than threats that were patchily distributed or temporally dynamic. For the Superior-Cronese study area, the human presence threat (habitat degradation) model caused the most precipitous and significant decline in the tortoise population. Human presence caused significantly greater declines in modeled tortoise populations because it contributed to habitat degradation and higher mortality rates constantly in time. The human presence threat was widely distributed with contributions from the proliferation of roads and OHV routes in and adjacent to the study area, and the presence of several linear features including utilities and travel corridors (Tuma et al. 2016).

Thus, a logical conclusion is that these factors are causing tortoise mortality and population declines in the Superior-Cronese TCA and are not compatible with the management of lands for tortoise conservation. Further, Tuma et al.'s (2016) modeling effort for the Superior-Cronese study area showed that threats with wide spatial distributions and constant temporal occurrences that caused higher mortality rates and habitat degradation (human presence) limited population growth more than constant threats that caused mortality alone (subsidized predators). We question the effectiveness of implementing minimization and mitigation measures listed in the GCP for the Superior-Cronese TCA and all other TCAs when the current management of this TCA does not address the primary cause of tortoise mortality.

While minimizing direct mortality and injury is important, it does not comply with the statute and regulations to minimize or mitigate the impacts of the taking. This would include direct, indirect, and cumulative impacts. Moreover, the USFWS's data on tortoise demographics in California (see Appendix A below) should inform the USFWS that these minimization measures have been ineffective in halting the decline of tortoises. Thus, additional effective measures are needed to offset the direct, indirect, and cumulative impacts of the taking. Please revise this section of the FEIS to include these additional measures.

Page 2-8, Mitigation Activities in the Mitigation Area: "Mitigation measures would offset the impacts of the take to help meet recovery criteria and support the desert tortoise's long term viability." Offsetting impacts means that there is no change to the species. Consequently, we are unsure how implementing mitigation that offsets the impacts of taking to the tortoise would result in meeting recovery criteria for the tortoise or conserving the species. Offsetting usually means the status quo remains. Please explain in this section how mitigating to achieve the current status quo results in conserving the tortoise. We presume the USFWS is using the FESA's definition of "conserving" in the DEIS.

Page 2-8, mitigation measures, first bullet: "The proponent would fulfill its mitigation obligation through non-acquisition (that is, restoration and enhancement), land acquisition (that is, habitat preservation), mitigation bank credits, other actions needed to protect and conserve desert tortoises, or a combination of these options. At a minimum, the amount of land acquisition would generally follow the guidelines in the BLM's DRECP (BLM 2016, table 18). Table 18 presents biological resources compensation ratios for the impacts of activities in the DRECP land use plan amendment decision area. The standard compensation ratio is 1:1, while compensation in desert tortoise designated critical habitat is 5:1."

This mitigation requirement may or may not meet the requirements for issuing an incidental take permit. One requirement is to minimize and mitigate to the maximum extent practicable. One way to demonstrate that the “maximum extent practicable” requirement has been met is for the proponent to fully mitigate or fully offset the impacts of the taking (USFWS & NMFS 2016) (direct, indirect, and cumulative impacts of the taking). The courts have ruled that the USFWS must demonstrate this standard has been met before issuing an incidental take permit. Consequently, the USFWS must provide an accounting of the impacts of the taking, how the implementation of minimization measures would reduce the impacts, and how the remaining impacts would be fully mitigated and offset by the proposed mitigation. We found no reference in this section of the DEIS to the USFWS’s accounting of the impacts of the taking for a “typical project.” In addition, the DRECP did not address indirect and cumulative impacts, looking only at the project footprint when calculating compensation. This approach does not comply with the requirements of Section 10 of the FESA, implementing regulations for incidental take permits, or the HCP Handbook.

In addition, the Council on Environmental Quality (CEQ 2023) recently issued “Guidance for Federal Departments and Agencies on Ecological Connectivity and Wildlife Corridors.” The purpose of this document is for federal agencies to consider “how their actions can support the management, long-term conservation, enhancement, protection, and restoration of year-round habitat, seasonal habitat, stopover habitat, wildlife corridors, watersheds, and other landscape/waterscape/seascape features and processes that promote connectivity.” “The objective is to build consideration of connectivity and corridors into the early steps of these [planning] processes to facilitate easy implementation.”

CEQ applies this guidance to the following areas:

- Agency planning and decision-making;
- Science and data; and
- Collaboration and coordination.

In addition, CEQ identified best practices that should be incorporated into planning and decision-making, gathering baseline information to assess public lands for connectivity and corridor values, using science and data to develop performance measures and metrics to assess whether and how federal agencies collectively are promoting greater connectivity across terrestrial habitats.

For the second bullet, science and data, CEQ said, “Federal agencies should address how the best available science and data will inform planning and decision-making, and consider approaches to identify and address gaps in available science and data.” CEQ describes the types of science and data to be used and the sharing of science and data.

For the third bullet, collaboration and coordination, federal agencies “should support strategic collaborations and partnerships to advance work on connectivity and corridors,” and “should promote both intra- and interagency coordination and collaboration, to ensure that planning and information regarding connectivity and corridor efforts are not siloed within individual agencies or within distinct programs within a single agency.” The USFWS’s proposed GCP is adjacent to lands managed by the BLM, NPS, Department of Defense (DOD), and state agency lands (state parks, state OHV areas, etc.), and land important to tribes. The USFWS should coordinate with these entities to explore collaborative opportunities to enhance connectivity across jurisdictional boundaries as part of the process in developing and managing the GCP and issuing incidental take permits under the GCP. This collaboration effort and its result should be described in the FEIS and the GCP.

Because of CEQ's directive, we request that the USFWS explain in the FEIS and GCP how it is complying with CEQ's guidance on Ecological Connectivity and Wildlife Corridors. Please explain how the action alternatives would comply with the purpose and objectives of this guidance, including enabling "wildlife to adapt to fluctuating environmental conditions, including those caused by climate change." In addition, the FEIS and GCP should demonstrate how the USFWS is implementing "consistent federal action on connectivity and corridors" with other federal agencies in agency planning and decision-making, science and data, and collaboration and coordination.

CEQ's guidance on linkage areas emphasizes that although located outside critical habitat and TCAs, linkage areas are as important as the TCAs/critical habitat for the survival and recovery of the tortoise. They maintain gene flow among the tortoise populations and connect to habitats that allow tortoises to move north in response to climate change. Consequently, 1:1 mitigation for projects/actions permitted in these important linkage habitats may be inappropriate because of edge effects and the importance of this habitat. Development may substantially deter or prevent tortoises from moving as their habitat moves north. Consequently, the USFWS should identify and periodically revise the linkage habitats needed to provide connectivity of tortoise populations among TCAs and north to connect to habitats moving in response to climate change.

Averill-Murray et al. (2021) emphasized that "[m]aintaining an ecological network for the Mojave desert tortoise, with a system of core habitats (TCAs = Tortoise Conservation Areas) connected by linkages, is necessary to support demographically viable populations and long-term gene flow within and between TCAs." "Ignoring minor or temporary disturbance on the landscape could result in a cumulatively large impact that is not explicitly acknowledged (Goble 2009); therefore, understanding and quantifying all surface disturbance on a given landscape is prudent. For linkage habitat between TCAs, these areas must be wide enough to sustain multiple home ranges or local clusters of resident tortoises (Beier et al. 2008, Morafka 1994), while accounting for edge effects, in order to sustain regional tortoise populations."

Consequently, Averill-Murray et al. (2021) found that effective linkage habitats are not long narrow corridors. The authors also found that any development within the linkage habitats has an edge effect (i.e., indirect impacts) that extend from all sides into the linkage habitat further narrowing or impeding the use of the linkage habitat, depending on the extent of the edge effect.

To help maintain tortoise occupation and permeability across all other non-conservation-designated tortoise habitat, Averill-Murray et al. (2021) recommended that all surface disturbance should be "limited to less than 5-percent development per square kilometer because the 5-percent threshold for development is the point at which tortoise occupation drops precipitously (Carter and others 2020a)." They cautioned that the upper threshold of 5 percent development per square kilometer may not maintain population sizes needed for demographic or functional connectivity; therefore, development thresholds should be lower than 5 percent.

The lifetime home range for the Mojave desert tortoise is more than 1.5 square miles (3.9 square kilometers) of habitat (Berry 1986) and, as previously mentioned, tortoises may make periodic forays of more than 7 miles (11 kilometers) at a time (Berry 1986). Consequently, for linkage habitats for the tortoise to be effective, there must be areas of sufficient size and mostly devoid of development including edge effects (e.g., indirect impacts from nearby development, human activities, etc.).

The two action alternatives do not identify and include lands needed by the tortoise for connectivity to current and future habitats and to provide gene flow among populations within each tortoise recovery unit in California and throughout the listed population, which is a problem. The GCP and FEIS should include this information, the GCP updated as new information becomes available, and the USFWS should use this updated information in its decision-making process of whether to issue an incidental take permit and whether the proposed project/activity would minimize and mitigate to the maximum extent practicable the impacts of the tortoise taking.

Further, the GCP appears to treat all tortoise habitat that would be acquired as having the same ecological functions and values when determining whether this mitigation would minimize and mitigate to the maximum extent practicable/mitigate to fully offset the impacts of the taking. Some tortoise habitat that is acquired may have substantial surface disturbance or high densities and distributions of invasive nonnative plants. These lands would not likely provide the quality and quantity of forage tortoises need for survival, reproduction, and growth unless management actions are implemented to remove the nonnative plants and effectively establish the quality and quantity of native annual forbs required by tortoises. Some mitigation lands may be adjacent to areas with human activities whose indirect impacts spillover to the mitigation lands making them less valuable for tortoises to use for feeding, breeding, and shelter, not useable by tortoises, or resulting in take of tortoises. The FEIS should provide information on how the USFWS would evaluate the ecological functions and values of the mitigation lands to determine that they will mitigate the impacts of the taking to the maximum extent practicable.

For these reasons, the USFWS should not use a simple formula such as the DRECP formula, which is provided as an example of compensation to be implemented in the GCP. The USFWS is required to comply with the requirements in the FESA, its regulations, and the HCP Handbook. The USFWS should also use the best available science to determine the impacts of the taking and identify and require that effective mitigation be implemented that will offset the impacts of the taking. The USFWS should closely coordinate with the DTRO and use the best available science to determine the impacts of the taking, the effective mitigation that will offset these impacts, and whether each incidental take permit should be issued. This attention to the best available science should include connectivity habitat, climate change, and planned and existing anthropomorphic development and activities.

When developing standardized minimization and mitigation requirements for this GCP, we recommend that a comprehensive list of minimization and mitigation measures be compiled from which to select as appropriate for the type of project, the location of the project with respect to its importance for current and future tortoise conservation, and the extent of the (direct, indirect, and cumulative) impacts of the taking. This list would be reviewed and revised at least annually according to the results of the effectiveness monitoring data (= using the best available science). We recommend that if the status of the tortoise does not improve after a few years of implementing minimization and mitigation measures under the GCP, this information would indicate that these measures are not meeting their purpose and need, which is “ensuring project mitigation contributes to the long-term recovery for the desert tortoise” (page 1-3 of the DEIS) and likely not the biological goals and objects of the GCP and the incidental take permit. The USFWS would revise these minimization and mitigation measures to correct the worsening impacts of the taking to the tortoise. Please revise the GCP and FEIS document to include this action by the USFWS in issuing individual incidental take permits under the GCP.

The USFWS lists the biological goals and objectives of the GCP (page 40) as:

Goal 1: Minimize take of desert tortoises within the project areas.

Objective 1.1 Minimize the potential for the take of desert tortoises because of covered activities.

Objective 1.2 Remove any desert tortoises from impact areas by performing surveys prior to and, if necessary, during implementation of the activity, and translocate any individuals to approved suitable habitat within conservation areas.

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

Objective 2.1 To mitigate impacts on the desert tortoise, project proponents will acquire, restore, and/or manage habitat to ensure conservation benefits for the desert tortoise within conservation areas. Conservation benefits include measures to reduce the mortality of desert tortoises (e.g., installation of highway fencing, etc.) and to improve habitat conditions (e.g., restoration of disturbed habitat within conservation areas, etc.).

This information does not appear to match the information provided in the DEIS. For example, Objective 1.2 should not limit translocation to conservation areas, which we presume means TCAs. In addition, Goal 1 should be to minimize the impacts of the taking within the project areas not just take of the tortoise. Please ensure that the wording in the FEIS and the GCP is consistent and complies with the requirements of the FESA, the implementing regulations, and the HCP Handbook.

We contend that the GCP framework does not comply with the requirements in the FESA, its implementing regulations, and the HCP Handbook. The FESA requires that to issue an incidental take permit the proponent must specify the impacts that will likely result from such taking, the steps the applicant/proponent will take to minimize and mitigate such impacts, the funding that will be available to implement such steps, what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized, and such other measures that the Secretary of the Interior (delegated to the USFWS) may require as being necessary or appropriate for purposes of the conservation plan.

The GCP framework should be revised to clearly document that it includes and complies with these five requirements — the proponent specifies the impacts that will likely result from such taking; the steps the applicant/proponent will take to minimize and mitigate such impacts; the funding that will be available to implement such steps; what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and such other measures that the Secretary/USFWS may require as being necessary or appropriate for purposes of the plan.

Key to determining the minimization and mitigation that will be implemented is the impacts of the taking and whether alternatives exist that substantially reduce or avoid the impacts of the taking. This should be the first step in designing a project/action – to avoid the impacts of the taking. When the proponent demonstrates that this is not possible and the USFWS evaluates this information on unavailability of alternatives, provides a written analysis, and accepts it, then the USFWS and the proponent move to assessing the impacts of the taking and the measures to

minimize and mitigate to the maximum extent practicable. We did not find the step requiring alternatives to the proposed project/action that were considered by the applicant/proponent in the GCP process and framework. This is required by the FESA and must be added to the GCP to comply with the FESA. Please add these five FESA requirements to the GPC.

A counter argument could be made that by not evaluating the availability of alternatives that avoid the impacts of the taking to the tortoise in the GCP, the USFWS is aiding proponents in locating their projects in tortoise habitat by making the issuance of incidental take permits in tortoise habitat easier. Consequently, the requirement to evaluate alternatives is a crucial part of the GCP and incidental take evaluation process by the USFWS and should occur for each proposed project/activity.

Page 2-9, For the land acquisition, land donation, and mitigation banking options ...: Mitigation lands should have a conservation easement in perpetuity placed on them prior to being given to the land management entity. The USFWS and NMFS (2016) advise that the applicant “ensure that the easement is granted only to an entity allowed under state law to hold conservation easements.”

A conservation easement is needed for lands given to federal agencies because there is no guarantee that these lands will be managed for the conservation and benefit of the tortoise in the future. A recent example occurred on BLM lands in the Red Cliffs National Conservation Area in Utah. Parcels were purchased using Land and Water Conservation Funds and the parcels given to BLM to manage for the conservation and benefit of the tortoise. A few years later, BLM proposed that these parcels be part of a ROW for a new expressway. Without a durable conservation easement on mitigation lands, there is no guarantee that these lands will be managed for the conservation and benefit of the tortoise in perpetuity.

In addition, the USFWS in its HCP Handbook under Mitigation, advises that “[a]pplicants must ensure sufficient control of the land to achieve mitigation objectives. The land preservation tool is important in making sure those objectives are met.” Thus, when an applicant/proponent gives lands to a federal agency such as BLM or NPS to manage for the conservation/benefit of the tortoise, the applicant/proponent then has no control over how these mitigation lands are managed.

Further, the USFWS and NMFS (2016) say, “[i]f a land preservation tool does not achieve mitigation objectives, then the land cannot be credited toward meeting mitigation obligations until it meets the stated purpose. Even if the land is sufficiently protected from development threats, it must be managed in a way that is compatible with the mitigation objectives per the HCP in order to count toward meeting the stated purpose.” This condition applies to BLM lands. BLM has a mandate to manage its lands for multiple use and not for the conservation/benefit of the tortoise.

The recent adoption by BLM of the Conservation and Landscape Health Rule (commonly known as the “Public Lands Rule”), published on May 9, 2024, advances the BLM’s multiple use and sustained yield mission by prioritizing the health and resilience of public lands. Conservation is identified as a use of public lands, is on equal footing with other uses, and is necessary for the protection and restoration of important resources. Although the Public Lands Rule will help safeguard the health of public lands for current and future generations by ensuring that BLM

protects the most intact, functioning landscapes; restores degraded habitats and ecosystems; and uses science and data as the foundation for management decisions across all plans and programs, this is a new program that has yet to be implemented to see how effective it will be and how open the BLM management culture is to managing lands for conservation and landscape health. Managing BLM lands potentially in the future for conservation is a new and different purpose for BLM.

If BLM applies this rule to the California Desert Conservation Area (CDCA), BLM will need to amend the CDCA Resource Management Plan, which is an expensive and time-consuming process. Therefore, implementation of this new rule is not likely to occur for several years. In addition, this rule can be modified or removed by BLM whenever it chooses to at BLM headquarters by publishing a new proposed rule rescinding part or all of the rule, opening it for public comments, and adopting the new final rule. In addition, in recent years as new administrations occupy the White House, environmental regulations have changed, so there is no guarantee that the Public Land Rule will remain and be implemented in the future. Finally, Congress has not modified the Federal Land Policy and Management Act (FLPMA) that directs BLM to manage its lands for multiple use and not for the conservation of listed species. Thus, it is likely that BLM will continue to approve numerous projects and activities (e.g., mining, grazing, off-highway vehicle (OHV) and other surface disturbance recreation, utility-scale renewable energy development, granting utility ROWs (e.g., pipelines, transmission lines, communication towers, roads, public purpose leases, and land disposal) in the CDCA in tortoise habitat including critical habitat/TCAs.

From the federal agency's perspective, the NPS may not be able to accept the lands and incorporate them into the management of a national park unless they meet certain requirements (e.g., occur adjacent to current national park lands, etc.)

The courts have found that only mitigation and other conservation measures provided by the proponent may be considered in making the "maximum extent practicable" finding. Thus, if the proponent purchases parcels and gives them to the BLM or NPS to manage in perpetuity for the tortoise, the management of those lands would not be considered in making the maximum extent practicable finding. In other words, their management would not count toward mitigating for the impacts of the taking.

Another factor confounding the "gifting" of land to BLM or NPS as mitigation for the impacts of the taking to tortoises is that the "BLM, NPS, or other land management entity would continue to be responsible for approving mitigation activities on the lands they administer" (USFWS 2024 – DEIS GCP, page 1-9) and not the proponent. Thus, additional mitigation may be required of the proponent to comply with the FESA, its implementing regulations, and the HCP Handbook because the federal agency may not approve the specified mitigation activities on the land given to them.

For these and other reasons, giving lands to a federal agency that are mitigating for a project/activity with the intent that they be managed for the conservation and benefit of the tortoise and are counted in minimizing and mitigating to the maximum extent practicable should not be allowed under the GCP.

Page 2-9 For non-acquisition options...: Generally, we oppose the establishment of a fund that proponents would contribute to in lieu of implementing mitigation. This is because the USFWS does not have the staff to swiftly prepare and issue contracts to implement mitigation measures to offset the impacts of the taking, monitor the effectiveness of these mitigation measures, or quickly implement adaptive management that monitoring indicates is needed. Because mitigation should be implemented in advance of or commensurate with the impacts of the taking (USFWS and NMFS 2016), a proponent's project may be delayed because the USFWS was unable to have mitigation implemented in a timely manner. Having the mitigation implemented later than the impacts of the taking would result in temporal impacts and potentially increase the impacts to the taking and require the proponent to implement additional mitigation to offset these impacts. Consequently, the incentive to implement the mitigation lies with the proponent especially if the incidental take permit requires mitigation measures be implemented in a phased approach and are tied to the phased implementation of the project/activity. Please make these changes in the FEIS and GCP and require that the implementation of the mitigation be tied to implementation of each phase of the project/activity.

Page 2-9, pursuing a non-acquisition option on lands managed by the BLM: Generally, we oppose this mitigation for the reasons provided above under "Page 2-9: For the land acquisition, land donation, and mitigation banking options for mitigation." Purchasing land and giving it to a federal agency to manage for the conservation and benefit of the tortoise with no funding to implement this management and monitoring in perpetuity does not demonstrate that this mitigation would minimize and mitigate to the maximum extent practicable. The financial responsibility/burden of managing these lands once transferred to the federal agency falls to the federal agency and ultimately the taxpayer. Additionally, the BLM and NPS are underfunded so it is unlikely that these donated lands would be managed and monitored effectively and adaptive management actions implemented if the management is not as effective as indicated in the biological goals and objectives.

Under the GCP's Objective 2.1, "Conservation benefits include measures to reduce the mortality of desert tortoises (e.g., installation of highway fencing, etc.) and to improve habitat conditions (e.g., restoration of disturbed habitat within conservation areas, etc.)," there is no guarantee that the federal agency would not grant a ROW or designate a travel route through an area where the proponent recently improved habitat conditions for the tortoise. For the above reasons, we request that this mitigation approach not be implemented in the GCP.

Page 2-9, Contribute to the National Fish and Wildlife Foundation recovery account: "The proponent 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."

We have concerns about this mitigation measure with respect to demonstrating that it minimizes and mitigates to the maximum extent practicable and fully funds the implementation of the conservation plan for each proposed project/activity. It would mix funding from several incidental take permits for the tortoise with funds from other sources in this NFWF tortoise account. This mixing of funds from multiple incidental take permits and other sources would make it difficult to track whether there is sufficient funding provided to effectively implement the minimization, mitigation, monitoring, and adaptive management required of each incidental take permit.

In addition, many recovery actions funded from this account are research projects to learn more about the tortoise or the extent of impacts of a particular type of project or activity. While the results of this research are helpful if and when it is applied to managing the tortoise, this research does not minimize and mitigate to the maximum extent practicable the impacts of the taking to the tortoise from the proposed project/activity. We do not believe the implementation of this mitigation measure as presented in the DEIS and GCP would comply with Section 10 of the FESA, its implementing regulations, or the HCP Handbook. For the above reasons, we request that this mitigation approach not be implemented in the GCP.

Page 2-9, Alternative 3: Reduced Mitigation Area: This is the second of two action alternatives analyzed in the DEIS. Under this alternative, mitigation would only occur on “lands within desert tortoise conservation areas that model as ‘good’ desert tortoise habitat within NPS lands, CDNCLs administered by the BLM, and non-federal lands that either are in conservation management or that are acquired for conservation management.”

We believe this alternative was developed to focus the minimization and mitigation measures from the issuance of incidental take permits in areas with “good” tortoise habitat, with the assumption that “good” tortoise habitat means there are pockets of higher density tortoises in these areas of good habitat. We found no science in this section to support the effectiveness of this alternative. In addition, we have several concerns about this alternative.

We found no information in the DEIS about the definition of what constitutes “good” tortoise habitat. What environmental factors will be used to make this determination? Will a tortoise habitat model or combination of tortoise habitat models be used to make this determination? Because the tortoise habitat models that we are familiar with are probability models, what is the probability needed to be considered good tortoise habitat – 60%, 75%, 90% – and what scientific reports/journal articles were used to determine this needed minimum probability?

A crucial factor in determining good tortoise habitat is the availability of native annual forbs. As mentioned above under page 2-7, Measure 8, native annual forbs provide the nutritional content tortoises of all age classes and reproductive females need for energy and water balance (Esque 1994, Henen 2002, Jennings 1993), protein (Drake et al. 2016), and other important nutritive components (Abella and Berry 2016, Oftedal et al. 2002) so that tortoises can survive, reproduce, and grow. Nonnative annuals do not provide for these needs (Drake et al. 2016). Absent the frequent availability of these native annual forbs, the tortoise is unable to survive, reproduce, and grow. Unfortunately, this factor is not readily measured using remote sensing (used in habitat models) and it is difficult to ground truth the large, scattered areas of tortoise habitat in California to verify that the areas the model indicates have a high probability for tortoise habitat contain

sufficient quantities of native annual forbs. This difficulty is compounded by the short duration that these native annual forbs grow in the spring and early summer and not every year. Environmental factors such as temperature, precipitation, and soil conditions can be measured remotely or their data sets exist (e.g., soils). These factors likely influence the occurrence of native annual forbs needed by tortoises of all age classes and reproductive females for survival, reproduction, and growth. However, other factors such as competition with nonnative invasive plants are not easy to measure remotely but greatly affect the occurrence of native annual forbs.

This alternative does not appear to include connectivity habitat that is needed by the tortoise in the next few decades to allow movement between habitat patches, prevent genetic isolation, and ultimately to ensure persistence of the species especially in response to climate change and the movement of tortoise habitat generally northward (Parandhaman 2023). Averill-Murray (2021) identified the need for “[l]arge, connected landscapes ... to facilitate natural range shifts in response to climate change” for the tortoise. It does not appear to comply with “Guidance for Federal Departments and Agencies on Ecological Connectivity and Wildlife Corridors” (CEQ 2023).

Parandhaman (2023) developed habitat models for the tortoise under future climate scenarios. All modeled scenarios indicated a general loss of habitat in the future across multiple climate and land use scenarios, with losses increasing with projected emissions and urbanization, especially in Critical Habitat Units (CHUs). Parandhaman also added land use scenarios to these models and found decreases in overall habitat amount in CHUs for three scenarios with habitat forecasts showing a sharp decline in critical habitat as tortoise habitat after approximately 2055. By 2099, Parandhaman (2023) predicted a 10,000 km² loss in desert tortoise habitat in CHUs. These losses were greater when land use scenarios (anthropomorphic development and use) were added to the model. In addition, under climate change models, there was a gain in habitat in the northern regions of the tortoise’s range (Parandhaman 2023). CHUs suffered the highest net change in habitat with up to -23% in some of the climate scenarios. Parandhaman (2023) concluded that the “loss of such critical habitat would be perilous to the status of its recovery. The emphasis on edge habitat and its conservation may need to be taken into further consideration as CHUs or core tortoise habitat continue to be lost over time.”

We question the effectiveness of directing the management of tortoise habitat in the foreseeable future to currently designated CHUs. The USFWS should use the best available scientific information when identifying where to locate mitigation lands for the tortoise that would be managed in perpetuity for the tortoise. This information would include adding factors such as climate change, land use planning, and natural and anthropomorphic barriers to tortoise movements. Tortoise movements and therefore exchange of genetic material among populations are affected by natural and anthropomorphic barriers (e.g., steep slopes, roads, fences, human development, etc.), tortoise populations are adversely impacted by “isolation by resistance” (Dutcher et al. 2020, Hromada 2022), that is, “[t]ortoises avoided areas of high slope and low perennial vegetation cover, avoided moving near low-density roads, and traveled along linear barriers” (Hromada 2022, etc.). The USFWS should use current scientific information to identify, acquire, and manage the best locations that would avoid these impacts and promote effective connectivity and long-term management of tortoise populations and habitats.

Selecting existing CHUs because they were identified by the USFWS 30 years ago before the current information and impacts of climate change were known does not demonstrate that the USFWS is using the best available science for determining the best locations for managing the tortoise now and in the future. The FESA and the designation process of critical habitat were implemented before Congress and the USFWS were aware of climate change. As modelling improves in predicting the foreseeable effects of climate change, the USFWS should modify its concept of habitat required by listed species for survival and recovery to include habitat needs by species to survive in the foreseeable future. Because Alternative B does not appear to include the impacts of climate change on the locations of tortoise habitat in the foreseeable future, we do not consider this alternative to be a viable alternative. We say this because the duration of incidental take permits issued by the USFWS typically ranges from 25 to 50 years, and we presume that the USFWS would not revise the GCP for several decades (as it indicates on page 3-2 of the DEIS).

Pages 2-11 – 2-12, Alternatives Considered but Eliminated: In the Council’s August 31, 2023 letter to the USFWS commenting on the 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), the Council requested that the covered activities 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 not associated with development/construction projects (e.g., public works agencies, OHV events, OHV use in State Recreation Areas, etc.).” The Council provided “any non-federal entity sponsoring off-highway or off-road vehicle recreation” as an example of a covered activity that should be included.

We appreciate that the USFWS added the operations and maintenance activities of projects to the covered activities, which would include public works agencies. However, we are disappointed that OHV and off-road vehicle (ORV) activities were not included as covered activities in the GCP and analyzed in the DEIS. Further, we are puzzled as to the USFWS expanding our request for OHV/ORV activities to include all recreation activities and then dismissing it. We agree that the impacts from all forms of recreation conducted in the California desert (hunting, hiking, camping, wildlife watching, geocaching, OHV/ORV use, picnicking, etc.) would be difficult to analyze. However, we specifically identified OHV/ORV activities because of their numerous documented impacts on tortoises and tortoise habitat (Brooks 1995, Lovich and Bainbridge 1999, Belnap 2002, Brooks and Esque 2002, Bury and Luckenbach 2002, Brooks and Berry 2006, Belnap et al. 2007, Berry et al. 2008, Keith et al. 2008, Berry et al. 2014a, Kim et al. 2014, Tuma et al. 2016, Custer et al. 2017, Switalski 2018, Averill-Murray and Allison 2023, etc.) and because these activities continue to expand in the California desert on both federal and non-federal lands. We correct USFWS’s statement that “no entity has ever applied for an incidental take permit for a recreational activity” because we know that Pismo State Beach and Oceano Dunes State Vehicular Recreation Area (SVRA) have applied for an incidental take permit. We again request that the USFWS include OHV events and OHV use on non-federal lands as a covered activity in the GCP.

Page 3-8, Affected Environment, Status within the Planning Area: This section summarizes the available data on the demographic status of the tortoise in the GCP’s proposed permit area. This section does not provide the USFWS’s data on the demographic status and trend of the tortoise in the mitigation area, which includes the TCAs. The USFWS implemented its current monitoring methodology for the tortoise in 2004. Instead, this section provides the following information – Based on range-wide monitoring, the Service concluded that “some annual density estimates in [TCAs] since 2014 have been higher and some lower than projected from past trends” – this sentence provides no information on the status of the tortoise or population trend data.

We request that the demographic data that the USFWS has for tortoises in the TCAs in California be provided in this section of the FEIS so the public and the decision maker are aware of the status and trend of tortoise population densities. This information is needed because it provides a baseline for analysis of the impacts of the action alternatives, and demonstrates the lack of effectiveness of the minimization and mitigation measures the USFWS has required for projects in tortoise habitat for the past few decades to halt tortoise declines. To assist the USFWS in this effort, we have compiled the results of annual monitoring for the tortoise in “Appendix A. Demographic Status and Trend of the Mojave Desert Tortoise including the Tortoise in California,” which is an attachment to this comment letter.

Pages 3-8 to 3-19, Desert Tortoise, Environmental Consequences: This section contains a description of the impacts to the tortoise from implementation of the three alternatives.

CEQ directs federal agencies to prepare their environmental impact statements using the best available science. In 40 Code of Federal Regulations (CFR) 1502.24, Methodology and scientific accuracy, CEQ says, “Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement.” In 40 CFR 1502.22(b) under “Incomplete or unavailable information,” CEQ says that and environmental impact statement shall contain, “...(3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment; and (4) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community. For the purposes of this section, "reasonably foreseeable" includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.”

In reviewing the DEIS, we did not find an analysis of the impacts or references to the scientific literature that supported the conclusions in the Environmental Consequences and Cumulative Impacts sections for the tortoise and other resource issues, such that the DEIS complied with these sections of the regulations for implementing NEPA. Please include these scientific sources in the FEIS.

Pages 3-8 and 3-9, Environmental Consequences - Impacts Common to All Alternatives: “Under all three alternatives, if a proponent for an incidental take permit meets the issuance criteria in ESA section 10(a)(1)(B), the Service would issue an incidental take permit that would require the proponent to minimize and mitigate the effects of the incidental take on the desert tortoise to the maximum extent practicable. The incidental take permit would also require monitoring of the project's effects on the desert tortoise.” Please add that the proponent would be required to fully fund the actions that minimize and mitigate the impacts of the taking to the tortoise and the monitoring and adaptive management.

Page 3-9, Environmental Consequences, Impacts Common to All Alternatives: “Consequently, if the Service issues an incidental take permit for an activity, whether under the guidance of the GCP or on a case-by-case basis, the effects on individual desert tortoises would remain largely the same.” We disagree with this statement. The GCP says that it would standardize the minimization and mitigation measures that would be implemented, regardless of the covered activity. We assert that this approach would mean that some proponents would do more than fully mitigate while many would not meet the required threshold of minimizing and mitigating to the maximum extent practicable. This is because the impacts of the taking for two identical projects at different locations are not likely to have the same impact to the tortoise. One may be located in marginal habitat on the western edge of the range of the tortoise and bordered by existing development while another may be in a north-south valley that provides crucial connectivity for the tortoise to respond to climate change. We reassert that the USFWS’s standardized approach is too simple and does not demonstrate compliance with the issuance criteria for an incidental take permit.

We encourage the USFWS to pursue a GCP for the tortoise but one that demonstrates it has incorporated all the requirements of Section 10 of the FESA, the implementing regulations, and the HCP Handbook. From the information provided in this DEIS, this GCP does not.

Because the USFWS states in the DEIS that the GCP would function for decades, the USFWS should build into the GCP and analyze in the NEPA document a mechanism that allows for streamlined revisions to the GCP as new information from monitoring data and the scientific literature become available; that is, the ability to update the GCP without having to prepare another environmental assessment or EIS.

Page 3-10, Desert Tortoise, Environmental Consequences - Impacts Common to All Alternatives: “The Service would require project proponents to follow the most recent translocation protocol.”

The USFWS does not update its translocation protocol every time it learns new information from a translocation study. Consequently, the text on page 3-10 should be revised to say that the proponent would follow the most recent translocation protocol, include the most recent information on lessons learned from all translocation studies for the tortoise, and is approved by the DTRO. To comply with the FESA, implementing regulations, and the HCP Handbook, the proponent’s translocation plan should state the success criteria and these criteria should be measurable. It should include monitoring and adaptive management that obligate the proponent to modify the translocation plan when requisite science-based monitoring information is not being collected to determine success, when monitoring information indicates the translocation is not meeting its success criteria, and as new information on the implementation of other translocation plans indicate that the plan is not using and implementing the best available scientific information. Our additional concerns for tortoise translocation provided on pages 6 and 7 above also apply here.

Page 3-12, Desert Tortoise, Environmental Consequences, Construction of Nonlinear Facilities: “Some activities could result in the exclusion of desert tortoises from work areas temporarily (for example, repair of underground pipelines). In these instances, perennial plants may be reestablished...”

The title of this section is “Construction of Nonlinear Facilities” but the example provided is a maintenance activity for a linear facility. Please correct this discrepancy. In addition, excavating soil to repair a buried pipeline would not result in perennial plants, especially woody species, being reestablished in the near future. Abella (2010) reported that the regeneration times for native vegetation for cover take on average 76 years in the Mojave Desert while return to species composition is an estimated 215 years. Please revise the information in the FEIS.

Pages 3-13 to 3-14, Desert Tortoise, Environmental Consequences, Construction of Linear Facilities: “Overall, the construction of linear facilities would likely injure or kill relatively few desert tortoises.” This statement is not true. In their assessment of take authorized by biological opinions that had been implemented between 1989 when the tortoise was listed and 1998 at the time of the study, LaRue and Dougherty (1998) found that construction of linear facilities was responsible for the majority of tortoise mortalities during that time frame.

This analysis and similar analyses in other sections of the DEIS (e.g., Operation and Maintenance of Linear Facilities and Operation and Maintenance of Nonlinear Facilities, etc.) for covered activities focuses on direct injury and mortality; it does not analyze the impacts of indirect injury and mortality including trapping, capturing, harming, and harassing tortoises. Please add this analysis to the FEIS. We remind the USFWS that the FESA requires that mitigation be developed for the impacts of the taking. To determine this, the USFWS must conduct an analysis of the impacts of the taking.

Page 3-18, Desert Tortoise, Environmental Consequences: “This land base would allow federal agencies and conservation partners to manage a large landscape in a more comprehensive manner without expending most available funding on land acquisition.” We were not aware that BLM and NPS were using their annual budgets to acquire lands and put them into federal ownership to benefit the tortoise. Please provide more information for this program/activity in the FEIS.

Page 3-18, Desert Tortoise, Environmental Consequences: “[T]he Service, BLM, and other agencies and organizations working on recovery of the desert tortoise would be able to integrate more fully the mitigation stemming from incidental take permits with mitigation from projects on federal lands and other recovery initiatives.” We are unsure what this means. The area in which mitigation could be selected for implementation in Alternative 2 is more than 8 million acres while in Alternative 3 it is more than 7 million acres. In the Desert Tortoise Recovery Plan (USFWS 1994) the USFWS used the principles of conservation biology in designing reserves for the tortoise. These included:

- Large blocks of habitat, containing large populations of tortoises are superior to small blocks of habitat containing small populations;
- Blocks of habitat that are close together are better than blocks far apart;
- Habitat that occurs in less fragmented, contiguous blocks is preferable to habitat that is fragmented;
- Habitat patches that minimize edge to area ratios are superior to those that do not;
- Interconnected blocks of habitat are better than isolated blocks, and linkages function better when the habitat within them is represented by protected, preferred habitat for the tortoise; and,
- Blocks of habitat that are roadless or otherwise inaccessible to humans are better than blocks containing roads and habitat blocks easily accessible to humans.

We ask that these management objectives be incorporated when proponents are selecting habitat to acquire or recovery actions to implement. Otherwise, the habitat acquisition and implementation of other recovery actions may be scattered among the 7+ or 8+ million acres and provide little benefit to the tortoise.

To focus recovery actions in a geographic configuration that would provide the greatest effective conservation benefit to the tortoise, we recommend a tiered approach to habitat acquisition and implementation of other recovery actions. Tier 1 would be a geographic area delineated that would build upon the current locations of tortoise habitat effectively managed for the conservation of the species and connectivity habitats needed now and in the near future. When the mitigation in Tier 1 is complete or nearly complete, Tier 2 would be available for implementation. It would be a geographic area that would build upon the effectiveness of the mitigation implemented in the Tier 1 area. When the mitigation is complete or nearly complete, Tier 3 would be available. Given this approach, the USFWS would direct proponents to areas smaller than the 7 million or 8 million acres currently identified in the DEIS and GCP, thereby better meeting the reserve design objectives stated in the Desert Tortoise Recovery Plan (USFWS 1994). The tiering or prioritization of acquisition lands and other recovery actions would also weigh the importance of connectivity habitats to northern areas to facilitate tortoise movements north in response to climate change (Parandhaman 2023).

Page 3-18, Desert Tortoise, Environmental Consequences: “[M]itigation that is concentrated within the mitigation area would provide greater benefit to the desert tortoise and its critical habitat for two primary reasons. First, the mitigation area would consist primarily of federal lands and lands managed by other organizations for conservation purposes. This land base would allow federal agencies and conservation partners to manage a large landscape in a more comprehensive manner without expending most available funding on land acquisition. Second, the USFWS, BLM, and other agencies and organizations working on recovery of the desert tortoise would be able to integrate more fully the mitigation stemming from incidental take permits with mitigation from projects on federal lands and other recovery initiatives, such as the Recovery and Sustainment Partnership Initiative. This initiative is a partnership between the DoD and the Interior to “develop innovative regulatory approaches and tools for achieving [FESA] objectives in a manner consistent with military needs and objectives.” “As part of this program, the Department of Defense has funded recovery actions within specific desert tortoise conservation areas.”

Please see our comments above for pages ES-2 and 1-4, “conservation area” and page 2-9, “For the land acquisition, land donation, and mitigation banking options” that describe our concerns about whether tortoise conservation areas on federal lands are effectively managed for tortoise conservation especially given BLM’s multiple use mandate for managing our public lands.

Page 3-18, Desert Tortoise, Cumulative Impacts: “Over a million acres of land have been acquired by the BLM and other organizations within the planning area. These lands include acquisitions by the BLM through the Land and Water Conservation Fund, mitigation resulting from past projects that have affected desert tortoises, and acquisitions by nongovernmental organizations. Most of these acquisitions have been within critical habitat of the desert tortoise and the mitigation area of the GCP.”

Please provide a map that indicates where these acquired lands are located. This information will help explain where the management agencies are focusing their efforts to conserve the tortoise. Providing a summary of why specific areas have been targeted for land acquisition would also be helpful in elucidating recent efforts by these agencies and help determine the future focus of mitigation within the 7+ million to 8+ million acres within the mitigation area.

Given this effort by these entities and the acreage acquired, why have the densities and numbers of adult and young tortoises declined? The acquisition of more lands while allowing the development of activities on other lands in the mitigation area is not likely to “to ensure that mitigation contributes to the species’ long-term recovery” (page 1-3, Purpose and Need).

Page 3-19, Desert Tortoise, Cumulative Impacts: “Under the two action alternatives, the more focused and comprehensive approach to mitigating for the incidental take of desert tortoises in specific areas would likely accelerate recovery efforts for the desert tortoise. This more aggressive and comprehensive approach would be in line with the recommendation in the 2011 recovery plan to apply more “aggressive management . . . within existing [desert] tortoise conservation areas” (Service 2011). We do not understand how approving incidental take permits that offset the impacts of the taking to the tortoise in California through the implementation of minimization and mitigation measures would “accelerate recovery efforts.”

Rather, we argue that offsetting the impacts, if fully successful, would be more likely to result in the status quo for the tortoise. Please explain in the FEIS how this acceleration of recovery efforts would happen, including references from the scientific literature. In addition, please analyze what the results would be from the acceleration of these recovery efforts.

CEQ states, “Determining the cumulative environmental consequences of an action requires delineating the cause-and-effect relationships between the multiple actions and the resources, ecosystems, and human communities of concern. The range of actions that must be considered includes not only the project proposal but all connected and similar actions that could contribute to cumulative effects.” The analysis “must describe the response of the resource to this environmental change.” Cumulative impact analysis should “address the sustainability of resources [emphasis added], ecosystems, and human communities.”

The CEQ provides eight principles of cumulative impacts analysis (CEQ 1997, Table 1-2). These are:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Note that CEQ recognizes that synergistic and interactive impacts as well as cumulative impacts should be analyzed in the FEIS for the tortoise and other the resource issues.

We request that the FEIS (1) include these eight principles in its analysis of cumulative impacts to the Mojave desert tortoise; (2) ensure that synergistic and interactive impacts from the proposed project are included in this analysis; (3) address the sustainability of the tortoise in/near the planning area and in the Western Mojave, Colorado Desert, and Eastern Mojave Recovery Units especially with respect to connectivity between populations in TCAs/CHUs and connectivity to tortoise habitats to the north; and (4) include effective science-based mitigation, monitoring, and adaptive management that protect desert tortoises and their habitats during implementation of the GCP in the California desert.

In addition, we request that USFWS monitor the impacts to both tortoises and occupied habitats of each project authorized by an incidental take permit to a database and geospatial tracking system that tracks cumulative impacts (e.g., surface disturbance, paved and unpaved routes, linear projects, invasive species occurrence, herbicide /pesticide use, wildfires, etc.), management decisions, and effectiveness of mitigation for each project. Without such a tracking system, USFWS is unable to analyze cumulative impacts to special status species (e.g., desert tortoises) with any degree of confidence.

Page 3-24, Other Wildlife, Including Special Status Species, Affected Environment: “The Mohave tui chub occurs in several maintained ponds and a spring in the planning area. It does not overlap habitat with the desert tortoise. Use of the GCP is unlikely to affect this species.”

While the habitat of the tortoise does not overlap with the Mohave tui chub, the permit area that would allow development may adversely impact the Mohave tui chub. The permit area includes the Indian Wells Valley where Inyokern and Ridgecrest are located. Substantial over-drafting of ground water is a recent issue in the Indian Wells Valley. The Mohave tui chub occurs in a water body immediately north of Ridgecrest. The source of water for this water body is a combination of ground water and discharge from the wastewater treatment facility for the City of Ridgecrest. Increased development that would be facilitated by the GCP would likely mean more groundwater pumping to supply water to support this development, which could reduce the water quality and quantity that is currently available to the Mohave tui chub. The USFWS should analyze whether this increased development and associated increased water needs requiring more ground water as a result of issuing incidental take permits under the GCP would adversely impact the Mohave tui chub.

Page 3-26, Special Status Species, Environmental Consequences and Page 3-28, Special Status Species, Cumulative Impacts: In these two sections of the DEIS, we were unable to find an analysis of how the permitting of projects in the permit area would impact the Mohave ground squirrel (*Xerospermophilus mohavensis*). The USFWS briefly mentions on page 3-25 that the permit area includes “core population, peripheral population, and linkage areas for the Mohave ground squirrel.”

Although much of the range of the tortoise and Mohave ground squirrel overlap, their habitat and connectivity needs differ. The range of the Mohave ground squirrel is substantially smaller than the tortoise and confined to the western portion of the range of the tortoise. The mitigation area for the tortoise overlaps only a small part of the range of the Mohave ground squirrel. Permitting development in habitat for both species may have a greater adverse impact on the ground squirrel than the tortoise. Consequently, developing a GCP for the tortoise does not automatically include the conservation needs of the Mohave ground squirrel.

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. The USFWS was petition in 2023 to list the Mohave ground squirrel. We ask how this GCP for the tortoise would streamline the incidental take permitting process for projects that are likely to take the Mohave ground squirrel if it is listed under the FESA in the next few years. We question the logic of issuing a GCP and incidental take permits for the tortoise that may accelerate take of the Mohave ground squirrel and contribute to its listing under the FESA. We reiterate our scoping comments that recommended the Mohave ground squirrel be included as a covered species in the GCP so the USFWS can “streamline the issuance of incidental take permits for covered non-federal activities” for listed species and those that may become listed in the near future.

Summary of the GCP

In summary, we support the concept of the GCP but not as currently written. The GCP does not use the best available scientific information to determine the avoidance, minimization, and mitigation measures necessary to effectively offset the impacts of the taking, including direct, indirect, and cumulative impacts.

The GCP does not require the review and approval of the DTRO for the issuance of individual incidental take permits under the GCP or the approval of the GCP. The DTRO is the federal lead for the tortoise and as such keeps current with relevant scientific reports and journal articles, and analyzes data on the tortoise with respect to its survival and recovery.

The GCP does not appear to comply with the requirements in the FESA, implementing regulations, or USFWS’s and NMFS’s HCP Handbook.

The GCP does not appear to consider climate change or address its impacts in the delineation of the project area and mitigation area. As tortoise habitat moves to north, the tortoise requires linkage habitat to connect existing populations with this habitat. It does not include the designation of additional habitat needed by the tortoise for its long-term survival and recovery. The USFWS’s designation of critical habitat for the tortoise does not include the modeled changes to tortoise habitat from climate change and anthropomorphic development/activities.

We are attaching our August 31, 2023 comment letter on the 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). We request that USFW reconsider the suggestions made in this

letter as they were intended to help the USFWS develop a more inclusive GCP for covered species. We reiterate that the GCP should anticipate future listing of species and include them now rather than needing to revise the GCP and conduct NEPA compliance after they are listed in the future, so as to function as a pre-listing conservation planning activity; that covered activities fully comply with the FESA, implementing regulations, and HCP Handbook; and incorporate climate change in the development of the GCP as it applies to the covered species and their habitats.

We appreciate this opportunity to provide the above comments and trust they will help protect tortoises during any resulting authorized activities. Herein, we reiterate that the Council and DTTC want to be identified as Affected Interests for this and all other projects funded, authorized, or carried out by the USFWS that may affect desert tortoises, and that any subsequent environmental documentation for this project is provided to us at the contact information listed above. Additionally, we request that you notify the Council (eac@deserttortoise.org) and DTTC (roger.dale@tortoise-tracks.org) of any future proposed projects that the USFWS may authorize, fund, or carry out in the range of the desert tortoise in California or other desert tortoise species in the southwest.

Please 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



Roger Dale
Desert Tortoise Preserve Committee, President

Attachments:

Comment Letter on 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) date August 31, 2023

Appendix A – Demographic Status and Trend of the Mojave Desert Tortoise including the Tortoise in California

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Appendix A Demographic Status and Trend of the Mojave Desert Tortoise including the Tortoise in California

Status of the Population of the Mojave Desert Tortoise: We provide 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). We believe 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 in California through 2021

- Tortoises in all three TCAs in the Western Mojave Recovery Unit declined in densities and numbers since 2004
- Adult tortoise densities in all three TCAs in the Western Mojave Recovery Unit are below the population viability threshold
- Tortoises in three of the five TCAs in the Colorado Desert Recovery Unit included in the Mitigation Area for the General Conservation Plan declined in densities and numbers since 2004 [The Navy's Chocolate Mountains Aerial Gunnery Range is not included]
- Adult tortoise densities in two of the TCAs in the Colorado Desert Recovery Unit are below the population viability threshold
- Tortoises in the only TCA in the Eastern Mojave Recovery Unit in California declined in densities and numbers since 2004
- Adult tortoise densities in the only TCAs in the Eastern Mojave Recovery Unit in California are below the population viability threshold

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/km² 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/km² (10 breeding individuals per mi²) (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/km² 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/km² (10 breeding individuals per mi²) (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: We believe 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, we believe 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

Allison L.J. and A.M. McLuckie. 2018. Population trends in Mojave desert tortoises (*Gopherus agassizii*). Herpetological Conservation and Biology. 2018 Aug 1. 13(2):433–452. http://www.herpconbio.org/Volume_13/Issue_2/Allison_McLuckie_2018.pdf

or

<https://www.fws.gov/media/allison-and-mcluckie2018mojave-desert-tortoise-population-trends>

[USFWS] U.S. Fish and Wildlife Service. 1994a. Desert tortoise (Mojave population) Recovery Plan. U.S. Fish and Wildlife Service, Region 1, Portland, Oregon. 73 pages plus appendices. https://ecos.fws.gov/docs/recovery_plan/940628.pdf

[USFWS] 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.

[USFWS] U.S. Fish and Wildlife Service. 2011. Revised Recovery Plan for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*). U.S. Fish and Wildlife Service, California and Nevada Region, Sacramento, California.

<https://www.fws.gov/sites/default/files/documents/USFWS.2011.RRP%20for%20the%20Mojave%20Desert%20Tortoise.pdf>

- [USFWS] U.S. Fish and Wildlife Service. 2015. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2013 and 2014 Annual Reports. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada. <https://www.fws.gov/sites/default/files/documents/USFWS.2015%20report.%20Rangewide%20monitoring%20report%202013-14.pdf>
- [USFWS] U.S. Fish and Wildlife Service. 2016. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2015 and 2016 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada. <https://www.fws.gov/sites/default/files/documents/USFWS.2016%20report.%20Rangewide%20monitoring%20report%202015-16.pdf>
- [USFWS] U.S. Fish and Wildlife Service. 2018. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2017 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada. <https://www.fws.gov/sites/default/files/documents/USFWS.2018%20report.%20Rangewide%20monitoring%20report%202017.pdf>
- [USFWS] U.S. Fish and Wildlife Service. 2019. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2018 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada. <https://www.fws.gov/sites/default/files/documents/USFWS.2019%20report.%20Rangewide%20monitoring%20report%202018.pdf>
- [USFWS] U.S. Fish and Wildlife Service. 2020. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2019 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada. 42 pages. https://www.fws.gov/sites/default/files/documents/2019_Rangewide%20Mojave%20Desert%20Tortoise%20Monitoring.pdf
- [USFWS] U.S. Fish and Wildlife Service. 2022a. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2020 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada. <https://www.fws.gov/sites/default/files/documents/USFWS.2022%20report.%20Rangewide%20monitoring%20report%202020.pdf>
- [USFWS] U.S. Fish and Wildlife Service. 2022b. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2021 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada. <https://www.fws.gov/sites/default/files/documents/USFWS.2022%20report.%20Rangewide%20monitoring%20report%202021.pdf>



DESERT TORTOISE COUNCIL

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Submitted via <https://www.regulations.gov>

August 31, 2023

Martha Williams, Director
Gary Frazer, Assistant Director, Ecological Services
Attn: Docket No. FWS-R8-ES-2023-0084
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: PRB/3W
Falls Church, VA 22041-3803

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.

As of June 2022, our mailing address has changed to:

Desert Tortoise Council
3807 Sierra Highway #6-4514
Acton, CA 93510.

Our email address has not changed. Both addresses are provided above in our letterhead for your use when providing future correspondence to us.

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 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 General Conservation Plan, 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 are not associated with development/construction projects (e.g., public works agencies, OHV events, OHV use in State Recreation Areas, etc.).

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

California City, which has an active off-highway/off-road vehicle recreation program and includes the sales of permits to operate off-road vehicles, should be included as a covered activity.

The 25,000-acre Onyx Ranch purchased by the 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 off-highway/off-road vehicle 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 entity 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 range of the tortoise. This is 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 the time needed to determine the effectiveness of the mitigation and not an arbitrary time.

Similarly, types of effectiveness monitoring would 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 would 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, as it occurs in the proposed permit area and listed under the California Endangered Species Act (CESA). Its range overlaps much of the tortoise's range in the western portion of the Mojave Desert. Coordination with 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 and Leitner 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 GCP, we did not find specific direction on how to best minimize, mitigate, and monitor the impacts of the taking. Rather we found suggested options from which a permit applicant could make choices. The actions to minimize the impacts of the taking were mostly limited to new projects during the construction phase. We did 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.” We are unsure if this includes 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 FR 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 or areal extent 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 General Conservation Plan for the Mojave desert tortoise and appreciates the efforts by the USFWS to develop a GCP. 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/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 builds from 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 habitat conservation plans 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 CGP.

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 are also 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 California Department of Fish and Wildlife – “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 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 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/not covered. 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 after “...permit is in effect.”

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.”

How does USFWS intend to comply with NEPA for each ITP issued?

Page 5: “The general conservation plan would not be available to applicants in 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.

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 is 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 statements that appear to be arbitrary.

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 California Department of Fish and Wildlife.

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 statements, 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 sign 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 above-ground activity, movement, and 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 this sentence refers to in the GCP. Please clarify this statement.

In the 5-year review, the Service 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 the York Fire 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 and 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. 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 that we have attached for your use in the GCP. Because the focus of the GCP is the tortoise in California, you can delete the data for Nevada, Arizona, and Utah.

Noteworthy is 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 CGP. 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 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 see appropriate rather than saying “the difficulties associated with determining areas that it actually occupies....quantifying its distribution with precision. 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 incidental take permit 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. 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 provided subsidies 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. We ask this as, the Council could make a converse argument. 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 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 would be successful is 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 address 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 inquire 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. 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 this metric was appropriate for setting as the 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. Recovery unit boundaries have been delineated using genetics 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 Bureau 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 the requirement to minimize only.

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 do not believe this same level of assured conservation is possible under land donated to federal land management agencies. 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. 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 or an area of critical environmental concern 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 federal land management agencies as their management authorities allow diverse 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.

“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 discuss "post-activity compliance report" 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 that is 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. In addition, upon reviewing the GCP we discovered that many of our comments had not been incorporated into the GCP.

We thank the USFWS for providing 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, 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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