



DESERT TORTOISE COUNCIL

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Via email only

Date: 31 January 2024

Attn: Mr. Sierra Willoughby
National Park Service, Mojave National Preserve
2701 Barstow Road
Barstow, California 92311
Sierra.Willoughby@nps.gov

RE: Kelso-Cima and South Kelbaker Roads Improvement Project

Dear Mr. Willoughby,

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

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

We appreciate this opportunity to provide comments on the above-referenced project. Given the location of the proposed project in habitats occupied by the Mojave desert tortoise (*Gopherus agassizii*) (synonymous with Agassiz's desert tortoise), our comments include recommendations intended to enhance protection of this species and its habitat during activities authorized by the National Park Service (NPS), which we recommend be added to project terms and conditions in the authorizing document (e.g., right of way grant, etc.), as appropriate. We are also providing comments on the goals and objectives of the project and its potential impacts. 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), 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 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 decision is still pending at the time of this writing. (See two references attached.)

We understand that in developing the Kelso-Cima and South Kelbaker Roads Improvement Project (Project), NPS will address current issues from an existing outdated and deteriorating road carrying up to 1,700 vehicles per day, having a record of high human mortality due to accidents, and causing mortality to at least 10 tortoises each year along 34 of 41 linear miles of the Kelbaker Road. The Project's goals are to:

- Rehabilitate Kelso-Cima and South Kelbaker Roads, with demolition and removal of the existing road surface, installation of a new road base, and reapplication of the asphalt road surface to create consistent corridor width.
- Stabilize/armor low-water crossings to prevent erosion.
- Install features along Kelso-Cima Road and South Kelbaker Road to prevent tortoise mortality and promote habitat connectivity.
- Improve access and safety at the Granite Pass viewpoint.
- Include pullouts along the roadway.

Several of our members are familiar with this road, its desert surroundings, the University of California Sweeney Granite Mountains Desert Research Center, and the desert tortoise populations present along the Kelbaker Road. While we are in full support of all that can be done to improve the road to prevent mortality of desert tortoises and address other issues, we are aware that many details need to be worked out to ensure the best possible outcome for the road renovation. Our comments are as follows and we ask that your team review and consider them in creating the final road restoration plan.

Our primary concerns are the Project's impacts on the Mojave desert tortoise and their habitats during and after construction (e.g., road use and maintenance of the roads and associated structures). During construction, we strongly recommend the NPS implement all appropriate measures to protect tortoises from direct and indirect impacts. We recommend that NPS follow the guidance/direction provided in the publications by Blanchard et al. (2022), Fairbank et al. (2021), Fairbank et al. (2022), and Huijser et al. (2023). Further, we recommend that during construction, road use, and maintenance the NPS will:

- Ensure there are sufficient culverts in tortoise habitat taking account of predictable climate change.
- Ensure undercrossing (e.g., culverts) sizes and access points are usable by tortoises of all size classes (e.g., no riprap in the pathways leading to and from the culverts; no drop-off points/plunge pools, etc.). We suggest following guidelines developed by the U.S. Fish and Wildlife Service and other agencies on culvert design.
- Install and maintain *permanent* tortoise exclusion fencing during project construction activities, road use, and maintenance activities, as appropriate.
- Ensure tortoise shade structures are placed periodically both inside and outside tortoise exclusion fencing.
- Perform regular maintenance of exclusion fencing and these underpasses and culverts, especially after major precipitation events that direct surface flows to the roads.
- Monitor the effectiveness of the exclusion fencing to prevent tortoises from accessing roads and getting trapped on them, and monitor the use of culverts by tortoises and other wildlife to ensure their design is not impeding use.
- Reconsider existing tortoise crossing signs and supplement them as necessary along these roads where tortoise mortalities have been documented and occupied habitats occur.
- Consider whether the railroad track at Kelso creates an artificial barrier for tortoise movements, as we understand NPS currently plans to not install tortoise exclusion fencing along the proximate side of the road.

With regards to the third bullet, we intentionally use the word, “permanent,” for the tortoise exclusion fence. NPS documents that as many as 10 tortoises die each year along these roads, which we believe is unsustainable. Therefore, we recommend that fencing materials be bought and installed prior to road construction that can remain in place in perpetuity to minimize – hopefully eliminate – this avoidable source of mortality. To minimize costs, NPS can selectively choose those stretches of the roads to be fenced, as not all adjacent areas comprise occupied tortoise habitats. Whereas these fences will require monitoring and repair, particularly after storm events, we believe that the benefits justify the expenses.

For the last bulleted issue, we understand that NPS is assuming the existing railroad track parallel to the road creates an artificial complete barrier for tortoise movements. Hence, NPS does not plan to install tortoise exclusion fencing along the same side of the road as the railroad track. However, there is documentation of tortoises crossing rail lines [Kornilev et al. (2006) for box turtles – the size of small desert tortoises; Rautsaw et al. (2018) for adult gopher tortoises)]. We recommend that NPS study this railroad track if it has not already done so, to determine whether the rail line is a complete or semi-permeable barrier to tortoises. If semipermeable, we recommend that tortoise exclusion fencing be installed on both sides of the road to provide an effective barrier to tortoises moving onto the road.

We realize that excessive vehicle speeds are a contributing factor in vehicle accidents and human mortality. We suggest considering an alternative of using a packed gravel road rather than a paved surface to reduce vehicle speeds or providing an expanded asphalt roadbed like that used by the Nevada Department of Transportation (NDOT). We understand that the NDOT surfaces are resistant to wash boarding, relatively easy to maintain, and that they prevent excessive speeding that contributes to mitigating both human and tortoise mortality.

We request that NPS add this project, including GPS locations of sections of improved roadways, tortoise exclusion fencing, underpasses/culverts and types, and pullouts to a database and geospatial tracking system. This documentation would allow NPS to easily locate structures for future monitoring and maintenance. In addition, it would enable NPS to track cumulative impacts for the tortoise and other special status species., including Mojave desert tortoises. This tracking system should be used to track cumulative impacts (e.g., surface disturbance, paved and unpaved routes, linear projects, invasive species occurrences, herbicide/pesticide use, wildfires, etc.), management decisions, and effectiveness of mitigation for each project.

Finally, we recommend that the NPS supports the Sweeney-Granite Mountain Natural Reserve (Reserve) and its need for ongoing access for resident and visiting staff, researchers, and classes. There are at least four access roads along the southern part of Kelbaker Road that are essential for this facility to operate. We suggest that the Reserve, the University of California (U.C.) Riverside Campus, the U.C. Natural Reserve Office, and NPS coordinate and perhaps complete cooperative agreements to provide ongoing, necessary access by U.C. staff, student interns, and volunteers both during and following construction (if permanent fences are installed).

We appreciate this opportunity to provide the above comments and trust they will help protect tortoises during any resulting authorized activities and into the foreseeable future. Herein, we reiterate that the Council wants to be identified as an Affected Interest for this and all other projects funded, authorized, or carried out by the National Park Service 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 ask that you notify the Desert Tortoise Council at eac@deserttortoise.org of any proposed projects that National Park Service may authorize, fund, or carry out in the range of any species of desert tortoise in the southwestern United States (i.e., *Gopherus agassizii*, *G. morafkai*, *G. berlandieri*, *G. flavomarginatus*) so we may comment on it to ensure the National Park Service fully considers actions to conserve these tortoises as part of its directive to conserve biodiversity on lands managed by National Park Service.

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

Literature Cited

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