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Via email only

20 November 2021

Attn: Eric Duarte, Angelica Rose
Bureau of Land Management
Lake Havasu Field Office
1785 Kiowa Avenue
Lake Havasu City, AZ 86403
eduarte@blm.gov, adrose@blm.gov

RE: Lake Havasu Field Office Vegetation Management Plan (DOI-BLM-AZ-C030-2022-0005-OTHER_NEPA)

Dear Mr. Duarte, Ms. Rose,

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

We appreciate this opportunity to provide comments on the above-referenced project. Given the application of vegetation management prescriptions in habitats likely occupied by the Sonoran desert tortoise (*Gopherus morafkai*) (synonymous with Morafka's desert tortoise) and Mojave desert tortoise (*Gopherus agassizii*) (synonymous with Agassiz's desert tortoise), our comments pertain to enhancing protection of these two species during activities authorized by the Bureau of Land Management (BLM), which we assume will be added to the Decision Record as needed. Please accept, carefully review, and include in the relevant project file the Council's following comments and attachments for the proposed project.

Unless otherwise noted, the page numbers cited below pertain to the 2022 Vegetation Management Plan[1], which is summarized on page 2 as follows: "The development of the Vegetation Management Plan (VMP) within the Bureau of Land Management (BLM) Lake Havasu Field Office (LHFO) is to identify vegetative communities and apply best management practices on native and non-native species found within those communities. The LHFO oversees different types of vegetation communities and promotes long-term management goals to maintain and develop desire future conditions to support watershed stability, improve riparian-wetland functions, enhance ground water recharge, comply with state water quality standards, and enhance wildlife habitat. Through proper management of plant communities, ecological functions can improve to meet and maintain desired conditions. Implementing an Integrated Vegetation Management (IVM) approach in the LHFO is crucial to uphold all ecological vegetative communities including terrestrial, riparian, and aquatic systems. The purpose of this VMP is to identify and implement treatment areas to move efforts towards maintaining desired vegetation future conditions on BLM Lands in the LHFO."

Specific comments on the VMP are given as follows:

1. The second paragraph on page 2 references two Programmatic Environmental Impact Statements (PEIS) and one Programmatic Environmental Report (PER), two of which were dated 2007 and the third in 2016 (herein, "Programmatic Treatments"). All three refer to "Treatments" that govern the application of herbicides to wildland habitats. Given that the Sonoran desert tortoise is currently designated as a Candidate species for federal listing as of July 2020 (85 Federal Register 73164), four years after the most recent PEIS referenced above, we ask that the BLM reconsider each of these programmatic plans relative to the new status of the Sonoran desert tortoise and revise them as necessary. Now that the Sonoran desert tortoise is designated as a Candidate species within the project area, is there anything in the three programmatic plans that conflicts with management of a Candidate species, which we understand is to be treated as if it were listed until which time the formal determination is made?

2. Section 1.1 on page 2 provides the following affected area: "The LHFO is primarily located in what is known as the Lower Colorado River Valley Subdivision of the Sonoran Desertscrub Biome. Boundaries include the Colorado River from Davis Dam in the north to south of Parker Dam. Areas covered on the California side vary in width from less than one-quarter mile to approximately 6 miles west of the Colorado River. Boundaries also extend eastward to Alamo Dam and the Harcuvar Mountains near Wenden, Arizona. Counties found within LHFO include Mohave, San Bernardino, Riverside, La Paz, and Yavapai county." We note that areas in California are likely occupied by the Mojave desert tortoise, which has been listed as a threatened species by the U.S. Fish and Wildlife Service since 1990 (USFWS 1990). We ask that the BLM take this opportunity to review the VMP and the three Programmatic Treatments to ensure that the application of herbicides and other prescriptions are consistent with management of the federally-listed Mohave desert tortoise under the federal Endangered Species Act. This compliance would include completing an ecological risk assessment of the direct and indirect impacts of the named herbicides to the Mojave desert tortoise and its habitat and using this information to complete formal section 7 consultation for using specific herbicides, unless this was recently completed. Please see comment #7 below for addition information/concerns.

[1] https://www.dropbox.com/s/4yfuv4om4azt9wk/Lake%20Havasu%20Vegetation%20Management%20Plan.pdf?dl=0

3. On page 10, Section 3.1.4, Revegetation, the intent of this methodology is given as follows: "Introduction of native species may take place after treating an area to encourage native recruitment by introducing native species by various methods such as tree, shrub, and emergent plantings, seeding, and propagation techniques (cuttings, transplants, clone selection, specialized stems and roots, etc.) obtained by local seed collection areas or nurseries with local native species." We are pleased to provide BLM with a set of best management practices (Abella and Berry 2016), entitled "Enhancing and Restoring Habitat for the Desert Tortoise, *Gopherus agassizii*.[2]"

4. The final paragraph on page 10 states the following with regards to using supplemental irrigation: "Temporary protective measures such as small fencing around base, poles to keep plants upright, and/or exclosures may also be installed to allow time for vegetation to establish root systems and grow to a size that will withstand biotic and abiotic stressors." We further suggest in suitable tortoise habitats that the use of supplemental watering avoid the creation of any standing water, which may attract and concentrate common ravens, a known tortoise predator, in tortoise-occupied habitats or connectivity habitats.

5. The following statement is given at the bottom of page 17 and continued on the top of page 18: "Many entities exist throughout the LHFO that have the authorization and the responsibility under their ROW to maintain their access routes, roads, entry ways, and facilities. As a result, many [entities] maintain their ROW by mechanical and manual methods while a few have the ability to include chemical applications." We note that the VMP in its current draft fails to mention the requirements delineated in the various documents described in the following subsections. We ask that BLM amend the VMP by adding a section that describes these and other pertinent documents, with summaries of the protective measures identified therein that would be applied during vegetation management activities in suitable and occupied Sonoran desert tortoise habitats. There are analogous prescriptions and measures in USFWS (2009) that would apply to Mojave desert tortoises within the federally-listed population, which should be added to this amended section.

a. For all such projects authorized, funded, or carried out by the BLM that may affect the Sonoran desert tortoise, since BLM is a signatory to the Candidate Conservation Agreement for the Sonoran Desert Tortoise in Arizona (USFWS et al. 2015; herein "Agreement") and a member of the Arizona Interagency Desert Tortoise Team, we request that BLM implement all current Arizona Game and Fish Department (AGFD) guidance relative to protection of Sonoran desert tortoises included in the following documents: Desert Tortoise Survey Guidelines for Environmental Consultants (AGFD 2010); Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects (AGFD 2014); and Recommended Standard Mitigation Measures for Projects in Sonoran Desert Tortoise Habitat [Arizona Interagency Desert Tortoise Team (2008)].

b. Given that the Sonoran desert tortoise is currently designated as a Candidate species for federal listing as of July 2020 (85 *Federal Register* 73164), if there is any evidence that tortoises occur within a given project area, along designated access road(s), or within the "action area" (50 CFR §402.02) surrounding the sites, then we recommend that protective measures appropriate for a Candidate species be implemented, particularly if they supplement those protections provided by the Agreement (USFWS et al. 2015) referenced above. In addition, because the Sonoran desert

[2] https://www.dropbox.com/s/nx1b5m2b5ehya12/%23Abella%20and%20Berry%202016.pdf?dl=0

tortoise is a special status species (BLM 2008), BLM's policy says it is a "species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the ESA [Federal Endangered Species Act]." Consequently, additional protective measures from direct, indirect, and cumulative impacts may be appropriate to promote the conservation of the Sonoran desert tortoise and reduce the likelihood of future listing.

c. Equally important, the BLM's (2012 Desert Tortoise Mitigation Policy is applicable to revegetation, restoration, and related projects where vegetation is mechanically removed because the Sonoran desert tortoise is currently a Candidate species with a major threat of habitat loss/degradation. This Mitigation Policy requires "compensation to offset residual impacts after all reasonable on-site mitigation measures are incorporated into the [proposed] action." This would include compensation for tortoise habitat lost or degraded from direct impacts of construction, operation, and maintenance activities and habitat lost/degraded from indirect impacts associated with implementing the VMP (e.g., dust deposition, spread of invasive plant species, etc.).

6. On page 27, Table 4-1, Biological Resources, we ask that the following statement given in the first bullet be amended with the italicized clause that follows: "Minimize treatments during nesting and other important periods for wildlife, *including heightened tortoise activity periods in the spring (March to May) and fall (September and October)*."

7. Appendix A, pages 30 through 55, lists hundreds of trade names for herbicides and pesticides that have been approved by the BLM. In a recent BLM-authorized project [Engineering Evaluation/Cost Analysis for the Minnesota-Connor Mine Site, Mohave County, Arizona (DOI-BLM-AZ-C010-2020-0028)], BLM identified arsenic and lead as chemicals of concern (COCs) that exceeded human health and ecological screening criteria for that particular mine site. Does BLM apply similar analyses to this long list of herbicides? Given that tortoises are a long-lived species (Germano 1992, Curtin et al. 2009), we are concerned that one or more applications of some herbicides, depending on their toxicity, may bioaccumulate in tortoises that eat vegetation and/or soils saturated with these herbicides/pesticides. Have any ecological risk assessments been performed on any of the numerous herbicides listed in Appendix A with respect to their impacts on desert tortoises? In any case, we believe that it is prudent for BLM (likely enlisting an expert subcontractor) to conduct ecological risk assessments of those herbicides that are frequently used in suitable/occupied tortoise habitats. The physiology and behavior/ecology of the Mojave and Sonoran desert tortoises are very different than those of mammals and birds that are typically used as test animals to determine impacts of herbicides and other environmental contaminants. This means there are multiple pathways for these species to be exposed to herbicides. These pathways include:

- Intentional ingestion of soil and small rock that may be contaminated with herbicides
- Intentional ingestion of plants in down gradient washes that may be contaminated with herbicides
- Unintentional ingestion of soil contaminated with herbicides when foraging on plants
- Intentional inhalation of soil that may be contaminated with herbicides
- Unintentional inhalation of soil/subsoil that may be contaminated with herbicides when in burrows
- Unintentional inhalation of soil/subsoil that may be contaminated with herbicides when excavating/modifying a burrow

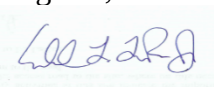
- Dermal contact when excavating/modifying a burrow.

For these reasons, the results of a standard ecological risk assessment may have little applicability to the Mojave and Sonoran desert tortoise. We request that BLM add reptiles and long-lived species in the ecological risk assessment of exposure to herbicides and evaluate all exposure pathways for the Mojave and Sonoran desert tortoise. If data from surrogate reptile species are not available, BLM should: (1) include information on the differences in longevity, physiology, and behavior/ecology of the tortoise from the surrogate mammal and bird species used in the risk assessment, and (2) add a weighted factor to adjust the increased exposure hazards to the tortoises (i.e., reduce the hazard quotient) because of its life history. The ecological risk assessment should include both acute and chronic exposure rates.

In addition, in California, use of pesticides also must comply with the California Department of Pesticide Regulation regarding the type of herbicides appropriate for particular uses, application methods and timing, worker safety, and environmental protections. BLM should indicate those herbicides that are approved for use in California as they may be different that those allowed in Arizona.

We appreciate this opportunity to provide input and trust that 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 BLM projects that may affect species of desert tortoises, and that any subsequent environmental documentation for this project is provided to us at the contact information listed above. Additionally, we ask that you respond in an email that you have received this comment letter so we can be sure our concerns have been registered with the appropriate personnel and office for this project.

Regards,



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

Literature Cited

Abella S.R. and K.H. Berry. 2016. Enhancing and restoring habitat for the desert tortoise (*Gopherus agassizii*). Journal of Fish and Wildlife Management 7(1):xx–xx; e1944-687X. doi: 10.3996/052015-JFWM-046.

[AGFD] Arizona Game and Fish Department. 2010. Desert Tortoise Survey Guidelines for Environmental Consultants. https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/2010SurveyguidelinesForConsultants.pdf

[AGFD] Arizona Game and Fish Department. 2014. Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects

https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/2014%20Tortoise%20handling%20guidelines.pdf

Arizona Interagency Desert Tortoise Team. 2008. Recommended Standard Mitigation Measures for Projects in Sonoran Desert Tortoise Habitat. June 2008. https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/MitigationMeasures.pdf

[BLM] Bureau of Land Management. 2008. Special Status Species Management – Manual 6840. Washington, D.C. December 12, 2008.

[BLM] Bureau of Land Management. 2012. Desert Tortoise Mitigation Policy. Instructional Memorandum IM-AZ-2012-031.

Curtin, A.J., G.R. Zug, and J.R. Spotila. 2009. Longevity and growth strategies of the desert tortoise (*Gopherus agassizii*) in two American deserts: Journal of Arid Environments, v. 73, p. 463–471.

Germano, D.J. 1992. Longevity and age-size relationships of populations of desert tortoises. Copeia, v. 1992, p. 367–374. [BLM] Bureau of Land Management. 2008. Special Status Species Management – Manual 6840. Washington, D.C. December 12, 2008.

[USFWS] U.S. Fish and Wildlife Service. 1990. Endangered and threatened wildlife and plants; determination of threatened status for the Mojave population of the desert tortoise. Federal Register 55(63):12178-12191.

[USFWS] U.S. Fish and Wildlife Service. 2009. Desert Tortoise (Mojave Population) Field Manual: (*Gopherus agassizii*). Region 8, Sacramento, California.

[USFWS et al.] U. S. Fish and Wildlife Service and Cooperating Agencies comprising the Arizona Interagency Desert Tortoise Team. 2015. Candidate Conservation Agreement for the Sonoran Desert Tortoise (*Gopherus morafkai*) in Arizona. Phoenix AZ.