

**DESERT TORTOISE COUNCIL**

3807 Sierra Highway #6-4514

Acton, CA 93510

[www.deserttortoise.org](http://www.deserttortoise.org)

[eac@deserttortoise.org](mailto:eac@deserttortoise.org)

**Via Email and BLM NEPA ePlanning Portal**

9 September 2024

Tassi-Gold Butte Wild Burro Gather EA Comments

Ben Roberts, Superintendent

Grand Canyon-Parashant National Monument

345 East Riverside Drive

Saint George, UT 84790

[ben\\_roberts@nps.gov](mailto:ben_roberts@nps.gov); [para\\_superintendent@nps.gov](mailto:para_superintendent@nps.gov); [jkirk@blm.gov](mailto:jkirk@blm.gov)

RE: Tassi-Gold Butte Herd Management Area Wild Burro Gather Plan Environmental Assessment (DOI-BLM-AZ-A030-2024-0009-EA)

Dear Mr. Roberts and Mr. Kirk,

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 northern 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 that may be authorized by the National Park Service (NPS) and Bureau of Land Management (BLM), which we recommend be added to project terms and conditions in the authorizing documents (e.g., decision document, etc.) as appropriate. Please accept, carefully review, and include in the relevant project file the Council's following comments and attachments for the proposed action.

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 the 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. In its status review, the California Department of Fish and Wildlife (CDFW) (2024a) 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 uplist the tortoise from threatened to endangered under the California Endangered Species Act (CESA) (CDFW 2024b) based on the scientific data provided on the species' status, declining trend, numerous threats, and lack of effective recovery implementation and land management. Among other things, this determination that the tortoise is an endangered species under CESA means that the Mohave desert tortoise population in California is deemed by the California Fish and Game Commission to be closer to extinction than when it was listed as threatened in 1989. The only status more dire than "endangered" is "extinct," and the state of California has formally determined based on its five-year status review (CDFW 2024a) that the desert tortoise is closer to extinction than it was in 1989.

### **Description of the Proposed Action**

The BLM and NPS (Agencies) that jointly manage the Grand Canyon-Parashant National Monument (Monument) propose to gather and remove wild burros from within and outside the Tassi-Gold Butte Herd Management Area (HMA) for burros. The gather plan would allow for an initial gather and removal of burros, as well as future gathers and removals, to achieve and maintain appropriate management levels (AML), which was set to zero in a 1998 agency decision. The proposed gather plan would remove wild burros from both the Tassi-Gold Butte HMA and greater Pakoon Basin area where wild burros are not authorized.

In the Tassi-Gold Butte Herd Management Area Wild Burro Gather Plan Environmental Assessment (EA), BLM and NPS describe the No Action alternative, one action alternative, and alternatives considered but not carried forwarded for analysis.

No Action Alternative – No gather or removal of burros would occur, and no additional management actions would be undertaken to control the size or growth rates of the wild burro population at this time. The estimated number of burros in the HMA is more than 200.

Proposed Action Alternative – BLM and NPS would gather and remove 100% of existing wild burros found in the Tassi-Gold Butte HMA and surrounding greater Pakoon Basin. Gathers would occur year-round and would continue to achieve and maintain the overall herd size of zero wild burros within the HMA and surrounding area. Gather methods would be determined on a case-by-case basis depending on access, time of year, funding, personnel availability, and the difficulty of gathering the burros. Gather methods include drive trapping and bait (food or water) trapping. Trap sites are about one acre each.

Wild burros would be transported in large trailers from the trap sites to a temporary holding corral within the HMA, greater Pakoon Basin, or other suitable location. Trap sites and temporary holding facilities would be located in previously used sites or other disturbed areas whenever possible. At the temporary holding corral, the wild burros would be aged and sorted into different pens. Wild burros would be transported to the receiving off-range corral (ORC, short-term holding facility) in large trailers.

Alternatives Considered but Dismissed – These included:

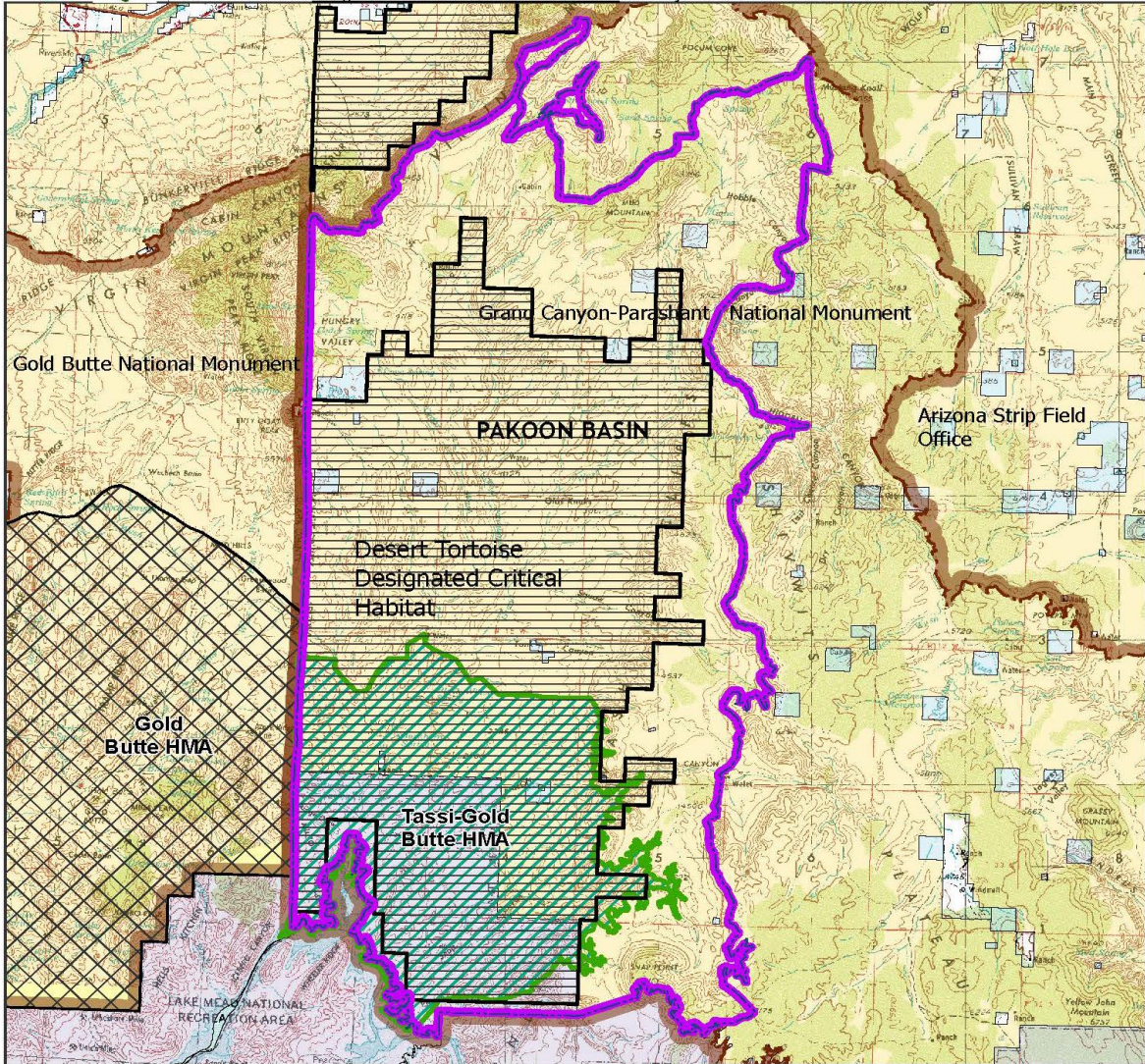
- chemical immobilization as the use of chemicals to sedate or immobilize wild horses or burros to enable their capture;
- raising the AML to a number greater than zero;
- administering fertility control vaccines;
- using natural controls;
- removing or reducing authorized livestock grazing instead of gathering and removing wild burros; and
- bait trapping only.

The Proposed Action is located in the Tassi-Gold Butte HMA and greater Pakoon Basin, in the Mojave Desert in Mohave County in northwestern Arizona. It is about 60 miles south, southwest of St. George, Utah and 35 miles south, southeast of Mesquite, Nevada. The Tassi-Gold Butte HMA is approximately 103,180 acres (elevation ranges from 1,220 to 4,800 feet) and the greater Pakoon Basin is approximately 321,365 acres (elevation ranges from 1,220 to 6,880 feet). Greater than 90% of the Tassi-Gold Butte HMA is also designated critical habitat for the tortoise as is much of the area north of the HMA in the Pakoon Basin (see Figure below).



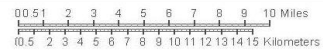


**Tassi-Gold Butte HMA Wild Burro Gather Plan - Desert Tortoise Designated Critical Habitat**  
**NEPA Project DOI-BLM-AZ-A030-2024-0009-EA, PEPC# 124215**  
 Bureau of Land Management - National Park Service - Grand Canyon-Parashant National Monument

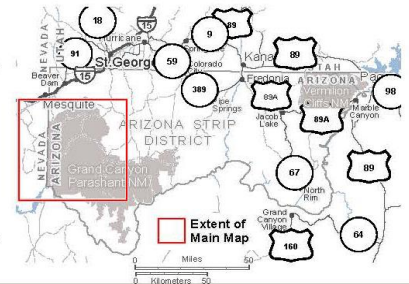


- Tassi-Gold Butte HMA
- Gold Butte HMA
- Pakoon Basin
- Grand Canyon-Parashant National Monument
- Gold Butte National Monument
- Desert Tortoise Designated Critical Habitat
- Bureau of Land Management
- Bureau of Reclamation
- National Park Service
- Private
- State

Map Produced by BLM Arizona Strip District  
 File: Burros.mxd  
 Coordinate System: NAD 1983 UTM Zone 12 N  
 Reference System: U.S. FLS3 GSRB&M  
 Scale: 1: at 8.5x11 page output  
 Date: 4/17/2024



No warranty is made by the Bureau of Land Management (BLM) regarding the accuracy or completeness of this map. This map is a representation and is to be used as intended by the BLM. Map data compiled from various sources. This map and the data from which it was derived are not binding on the BLM and may be revised at any time.



Designated critical habitat for the Mojave desert tortoise in the Tassi-Gold Butte Herd Management Area and Pakoon Basin, Mohave County, AZ.

## Comments on the Proposed Action

The Council thanks the BLM for contacting us directly about the availability of the EA for public comment. In addition, we appreciate that the Agencies have prepared an environmental compliance document for gathering burros and removing them from tortoise habitat, including designated critical habitat, to comply with the management plans for the area and initiate the process of implementing burro gathers, if the Proposed Action Alternative is selected.

**Page 9, Gather Methods – Bait Traps:** The Council recommends that, in addition to water and food used as bait, the Agencies consider using female burros in estrus to attract and trap male burros. This method was used successfully for trapping and removing all male wild boars at Channel Islands National Park.

**Page 10, Inventories and Surveys:** The Agencies say that biological and archaeological specialists would be consulted to “ensure that required surveys or inventories for sensitive species (both plant and animal) and archeological sites/artifacts and cultural sites are avoided during gather operations. If a gather is required to occur in an area not previously disturbed, a biologist and archaeologist would be required to assess the area where the trap site is to be placed to prevent impacts.”

The Council appreciates that the Agencies are trying to avoid direct impacts to sensitive species, including the tortoise. However, in this section we suggest that the Agencies add that they would implement the U.S. Fish and Wildlife Service’s (USFWS) “Desert Tortoise (Mojave Population) Field Manual: (*Gopherus agassizii*) (USFWS 2009) and “Preparing for any action that may occur within the range of the Mojave desert tortoise (*Gopherus agassizii*)” (USFWS 2019). These documents state that prior to conducting pre-project surveys to determine presence/absence of the tortoise, the names and qualifications of the surveyors should be provided to USFWS and appropriate State agency for review prior to initiating surveys. For tortoise clearance surveys, the USFWS requires that if a proposed action will be implemented under the purview of a section 7 biological opinion for the Mojave population of the desert tortoise, the USFWS requires that “each desert tortoise survey be conducted by a desert tortoise Authorized Biologist approved by the USFWS.” Please add these references and requirements to the Final EA.

**Page 10, Invasive, Non-native Plants and State Listed Noxious Weeds:** The Agencies say, “To reduce the risk of introduction or spread of weeds, any hay or feed used in conjunction with the gather activities, for example bait trap, holding facilities, or saddle horse feed, would be certified weed free.” However, we found no mention in this section of ensuring that vehicles and equipment (e.g., trailers, tractor trailers, etc.) brought to the Monument and used to implement the Proposed Action Alternative would be cleaned before being used to implement the Proposed Action Alternative to ensure they are not transporting invasive or noxious plant species to each gather site/associated facilities and through the Monument.

Please add to the description of the Proposed Action Alternative this standard conservation measure of thoroughly washing vehicles and equipment to remove plant parts and dirt prior to their transport to the Monument.



**Pages 11 – 13, Desert Tortoise:** This section begins with a citation of “Desert Tortoise Conservation Measures GCPNM RMP/GMP Appendix G 2.1.1 (BLM 2008a),” the conservation measure from the Grand Canyon Parashant National Monument Resource Management Plan [RMP] and General Management Plan [GMP].

We presume that the conservation measures for the tortoise listed below this citation in the EA are from the RMP/GMP. However, since the adoption of the TMP/GMP in 2008, some conservation measures implemented for proposed actions in the range of the tortoise/tortoise habitat have been modified. The Agencies should coordinate with the USFWS’s Desert Tortoise Recovery Office (DTRO) and Arizona Ecological Services Field Office to ensure that the latest avoidance and minimization methods are being implemented to comply with the Federal Endangered Species Act (FESA). For example, the Agencies say, “Handling procedures for desert tortoises and their eggs will adhere to protocols outlined in Desert Tortoise Council, Guidelines for Handling Desert Tortoises During Construction Projects (Desert Tortoise Council. 1994).” In 2009, this document was superseded by “Procedures for Handling and Relocating Tortoises and Eggs” in “Chapter 7 Guidelines for Handling Desert Tortoises of the Desert Tortoise Field Manual” (USFWS 2009). Recently the USFWS issued “Chapter 2. Desert Tortoise Handling” in “Desert Tortoise Monitoring Handbook, Revised 2024” (USFWS 2024). Please ensure that the current protocols and measures to avoid/minimize impacts to desert tortoises and tortoise habitat are included in the Final EA.

In addition, in this section of the EA the Agencies say, “Tortoises discovered in burrows will be relocated. Burrows will then be collapsed or blocked to prevent entry by tortoises. Desert tortoises and any desert tortoise eggs found in areas to be disturbed will be relocated.” However, we found no information on the procedures for relocating tortoises or tortoise eggs or a document cited that describes the relocation procedures. We suggest the Final EA reference the documents with procedures that will be implemented for relocating tortoises and tortoise eggs and that these procedures are approved by the DTRO and Arizona Ecological Services Field Office.

The Agencies say, “Vehicles associated with BLM-authorized projects traveling on unpaved roads in desert tortoise habitat will not exceed speed limits established by the BLM as necessary to protect desert tortoises. These speed limits will generally not exceed 40 mph even on the best-unpaved roads but may be much less than this on some roads.”

The Council’s experience with proposed actions located in tortoise habitat on unpaved roads in the project area is that the speed limits usually do not exceed 25 mph. BLM should explain why the speed limits may be faster than typically allowed in tortoise habitat for the Proposed Action Alternative. Until we have this information, the Council strongly recommends that speed limits for vehicles associated with the burro gathers be no faster than 25 mph so the driver can spot a tortoise in the vehicle’s path and stop before striking the tortoise.

We were unable to find speed limits for this preferred alternative for lands managed by the NPS. Please include this information in the Final EA.

**Page 22, Fires, Fuel Management:** The Agencies say, “Gather operations would follow policy and have no impact to fire or fuels management activities as no alterations to fuels are planned.” The Council believes that Fires and Fuel Management includes managing authorized actions to ensure that fires do not have an ignition source or sufficient fuel to carry them in the Mojave Desert as well as activities to fight wildfires. The use of motorized vehicles and equipment provides an ignition source for wildfires from catalytic converters and other heated areas on the underside of vehicles and motorized equipment. Many wildfires in the Mojave Desert are started by vehicles (Brooks and Matchett 2006). Motorized vehicles and equipment should not be used in/near stands of invasive non-native plants. We suggest that the Agencies revise this explanation by adding that measures would be implemented to substantially reduce the ignition source and fuels for wildfires where motorized vehicles and equipment would be used and include these measures in the description of the Proposed Action Alternative.

**Page 38, Threatened, Endangered, or Candidate Animal Species, Impacts from the Proposed Action:** The Agencies provided a broad description of direct impacts to the tortoise from implementation of the Proposed Action Alternative. We suggest that examples of activities that could injure, kill, or harass tortoises located above and below ground be added to this section.

For this section and other sections on resource issues analyzed in Environmental Consequences, we note an absence of citations from the scientific literature that supports the Agencies’ conclusions on impacts to the tortoise and other resource issues that affect the tortoise (e.g., Soil Resources, Vegetation including Invasive, Non-native Plant Species, Wildlife).

We remind BLM that it has a policy on “Advancing Science in the BLM: An Implementation Strategy” (BLM 2015) that it should be implementing.

According to the NPS webpage, “Putting Science to Work” (<https://home.nps.gov/subjects/science/science-to-work.htm>), “NPS applies the best available science to manage our resources and landscapes. Science informs our choices and guides our decisions. It provides ways to measure stability and change. We use science to make comparisons across places and spaces. And the scientific process allows us to see problems from many perspectives. Collaboration with our scientific partners enhances our ability to interpret data and share it with others.”

In reviewing the implementing regulations for the National Environmental Policy Act (NEPA), 40 Code of Federal Regulations (CFR) 1502.24 on Methodology and Scientific Accuracy says, that “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.”

Although this document is an EA, not an environmental impact statement, we recommend that the Agencies provide in the Final EA the citations to the scientific papers that they used to develop the information and conclusions presented in the Environmental Consequences sections for each resource issue analyzed, including the tortoise. Providing these references in the Final EA would demonstrate compliance with the BLM policy and NPS public statements and show that the conclusions in the Final EA are science-supported.

We searched the EA and were unable to find an analysis of impacts of the Proposed Action Alternative on the connectivity of tortoise populations. 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
- Collaboration and coordination.

For the first bullet, agency planning and decision-making, CEQ specifically identifies the following focal areas where connectivity and corridors should be considered early in planning, funding, and decision-making:

- Energy development planning and permitting
- Rangeland planning and management
- Hard rock mining and mineral exploration and development planning and permitting
- Public land planning and management
- Recreation planning
- Telecommunications infrastructure and management
- Transportation planning and use management.

To comply with this recent CEQ guidance, the Council requests that the Agencies add an analysis of the beneficial and adverse impacts of the Proposed Action Alternative and No Action Alternative to the Final EA with respect to connectivity of tortoise populations.

**Page 52, Threatened, Endangered, or Candidate Animal Species, Cumulative Impacts of the Proposed Action Alternative:** The analysis of cumulative impacts to the tortoise is limited to “habitat damage, disturbance, injury, and fatality from recreation, particularly OHV use, as well as competition for resources from livestock grazing and burros. Since these direct effects of the proposed action are short-term (days to months) and small in scale (approximately one acre per trap site) it is not anticipated that they would add much cumulative impact to desert tortoise in the analysis area. The long-term impact is improved suitable habitat and potential increased numbers of tortoises.”

The Council does not understand how this verbiage under Cumulative Impacts complies with CEQ’s guidance on “Considering Cumulative Effects under the National Environmental Policy Act.” (1997). In this guidance document, 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, ecosystems, and human communities.”



CEQ's guidance on how to analyze cumulative environmental consequences contains eight principles listed below:

**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 NEPA document for the resource issues.

We request that the Final EA (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 Action Alternative are included in this analysis; (3) address the sustainability of the tortoise in/near the project area and in the Northeastern Recovery Unit including connectivity between populations (CEQ 2023) in Tortoise Conservation Areas/Critical Habitat Units (CHUs); and (4) include effective science-based mitigation, monitoring, and adaptive management that protect desert tortoises and their habitats during and following implementation of each burro gather, including effective and timely restoration of habitat degraded or destroyed from implementation of the Proposed Action Alternative.

In addition, we request that BLM and NPS add this project and its impacts to BLM and NPS databases and geospatial tracking systems for special status species, including the Mojave desert tortoise, that track 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, BLM and NPS are unable to analyze cumulative impacts to special status species (e.g., desert tortoises) with any degree of confidence.

**Page 57, U.S. Fish and Wildlife Service Consultation:** The Council requests that the completed consultation document (e.g., biological opinion) with the USFWS be included in the Final EA.

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 wants to be identified as an Affected Interest for this and all other projects funded, authorized, or carried out by the BLM or NPS 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](mailto:eac@deserttortoise.org) of any proposed projects that BLM or NPS 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 BLM and NPS fully consider and implement actions to conserve these tortoises as part of their directives to conserve biodiversity on lands that they manage.

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

Cc: Darrel (Wayne) Monger, District Manager, Bureau of Land Management, Arizona Strip District, [dmonger@blm.gov](mailto:dmonger@blm.gov)  
Kristina Drake, Desert Tortoise Recovery Office Coordinator, U.S. Fish and Wildlife Service, [karla\\_drake@fws.gov](mailto:karla_drake@fws.gov)  
Heather Whitlaw, Field Supervisor, Arizona Ecological Services Field Office (Phoenix), U.S. Fish and Wildlife Service, [heather\\_whitlaw@fws.gov](mailto:heather_whitlaw@fws.gov)  
Shaula Hedwall, Senior Fish and Wildlife Biologist, Arizona Ecological Services Office, Flagstaff, AZ, [shaula\\_hedwall@fws.gov](mailto:shaula_hedwall@fws.gov)  
Brianna Fogel, Fish and Wildlife Biologist, Arizona Ecological Services Office, Flagstaff, AZ, [brianna\\_fogel@fws.gov](mailto:brianna_fogel@fws.gov)

#### Literature Cited

- Berry, K.H., L.J. Allison, A.M. McLuckie, M. Vaughn, and R.W. Murphy. 2021. *Gopherus agassizii*. The IUCN Red List of Threatened Species 2021: e.T97246272A3150871. <https://dx.doi.org/10.2305/IUCN.UK.2021-2.RLTS.T97246272A3150871.en>
- [BLM] U.S. Bureau of Land Management. 2015. Advancing Science in the BLM: An Implementation Strategy IB 2015-040. March 18, 2015. <https://www.blm.gov/policy/ib-2015-040>
- Brooks, M.L. and J.R. Matchett. 2006. Spatial and temporal patterns of wildfires in the Mojave Desert, 1980–2004. *Journal of Arid Environments* 67 (2006): 148–164. [https://cdn.greensoft.mn/uploads/users/1277/files/Greenmongolia/%D0%93%D0%B0%D0%B4%D0%B0%D0%B0%D0%B4/State%20and%20transition%20model/Brooks\\_Matchett\\_Mojave\\_wildfire\\_2006.pdf](https://cdn.greensoft.mn/uploads/users/1277/files/Greenmongolia/%D0%93%D0%B0%D0%B4%D0%B0%D0%B0%D0%B4/State%20and%20transition%20model/Brooks_Matchett_Mojave_wildfire_2006.pdf)
- [CDFW] California Department of Fish and Wildlife. 2024a. Status Review for Mojave Desert Tortoise (*Gopherus agassizii*) Report to the Fish and Game Commission, February 2024. <https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=CESA-Listing>
- [CDFW] California Department of Fish and Wildlife. 2024b. 2022-2024 News Releases. California Fish and Game Commission Holds Hybrid Meeting, April 23, 2024. <https://wildlife.ca.gov/News/Archive/california-fish-and-game-commission-holds-hybrid-meeting11>

[CEQ] Council on Environmental Quality. 1997. Considering Cumulative Effects under the National Environmental Policy Act.  
[https://ceq.doe.gov/publications/cumulative\\_effects.html](https://ceq.doe.gov/publications/cumulative_effects.html)

[CEQ] Council on Environmental Quality. 2023. Guidance for Federal Departments and Agencies on Ecological Connectivity and Wildlife Corridors. March 21, 2023.  
<https://www.whitehouse.gov/wp-content/uploads/2023/03/230318-Corridors-connectivity-guidance-memo-final-draft-formatted.pdf>

Defenders of Wildlife, Desert Tortoise Preserve Committee, and Desert Tortoise Council. 2020. A Petition to the State of California Fish And Game Commission to move the Mojave desert tortoise from listed as threatened to endangered.  
[https://defenders.org/sites/default/files/2020-03/Desert%20Tortoise%20Petition%203\\_20\\_2020%20Final\\_0.pdf](https://defenders.org/sites/default/files/2020-03/Desert%20Tortoise%20Petition%203_20_2020%20Final_0.pdf)

[USFWS] U.S. Fish and Wildlife Service. 2009. Desert Tortoise (Mojave Population) Field Manual: (*Gopherus agassizii*). December 2009. Region 8, Sacramento, California.  
<https://www.fws.gov/sites/default/files/documents/Desert-Tortoise-Field-Manual.pdf>

[USFWS] U.S. Fish and Wildlife Service. 2019. Preparing for any action that may occur within the range of the Mojave desert tortoise (*Gopherus agassizii*). USFWS Desert Tortoise Recovery Office. Reno, NV. October 8, 2019.  
[https://www.fws.gov/sites/default/files/documents/Mojave%20Desert%20Tortoise\\_Pre-project%20Survey%20Protocol\\_2019.pdf](https://www.fws.gov/sites/default/files/documents/Mojave%20Desert%20Tortoise_Pre-project%20Survey%20Protocol_2019.pdf)

[USFWS] U.S. Fish and Wildlife Service. 2024. Desert Tortoise Monitoring Handbook. Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Las Vegas, Nevada. Version: 5 June 2024.  
<https://www.fws.gov/sites/default/files/documents/2024-08/2024-mojave-desert-tortoise-monitoring-handbook.pdf>