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**Via BLM NEPA ePlanning Portal and email**

June 16, 2026

Molly Hocanson
David Jacobson
Bureau of Land Management
Utah State Office
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RE: High Desert Trail Draft Environmental Assessment (DOI-BLM-UT-0000-2026-0002-EA)

Dear Ms. Hocanson and Mr. Jacobson,

The Desert Tortoise Council (Council) is a non-profit organization comprising 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 potentially 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 Bureau of Land Management (BLM), which we recommend be added to project terms and conditions in the authorizing documents [e.g., issuance of right-of-way (ROW) grants, management plan and decision document, etc.] as appropriate. Please accept, carefully review, and include in the relevant project file the Council's following comments 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 (DTPC) to petition the California Fish and Game Commission (Commission) in March 2020 to elevate the listing of the Mojave desert tortoise from Threatened to Endangered under the California Endangered Species Act (CESA) (Defenders of Wildlife et al. 2020). Importantly, following California Department of Fish and Wildlife's (CDFW) (2024a) status review, 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 CESA based on the scientific data provided on the species' status, declining trend, numerous threats, and lack of effective recovery implementation and land management (CDFW 2024b). On July 15, 2025, the tortoise was officially uplisted to endangered status under the CESA (Commission 2025).

## Description of the Proposed Project

The Utah Department of Recreation (Utah DOR or Applicant) in partnership with Box Elder, Tooele, Juab, Millard, Beaver, Iron, and Washington Counties, Utah, proposes to designate and sign approximately 810 miles of existing routes as the High Desert Trail (HDT) (Figure 1). The BLM would designate the HDT as OHV-Open on BLM-administered lands, authorizing use by all motorized vehicles, and would create a framework for the issuance of special recreation permits (SRPs) for commercial motorized use, group use, and non-motorized competitive use of the HDT. Non-motorized use would be allowed on the HDT.

In the High Desert Trail Draft Environmental Assessment (DEA), BLM identified two action alternatives in addition to the No Action Alternative. The alternatives are:

**Alternative A, No Action Alternative**: BLM would not formally designate the HDT as open to off-highway vehicle (OHV) use, develop associated signage and staging areas, or issue coordinated Special Recreation Permits (SRPs) for use of the trail. Existing routes would continue to be managed consistent with current land use plan decisions and travel management designations on BLM land.

**Alternative B, Proposed Action**: BLM would designate on lands that it manages the 810-mile long HDT in Box Elder, Tooele, Juab, Millard, Beaver, Iron, and Washington Counties, Utah, and Elko County, Nevada (Figure 1). "The proposed trail would extend from St. George, Utah, to Beaver, Utah, and connect with the Paiute All-Terrain Vehicle (ATV) Trail in central Utah." In Washington County the HDT would " continue south toward Utah's southern border passing through the Beaver Dam Wash NCA [National Conservation Area]. The route would then head east and terminate at the Bear Claw Poppy trailhead south of St. George." This includes the Beaver Dam Slope TCA and designated critical habitat for the tortoise (Figure 2) and Zone 6 of the Red Cliffs Reserve (Figure 3).

"The project area encompasses approximately 9,851 acres and includes the HDT centerline, a buffer of 50 feet on either side of the centerline, and designated staging areas." "The maximum width of the HDT on the ground is approximately 20 feet." Staging areas would be developed, "would range from approximately 0.5 to 9.9 acres each, could be surfaced with gravel or pavement, and delineated with fencing or boulders. Staging areas may include restrooms, signage, picnic tables, and shade shelters. Camping amenities maybe developed adjacent to some staging areas in the future to accommodate increased use and demand; staging area expansion for camping would only occur after site-specific National Environmental Policy Act (NEPA) review and approval."

"The HDT would be supported by signage. Wayfinding trail markers would be installed adjacent to the road shoulder at approximately 1-mile intervals and at major intersections, using fiberglass, wood, or metal posts and decals. In addition, approximately 18 kiosks (11 at staging areas and 7 at key access points on the road shoulder) would be installed in the project area to provide maps, safety information, recreation etiquette, and information on resource stewardship and sensitive local resources." "The Utah Office of Tourism would produce paper and digital maps of the HDT and distribute information online and through social media platforms."

"All existing gates on the HDT would be replaced with cattle guards designed to accommodate full-size vehicles."

"County staff and any partners or contractors hired by the counties would generally be responsible for project construction. Equipment used during construction would vary depending on the task (e.g., staging area construction, signage installation, cattle guard installation), but would likely include backhoes, excavators, scrapers, loaders, graders, dump trucks, water trucks, and skid-steer loaders."

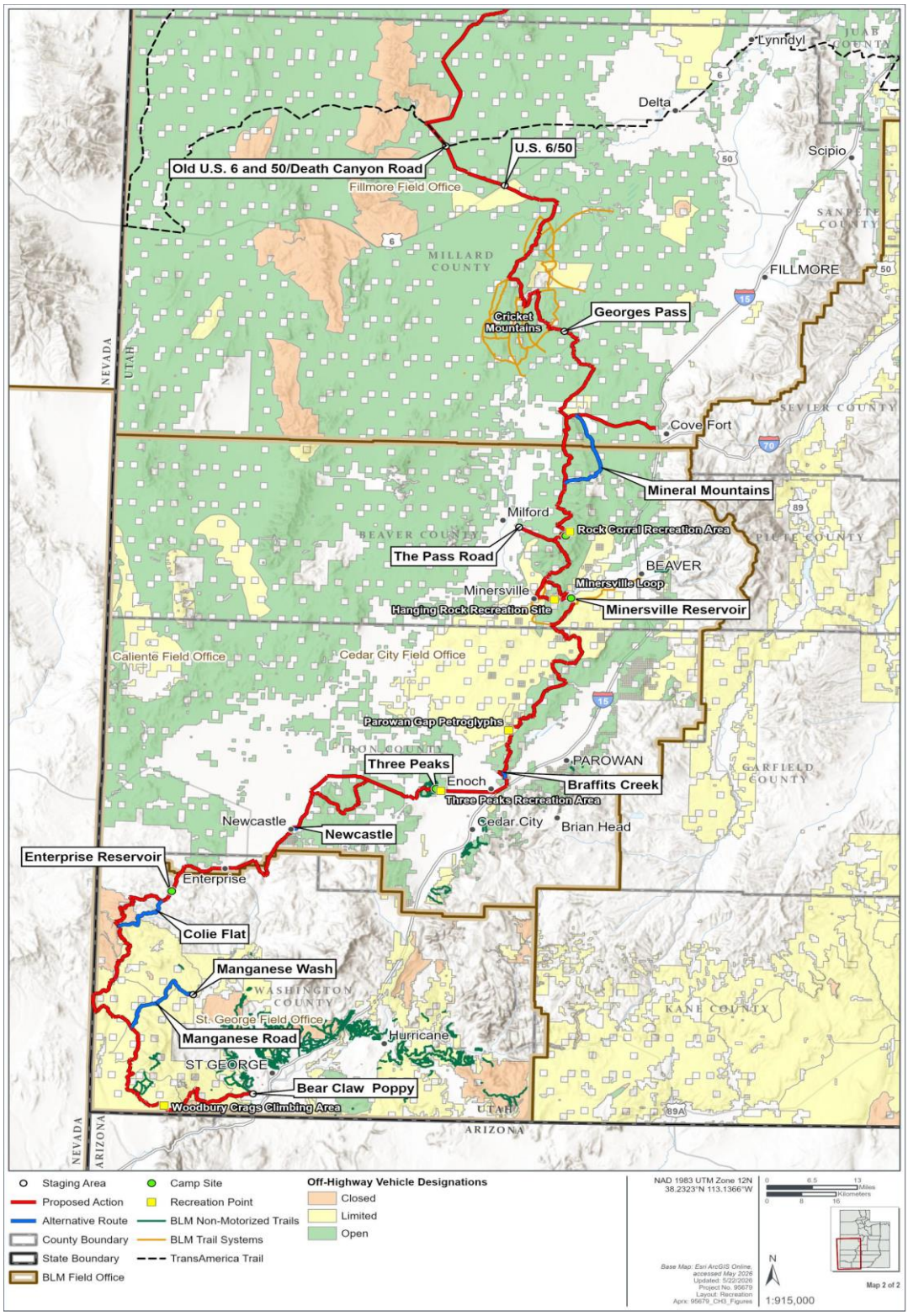



Figure 1. Southern part of proposed location of the 810-mile long High Desert Trail alternatives, staging areas and current campsites in western Utah and Elko County, Nevada

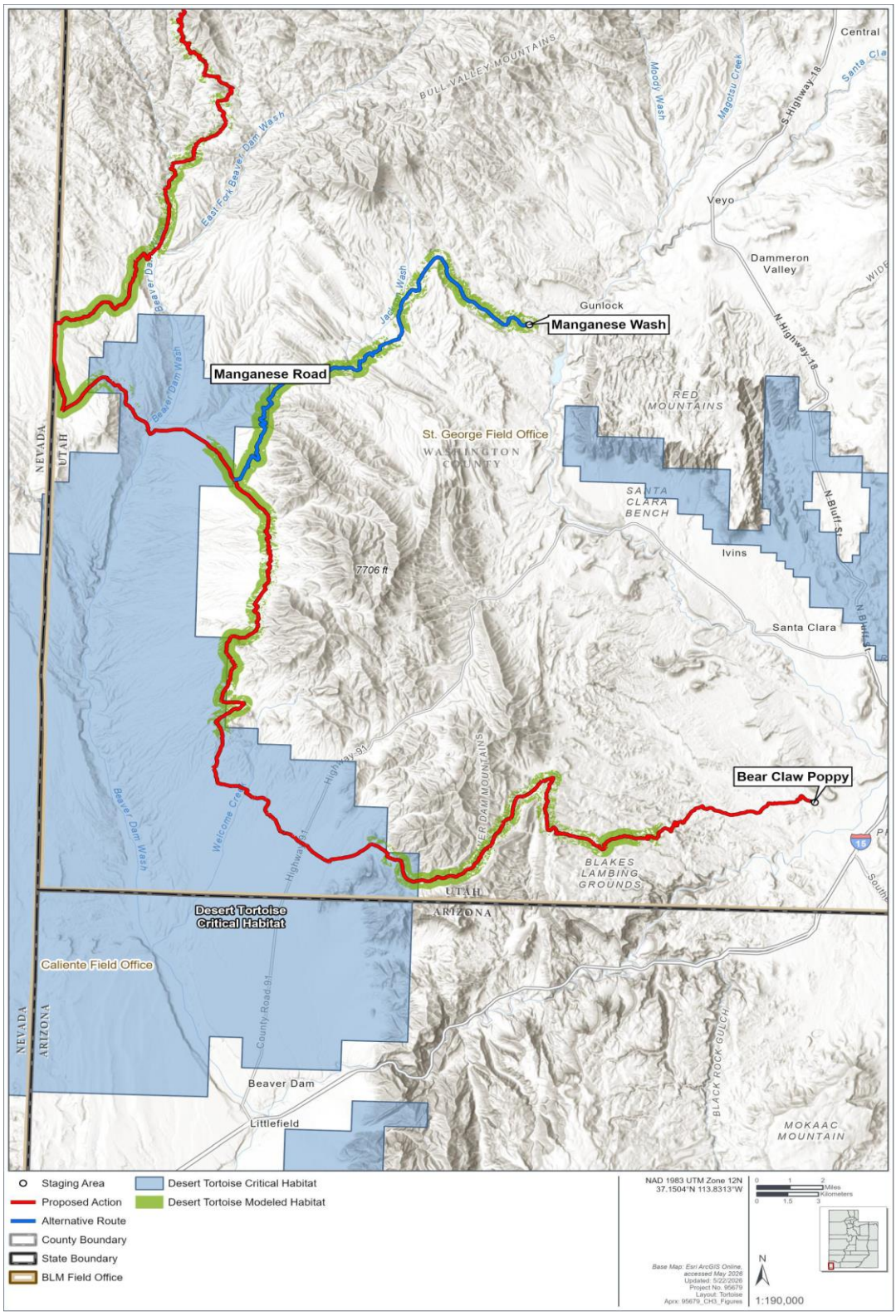



Figure 2. Critical habitat for the tortoise and locations of the proposed High Desert Trail and Alternative 6 in Washington County, Utah.

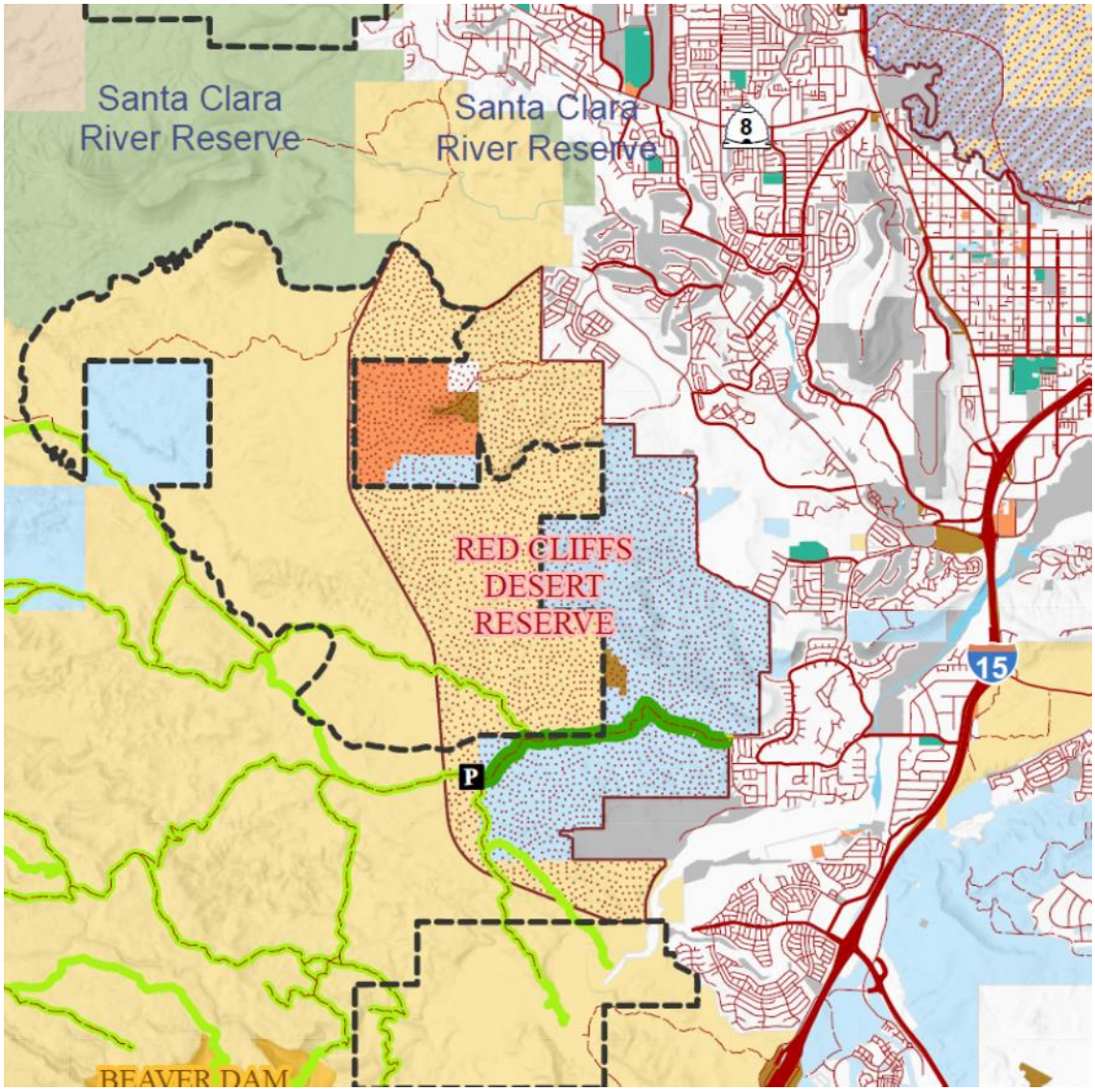



Figure 3. Location of Apex Mine Road Improvement Project (dark green ribbon) in Zone 6 of Red Cliffs Desert Reserve and Bear Claw Poppy Staging Area "P" symbol.

Approximately 28 miles of trail would require graveling" (locations not provided). Some may be paved.

"Construction is expected to begin after the NEPA process is complete in 2026 and could extend through 2030 due to the large geographic scope of the project and the number of parties involved (Table 2.2-3). Construction activities would primarily be led by the counties."

"Temporary closure of the HDT and associated staging areas, access roads, amenities, and surrounding areas may be allowed for site maintenance, visitor use management, resource protections, public health and safety, and other needs." Maintenance not considered routine was labeled additional maintenance and described as "Actions that are more than routine maintenance and that extend outside the previously disturbed road or staging area boundary, including trail widening, trail realigning, or otherwise creating new surface disturbance." "The BLM and DOR [Utah Division of Outdoor Recreation] are currently developing a memorandum of understanding that would be signed by all of the affected counties (except for Elko County, Nevada) to provide for maintenance of the trail and associated signage."

"Temporary or permanent reroutes may be authorized for cases such as special recreation events, washouts, paving of existing routes, or other circumstances. Site-specific NEPA review ***may be required*** [emphasis added] if reroutes involve new surface disturbance as part of construction or have the potential to become permanent."

BLM would designate the HDT route as OHV open on BLM-administered lands, authorizing use by all motorized and non-motorized vehicles, and would create a framework for the issuance of Special Recreation Permits (SRPs) on the HDT. Seasonal restrictions for activities requiring SRPs would be implemented for pronghorn and mule deer. "Travel would be limited to ***existing*** [emphasis added] or designated routes only." "Vehicles would be required to travel at 25 miles per hour or less in Mojave desert tortoise (*Gopherus agassizii*) habitat, wild horse herd management areas, and within a 350-foot buffer of Utah prairie dog (*Cynomys parvidens*) mapped habitat unless the trail is paved and has a posted speed limit that would be the allowable speed."

Funding for construction, management, and maintenance would be the responsibility of the Utah DOR, counties, and volunteers.

**Alternative C**: The trail route would be the same as Alternative B, the Proposed Action, except for seven reroutes that would address specific resource concerns. The total length of the Alternative C route would be approximately 779 miles. In Washington County, "the approximately 11.7-mile Colie Flat reroute would shift the trail route southeast following county roads such as Beaver Dam Wash Road and would run just outside the western edge of the Slaughter Creek Wilderness. The reroute would avoid potential private landownership conflicts." "The approximately 17.2-mile Manganese Road reroute would shift the trail northeast along Energy Corridor Road and terminate at the Manganese Wash staging area." "This reroute would shorten the overall trail length and avoid more Mojave desert tortoise designated critical habitat." "Alternative C would terminate at the Manganese Wash staging area (1.6 acres in size; see Figure 2.2-14) as opposed to the Bear Claw Poppy staging area."

"One new kiosk would be installed at the Manganese Wash staging area."

The Proposed Action and Alternative C are located on BLM and U.S. Forest Service (USFS) land with limited occurrence on Utah State Lands administered by the Utah Trust Lands Administration (TLA) (e.g., notably in Washington County (see Figures 1, 2, and 3)).

## Comments on the Proposed Project

### NEPA Document Is Limited to Use of BLM Lands

The HDT occurs on BLM lands and on U.S. Forest Service (USFS) lands (Dixie National Forest), Utah TLA lands, and private lands.

Our understanding is that the goal for the location of the HDT, when the development process started in 2019 with BLM, USFS and others, is to be a continuous route. If the USFS or other land managers/land owners decide to deny or impede access, the purpose of the HDT would not be realized. Consequently, the DEA appears to analyzing part of the proposed project rather than the entire project. BLM appears to be segmenting connected actions for the HDT by not including USFS and other land management agencies and land owners in the development of alternatives, analysis of impacts, and decision-making process.

The NEPA document for the HDT should be a collaborative effort. BLM and USFS should be co-lead agencies and U.S. Fish and Wildlife Service (USFWS) and perhaps other federal agencies), and relevant state and local agencies should be cooperating agencies in the NEPA process. This approach would result in a comprehensive description and analysis of the impacts of the HDT and associated facilities (i.e., staging areas, access routes to staging areas, camping areas, etc.) and their issues, analysis of impacts, and mitigation are presented to the decisionmakers and the public in one NEPA document.

### NEPA Document Does Not Analyze All Identified Development Projects

BLM described the HDT and identified connected actions to its implementation. These include staging areas, access roads to staging areas, and camping areas. We were unable to find an analysis of the impacts to the tortoise/tortoise habitat from the implementation of these connected actions. Although BLM may not know the precise location of the camping areas, it knows they would be located next to staging areas. The locations of staging area locations have been identified in the DEA. Similarly, the locations of access roads to staging areas are known at least in Washington County.

In the DEA BLM acknowledges that the Proposed Action "would increase recreational use (30%–40%) in the first 1 to 3 years (see Section 3.1), which may result in additional dispersed camping" This would result in impacts not analyzed in the DEA. However, this an averaged increase across the entire length of the HDT. In some areas the recreational use would increase substantially more than this (e.g., Washington County) (BLM 2026).

BLM should revise the DEA to include an analysis of all impacts to the tortoise/critical habitat/tortoise habitat from the construction, use, and maintenance of all connected actions to the HDT.

**Compliance with the Omnibus Public Land Management Act of 2009 and Comprehensive Travel Management Planning**

We question BLM about the travel management decision they propose to make for the HDT. Under the Omnibus Public Land Management Act (OPLMA) of 2009, section 1977, Congress gave clear direction to BLM to develop a comprehensive travel and transportation management plan for Washington County:

> "(b) COMPREHENSIVE TRAVEL AND TRANSPORTATION MANAGEMENT PLAN.—
>
> (1) IN GENERAL.—
>
> "not later than 3 years after the date of enactment of this Act, in accordance with the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) and other applicable laws (including regulations), the Secretary, in consultation with appropriate Federal agencies and State, tribal, and local governmental entities, and after an opportunity for public comment, shall develop a comprehensive travel management plan for the land managed by the Bureau of Land Management in the County [Washington County]—
>
> (A) to provide to the public a clearly marked network of roads and trails with signs and maps to promote—
>
> (i) public safety and awareness; and
>
> (ii) enhanced recreation and general access opportunities;
>
> (B) to help reduce in the County growing conflicts arising from interactions between—
>
> (i) motorized recreation and
>
> (ii) the important resource values of public land . . .
>
> (D) to support law enforcement officials in promoting—
>
> (i) compliance with off-highway vehicle laws (including regulations); and
>
> (ii) effective deterrents of abuses of public land."
>
> and
>
> "(c) DESIGNATION OF TRAIL.—
>
> (1) DESIGNATION.—
>
> (A) IN GENERAL.—As a component of the travel management plan, and in accordance with subparagraph (B), the Secretary, in coordination with the Secretary of Agriculture, and after an opportunity for public comment, shall designate a trail (which may include a system of trails)—
>
> (i) for use by off-highway vehicles; and
>
> (ii) to be known as the ''High Desert Off-Highway Vehicle Trail''.
>
> (B) REQUIREMENTS.—In designating the trail, the Secretary shall only include trails that are—
>
> (i) as of the date of enactment of this Act, authorized for use by off-highway vehicles; and
>
> (ii) located on land that is managed by the Bureau of Land Management in the County."

Our understanding of Congress's directive in this statute is that BLM is to develop a comprehensive travel management plan for Washington County. A component of that

comprehensive travel management plan is the High Desert Off-Highway Vehicle Trail. This Trail appears to be the HDT that BLM describes in the DEA.

In BLM's Travel and Transportation Management Manual (BLM 2016), BLM states "The BLM must complete TTM [Travel and Transportation Management] decisions for all Presidential and congressional designations or similar allocations in accordance with the designation/ proclamation."

To comply with OPLMA of 2009 and BLM's Travel and Transportation Management Manual (BLM 2016), we request that BLM explain the status of the travel management plan for Washington County that, according to OPLMA of 2009, should have been completed by 2012. We have not been able to find this travel management plan on BLM's website. If this plan has not been developed, then BLM's designation of the HDT prior to completing the comprehensive travel management plan for Washington County would violate the specified direction given by Congress in OPLMA of 2009. If Congress issued a new directive to BLM to designate the HDT prior to the completion of the comprehensive travel management plan for Washington County, please explain this in the NEPA document and reference the directive. If there is no new congressional directive, we request that BLM withdraw the DEA and follow Congress's directive in the OPLMA of 2009 and develop a comprehensive travel management plan for Washington County.

Unfortunately, this is not the first time that BLM has attempted to circumvent Congress' directive in OPLMA of 2009 with respect to designating the HDT with no comprehensive travel management plan for Washington County. In 2022 BLM issued a categorical exclusion to approve the HDT in Washington County. This decision was appealed to the Interior Board of Land Appeals and in 2023 the decision was vacated and remanded to BLM.

In the OPLMA of 2009, Congress directed that the Secretary shall only include in the High Desert Off-Highway Vehicle Trail trails that are as of March 30, 2009 authorized for use by off-highway vehicles and located on lands managed by BLM.

We were unable to find information in the DEA that BLM was complying with this requirement. In several locations in the DEA, we found wording that the proposed route for the HDT and Alternative C were comprised of "existing routes." Existing routes are not the same as routes authorized for use as of August 30, 2009, the date of enactment of the OPLMA of 2009. In other parts of the range of the tortoise on BLM land, many existing OHV routes are unauthorized routes created by OHV users. BLM does not enforce their closure. Instead, BLM adopts most of these unauthorized routes as open in the next round of travel management planning cycle and the result is the numbers and densities of routes proliferate. Thus, this is an important distinction between existing and authorized routes for OHV use. BLM should revise the NEPA document and provide this information, If any route in Washington County that is included in the HDT was not an OHV authorized route in March 2009, the unauthorized route(s) should be removed from the HDT.

**Compliance with OPLMA of 2009 for the Management of Beaver Dam Wash National Conservation Area and Compliance with the Federal Land Policy and Management Act (FLPMA)**

In the OPLMA of 2009 Congress directed the Secretary of the Interior (Secretary), delegated to BLM, to "only allow uses of the National Conservation Area that the Secretary [delegated to BLM] determines would further the purpose described in subsection (a)" – "to conserve, protect, and enhance for the benefit and enjoyment of present and future generations the ecological, scenic, wildlife, recreational, cultural, historical, natural, educational, and scientific resources of the Beaver Dam Wash National Conservation Area" (Beaver Dam Wash NCA).

FLPMA directs BLM to take any "action necessary to prevent unnecessary or undue degradation of the [BLM-managed] lands." In Appendix C of the DEA, BLM states:

> "Approximately 162 acres of the project area falls within the Beaver Dam Wash NCA boundary under the Proposed Action alignment, compared to 17 acres under the Alternative C alignment. Staging areas would not be constructed in the NCA. Designation of the HDT as OHV open and issuance of SRPs would occur along existing authorized routes and would not introduce new motorized routes to the NCA."

Because the numerous impacts to the tortoise/tortoise habitat/critical habitat from implementation of Alternative C (see "Adverse Impacts to the Mojave Desert Tortoise/Critical Habitat/Tortoise Habitat from Route/Road Presence, Improvements, and Increased Use" below) would be substantially less than the Proposed Action, BLM would be obligated under FLPMA to select Alternative C in Washington County rather than the Proposed Action. However, selection of either action alternative in the DEA for the HDT will promote increased vehicle use and human activities that increase the adverse impacts to the tortoise/critical habitat/other tortoise habitat. For example, in the DEA BLM says,

> "Potential impacts could include indirect effects on NCA objects and resource values from potential increased OHV use, such as noise, dust, and localized disturbance in areas adjacent to the existing route. Potential direct effects include increased Mojave desert tortoise (*Gopherus agassizii*) mortality due to collisions from increased OHV traffic. Further analysis of potential effects on NCA resource objects and values (i.e., federally listed and BLM sensitive species) is presented in Sections 3.12 and 3.13. HDT designation would not change applicable management prescriptions for the NCA, and all uses would remain subject to existing land use plan decisions, travel management designations, and project design features, including SRP conditions."

There are numerous direct, indirect, interactive, synergistic, and cumulative effects to the tortoise/tortoise habitat from the use of the HDT, the proposed and future planned improvements (e.g., construction and maintenance activities), and increased vehicle use of and improvement to roads leading to the staging areas and at the staging areas besides those mentioned in these few sentences by BLM and later in the DEA. Additional impacts are in "Adverse Impacts to the Mojave Desert Tortoise/Critical Habitat/ Tortoise Habitat from Route/Road Presence, Improvements, and Increased Use" below.

The latest population survey results for the tortoise in the area of the Beaver Dam Wash NCA indicate the density of adult tortoises in this NCA was 2.0 in 2019 (USFWS 2020) and 1.7 in 2024

(USFWS 2025b). The minimum adult density for a viable tortoise population is 3.9 adults per $km^2$ (USFWS 1994a). These data indicate to the Council that BLM is not managing the ecological, wildlife, and natural resources of the Beaver Dam Wash NCA for their conservation, protection, and enhancement – at least for the tortoise.

Under FLPMA BLM is mandated to avoid unnecessary and undue degradation of the lands. Under the OPLMA of 2009 BLM is directed to "only allow uses of the National Conservation Area that the Secretary [delegated to BLM] determines would further the purpose to conserve, protect, and enhance resources. Because the two action alternatives in the DEA would result in numerous adverse impacts to the tortoise/tortoise habitat/critical habitat from the increased vehicle use on the HDT; increased human activities on the HDT; proposed and future planned improvements of the HDT, staging areas, and access roads to the staging areas that would continue for longer than the designation/use of the road (see "Adverse Impacts to the Mojave Desert Tortoise/Critical Habitat/Tortoise Habitat from Route/Road Presence, Improvements, and Use"), BLM is obligated to select the No Action Alternative from the three alternatives presented in the DEA.

**Compliance with OPLMA of 2009 and Routes Selected for the High Desert Trail in Washington County**

In OPLMA of 2009, Congress directed BLM that in designating the High Desert Off-Highway Vehicle Trail, "only trails that are as of the date of enactment of this Act [March 30, 2009], authorized for use by off-highway vehicles; and located on land that is managed by the Bureau of Land Management in Washington County should be included." In reviewing the DEA, we were unable to find information that BLM limited the location of the HDT in Washington County to trails that were authorized for OHV use on March 30, 2009. Rather, for the Beaver Dam Wash National Conservation Area (NCA), BLM's wording in the DEA (pages 1-3 and 1-4) is that "the motorized vehicle use within this NCA on the HDT alignment is sited on ***existing routes*** [emphasis added] designated for motorized vehicles and does not introduce new routes in designated road areas." BLM's information does not demonstrate compliance with Congress's directive that only trails that were authorized for use by OHVs as of the date of enactment of the OPLMA of 2009 can be designated. Thus, BLM did not provide information on whether the action alternatives include any routes, as part of the HDT, that were not authorized for OHV use on March 30, 2009 in the Beaver Dam Wash NCA.

Similar unclear wording is offered by BLM with respect to the HDT for other areas in Washington County. On page 2-1 of the DEA, BLM "proposes to designate and sign approximately 810 miles of ***existing routes*** [emphasis added] as the HDT" and on page 1-4 with the HDT would "follow ***existing roads*** [emphasis added]in relatively rural, less populated parts of the state. No new road or trail development would occur as part of the HDT designation." This wording does not address the issue of whether these routes were authorized for use under a travel management plan for OHV use on March 30, 2009. BLM should provide this information for the proposed HDT routes in Washington County to comply with OPLMA of 2009.

**Compliance with BLM Policies**

BLM should demonstrate in the National Environmental Policy Act (NEPA) document for the HDT compliance with its policies with respect to the conservation of the tortoise, specifically:

- Bureau of Land Management. 2015. Advancing Science in the BLM: An Implementation Strategy IB 2015-040
- Bureau of Land Management 2022. Habitat Connectivity on Public Lands Instruction Memorandum 2023-005
- Bureau of Land Management. 2024. Special Status Species Management – Manual 6840. Washington, D.C. September 9, 2024.

**BLM Policy – Advancing Science**: BLM is directed in other documents besides this policy to use science in its decision-making processes. In the NEPA, Congress declared that federal agencies shall "[u]tilize a systematic, interdisciplinary approach which will ensure the integrated use of the natural and social sciences . . . in planning and in decisionmaking." To comply with this requirement, the NEPA document should have used the latest information from scientific journals and reports on the demographic status of the tortoise; the needs of the tortoise for its survival and recovery in the Upper Virgin River Recovery Unit, Northeastern Mojave Recovery Unit, tortoise critical habitat, and range-wide; and how the direct, indirect, interactive, synergistic, and cumulative impacts of the action alternatives would affect the future survival and recovery of the tortoise in these Recovery Units and range-wide. This analysis and any conclusions stated in the NEPA document regarding the tortoise should be supported with citations from the scientific literature rather than by unsupported conclusions. The BLM's "Advancing Science in the BLM: An Implementation Strategy IB 2015-040" (BLM 2015) reinforces the need to use science in decisionmaking. Because the NEPA document provides the data and analysis the decisionmaker needs/uses to make a fully informed decision, BLM should ensure that the best available science is used in describing the demographic status and trend of the tortoise, the condition and arrangement of tortoise habitat including linkage habitat in the vicinity of the action alternatives, and the environmental effects that would occur to the tortoise, tortoise habitat, and critical habitat using currently available scientific information.

**BLM Policy – Habitat Connectivity on Public Lands**: In this policy BLM is directed to "fulfill aspects of its multiple use and sustained yield mandate by ensuring habitats for native fish, wildlife, and plant populations are sufficiently inter- connected" and . . . "to assess habitat connectivity in order to manage as best as possible for intact, connected habitat" (BLM 2022).Further, the intent of this policy "is to ensure habitat connectivity, permeability and resilience is restored, maintained, improved, and/or conserved on public lands." To accomplish this outcome, BLM is directed to work with stakeholders to assess data regarding connectivity, permeability, and resilience and, based on that assessment, identify where to focus management that best supports priority species. In addition, BLM "offices are also encouraged to work with a diverse scientific field of experts to expand research on habitat connectivity on public lands to best inform the assessment of habitat connectivity." We strongly suggest that BLM work with the Council, Desert Tortoise Recovery Office, and U.S. Geological Survey tortoise biologists (as stakeholders and researchers) to assess these data for the HDT and in the development of alternatives.

Please see objective 3 under "Special Status Species Management" for the results of research on how to manage for connected populations and habitats for the tortoise. BLM should apply these results in their analysis of impacts to the tortoise for the HDT alternatives and demonstrate how the proposed action alternatives comply with this policy for habitat connectivity especially for

connectivity between the Upper Virgin River Recovery Unit and the Northeastern Mojave Recovery Unit. This analysis may result in BLM developing new alternatives in Washington County that avoid tortoise habitat including linkage habitat through the Beaver Dam Mountains. However, BLM must also comply with OPLMA of 2009 and develop alternatives for the HDT as part of a comprehensive travel management plan for Washington County.

**BLM Policy – Special Status Species Management**: In this Policy BLM states, "This policy establishes an agencywide emphasis on proactive, landscape- and ecosystem-level, scientifically informed conservation and recovery of special status species and their habitats." BLM identified five objectives:

- Focus on Proactive Conservation and Recovery for Special Status Species;
- Use ESA Section 7(a)(2) Consultation to Support Conservation and Recovery;
- Promote Healthy Species Populations and Biodiversity through Landscape- and Ecosystem-Level Management – including promoting ecosystem resilience and landscape intactness, including habitat connectivity especially with regard to climate change;
- Use Science and Adaptive Management to Advance Conservation and Recovery; and
- Engage Stakeholders through Internal and External Involvement.

For the first objective, BLM should demonstrate in the NEPA document for the comprehensive travel management plan for Washington County (NEPA document) for how implementation of the Proposed Action is not hindering the conservation and recovery of the tortoise in the Upper Virgin River Recovery Unit or the Northeastern Mojave Recovery Unit. This analysis is important because tortoises in all five recovery units must meet recovery objects for the species to recover and be delisted (USFWS 2011). If tortoises in one recovery unit are unable to achieve recovery, then the species cannot be delisted.

For the second objective, BLM should explain in the NEPA document how it is complying with Section (7)(a)(2) of the Federal Endangered Species Act (FESA) for species and designated critical habitat, including the desert tortoise, that may be affected directly or indirectly by any phase of the Proposed Action. Section 7(a)(2) of the FESA requires federal agencies to consult with the USFWS on any action that they fund, authorize, or carry out that may affect the desert tortoise. The effects of the Proposed Action may be direct, indirect, interrelated, and/or interdependent.

For the third objective, BLM should demonstrate in the NEPA document how it has (1) analyzed and incorporated habitat connectivity for the tortoise and other special status species in the analysis of impacts; and (2) develop appropriate mitigation to offset these impacts and ensure that habitat connectivity is maintained. Habitat connectivity is necessary to support demographically viable populations and long-term gene flow for the tortoise and crucial to achieve recovery of the tortoise, especially in the Upper Virgin River Recovery Unit, which is the smallest recovery unit in size and tortoise abundance and between the Upper Virgin River Recovery Unit and Northeastern Mojave Recovery Unit.

In analyzing habitat connectivity for the tortoise, Averill-Murray et al. (2021) stated, "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." The authors found that effective linkage habitats are not long narrow corridors. Rather, "low-mobility species, such as the desert tortoise, are considered "corridor dwellers" that may spend their entire life within corridors (Beier and Loe 1992). In effect, low mobility of the species means that interconnected local populations of tortoises must persist across the landscape to ensure overall species persistence (Averill-Murray et al. 2021).

In addition, any development within or adjacent to connectivity habitat has an "edge effect" (i.e., indirect impact) that extends 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 – again demonstrating the importance of analyzing indirect impacts to the tortoise from implementation of construction, initial use, and increased use of the alternatives.

To help maintain tortoise residency 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 et al 2020, cited in Averill-Murray et al. 2021). They cautioned that the upper threshold of five percent development per square kilometer may not maintain population sizes needed for demographic or functional connectivity; therefore, development thresholds should be lower than five percent. Thus, when analyzing whether a project/proposed action may impact areas on the landscape used/needed by tortoises for habitat connectivity, BLM should include that (1) the tortoise is a corridor dweller so human activities/development in linkage habitat including edge effects must be compatible with tortoise occupancy, (2) the lifetime home range for the Mojave desert tortoise is more than 1.5 square miles (3.9 square kilometers) (Berry 1986), and (3) that tortoises may make periodic forays of more than seven miles (11 kilometers) at a time (Berry 1986). These data affirm that as a corridor dweller, connectivity habitat for the tortoise is not a long, linear corridor with human activities/development in or adjacent to it that result in edge effects such as vehicle use on routes (see "Adverse Impacts to the Mojave Desert Tortoise/Critical Habitat/ Tortoise Habitat from Route/Road Presence, Improvements, and Increased Use" below).

The connectivity between the Upper Virgin River and Northeastern Mojave Recovery Units appears to be highly limited. Two locations have been identified from habitat modeling for the tortoise (Averill-Murray et al. 2021). The northern linkage habitat that may provide connectivity extends west from the Red Cliffs Desert Conservation Area through a pass in the Beaver Dam Mountains (Gray et al. 2019). However, much of this area especially near St. George and Santa Clara has been developed creating edge effects that extend in to the linkage habitat and may substantially compromise connectivity via this northern linkage habitat. The southern linkage habitat is from Big Valley southwest into Arizona and along the edge of the Virgin Mountains into Nevada. The southern linkage may be adversely impacted at a minimum through edge effects from the surface disturbance from proposed oil and gas development.

For the action alternatives, BLM should describe and analyze how the locations of the HDT, staging areas/improvements to staging areas, access roads/improvements to access roads, and other associated improvements would impact the remaining limited remaining linkage habitat between these two recovery units for the tortoise. This analysis should use the best available information

from the scientific literature. It should include the geographical extent of edge effects from current activities, activities associated with HDT, and how these impacts affect the survival and recovery of the tortoise.

For the fourth objective, the BLM should explain in the NEPA document how it analyzed impacts for all alternatives using the best available science for direct, indirect, interconnected, synergistic, and cumulative impacts of the Proposed Action and Alternative C. BLM should use this information to develop effective mitigation for the tortoise and other listed species that would be affected by these impacts from implementation of all phases of the Proposed Action and Alternative C.

For the fifth objective, BLM should engage all interested stakeholders in the development of alternatives. Please see our comments below under "Stakeholder Involvement in the Development of Alternatives." BLM should provide information in the NEPA document on the stakeholders that were invited to participate in the development of action alternatives/identification of impacts associated with each alternative, the stakeholders that accepted the invitation, and a summary of the input from each stakeholder. In addition, BLM should conduct public scoping and provide a scoping report that includes the stakeholder information in the draft NEPA document.

**Compliance with OPLMA of 2009, BLM's Northern Corridor Highway Decision, and Special Recreation Permits**

In section 2.2.7 of the DEA, BLM describes Special Recreation Permits (SRPs). We found no information on how these limits and standards would comply with the OPLMA of 2009 for the designations on the Beaver Dam Wash NCA or management of Zone 6 for the conservation of the tortoise as part of the Red Cliffs Desert Reserve. For example, "the HDT would be open to multiple concurrent SRPs for outfitters and guides, up to 200 vehicles for motorized events, and up to 500 participants for non-motorized events. SRPs would be defined as follows:

- Small motorized group: Up to 37 vehicles/74 people per group
- Small non-motorized group: Up to 74 people per group
- High-intensity motorized group: More than 37 vehicles/74 people per group
- High-intensity non-motorized group: More than 74 people per group

Additional site-specific NEPA would generally not be required for SRPs, except for motorized competitive events and other activities that would not meet the requirements outlined in this EA. One BLM field office would be selected to administer the SRPs for the HDT."

Or interpretation of this wording is that up to 200 motorized vehicles and likely more than 200 people as participants and 500 people for non-motorized events could be located at one staging area/camping area or grouped at one location at any time on the HDT with another 200 motorized vehicles/more participants and 500 people for non-motorized events using the same staging area/camping area the next day. These numbers do not mention the number of spectators that would be allowed to observe the events. We found no limits such as seasonal or frequency limits in the DEA that BLM would place on this potentially recurring intensive use of the HDT, staging areas, camping areas, and access routes to staging areas.

From the Council's past experience with group or commercial recreation events in desert environments on BLM land, there is a staging area at the beginning and end of the route for the event and there may be other staging areas along the route for the event. Compliance with staying on the route, within the designated route width, and boundary of the staging area is generally the responsibility of the event organizer. This compliance is usually not a priority for the event organizer. When BLM is present it is usually to observe, not to enforce.

In the DEA BLM lists actions that groups of recreationists would be asked to implement as part of issuing a SRP with the intention that if implemented correctly, these actions would lessen or minimize a few direct and indirect impacts to the tortoise/tortoise habitat. However, there are numerous direct, indirect, interactive, synergistic, and cumulative impacts to the tortoise/tortoise habitat from the presence, improvement, and increased use of vehicle routes, development of staging/camping areas and development/improvement of access routes to staging areas that are not mentioned (see "Adverse Impacts to the Mojave Desert Tortoise/Critical Habitat/ Tortoise Habitat from Route/Road Presence, Improvements, and Increased Use" below). The minimization actions or measures that BLM describes in the DEA have been implemented for a few decades in other parts of the range of the tortoise, yet tortoise densities have declined to levels below population viability there. BLM should be aware of these ongoing efforts and their ineffectiveness.

BLM should explain why it continues to require implementation of ineffective minimization measures for the tortoise/tortoise habitat with respect to helping with survival and recovery for activities associated with use of the HDT. This explanation is especially important for the Beaver Dam Slope population whose adult population density is well below the minimum needed for population viability and is located in a NCA and critical habitat. BLM should explain why it requires organized groups to obtain SRPs when smaller informal groups or individuals using the HDT collectively (e.g., Washington County reported use in 2021 at the Bear Claw Poppy Trailhead was 100,000 vehicles) (Utah DOR 2023) https://www.utah.gov/pmn/files/1008383.pdf#:~:text=This%20road%20is%20accessed%20from,is%20a%20class%20B%20County) have the same multiple adverse impacts to the tortoise/tortoise habitat but are not required to implement minimization measures. Please explain in the NEPA document this arbitrary "double standard" SRP system that BLM proposes to implement for the HDT in tortoise habitat.

We request that BLM explain and analyze in the NEPA document how allowing multiple adverse environmental effects from implementation of the HDT project that would increase the frequency and intensity of vehicles use and associated human activities for an unknown time is effectively managing the for the conservation, protection and enhancement of the tortoise and tortoise habitat in the Beaver Dam Wash NCA. Recall that in the OPLMA of 2009 BLM is directed to "only allow uses of the National Conservation Area that the Secretary [delegated to BLM] determines would further the purpose described in subsection (a)" – "to conserve, protect, and enhance for the benefit and enjoyment of present and future generations the ecological, scenic, wildlife, recreational, cultural, historical, natural, educational, and scientific resources of the Beaver Dam Wash National Conservation Area." Please analyze in the NEPA document the range of impacts from numerous casual recreation users that need no permits (i.e., vehicle use in 2021 at the Bear Claw Poppy

Trailhead reported to be 100,000 vehicles) with that of commercial/organized groups that BLM would require to obtain SRPs. This scientific analysis should demonstrate that the management actions that BLM proposes to implement for the HDT in the Beaver Dam Slope NCA will conserve, protect, and enhance the tortoise population and tortoise habitat (OLMA of 2009). Recall that the density of tortoises in the Beaver Dan Wash NCA is well below the 3.9 adult tortoises per $km^2$ needed for minimum population viability (USFWS 1994a). Please explain how allowing large groups of motorized and non-motorized recreationists to use the HDT (1) would not result in further declines in tortoise abundance, density, and recruitment, and (2) with direct, indirect, interactive, synergistic, and cumulative impacts from past and ongoing adverse impacts not adversely modify critical habitat in the Beaver Dam Slope Critical Habitat Unit.

**Compliance with FLPMA, NEPA, and BLM's Northern Corridor Highway Decision**

In the DEA, BLM says, "Zone 6 was added to the Red Cliffs Desert Reserve in 2021 as compensatory mitigation for impacts associated with construction of the Northern Corridor Highway in Zone 3 of the Reserve."

In 2023, Washington County requested a grant from Utah DOR's OHV Division to substantially improve the length of the Apex Mine Road that bisects Zone 6 of the Red Cliffs Desert Reserve (Reserve) to improve access to the Bear Claw Poppy staging area. Both the road and the staging area are located in Zone 6 of the Reserve (Utah DOR 2023). The purpose of the County's request was to highlight the importance of keeping this access route to the Bear Claw Poppy trailhead in good condition to haul their OHVs to the trailhead, to facilitate public travel through Zone 6 to BLM lands with OHV routes on the west side of Zone 6, and facilitate access to the Bear Claw Poppy staging area on the western edge of Zone 6 that will be improved during a later phase.

For the Proposed Action, the southern starting location and associated staging area for the HDT is on the west side of Zone 6, a mitigation area that, under a BLM decision and with the State of Utah, should be managed for the conservation of the tortoise. Greatly expanding the Bear Claw Poppy Staging Area for OHVs and other vehicles in or immediately adjacent to a mitigation area for the tortoise would have numerous adverse impacts to the tortoise and tortoise habitat in the Zone 6 mitigation area that would extend beyond the footprint of this Staging Area. With the Bear Claw Poppy Staging Area located on the west side of Zone 6, the access to this Staging Area is provided via the Apex Mine Road that brings recreation users from St. George on the east side of Zone 6 and through the mitigation area to the Staging Area (Figure 3). The impacts from and areal extent of these impacts, called the road effect zone, have substantial impacts that preclude management of Zone 6 for the conservation of the tortoise. Our conclusions are drawn from studies published in the scientific literature on the effects of the presence of roads/routes and road/route use on the behavior and survival of the tortoise and impacts to tortoise habitat (see "Adverse Impacts to the Mojave Desert Tortoise/Critical Habitat/Tortoise Habitat from Route/Road Presence, Improvements, and Use" below). Recall that Washington County reported that 100,000 vehicles used the Bear Claw Poppy Trailhead in 2021 with this use expected to substantially increase with the selection of the Proposed Action.

In summary, BLM's identified the HDT Preferred Alternative as the Bear Claw Poppy Trailhead and Staging Area as the southern start of the HDT located in Zone 6, Washington County requested

a grant from the State of Utah to substantially improve Apex Mine Road that cuts through Zone 6 (Figure 3), and BLM appear to be tardy in completing a comprehensive travel management plan for Washington County that Congress directed to be completed by 2012. These actions and more indicate that BLM and others are more interested in responding favorably to the OHV community than complying with federal statutes (FLPMA, OPLMA of 2009, NEPA, etc.) and legal commitments (i.e., the Northern Corridor Highway decision).

**Compliance with the Federal Endangered Species Act**

**Consultation with U.S. Fish and Wildlife Service under 7(a)(2) of the Endangered Species Act:** We did not find information in the DEA that BLM has completed formal consultation with the USFWS under section 7(a)(2) of FESA. This information and a copy of the biological opinion should be included in the NEPA document.

In the DEA BLM make a statement that is questionable with respect to its legality. On page 2-6, 1.1.7.1. Special Recreation Permits, Traversing: "Any time a vehicle or equipment is parked on public lands in Mojave desert tortoise habitat, the area around and directly under the vehicle/equipment must be inspected for tortoises before the vehicle/equipment is moved. If an individual [tortoise] is observed, it would be left to move on its own—the individual would not be approached or handled. If the individual does not move within 15 minutes, an authorized biologist or trained SRP event staff member can safely relocate it." Be advised that only authorized biologists may handle tortoises under the USFWS tortoise protocols. A recreation event staff member cannot relocate it. In addition, this measure does not include the requirement that the tortoise be monitored after being relocated or the upper limits for ambient temperature when relocating the tortoise.

If USFWS identified reasonable and prudent measures and terms and conditions in the biological opinion, implementation of these is mandatory. They should be added to the description of all action alternatives.

In addition, the authorization for incidental take for a listed species (e.g., Mojave desert tortoise) applies to implementing lawful activities. If BLM is violating the OPLMA of 2009, then consultations for actions that violate this statute may not be lawful, and incidental take coverage for the proponent or federal agency may not be valid.

**Consultation with U.S. Fish and Wildlife Service under 7(a)(1) of the Endangered Species Act**:

Under section 7(a)(1) of the Endangered Species Act, Congress states that all federal agencies "…shall… utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to Section 4 of this Act." In Section 3 of the FESA, "conserve," "conserving," and "conservation" mean "to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law

enforcement, habitat acquisition…" "[A]t which the measures provided pursuant to this Act are no longer necessary" means recovery of the species.

The Council believes that the data from ongoing rangewide surveys of the tortoise in the Beaver Dam Slope Tortoise Conservation Area (TCA)/Beaver Dam Wash Critical Habitat Unit indicates that BLM is not using methods and procedures to conserve the tortoise and its habitat or is using ineffective methods. In 2004 the density of adult tortoises in this TCA was 6.2 per km2. In 2024 it had declined to 1.7 adults per km2 (USFWS 2025b). The addition of the HDT with increased human uses and improvements that will have numerus long-term adverse impacts to the tortoise/critical habitat/tortoise habitat will not help to reverse the tortoise's downward population trend.

**Management of Critical Habitat for the Tortoise**: The USFWS designated critical habitat for the tortoise to provide habitat that contains the primary constituent elements/physical and biological features in sufficient quantities to maintain viable populations of desert tortoises within the recovery units (USFWS 1994b). Unfortunately, tortoise densities and numbers have declined substantially in all critical habitat units since listing, and are below the threshold for viable populations in most recovery units (USFWS 2025b) This means that critical habitat is no longer providing the primary constituent elements/physical and biological features in sufficient quantities to maintain viable populations of desert tortoises. It also means that a proposed action that increases the intensity or duration of adverse impacts or results in additional adverse impacts should meet the definition of adverse modification to the critical habitat unit in which that action.

Destruction or adverse modification of critical habitat is defined at 50 CFR 402.02 as a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. The regulations also clearly state that such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.

The Act's definition of critical habitat indicates that the purpose of critical habitat is to contribute to a species' conservation, which by definition equates to recovery. Section 7 prohibitions against the destruction or adverse modification of critical habitat apply to actions that would impair survival and recovery of the listed species, thus providing a regulatory means of ensuring that Federal actions within critical habitat are considered in relation to the goals and recommendations of a recovery plan. As a result of the link between critical habitat and recovery, the prohibition against destruction or adverse modification of the critical habitat should provide for the protection of the critical habitat's ability to contribute fully to a species' recovery. Thus, the adverse modification standard may be reached closer to the recovery end of the survival continuum, whereas the jeopardy standard traditionally has been applied nearer to the extinction end of the continuum.

**Stakeholder Involvement in the Development of Alternatives**

On pages 1-4 and 1-5 of the DEA, BLM provides a summary of the history of development of the HDT and the alternatives. "No external scoping with the public was conducted due to extensive county and agency coordination and public input on the development of the proposed HDT. This

coordination has been ongoing since 2019." Earlier on Page 1-1, BLM provided "From 2019 to 2023, a working group consisting of representatives from the seven counties [in Utah], the Utah Division of Outdoor Recreation (DOR), the BLM, and USFS developed a formal proposal for the trail and its associated infrastructure, including staging areas, trailheads, and kiosks." The Council was not included in the group to help develop this HDT route and alternatives.

On November 7, 2019, the Council sent a certified letter to Ahmed Mohsen, District Manager, Color Country District, Bureau of Land Management, Cedar City, Utah, identifying the Council as an affected interest and requesting to be contacted by BLM for any BLM proposed actions affecting the desert tortoises of tortoise habitats. Prior to this, the Council submitted a comment letter on October 15, 2015 on the Beaver Dam Wash and Red Cliffs National Conservation Area Draft Resource Management Plans that included a similar request to BLM. Subsequent to the November 2019 certified letter, the Council has reiterated this request to BLM in additional comment letters sent to BLM when we commented on BLM proposed actions in Washington County that would affect the tortoise. Many of these letters were carbon copied to the BLM state Director in Utah.

The Council was not included in the group to help develop the HDT and alternatives. We found no information that stakeholders concerned about the conservation of special status species (including the tortoise), their habitats needed for survival and recovery (including functioning critical habitat), or research scientists with expertise on special status species and their habitats, participated in the development of the HDT location and alternatives.

From the information provided by BLM in the DEA, the appearance is that involvement of stakeholders was restricted to those supporting implementation of the HDT and the land management agencies that would be directly affected by its implementation. BLM decided not to honor the Council's numerous written requests to be considered an affected interest or stakeholder for projects affecting the tortoise/tortoise habitat when participating in the development of the HDT location, its alternatives, and other components of the HDT because the Council has no record of being invited to participate in the development of the HDT. When involving stakeholders in the development of a proposed project, affected interests/stakeholders should include those beneficially and adversely affected by a proposed action. This approach ensures that any conflicts will be identified early in the development process and effective solutions developed. This process did not occur with the development of the HDT.

**Reasonable Range of Alternatives Analyzed**

"BLM must decide through a travel management decision whether to authorize the designation of the HDT as an OHV open trail across BLM-administered lands. The final HDT trail would be developed from the alternatives considered in this EA and may include the modification of an alternative or a combination of the alternatives" (pages 1-2 of the DEA).

The OPLMA of 2009 included language directing the designation of the HDT in Washington County as part of the BLM's comprehensive travel management planning process. However, Congress does not say where in Washington County the HDT would be located. Further, we found no information in the DEA about why the southern starting location of the HDT should be Bear

Claw Poppy Trailhead/Staging Area on the west side of St. George. This area is not a "rural area" as BLM describes in the DEA for the location of the staging areas.

The start location at the south end of the HDT for both action alternatives is the same. We ask BLM to explain in the NEPA document:

- the selection of the southern start location for the HDT in St. George in a mitigation area for the tortoise (Zone 6 of the Red Cliffs Desert Reserve)
- the omission of the locations of access routes to the staging areas and analysis of impacts (because these are connected actions and the routes will be designated/improved as part of the action alternatives
- the lack of avoidance to the maximum extent of the distribution of the tortoise, its habitat, and especially designated critical habitat
- the lack of avoidance to the maximum extent of the distribution of other species listed or proposed for listing under FESA including linkage habitat.

The absence of direction from Congress on the location of the HDT in Washington County provides BLM with the ability to avoid tortoises/tortoise critical habitat/tortoise habitat by locating the starting point north of the distribution and habitat of the tortoise in Washington County. This avoidance would comply with FLPMA (action taken to prevent unnecessary or undue degradation), OPLMA of 2009 ("only allow uses of the [Beaver Dam Wash] National Conservation Area that the Secretary [delegated to BLM] determines would further the purpose to conserve, protect, and enhance resources"), FESA (federal agencies should "utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species"), and BLM's policies on Habitat Connectivity on Public Lands and Special Status Species Management.

The Council affirms that BLM should have presented other alternatives in the DEA. Because the Applicant is the Utah State, we assert that the routes should occur as much as possible on Utah state lands that are not mitigation lands or provide habitat for listed species. While in the OPLMA of 2009 Congress directs the "High Desert Off-Highway Vehicle Trail" be located on BLM land in Washington County, this directive does not apply to the six other counties in Utah in which the HDT is proposed to be located. Thus, there is no federal statutory restriction from locating the HDT on Utah state lands wherever possible. The development of this alternative would demonstrate that BLM was implementing "any action necessary to prevent unnecessary or undue degradation of the [public (i.e., BLM-managed)] lands" as required under FLPMA because some direct impacts would no longer occur on BLM land.

The Council strongly suggests that the southern starting point for the HDT be located "in relatively rural areas and not near residential areas." This siting would direct the economic benefits to that rural community (one of the purposes of the HDT), and reduce traffic congestion in the St. George sphere of influence. To meet these criteria, we recommend that the HDT start near Enterprise, UT or Enterprise Reservoir in Washington County.

Our reasons for moving the southern starting point of the HDT from the Bear Claw Poppy Trailhead and staging area are presented above under "Compliance with FLPMA, NEPA, and BLM's Northern Corridor Highway Decision."

Because rural towns are banking on outdoor recreation to boost their economies (according to one recent Utah DOR May 3, 2026 newsletter – https://us19.campaign-archive.com/?u=bba6a146af0b05baf49fa8719&id=02985130e8), we strongly recommend that the HDT terminate at a rural town that is north of desert tortoise habitat rather than St. George. In looking at the alternatives, we recommend that BLM with the USFS, cooperating agencies that would include the Desert Tortoise Recovery Office, TLA, and all interested stakeholders develop a route that all stakeholders can support.

**Adverse Impacts to the Mojave Desert Tortoise/Critical Habitat/Tortoise Habitat from Route/Road Presence, Improvements, and Use**

BLM is proposing to approve construction projects under the current phase of the HDT and other construction projects in a later phase of the HDT. We label these construction and maintenance projects a "improvements" to the HDT and include them in the description and analysis of impacts to the tortoise/tortoise habitat.

**Analysis Area for the Tortoise and Impacts to Be Analyzed**: In section 3.12 on how the proposed project would impact listed and proposed species under the FESA, BLM defined the analysis area as the project area plus a 0.25-mile buffer. In the section BLM also stated that the HDT would experience "increased visitation commensurate with projected outdoor recreation trends in Utah (see Section 3.1), which could result in impacts to ESA species from increased human activity and associated noise, traffic, and fugitive dust. Reasonably foreseeable trends and planned actions (see Section 3.12.2.2) could also continue to impact ESA species in the analysis areas." Throughout the DEA BLM stated that it expects increased use on the HDT which means more vehicles and more human activities present on the HDT.

We were unable to find in the DEA information from the scientific literature that supported BLM's analysis area as the project area plus a 0.25-mile buffer. For example, the edge effect of route use by motorized vehicles extends into tortoise habitat and varies by the frequency of use. For the single threat of vehicle use on a route, the edge effect from a lightly-used vehicle route ranged from 1.1 to 1.4 km (3,620 to 4,608 feet = 0.68 to 0.87 mile). This indirect effect increases in distance with increased road use (Von Seckendorff Hoff and Marlow 2002). Consequently, the edge effect from light use of motorized vehicles is greater than the 0.25 mile that BLM applied for all threats to the tortoise from the action alternatives.

BLM should revise its NEPA document and use data from the scientific literature regarding the areal extent of impacts to the tortoise/tortoise habitat to determine the analysis area for the tortoise.

According to DOI's National Environmental Policy Act Implementing Regulations Final Rule (91 *Federal Register (FR*) (36) 8753-8762) "DOI bureaus were and are required to consider effects that are both reasonably foreseeable and have a reasonably close causal relationship to their proposed actions."

DOI makes the statement that "NEPA does not contain any provisions addressing any specific type of environmental impact." "Direction from within the executive branch may in the past have pushed agencies to articulate environmental analysis according to artificial distinctions between ''direct,'' ''indirect,'' and ''cumulative'' types of effects, . . . but that direction has now been rescinded" (91 *FR* (36) 8753).

While that direction may have been rescinded, we found no information that gives the executive branch the authority to narrow the meaning of a term used in a statute (i.e., "environmental effect" in NEPA) without documentation that this was the intent of Congress. In other words, DOI and BLM should not declare that they know what Congress meant when it used the term "environmental effect" and assume it was limited to direct actions or to the location of direct environmental effects/direct disturbance.

In addition, in a recent court decision regarding the USFWS's wording of the regulations to narrow the meaning of "adverse modification" of critical habitat, the court found that the regulatory wording imposed "a significant restriction on the statutory language" (Center for Biological Diversity, et al. v, Department of the Interior, et al. Case No. 24-cv-04651-JST, March 20, 2026). We contend that DOI's regulations narrow the meaning of "environmental effects" from what is presented in the NEPA statute for environmental impacts.

It appears that for the tortoise and tortoise habitat, BLM decided to limit the issues analyzed and areas affected in the DEA to the area of effects from direct disturbance plus 0.25 mile. However, we found no information where BLM explained the authority under NEPA that it used to limit this analysis. Without such authority from Congress, we contend that BLM should have analyzed in the DEA the identified resource issues and all environmental effects (i.e., direct, indirect, synergistic, interactive, and cumulative effects) from implementation of the alternatives in the DEA including the areal extent of the indirect effects, not merely the effects from direct disturbance of the location of the HDT plus 0.25 mile.

In the DEA BLM says, "development of the staging areas under the action alternatives would increase trail use."

BLM provided limited data on vehicle counts at certain points of the HDT. The vehicle counts in Washington County was substantially greater than the rest of the trail (i.e., greater than 12,000 at two rural locations in Washington County vs. 1,000 in Beaver County and 2,000 near Lucin in Box Elder County) (BLM 2026).

From the data provided in the DEA, we noticed a trend in vehicle use in Washington County — the closer the point for conducting vehicle counts was to St. George, the greater the number of vehicles using the HDT. Unfortunately, BLM did not provide data in the DEA on vehicles use near the Bear Claw Poppy Trailhead/Staging Area, which is the identified southern starting point of both action alternatives and located in Zone 6 of the Red Cliffs Reserve. This is desert tortoise habitat so we are surprised that the study design to collect data on current use did not include vehicle use at/near the Bear Claw Poppy Trailhead/Staging Area. However, as mentioned earlier,

in a report from Washington County to the Utah DOR OHV Advisory Council (2023), the number of vehicles that accessed the Bear Claw Poppy Trailhead in 2021 was reported as more than 100,000 vehicles (motorized and non-motorized). This trailhead staging area/parking area was not designed to accommodate this high current use.

Recall that BLM expects the recreational use of the HDT in Washington County to increase more than the other counties in Utah where the HDT is proposed. A 105.1% increase in outdoor recreation participation was reported in the 3 years following the creation of the Bears Ears National Monument in San Juan County, Utah (BLM 2026) (a location that is less populated than the St. George area in Washington County). Using BLM's information, this could mean that the vehicle count at the Bear Claw Poppy Trailhead/Staging Area, the southern starting point of the HDT, would increase to more than 200,000 vehicles per year or an average of 548 vehicles per day using this staging area. We found no analysis in the DEA of the impacts to the tortoise/tortoise habitat from this intensive use at or near the trailhead/staging area and the HDT. To accommodate this concentrated use, the staging area would need to be several acres in size. Recall that the staging area is located in a mitigation area that BLM and the State of Utah are managing for the conservation of the tortoise.

From this information we conclude that BLM expects a substantial increase in the vehicle use and number of visitors on the HDT in Washington County, especially near St. George and Zone 6 of the Reserve. This substantial increase in use should be reflected in the analysis of impacts to the tortoise, tortoise habitat, and critical habitat in the NEPA document as well as its compliance with the decision document for the Northern Corridor Highway.

**Demographic Status of the Tortoise and Reasons for Decline in Abundance**: The USFWS and Utah Division of Wildlife Resources have documented substantial declines in tortoise abundance and density since the early 2000s (USFWS 2015, 2016, 2018, 2019, 2020, 2022, 2025a, 2025b; UDWR 2024, 2025). The primary reason for the substantial decline in tortoise abundance, density, and recruitment has been from increased mortality caused by human activities that result in impacts that are not direct impacts. These include human activities that result in the degradation and/or fragmentation of tortoise habitat (USFWS 2011); surface disturbance and proliferation of non-native invasive plant species (Brooks and Berry 2006) via construction equipment, vehicles, and other sources; replacement of native forbs with high nutritional and water value with low nutritional non-native invasive grasses (Drake et al. 2016); increased occurrence of size, intensity, and frequency of human-caused wildfires from fuels provided by non-native invasive plant species (Brooks and Esque 2002); increased predation from substantially increased numbers of coyotes that utilize human subsidies of food and water (Richter et al. 2024) and numbers of ravens that utilize human subsidies of food, water, roosting, perching, and nesting locations (Boarman 2003); and increased human access that provides opportunities for vandalism and collecting tortoises for pets (Lovich and Bainbridge 1999, Berry et al. 2020). The development, use, and maintenance of routes/roads cause/contribute to these impacts (USFWS 2011, Tuma et al. 2016, Averill-Murray and Allison 2023).

Associated impacts that have a causal relationship include routes that change surface flow that affects soil moisture and plant survival downslope/downgradient, reduced reproduction, and

growth; and anthropogenic dust deposition on native vegetation that adversely impacts its survival, reproduction, and growth. Consequently, all these impacts should be described in the NEPA document and analyzed with respect to their impacts on the survival and recovery of the tortoise including tortoise habitat/critical habitat.

**Mortality, Injury, and Tortoises Lost from the Population**:
The probability of mortality and injury of tortoises would increase with increased vehicle use on the HDT and associated facilities (e.g., staging areas, access routes to staging areas). Tortoise may also be killed or injured during improvement projects along the HDT. Collecting tortoises by humans performing construction and maintenance activities may also occur.

Increased use of the HDT would result in more people accessing areas that are remotely located from human population centers. Any tortoises seen near the HDT could be collected resulting in permanent removal from the wild population (Lovich and Bainbridge 1999).

**Impacts to Soils and Surface Hydrology:** After severe disturbance, desert soils require long periods to recover naturally (Chiquoine et al. 2016). For example, for biological soil crusts, Belnap (2001) reported recovery rates ranging from 14 to 50 years depending on the species comprising the soil crust. Chiquoine et al. (2016) reported that for soil crusts composed of lichens or mosses, recovery time is several decades to centuries depending on the availability of the propagules.

Devitt et al. (2022) found that a simple service road built over 27 years before a solar facility was constructed, decoupled the flow of water from up gradient washes to down gradient washes and once decoupled, altered the area in which rain water harvesting occurred. The decoupling of the wash system led to a significant decline in soil moisture, canopy level NDVI (Normalized Difference Vegetation Index) values and mid-day leaf xylem water potentials. Plants within the first 300 meters from where the wash was decoupled were placed under significantly greater stress during the higher environmental demand summer months (Devitt et al. 2022). Schwinning et al. (2011) argued that the overall health of desert ecosystems is directly linked to the integrity of their surfaces and such drainage systems.

**Impacts from Anthropogenic Dust:** Once disturbed (by human activities such as vehicles use), soils in the Mojave Desert are easily eroded by wind and water (U.S. Army 2006) with wind erosion producing airborne dust. Eller (1977), Thompson et al. (1984), Sharifi et al. (1997), and Farmer (1993) have indicated that varying amounts of dust settling on vegetation can block stomata, increase leaf temperature, and reduce photosynthesis thereby adversely affecting transpiration and growth of native desert plants. Airborne dust generated by vehicles buried soil crusts, resulting in the death of their photosynthetic organisms (e.g., cyanobacteria and green algae) (Belnap et al. 2001), and wind generates dust that can cover or abrade annual vegetation or seedlings. Dust deposition may reduce shoot length, increase water stress, and reduce or eliminate reproductive output for established plants (Wijayratne et al. 2005).

The extent of this damage to/loss of plants depends on the amount of dust produced, duration of production, and distance traveled. Distance traveled is related to the size of the dust particle and wind velocity. Large dust particles settle out near the source, whereas considerable amounts of

fine particles also are emitted and dispersed over much greater distances from the source. Particulate matter 10 micrometers (µm) or PM-10 represents a relatively fine particle size range and, as such, is not overly susceptible to gravitational settling (http://www.epa.gov/ttnchie1/ap42/ch13/final/c13s02.pdf).

Under a typical wind speed of 10 miles per hour (mph), larger dust particles that are 30 to 100 µm (PM-30 to PM-100) in diameter are likely to settle within a few hundred feet from the source. Smaller particles, (e.g., PM-10) have much slower gravitational settling velocities and are much more likely to have their settling rate decreased by atmospheric turbulence (http://www.epa.gov/ttnchie1/ap42/ch13/final/c13s02.pdf). Thus, they may be transported greater than a few hundred feet from the source under a typical wind speed of 10 mph. Greater wind speeds would transport these dust particles farther than a few hundred feet before settling on vegetation and adversely affecting their respiration, growth, reproduction, and survival.

**Surface Disturbance and Effects on Non-native Invasive Plants:** Construction, maintenance, and use of vehicles along OHV routes including the HDT, staging areas and camping areas disturb desert soils. Karban et al. (2024) compiled research results of several studies on non-native invasive annual plants in the desert southwest. They reported that practices that disturb soil and remove vegetation open up space and resources for invasive species to colonize and spread to adjacent areas. The phenology of non-native invasive plants enables them to outcompete native annual forbs. Invasive species germinate, grow, and produce seed faster and in greater abundance than native species. Their large numbers can overwhelm native species in the seed bank. This trait also allows for greater seed dispersal, increasing the chances of a seed landing somewhere suitable for recruitment. By investing less in leaves, growing quickly, and completing their lifecycle rapidly, non-native invasive species are opportunistic and able to capitalize with a high reproductive output when favorable conditions occur. In addition, invasive plant species often spread by vegetative reproduction.

Once established, invasive annual plant species outcompete native annual plant species in nearby undisturbed, natural areas with more resources, such as beneath native perennial plant canopies (Karban et al. 2024). Thus, proximity of undisturbed natural areas to areas with surface disturbance facilitates the introduction, spread, and proliferation of non-native invasive plants into undisturbed, natural areas. Routes and OHVs are the conduits that bring non-native invasive plants to locations in the desert accessible by vehicles. Once established the non-native invasive plants spread to undisturbed areas that vehicles are not able to access. Thus, non-native invasive annual are not confined to the areas along routes. The greater the number of vehicles that access an area, the greater the likelihood that they transport more non-native invasive plants including new species not yet established in the southwestern deserts.

**Transport of Non-native invasive Plant Species on Vehicles along Routes/Roadways**: Vehicles unintentionally transport plant propagules (e.g., seeds and vegetative plant parts) from non-native invasive annual plants along roadways (Brooks and Esque 2002, Brooks and Berry 2006, Averill-Murray and Allison 2023). These activities promote the establishment and facilitate the distribution of non-native invasive annual plants that outcompete native herbaceous plant species. Thus, the use of vehicles including OHVs in the desert disturbs the soil surface and

damages/removes native vegetation while transporting non-native invasive plants to these areas with soil disturbance to help vegetation become established.

**Increased Nitrogen Sources that Fertilize Non-native Invasive Plants**: In the DEA, the HDT is for motorized and non-motorized recreation use. We would argue that the primary impetus for designating the HDT and a majority of its use would be from motorized recreation.

Motorized vehicles emit nitrogen as exhaust pollutants. OHVs that do not have emission-control equipment emit more nitrogen. The pollution contains both oxidized and reduced forms of nitrogen (N), which are of concern because they are deposited on soil and plant surfaces and thus fertilize plants (Allen et al. 2009).

Nitrogen levels are naturally low in deserts (Brooks 2003). Relatively small increases in nitrogen may cause large changes in plant communities, because the ratio of increased nitrogen to plant biomass is higher compared with ecosystems with higher plant productivity (Brooks 2003). For example, in the Mojave Desert where most of the distribution of the tortoise occurs, there are non-native invasive annual plant species. These non-native species flourish in an environment with additional nitrogen promoting their growth (Brooks 2003).

With respect to the effects of nitrogen on invasive and native plant species, "biomass of non-native grasses increased significantly with N fertilization" and the response of native species depended on the abundance of non-native invasives. Where non-native invasive annual grass species were abundant, following nitrogen fertilization, native species richness decreased. Where non-native invasive annual grass species were low in abundance, native species richness and cover increased with fertilization (Allen et al. 2009). This suggests that the native species are also nitrogen-limited, but that the non-native grasses respond to nitrogen more rapidly (Allen er al. 2009) and are able to outcompete native annual forbs. Thus, implementation of improvements associated with the HDT and increased use of motorized vehicles on the HDT from its designation would provide increased ongoing nitrogen emissions and nitrogen deposition to nearby surface soils and vegetation of the HDT. This increased nitrogen deposition would promote the growth of non-native invasive annual grasses along/near the HDT in/near tortoise habitat.

**Effects of Non-native Invasive Annual Plant on Native Annual Plants and the Quality and Quantity of Available Forage or the Tortoise**: The impacts to the tortoise from the introduction, spread, and proliferation of non-native invasive annual plants are potentially devastating. By outcompeting native annual forbs, the non-native invasive annual grasses replace native forbs. In some areas in the eastern Mojave Desert, this reduction is substantial with non-native annual grasses comprising more than 90 percent of the biomass (Brooks and Esque 2002).

These non-native invasive annual grasses have altered the foods available to the tortoise. They do not provide the nutrition needed by the tortoise for survival, reproduction, and growth. They are detrimental in the diets and health of juvenile and adult tortoises because of their low nutritional value and water content (Drake et al. 2016). They have replaced native annual and perennial forbs that are high in nitrogen, other nutrients, and water that the tortoise needs for survival, reproduction, and growth, especially for hatchling and juvenile tortoises (Berry et al. 2023).

**Wildfires and Non-native Invasive Annual Grasses:**

*Number, Areal Extent, and Frequency of Wildfires*: In Appendix C of the DEA, Issues Analyzed in Brief, BLM states,

> "In 2025's fire season (July 1–October 1), there were approximately 1,159 reported fires that affected 164,874 acres of land across the state. Of the reported fires, approximately 702 were determined to be caused by humans, composing approximately 61% of the total reported fires for the season (Utah Department of Natural Resources 2025). Each BLM field office in Utah incorporates management actions related to wildfire risk mitigation in its respective RMPs.
>
> Designating the proposed trail as OHV open, issuing SRPs, installing staging areas, and advertising the trail would likely increase the volume of OHVs and visitors, which could increase the risk of human-caused wildfires along and near the proposed route. However, the HDT would not alter the implementation of BLM field office management actions related to wildfire risk mitigation in the project area. Visitors holding SRPs would be required to follow the current fire restrictions (see EA Section 2.2.8), and the BLM can post information at kiosks about fire safety. Therefore, a detailed analysis is not required to inform a significance determination, and this issue has been dismissed from further analysis."

We thank BLM for including the data on fires throughout Utah in 2025. However, 2025 was a near record drought for Utah. In the warm desert portion of Utah (i.e., southwestern Utah with Mojave Desert plants as indicator species), fires occur in increased frequency, areal extent, and intensity following wet winters. For example, in the summer and fall of 2020 following a wet winter, there were three large human-caused fires in the Red Cliffs NCA in tortoise habitat. All three fires "burned very hot, decimating native trees, shrubs, forbs and grasses to ash" (pers. com. Kellam 2020 cited in BLM & USFWS 2020). An additional 18 human-caused fires in/near the Red Cliffs NCA, Red Cliffs Desert Reserve, and Snow Canyon State Park burned acreage that ranged from less than 1 acre to 234 acres (Utah Fire Info accessed 2020-12-1). All 21 fires were human-caused and had ignition points at roads. Most human-caused ignition points for fires in the Mojave Desert occurred along roads (Brooks and Matchett 2006).

Current road systems increase risk of human-caused fire (Morrison 2007). Morrison (2007) examined the spatial relationship of roads to wildfires and whether roads enable wildfire ignitions. He found that 88% of all wildfires nationwide are caused by humans. Of these human-caused wildfires, 95% occurred within ½ mile of a road. Human-caused wildfires occur much more commonly next to roads than would be predicted by random occurrence across the landscape. Road access is a significant contributing factor in the probability of occurrence of wildfires. These results were statistically significant.

Brooks and Matchett (2006) mapped the ignition points for fires in the Mojave Desert between 1980 and 2004. They distinguished between human-caused and lightning fires. They reported that most ignition points of human-caused fires occurred along roadways. For example, between July 1 and 2, 2004, two vehicles travelling on separate roads caught fire and started two wildfires in

southern California. Roads provide other ignition sources such as cigarettes and other burning objects tossed from a vehicle.

Because of the prevalence of nonnative invasive annual grasses along roadways and the presence of people in vehicles, the probability of human-caused fires starting along roadways in the desert is increased (Gucinski et al. 2001, Brooks and Matchett 2006). Similarly with increases in vehicle use on the Washington County portion of the HDT, which according to BLM is between 12,000 to 13,000 vehicles in a year (BLM 2026) or higher near the Bear Claw Poppy Trailhead/Staging Area, and increases in non-native invasive annual grasses along this route and into nearby undisturbed areas, the probability of human-caused fires starting along the HDT is increased. With increases in vehicle use along the HDT in the Beaver Dam Wash NCA and tortoise critical habitat and increases in non-native invasive annual grasses along this route and into undisturbed areas, the probability of human-caused fires starting in the NCA and tortoise critical habitat is increased. A similar increased probability of human-caused wildfires exists for Zone 6 of the Reserve because vehicles accessing the Bear Claw Poppy Trailhead/Staging Area must drive through Zone 6 to reach this trailhead.

Many non-native invasive annual plant species can form a continuous carpet covering large areas of the desert. When they dry they provide fuel for wildfires. that spread fires over large areas and provide fuel to ignite native woody perennial shrubs. Thus, the frequency, intensity, and areal extent of fires in the southwest desert portion of Utah increases substantially in years following one or more wet winter rainy seasons (Brooks and Minnich 2006, Moloney et al 2018).

We request that BLM separate causes of wildfires in Utah by county for the western part of the state – the location of the HDT. We predict that there would be a greater number of human-caused fires in southwestern Utah than naturally occurring fires because the population is larger than along the rest of the HDT route.

*Response of Native Desert Shrubs to Wildfires*: Following a fire, native plant species diversity and cover decreased (Brooks and Matchett 2003). Native desert perennial plants are generally slow to re-establish after fire and recurrent fire may prevent their re-establishment (Brooks and Minnich 2006, Brown and Minnich 1986, O'Leary and Minnich 1981). The loss of native plants can be followed by increased dominance of non-native annual grasses. Thus, post-fire vegetation has typically lower species diversity and plant structural diversity than the native community, which can negatively affect the desert tortoise (Brooks and Esque 2002, Esque et al. 2003) and other desert wildlife.

"Based on the severity of a fire it is unknown how long, if ever, the vegetation will take to return to pre-burn conditions." For blackbrush shrublands, "regrowth can take centuries" (Hood and Miller 2007, cited in BLM & USFWS 2020).

*Response of Non-native Invasive Annual Plants to Wildfires*: Annual grasses that were on the landscape before the fire will likely dominate during the next several growing seasons. Cheatgrass can replenish its seedbank after one full season, particularly after a wildfire" (BLM & USFWS 2020). As mentioned above, following a fire non-native annual plant species diversity and cover

increased (Brooks and Matchett 2003). This sets up a recurring grass-fire cycle (D'Antonio and Vitousek 1992, Brooks 1999) and conversion of vegetation from native desert shrub to non-native annual grassland.

*Response of Soil Seed Banks to Wildfires*: Lee et al. (2024) examined soil seed bank biodiversity from 30 wildfires that burned between 1972 and 2010 across the Mojave Desert ecoregion of North America. Soil seed banks are reserves that (1) help maintain species diversity through temporal storage effects, (2) function as germination pools that optimize fitness across varying environmental conditions, and (3) promote the persistence of native plant communities (Lee et al. 2024). Disturbances such as fire and associated invasions by non-native annual plant species disrupt these reserves. Burned area seed banks in the Mojave Desert tended to be dominated by non-native invasive species, primarily two grasses, (*Bromus rubens*, *Bromus tectorum*), as well as an invasive forb (*Erodium cicutarium*). Lee et al. (2024) documented a "collective sharp decline in alpha diversity [mean effective number of species across 1-$m^2$ subplots within a plot], beta diversity [effective number of distinct localized communities within a plot, a direct measure of community variability], and gamma diversity [the effective number of species for the entire 0.1 ha plot] with increased invasive species dominance."

These results indicate that "invasion of the Mojave ecoregion by non-native annual plants homogenizes the soil seed bank by rapidly driving a decline in native plant diversity beyond a critical threshold in non-native plant relative abundance, and a concomitant decrease in the compositional variability of the seed bank across the landscape." With the addition of wildlife, this disturbance allows "for a rapid increase in the relative abundance of non-native plants driving more rapid losses of native diversity and resulting in greater homogenization across space" (Lee et al. 2024). Thus, species diversity of native plants in the soil seed bank is being lost along with impacting native plant species diversity and trophic levels of animals (Lee at al. 2024). These results for the soil seed banks are not surprising because "certain *Bromus* grass species, once introduced, exhibit explosive invasiveness in post-fire areas in the Mojave and other regions" (Lee et al. 2024).

*Impacts of Wildfires on Tortoises/Tortoise Habitat*: Fires kill tortoises. Results from a limited survey of 618 acres of the Cottonwood Trail fire revealed mortality of 14 tortoises directly attributed to the fire (BLM & USFWS 2020). The actual number of tortoises that died from this one fire is unknown at this time but presumed to be substantially greater. The Cottonwood Trail Fire resulted in the direct mortality of a" significant amount of tortoises, including adults, immatures and juveniles," Kellam reported (BLM biologist). Surveys have not been completed for the Turkey Farm Road fire or the Lava Ridge fire as of the release of the FEIS. However, Mike Schijf, a biologist with the Washington County Habitat Conservation Advisory Committee, previously stated there could have been between 500 and 800 tortoises residing in the torched portions of the reserve from the Turkey Farm Road and Cottonwood Trail fires (Kessler 2020).

Whereas some plant communities have evolved under fire regimes and are dependent upon fire for seed germination, plant communities within the Mojave Desert are not dependent on a fire regime to complete their life cycle and are highly adversely impacted by fire (Brown and Minnich 1986, Brooks 1999). Natural range fires are not prevalent in the Mojave Desert because there is not

enough vegetation present (too many shrub interspaces) to sustain a fire (Johansen 2003, cited in Fenstermaker 2012).

Non-native invasive annual grasses (e.g., *Bromus* spp.) provides the fine fuel necessary for the initiation and spread of fire, which in turn increases the frequency, area, and intensity of fire. Following a fire, native plant species diversity and cover decreased, whereas non-native annual plant species diversity and cover increased after burning (Brooks and Matchett 2003). This sets up a recurring grass-fire cycle (D'Antonio and Vitousek 1992, Brooks 1999) and conversion of vegetation from native desert shrub to non-native annual grassland. This vegetation conversion results in the loss of habitat for the tortoise —the quality and quantity of native vegetation the tortoise requires for adequate nutrition and water balance are no longer present, and woody shrubs that provide cover from temperature extremes and predators are gone. An invasive plant/fire regime cycle is currently establishing in the middle elevation shrublands of the Mojave Desert (Brooks and Matchett 2006) including Washington County.

**Subsidized Tortoise Predators**: Common ravens are known to prey on juvenile desert tortoises based on direct observations and circumstantial evidence, such as shell-skeletal remains with holes pecked in the carapace (Boarman 1993). The number of common ravens increased by 1,528% in the Mojave Desert since the 1960s (Boarman 1993). This increase in raven numbers is attributed to unintentional subsidies provided by humans.

In the Mojave Desert, common ravens are subsidized predators because they benefit from resources associated with human activities that allow their populations to grow beyond their "natural" carrying capacity in the desert habitat. Kristan et al. (2004) found that human developments in the western Mojave Desert affect raven populations by providing food subsidies, particularly trash and road-kill. Boarman et al. (2006) reported raven abundance was greatest near resource subsidies (specifically food = trash and water). Human subsidies include food and water from landfills and other sources of waste, reservoirs, sewage ponds, agricultural fields, feedlots, gutters, as well as perch, roost, and nest sites from power towers, telephone poles, light posts, billboards, fences, freeway or railroad overpasses, abandoned vehicles, and buildings (Boarman 1993). Subsidies allow ravens to survive in the desert during summer and winter when prey and water resources are typically inactive or scarce. Boarman et al. (1993) concluded that the human-provided resource subsidies must be reduced to facilitate a smaller raven population in the desert and reduced predation on the tortoise.

Coyotes are known predators of tortoises. High adult tortoise mortality from coyote predation was reported by Petersen (1994), Esque et al. (2010) and Nagy et al. (2015). In some areas, numbers of ravens correlated positively with coyote abundance (Boarman et al. 2006). Lovich et al. (2014) reported tortoise predation may be exacerbated by drought if coyotes switch from preferred mammalian prey to tortoises during dry years. The Mojave Desert has been in a multi-decade drought (Stahle 2020, Williams et al. 2022) due to climate change, and drought conditions are expected to continue and intensify in future years. Thus, increased predation pressure from coyotes on tortoises is expected to continue.

The action alternatives would likely increase the availability of human-provided subsidies for predators of the tortoise including the common raven and coyote during construction, use, and maintenance activities for the HDT and associated facilities. For example, during the construction phase the water used to control dust and the waste generated during construction including food brought to the Project site by workers for meals, etc., are examples of food and water subsidies for ravens and coyotes that would attract these predators to the Project area and increase their numbers in the surrounding area. The presence of food waste during use and maintenance would provide food subsidies for ravens and coyotes.

**Impacts to Tortoise Behavior**: Routes also affect tortoise behavior. Harju et al. (2024) reported that when female tortoises were nearer to a road, they were more likely to switch to and stay within a more energy demanding movement state. Further, when in this state, they moved even greater distances than when in the traveling state and far from the road. Thus, the presence of a road near a tortoise resulted in a greater expenditure of energy, which is not desirable in an arid environment where food and water to support increased energy demands are limited and this increased energy demand would reduce the reproductive output and survival of female tortoises (Henen 2002).

**Design Features for the Tortoise**

Of interest to the Council were the design features listed in the DEA on pages 2-9 and 2-10 for the tortoise. We are not sure of the purpose of these design features. They include:

- monitoring route used for 3 years to determine changes in usage

  **Comment**: Does this mean a change in usage by trail users or by the tortoise? If for the tortoise (because this is a design feature for the tortoise), baseline data on tortoise use of the area on/near the proposed HDT would need to be collected prior to implementation of the HDT. Who would design the study to collect and what data would be collected to be able to answer what questions with respect to impacts to the tortoise? A study design to monitor change in usage of the area by the tortoise is a scientific process that should be developed by tortoise researchers and not the DOR or BLM. The only appropriate agency in the Department of the Interior would be the U.S. Geological Survey and their tortoise scientists. Who would pay for the 3 years of monitoring? What would BLM do if the monitoring data showed an adverse impact? We ask this because there are numerous reports in the scientific literature of the adverse effects of vehicles use on paved and unpaved routes in tortoise habitat and impacts of increased use, yet BLM continues to authorize the use of more trails and greater use in tortoise habitat.

  If it means changes in the usage that affect the physical components of the HDT, we assert this should be a requirement for the entire HDT. To determine whether changes have occurred, baseline data must be collected before the HDT is designated so there is a comparison of pre- and post-HDT designation data, whatever the data may be.

  Standard changes to OHV routes include increased trail depths and trail widths, consistent trail rutting along inventoried routes, severe hill and switchback impacts in steep areas from vegetative and soil losses, observed shrub/tree damage adjacent to a majority of trails and intersections from cross-country travel, and multiple trailing and trail widening to avoid severely mudded/potholed areas in all use areas (Divine and Foti 2008).

- educational signage describing the Mojave desert tortoise and its conservation needs would be included at all kiosks within the range of the Mojave desert tortoise

and

- signage where appropriate of the potential presence of Mojave desert tortoise, prohibiting the collection of individuals, and requiring users to stay on the route and drive slowly

  **Comment**: While these kiosks may seem to be helpful, the information provided does not include information on threats to the tortoise/tortoise habitat and that the presence and use of the trail is adversely impacting the tortoise/tortoise habitat (von Seckendorff Hoff and Marlow 2002, Berry et al. 2014, Tuma et al. 2016, Averill-Murray and Allison 2023). Does BLM have data to show that motorized trail users read this information and that it changes their behavior to reduce their impacts on the tortoise/tortoise habitat?
- monitoring Mojave desert tortoise mortality during the species' most active season (March 15–May 15 and August 20–October 20)

  **Comment**: In the eastern range of the tortoise summer rains alter the active season of the tortoise. They are active following rummer rain events.
- at a minimum, on a weekly basis with monitoring of mortality occurring monthly during the remaining past of the active season with DOR responsible for implementing monitoring

  **Comment**: We are not sure what question this monitoring is answering. If it is to determine the amount of tortoise mortality from vehicle strikes, then monitoring once a week is unlikely to discover tortoise carcasses on the HDT. Scavengers would move the carcass off the trail to a less active location for consumption
- Adaptive management would be implemented if monitoring indicates high impacts to Mojave desert tortoise along the route. Adaptive management strategies may include additional signage, line-distance monitoring (i.e., more monitoring), re-routing or route closure, and targeted tortoise exclusion fencing and tortoise passage structures.

  **Comment**: If incidental take is exceeded, then BLM is required to halt the activity causing the take. If the activity is vehicle strike causing tortoise mortality then that section of the HDT would be closed to vehicle use.
- DOR and its partners would implement road kill management to minimize predator attractants along the routes

  **Comment**: Roadkill management should include collecting data on the numbers and species that are killed from vehicle strikes. Coyotes and ravens are more effective at finding roadkill wildlife than people are. They move it to another location to consume it.
- BLM would notify the UDWR of any dead or injured Mojave desert tortoises along the route

  **Comment**: Under the biological opinion, USFWS should be notified.
- The BLM would coordinate with USFWS, DWR, and Washington County to develop a long-term monitoring strategy for the Beaver Dam Wash NCA.

  **Comment**: We are unsure of the purpose of this monitoring. There is no indication that it would be implemented.
- In the range of Mojave desert tortoise, the route would be monitored annually for new invasive plant infestations, and treatment and removal would be implemented on a regular basis, as needed and appropriate.

  **Comment**: Monitoring annually does not halt the invasive plant infestations. The monitoring schedule should follow the phenology of the plant species with some species setting seed earlier

in the year than others. This does not address the spread of invasive via vegetative propagation which can happen any time of year.

- In the range of Mojave desert tortoise, the route would be monitored annually for unauthorized user-created routes and would be physically closed.
  **Comment**: Does this mean that unauthorized routes would be physically closed? We are unsure how effective this would be when implemented once a year. BLM's experience in the Mojave Desert in California is that physically closing a route frequently results in a user ignoring the closure using the unauthorized route again. If the monitoring and physical closure occurs once a year, this would mean that the unauthorized routes could be used for almost another year before someone would physically closed them again.

If the purpose of the design features is to offset the impacts to the tortoise/tortoise habitat from implementation of either action alternative described in the DEA, these design features do not begin to offset the myriad of direct, indirect, interactive, synergistic, and cumulative impacts to the tortoise/critical habitat/tortoise habitat described above (see Adverse Impacts to the Mojave Desert Tortoise/Critical Habitat/Tortoise Habitat from Route/Road Presence, Improvements, and Use"), from the increased use of the HDT and proposed improvements.

BLM has a history of collecting data on the demographic status of the tortoise and funding studies on the impacts of various land management actions and development projects, but rarely does it implement and enforce on-the-ground management actions to halt or reverse these impacts to the tortoise/tortoise habitat/critical habitat (BLM 2019).

Tortoises have life history characteristics of slow growth, delayed sexual maturity, high adult survivorship, low rates of recruitment (Iverson 1991, Turner et al. 1987, Congdon et al. 1993), and without human impacts, are long-lived. These characteristics greatly increase their vulnerability to continued losses of tortoises from the population and contribute to markedly slow population recovery (Congdon et al. 1994, Hall et al. 1999, Dorcas et al. 2007), if any. This was recently affirmed in a model on the effects of introducing mortality from vehicle use on a road to a stable tortoise population (Peaden 2017). A small stable tortoise population of 2,000 animals had a road constructed and used in its habitat. With no environmental stochastic events (e.g., droughts, etc.) or other new sources of mortality, the formerly stable population declined to 1,500 animals in 50 years. However, when the road was fenced with tortoise exclusion fencing and the source of road mortality eliminated, the population did not increase within the next 50 years. There was little change in population abundance. Adding head-started tortoises to the population (i.e., population augmentation) with tortoise exclusion fencing increased the tortoise population slightly after 50 years. This model demonstrates the slow recovery of a tortoise population when one mortality factor (specifically, a road use) is constructed in the habitat of a stable tortoise population's habitat

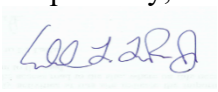
Corresponding to this are the very long recovery times for desert soils (including the crucial biotic components – soil crusts and arbuscular mycorrhizal fungi) and native vegetation when adversely impacted by surface disturbance such as impacts from vehicle use in the desert (i.e., soil compaction, erosion, damage/destruction to the biotic components of soils, vegetation removal, and alteration of downgradient surface hydrology, etc.) seeing improvement in the status of the tortoise or its habitat which supports the tortoise takes decades or longer.

Because of the numerous long-term impacts to tortoise populations from ongoing and increased use of the HDT and proposed improvements, the solution is to avoid placing the HDT in the distribution of the tortoise/critical habitat/tortoise habitat rather than list a few ineffective minimization actions that a subset of the HDT users may implement, that will not halt the ongoing decline of the tortoise, and that cannot be enforced because of inadequate BLM funding and staffing.

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/Stakeholder for this and all other projects funded, authorized, or carried out by the BLM 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 Council at eac@deserttortoise.org of any proposed project that BLM 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 provide comments to ensure that BLM fully considers and implements actions to conserve these tortoises as part of its directive to conserve special status species on lands managed by BLM.

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,



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