



DESERT TORTOISE COUNCIL

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Via BLM NEPA ePlanning Portal & email

September 9, 2026

Keenan Murray
Arizona Strip District Office
Bureau of Land Management
Attn: ASDO Oil and Gas Lease Sale Draft EA
4001 E. Aviator Drive
St. George, UT 84790
blm_az_asdo_nepa_comments@blm.gov

RE: Arizona Strip Field Office Competitive Oil and Gas Lease Sale Environmental Assessment
(DOI-BLM-AZ-A000-2026-0007-EA)

Dear Mr. Murray,

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 and attachment 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 (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 Action

BLM has nominated 132 parcels (287,284 acres) for two separate quarterly Competitive Oil and Gas Lease Sales (Proposed Action). The first lease sale, to be held in December 2026, includes 40 oil and gas parcels totaling 78,708 acres; the second lease sale, to be held in February 2027, includes 92 parcels totaling 208,576 acres. The nominated lease parcels are in the Arizona Strip District, Mohave County, Arizona South of the Arizona – Utah border and north of the Grand Canyon.

BLM prepared the “Arizona Strip Field Office Competitive Oil and Gas Lease Sale Environmental Assessment” (EA) and an unsigned Finding of No Significant Impact (FONSI).

A Federal onshore oil and gas lease is initially issued for a “primary term,” which is currently ten years. The lease may be extended as long as oil or gas is produced in paying quantities, or as long as the lease remains committed to an approved unit or communitization agreement with ongoing production. “The act of leasing does not directly cause environmental consequences, although it is considered to be an irretrievable commitment of resources because once a lease is issued, generally the BLM cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy (NSO) stipulation” (BLM 2026a).

BLM provided a description of two alternatives in the EA — Alternative A, the Proposed Action and Alternative B, the No Action Alternative.

Alternative A - Proposed Action: The Proposed Action does not include any surface disturbance, such as exploration, development, production, or final reclamation of oil and gas resources. However, the authorization of oil and gas leasing does convey a right to subsequent exploration, development, and production activities (typical phases of surface disturbance that occur after issuance of such leases) subject to stipulations, non-discretionary restrictions from certain statutes (e.g., Federal Endangered Species Act (FESA)), conditions of approval, and other reasonable measures required to minimize adverse impacts. Stipulations and/or lease notices would be attached to each offered lease parcel. Drilling wells on leased parcels is not permitted until the leaseholder submits, and BLM approves (subsequent to additional site-specific environmental review documentation) a complete Application for Permit to Drill (APD) package, which occurs after leases have been issued. BLM has authority, according to the Standard Terms and Conditions of the leases, regulations, and statutes, to attach Conditions of Approval (COA) to the APD that mitigate impacts on public land, resources, and/or resource values.

BLM used the following “Reasonably Foreseeable Development Scenario” (RFDS) and assumptions.

- Oil and gas resources within the Arizona Strip Field Office administrative area are currently considered limited, with no commercial discoveries to date (with most activity located in the eastern part of the Arizona Strip).
- BLM assumes that two wells could be drilled on the leases offered during the ten years of the leases’ primary term based on past and present oil and gas exploration and development activity in other areas of the Arizona Strip and activity presented in BLM’s Resource Management Plan (RMP) Final Environmental Impact Statement (FEIS) RFDS (BLM 2007).
- Each well is expected to disturb about seven acres, with immediate reclamation following drilling.
- BLM assumes that activities would be limited to exploration drilling followed by immediate reclamation.
- BLM assumes a 10-year reclamation period.
- Existing and foreseeable oil and gas activity in the Arizona Strip Field Office administrative area is expected to remain limited to intermittent exploration, with minimal and fully reclaimable surface disturbance.
- No development (production) is anticipated unless a commercial discovery is made, in which case further environmental review would be required.

Of the 287,284 acres BLM proposed to offer for the lease sale, 25,306 acres are in the Mojave Desert ecological zone and 42,297 acres in the Mojave-Great Basin Transition Ecological Zone. These are the two ecological zones used by tortoises.

Alternative B – No Action Alternative: Under the No Action Alternative BLM would not offer any of the nominated parcels in this lease sale. Surface management would remain the same and potential oil and gas development could occur on surrounding federal, private, and state lands if those lands are leased.

Other Alternatives Considered but Not Analyzed in Detail

BLM considered two alternatives identified by the public. One alternative would avoid, reduce, and minimize adverse resource impacts and land use conflicts to the greatest extent, (i.e., cause the least amount of surface disturbance, minimize water usage, and avoid or minimize the use of hazardous materials). The second alternative, suggested by the Council in its scoping comments, avoids surface disturbance in tortoise habitat by using methods such as directional drilling to explore for and extract oil and gas. BLM did not consider these suggested alternatives in detail because the “commenters failed to articulate any specifics on what the alternative would entail, or how such an alternative would accomplish the purpose and need of the project” (BLM 2026a).

Comments on the Environmental Assessment

We appreciate that BLM contacted the Council about the availability of the Draft EA for public comment. We request that such notifications continue for all BLM proposed actions that may affect the tortoise or its habitat including habitat needed for connectivity to support survival and recovery. The Council’s comments are intended to help BLM ascertain the depth and complexity of potential impacts to the tortoise and its habitat from the Proposed Action so it may effectively manage for the tortoise and tortoise habitat to achieve its survival and recovery.

Scoping Comments from the Council and BLM’s Response

During public scoping, BLM provided the following information. Under “Description of the Project” on BLM’s National NEPA [National Environmental Policy Act] Register for the Proposed Action (<https://eplanning.blm.gov/Project-Home/?id=c5f10790-8349-f111-88b4-001dd8084607>), The Council used this information to develop scoping comments and an action alternative other than the Proposed Action.

For the December 2026 lease sale –

“Project Description

The Bureau of Land Management (BLM) has opened a 30-day public scoping period to receive public input on 40 oil and gas parcels totaling 78,708 acres that may be included in a December 2026 lease sale in Arizona. The scoping period ends June 11, 2026. Leasing is the first step in the process to develop federal oil and gas resources. Before development operations can begin, an operator must submit an application for permit to drill detailing development plans. The BLM reviews applications for permits to drill, posts them for public review, conducts environmental analysis and coordinates with state partners and stakeholders. All

parcels that are included in a federal oil and gas lease sale include appropriate stipulations to protect important natural resources. Information on current and upcoming BLM leases is available through the National Fluid Lease Sale System. BLM lease sales are held online through Efficient Markets.”

For the February 2027 lease sale –

“Project Description

The Bureau of Land Management (BLM) has opened a 30-day public scoping period to receive public input on 92 oil and gas parcels totaling 208,576 acres that may be included in a February 2027 lease sale in Arizona. The scoping period ends July 29, 2026. Leasing is the first step in the process to develop federal oil and gas resources. Before development operations can begin, an operator must submit an application for permit to drill detailing development plans. The BLM reviews applications for permits to drill, posts them for public review, conducts environmental analysis and coordinates with state partners and stakeholders. All parcels that are included in a federal oil and gas lease sale include appropriate stipulations to protect important natural resources. Information on current and upcoming BLM leases are available through the National Fluid Lease Sale System. BLM lease sales are held online through Efficient Markets.”

In reviewing this limited information provided by BLM, it describes BLM’s process for conducting lease sales. It provides no description of the “on-the-ground” activities that would be implemented subsequent to these lease sales during exploration, development, or production of oil and gas resources or where they would occur. In addition, BLM did not provide the public with the purpose and need of the Proposed Action. BLM provided no references to or information from the Final Environmental Impact Statement and Proposed Resource Management Plan for the Arizona Strip Field Office (BLM 2007) that would have been relevant to the leasing, exploration, development, and production of oil and gas resources on the Arizona Strip. Consequently, the Council presumed that the purpose and need was to lease parcels and explore, develop, and produce oil and gas resources.

Using BLM’s limited information in the scoping announcement, the Council determined that:

- Some areas identified for this Proposed Action are in tortoise habitat in the Upper Virgin River Recovery Unit (USFWS 2021);
- the available demographic data on the tortoise in the Upper Virgin River Recovery Unit shows continuing declines for the past 25 years in an area managed for the protection of the tortoise (UDWR 2026);
- activities typically associated with oil and gas exploration, development, and production would adversely impact the tortoise and its habitat and contribute to the ongoing demographic declines for the tortoise in the Upper Virgin River Recovery Unit; and
- depending on the location of activities associated with oil and gas leasing, exploration, development, and production in tortoise habitat, these activities could substantially impede or block connectivity of tortoises south of the Virgin River with tortoises in the adjacent Northeastern Mojave Recovery Unit to the west.

With limited information provided by BLM from which to develop an alternative, the Council suggested that BLM analyze an alternative that would have “the least amount of surface disturbance, use the least amount of water, and avoid or minimize the use of hazardous materials. If more than one entity is awarded a lease, they should be required to consolidate their development facilities. One or more alternatives should avoid surface disturbance in tortoise habitat by using methods such as directional drilling to access oil and gas. The locations and use of new roads or improvements to BLM open roads for oil and gas development should be consolidated as much as possible for safety purposes” (Council 2026a, 2026b).

In the Draft EA, BLM provided to the public for the first time the purpose and need of the project. BLM stated their “purpose in preparing the EA is to respond to EOIs [expressions of interest] for oil and gas leasing on specific federal mineral estate through a competitive leasing process and to make a decision as to which parcels will be offered.” The need is to comply with the Mineral Leasing Act of 1920, as amended (MLA), that “establishes that deposits of oil and gas owned by the United States are subject to disposition in the form and manner provided by the MLA under the rules and regulations prescribed by the Secretary of the Interior, where consistent with FLPMA and other applicable laws, regulations, and policies.”

The Council asserts that their alternative meets the purpose and need of the project because it allows for leasing and development of oil and gas resources in tortoise habitat. The Council challenges BLM’s reason for not analyzing in detail the suggested alternative because the Council “failed to articulate any specifics on what the alternative would entail” when BLM provided no information on the Proposed Action other than to issue or not issue leases and a map of the parcels. In addition, the Council received no communication from BLM requesting additional information about our suggested alternative.

We contend that in the Final EA, BLM should analyze additional action alternatives including the alternative suggested by the Council during public scoping for the December 2026 and February 2027 oil and gas leases.

Pages 1 & 2, Introduction: “The act of leasing does not directly cause environmental consequences, although it is considered to be an irretrievable commitment of resources because once a lease is issued, generally the BLM cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy (NSO) stipulation.”

Please see our comments below under “Consultation and Coordination, U.S. Fish and Wildlife Service Consultation” with respect to how this statement and the proposed issuance of oil and gas leases obligates BLM to conduct an analysis of the effects of the foreseeable exploration, development, and production of oil and gas resources on the tortoise and its habitat and obtain a biological opinion before BLM may issue any leases.

Page 3, 1.2 Background: BLM said, “The parcels would be available for sale through an online auction held by the BLM, the first of which is scheduled for December 15, 2026 while the second is scheduled for February 2, 2027.”

In this sentence, BLM states they are selling parcels rather than leasing parcels. Please correct this sentence to state the parcels are available “for lease” and not “for sale.”

Page 3, 1.4, Decision to Be Made and Pages 5 - 7, 1.5 Conformance with the Land Use Plan:

Regarding the decision to be made, BLM said, “The BLM Authorized Officer will decide whether to offer for lease the nominated lease parcels with or without constraints, in the form of lease stipulations, *as provided for in the approved land use plan* [emphasis added]. If the decision is to offer the lands for lease and subsequently issue a lease, standard terms and conditions (STCs) under Section 6 of the BLM lease form (Form 3100-11, Offer to Lease and Lease for Oil and Gas), would apply” (BLM 2008).

With this statement BLM has limited its decision to one of two choices – issue leases with the stipulations in the land use plan or not issue the leases. This statement implies that additional terms and conditions would not be required and that no surface occupancy (NSO) would not be a stipulation with respect to tortoise habitat. A NSO stipulation was not identified in the RMP for tortoise habitat in this part of the Arizona Strip.

We provide information below on how other sections of the RMP appear to contradict this statement and the two identified choices that BLM states they have in issuing the leases, especially with respect to activities that would occur in tortoise habitat (see below under “Consultation and Coordination, U.S. Fish and Wildlife Service Consultation”).

Regarding conformance with the land use plan, BLM said, “Under the FLPMA, the BLM must manage for multiple uses of public lands in a combination that will best meet the present and future needs of the public and the various resources based on an approved land use plan or RMP.” While in the Draft EA, BLM provides requirements from the RMP for minerals leasing, we did not find information from the RMP regarding requirements for managing for the tortoise and its habitat. We did find a statement that, “The proposed action conforms to the fluid mineral leasing decisions in the RMP and is consistent with the RMP’s goals and objectives for natural and cultural resources. It is also consistent with RMP decisions, and their corresponding goals and objectives related to the management of (including but not limited to) air quality, water resources, soils, cultural resources, vegetation, special status species, wildlife, recreation and areas of critical environmental concern (ACEC).”

We are not sure how BLM arrived at this conclusion for all these resource issues, when the Draft EA analyzed, in detail, impacts to only two resource issues, air quality and American Indian resources. While BLM provided “Appendix C Issues Analyzed in Brief” for all other resource issues, we assert that this appendix, at least for the tortoise, did not provide an analysis of the likely effects to the tortoise and its habitat that would occur from leasing, exploration, development, and production of oil and gas resources (see our comments below under “Review of literature” and “Analysis of effects of the action.” Thus, we found no information in the Draft EA to substantiate BLM’s claim that the Proposed Action and likely future actions for exploration, development, and production are consistent with the goals and objectives in the RMP for natural and cultural resources, especially for the tortoise and tortoise habitat.

Goals and Objectives in the RMP: In the approved RMP for the Arizona Strip (BLM 2008), BLM listed “Identified Future Conditions” and “Management Actions” to be implemented for management of the tortoise and its habitat. For example, BLM stated that a desired future condition is, “There will be no net loss of acres of Mohave Desert plant communities (i.e., long-term or

permanent removal from the landscape). A no net loss objective will not preclude restoration, rehabilitation, or related management actions.” The identified future conditions and management actions relevant to the tortoise, its habitat, and leasing, exploration, development, and production of oil and gas resources are provided in Appendix A of this letter.

In the Draft EA under “Reasonable Foreseeable Actions Common to All Issues,” BLM stated, “Complete reclamation of the disturbance [from leasable mineral activities] requires five to ten years.”

For projects in tortoise habitat, when analyzed by other BLM offices, any activity that removes native perennial vegetation (i.e., road construction, well installation, etc.) even if for temporary use is categorized as a long-term impact. This is because of the long reclamation time for native perennial desert vegetation. Abella (2010) reported recovery of vegetation in the Mojave Desert lost from surface disturbance would take 200 years, and disturbances can leave scars in the desert visible for multiple human generations (equivalent to tortoise generations). We expect that this time would be reduced if the applicants implemented effective actions to assist in restoration of soils and vegetation. Consequently, complete reclamation of disturbance takes much longer than five to ten years that BLM reported in the Draft EA.

When revising this information in the Final EA with regard to reclamation times in desert vegetation, including tortoise habitat, please provide documentation from the scientific literature that these reclamation times are accurate and sufficient to ensure that the physical, chemical, and biological components of soils and native plants species cover, density, and composition are restored to pre-Proposed Action conditions (=complete reclamation).

In addition, please ensure that the applicants for leases are required to develop and implement a habitat restoration plan in tortoise habitat that uses the latest methods reported in the scientific literature for re-inoculation of soils and replanting including necessary soil conditions and components and realistic monitoring periods. For example, there is a relationship between arbuscular mycorrhizal fungi, soil crusts, and native desert plant species to achieve successful vegetation reclamation results when reclaiming areas with previous surface disturbance (e.g., roads, graded areas). There is a symbiotic relationship between the biota in desert soils and vegetation that promotes the survival and growth of native vegetation (Hernandez et al. 2023).

The methods identified and implemented for complete reclamation should be highly effective. For several projects in the Mojave Desert, BLM has allowed applicants to reseed areas with native perennial species as the primary revegetation effort. While reseeding can cover a larger area than outplanting (using containerized plants), it usually has a low success rate. Other methods such as outplanting have higher success rates. When comparing seeding to outplanting for ten native perennial species, Abella et al. (2012) reported that, in an experiment in the Mojave Desert in southern Nevada, seeding failed despite 1) protecting seeds from predation by small mammals; 2) seeding at rates of ≥ 200 pure live seeds/meter² for each species; 3) conducting germination tests to ensure that seeds were viable; 4) irrigating plots; and 5) receiving above-average precipitation in 2 post-seeding years.

We request that BLM demonstrate in the Final EA how its proposed leasing of parcels, exploration, development, and production of oil and gas resources would comply with this and other Identified Future Conditions and Management Actions identified by BLM in the RMP under “Mojave desert tortoise,” “Special Status Species,” and habitat for the tortoise under “Management of the Ecological Zones” in which the tortoise occurs. This added information to the Final EA is needed to demonstrate that BLM’s statement that “The proposed action conforms to the fluid mineral leasing decisions in the RMP and is consistent with the RMP’s goals and objectives for natural and cultural resources. It is also consistent with RMP decisions, and their corresponding goals and objectives related to the management of (including but not limited to) air quality, water resources, soils, cultural resources, vegetation, special status species, wildlife, recreation and areas of critical environmental concern (ACEC)” is accurate.

Using Outdated Information for Analysis of Impacts: Information pertaining to the occurrence of the Mojave desert tortoise, its need for survival and recovery, and the extensive impacts from human activities has changed substantially since the RMP was adopted. The Arizona Strip RMP was adopted in 2008 before information was available that the Mojave Desert Tortoise in the United States was two different species. With identification of the Sonoran desert tortoise (*G. morafkai*) as a separate species from the Mojave desert tortoise (Murphy et al. 2011), the number of animals and distribution of the Mojave desert tortoise was reduced by about 50 percent. In 2008 the demographic trend for the tortoise in the Upper Virgin River Recovery Unit (the location of the Proposed Action) and the Northeastern Mojave Recovery Unit immediately west of the Upper Virgin River Recovery Unit was unknown. The heightened importance of genetic connectivity of tortoise populations both within and between these two recovery units (Averill-Murray et al. 2021) was not fully realized in part because of the absence of demographic trend data. Thus, relying on the analysis in the 2007 Final EIS, now 19 years old, and the requirements in the 2008 RMP, now 18 years old, means that BLM is relying on outdated information on the demographic status and trend of the tortoise and analysis of effects to the tortoise and its habitat for the Proposed Action and exploration, development, and production of oil and gas resources on the Arizona Strip.

Some examples of information and analysis published after the RMP was adopted include tortoise demographic status and trends (e.g., Allison and McLuckie 2018, UDWR 2025), the extent of indirect impacts from human activities (e.g., Tuma et al. 2016, Goble 2009, Carter et al. 2020), road and route densities (Averill-Murray and Allison 2023), and importance of genetic connectivity of tortoise populations through management of linkage habitats (Beier et al. 2008, Beier 2018, Averill-Murray et al. 2021). This information was not available when the RMP was adopted in 2008 for land management actions so it was not used in the analysis of impacts to the tortoise.

BLM could have revised the RMP to incorporate this substantial new information into the planning and management directives in the RMP, including management of mineral resources, however we found no information that it has done this. BLM could have added this information in its analysis of impacts in the Draft EA. We found no information that it has done this.

Table 1. Data¹ of adult tortoise numbers sampled, sex ratio, densities, confidence intervals, and coefficient of variation for Zones 2, 3, and 5 combined at the Red Cliffs Reserve, Upper Virgin River Recovery Unit.

Year	Estimated Number of Adult Tortoises (Zones 2, 3, & 5)	Estimated Number of Adult Tortoises (Zone 3)	Sex Ratio ♂ : ♀ (Zones 2, 3, & 5)	Estimated Tortoise Density (Zones 2, 3, & 5 (km ²))	Estimated Tortoise Density (Zone 3 (km ²))	Coefficient of Variation (%) for Zones 2, 3, & 5 (for tortoises >180 mm MCL)	95% Confidence Interval (Zones 2, 3, & 5)		Shell Remains Found	Percent Mortality
							Low	High		
1999	3404	3199	89:93	29.1	33.1	14.48	21.4	39.6	54	4.5
2000	3568	3173	65:103	30.5	33.8	13.36	22.9	40.7	44	6.4
2001	3591	3351	76:83	30.7	35.0	12.35	23.5	40.2	34	4.7
2003	1926	1670	61:27	16.5	17.6	12.16	12.6	21.5	93	34.2
2005	3067	2509	79:76	26.2	26.2	11.85	20.2	34.0	106	13.0
2007	1948	1582	36:60	16.7	16.5	12.85	12.6	22.0	73	11.7
2009	1603	1116	33:49	13.7	11.6	14.29	10.1	18.6	66	15.4
2011	2238	1775	70:52	19.1	18.5	11.27	14.9	24.6	29	12.7
2013	1971	1532	39:62	16.9	16.0	12.97	12.7	22.3	22	7.7
2015	1751	1317	47:49	15.0	13.7	13.65	11.2	20.1	20	4.1
2017	2231	1710	53:62	19.1	17.8	11.50	14.7	24.8	17	2.6
2019	2011	1181	59:47	17.2	12.3	16.21	16.3	26.3	19	6.5
2023	2425	1681	26:20	20.7	17.5	11.93	13.3	23.1	12	1.4
2025	1600	891	48:59	13.7	9.3	17.23	6.7	12.9	46	31.3

¹ Data from UDWR. 2026. Regional Desert Tortoise Monitoring in the Red Cliffs Desert Reserve, 2025. Utah Division of Wildlife Resource Publication 26-15.

For example, the trend in demographic data for the tortoise in the Upper Virgin River Recovery Unit is provided below (Table 1). These data are for tortoises in the Red Cliffs Reserve that occur on lands that are managed for their conservation and protection of the tortoise (i.e., Omnibus Public Land Management Act of 2009), with most of this area designated as a National Conservation Area (NCA). Adult tortoise densities have declined since 2001 with a high of 30.7 tortoises per mile² to 13.7 tortoises per mile² in 2025 (UDWR 2026). It is likely that the demographic status and trend of other tortoise populations in the Upper Virgin River Recovery Unit are in worse condition (i.e., have reduced densities and greater death rates than in the Red Cliffs Reserve) because they are exposed to more adverse impacts and are not managed for tortoise conservation and protection.

Demographic trend data are not available for other areas of the Upper Virgin River Recovery Unit. This is, in part, because the land management agencies and Washington County have focused their efforts on managing the tortoise and its habitat at one location in this recovery unit, the Red Cliffs National Conservation Area (NCA)/Red Cliffs Reserve. This management decision was made even though the Recovery Plan identified that redundancy of areas managed for tortoise in each recovery unit, larger areas with less edge effect are better than smaller areas for species persistence, and connections between tortoise management areas is needed (USFWS 1994, 2011). Of the five recovery units, the Upper Virgin River Recovery Unit is the only one with one area managed for tortoise conservation (= Tortoise Conservation Area) and it is the smallest TCA.

In the 1994 Recovery Plan, the U.S. Fish and Wildlife Service (USFWS) focused on one area in the Upper Virgin River Recovery Unit to manage for the tortoise (i.e., tortoise conservation area (= TCA)). This focus was the result of limited information available at that time. Tortoise habitat south of the Red Cliffs Reserve/NCA and extending into Arizona was reported as either lost to urbanization or was not known to have ever been occupied (Bury et al. 1994). This information has been revised with tortoises known in the Arizona Analytical Unit of the Upper Virgin River Recovery Unit (USFWS 2021) located on the Arizona Strip south of St. George (Figure 1) (USFWS 2021). Please see additional information in this letter on the importance of this tortoise population under “BLM Policy – Habitat Connectivity.”

In the 2008 RMP, we did not find that BLM had incorporated the reasonable and prudent measures and terms and conditions in the 2007 biological opinion for the RMP regarding discretionary actions that would likely adversely affect the tortoise. This would include mineral leases, exploration, development and production. Please see our discussion under “Consultation and Coordination, U.S. Fish and Wildlife Service Consultation” for more information on this perceived omission.

The Council concludes that the Arizona Strip RMP (BLM 2008) is outdated with respect to analyzing the impacts of human activities to the tortoise and its habitat including habitat needed for population connectivity, and applying it to demographic status and trend of the tortoise and its effects on tortoise survival and recovery. There are several examples that support this conclusion. First, BLM has not updated the RMP since its approval in 2008 with relevant results and analysis reported in the scientific literature on changes in demographic status of the tortoise, extent of impacts from human activities to the tortoise, survival and recovery needs of the tortoise. Second, BLM has not incorporated the requirement to use the best available information in the analysis of future individual proposed actions whose impacts were addressed at a large-scale planning level in the RMP.

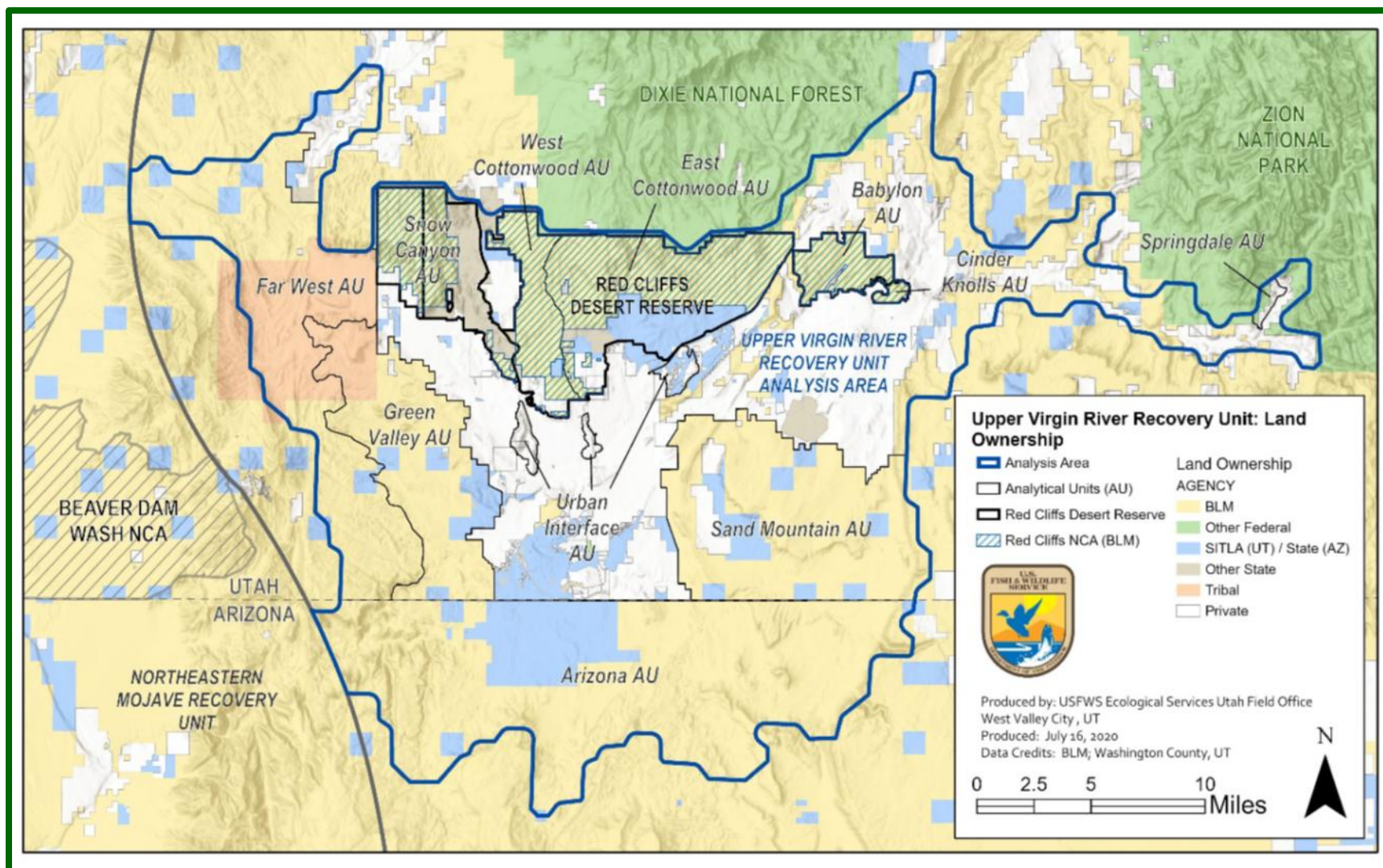


Figure 1. Locations of the Arizona Analytical Unit and other analytical units in the Upper Virgin River Recovery Unit for the Mojave desert tortoise (USFWS 2021).

We request that BLM revise its choices under “Decision to Be Made” and “Conformance with the Land Use Plan” in the Final EA to reflect the commitments made in the RMP for management of the tortoise, management of special status species that includes the tortoise, and management of tortoise habitat with respect to leasing, exploration, development, and production for oil and gas extraction (see Appendix A of this letter). We also request that these commitments should be adjusted to require implementation of more actions that contribute to the conservation of the tortoise than offered in the RMP, especially because the demographic trend in both recovery units has been one of decline since the RMP was finalized in 2008.

In addition, we request that BLM revise the stipulations included in the oil and gas leases in tortoise habitat to include all reasonable and prudent measures and terms and conditions for the tortoise in the biological opinion issued for the RMP; the biological opinion that will be issued for the Proposed Action and the associated exploration, development, and production of oil and gas resources; and any other relevant biological opinions. Please see our comments below under “Consultation and Coordination, U.S. Fish and Wildlife Service Consultation” for more information on compliance with FESA.

Pages 4 & 5, Relationship to Statutes and Regulations: “Purchasers of oil and gas lease parcels are required to comply with all applicable federal, state, and local laws and regulations, including obtaining all necessary permits prior to any lease-development activities. The BLM is also required to comply with all applicable federal, state, and local laws and regulations, as well as U.S. Department of the Interior policies, when leasing mineral estate and responding to EOIs [expressions of interest].”

BLM provided “Table 1-1. Relevant Statutes and Regulations” that listed these documents and a brief explanation of how they are relevant. However, we found no information in this section of the Draft EA where BLM explained how they were complying with these statutes and regulations. We found no information on compliance with applicable BLM policies. We presume that BLM would be adhering to its policies when deciding whether to issue leases and if issued, the stipulation added to the leases.

We request that BLM describe how the Proposed Action and the exploration, development, and production of oil and gas resources on BLM land in the Arizona Strip would comply with all relevant BLM policies including those listed below:

- 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; and
- Bureau of Land Management, 2016. Travel and Transportation Management. Manual 1626. Washington, D.C. September 27, 2016.

We identified these policies in our comment letters to BLM for the December 2026 and February 2027 Oil and Gas Lease Sale 30-Day Scoping Periods. Again, the Council requests that BLM demonstrate in the Final EA how it is implementing these policies with respect to the conservation of the tortoise with approval of the Proposed Action, exploration, development, and production of oil and gas reserves.

BLM Policy – Advancing Science: BLM (2015) is directed in other documents and in this policy to use science in its decision-making processes. In 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 these requirements, BLM should use the latest information and analysis from scientific journals and reports when conducting its analysis of the impacts to the tortoise in the Final EA. This analysis should include impacts to (1) the demographic status of the tortoise; (2) the needs of the tortoise for its survival and recovery in the Upper Virgin River Recovery Unit and rangewide; and (3) how the direct, indirect, cumulative, synergistic, and interactive impacts of action alternatives would affect the future survival and recovery of the tortoise in this Recovery Unit. This last analysis would assess connectivity across the Upper Virgin River Mojave Recovery Unit, connectivity with the Northeastern Mojave Recovery Unit, connectivity range-wide, and the ability of tortoise populations to respond to habitat shifts from climate change. This analysis and any conclusions stated in the Final EA regarding the tortoise/tortoise habitat should be supported with citations from the scientific literature.

BLM’s “Advancing Science in the BLM: An Implementation Strategy IB 2015-040” (BLM 2015) reinforces the need to use science in decisionmaking. Please ensure the Final EA demonstrates compliance with this BLM policy especially with respect to analysis, conclusions, and decisions made concerning the tortoise.

BLM Policy – Habitat Connectivity: Under this policy, BLM is directed “to ensure habitat connectivity, permeability and resilience is restored, maintained, improved, and/or conserved on public lands” (BLM 2022). “BLM state offices will work with state and Tribal wildlife managers as well as other stakeholders to assess data regarding connectivity, permeability, and resilience and, based on that assessment, identify where to focus management that best supports priority species.” 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.” “Consistent with BLM’s inventory obligations and authority for important resource values (as provided for in Section 201(a) of FLPMA)[1], and to help guide where best to focus management of connectivity, the BLM will assess public lands for habitat connectivity and identify areas of habitat connectivity, which are habitats on BLM administered public lands that support or facilitate priority species movements and other ecological processes, such as seed dispersal, migrations, and stopover sites.”

BLM should demonstrate in the Final EA that it has implemented this policy in the Arizona Strip with respect to the tortoise.

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 and others 2020a).” 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.

When analyzing whether a project/proposed action may impact areas on the landscape used/needed by tortoises, BLM should include that the lifetime home range for the Mojave desert tortoise is more than 1.5 square miles (3.9 square kilometers) (Berry 1986) and that tortoises may make periodic forays of more than seven miles (11 kilometers) at a time (Berry 1986).

Recovery of the tortoise includes population connectivity between tortoise recovery units via functioning linkage habitats. Between the Upper Virgin River and Northeastern Mojave Recovery Units, two locations of linkage habitats have been identified from habitat modeling (Averill-Murray et al. 2021). The northern linkage habitat that may provide connectivity extends west from the Red Cliffs National Conservation Area through a pass in the Beaver Dam Mountains. However, much of this area near St. George and Santa Clara has been developed creating edge effects that may substantially compromise connectivity via this northern linkage habitat. The southern linkage habitat is from Arizona near Big Valley southwest along the edge of the Virgin Mountains into Nevada. Thus, the southern linkage habitat and the tortoise populations adjacent to it (i.e., Arizona Analytical Unit population) are crucial to maintaining genetic connectivity between these two recovery units.

However, the southern linkage may be adversely impacted at a minimum through edge effects from the Proposed Action and oil and gas exploration, development, and production in the Arizona Analytical Unit. The identified parcels for leasing and potential development form a near continuous block from Interstate 15 south to lands with increasing elevations to those higher than where tortoises are usually found (Figure 2). While every parcel in this block may not be developed for exploration, additional roads would likely be constructed and used. Depending on the density of existing routes with construction and use of new roads, these linear features may substantially impede or prevent tortoises from occupying the southern linkage habitat from the Upper Virgin River Recovery Unit.

As mentioned earlier, management of road and route densities (Averill-Murray and Allison 2023) and the importance of genetic connectivity among tortoise populations through management of effective linkage habitats (Beier et al. 2008, Beier 2018, Averill-Murray et al. 2021) are research findings that were published after approval of the RMP. Effective implementation of these findings in managing tortoise habitat are crucial to the survival and recovery of the tortoise. The direct and indirect effects to the tortoise from road construction and use are documented in the scientific literature with reductions in tortoise sign and numbers occurring. Von Seckendorff Hoff and Marlow (2002) reported that they detected reductions in tortoise numbers and sign from infrequent use of roadways to major highways with heavy use. There was a linear relationship between traffic level and reduction. For two graded, unpaved roads, with low traffic volume, the reduction in tortoises and sign was evident 1.1 to 1.4 km (3,620 to 4,608 feet = 0.68 to 0.87 mile) from the road.

Other documented impacts from road construction and use include increases in roadkill of wildlife species including tortoises, and creating or increasing food subsidies for common ravens. This food subsidy contributes to increases in raven numbers and predation pressure on the tortoise (Boarman 2003). Similar food subsidies occur for coyotes with increases in their numbers and increased predation pressure on tortoises (Richter et al. 2024). Cover and species richness of nonnative invasive annual plant species are greater closer to roads (Boarman and Sazaki 2006), and nonnative invasive plant species (Brooks and Berry 2006) are transported and established via construction equipment, vehicles, and other sources. The replacement of native forbs having high nutritional and water value with low nutritional nonnative invasive grasses adversely affects tortoise health and survival, especially in juvenile tortoises (Drake et al. 2016). There is increased occurrence of wildfire size, intensity, and frequency of human-caused wildfires from fuels provided by non-native invasive plant species (Brooks and Esque 2002); and increased human access that provides opportunities for vandalism and collecting tortoises for pets (Lovich and Bainbridge 1998, Berry et al. 2020).

BLM should analyze in the Final EA how the Proposed Action, exploration, development, and production of oil and gas resources would comply with BLM's policy on Habitat Connectivity and FLPMA. Specifically, the issues are connectivity for the tortoise within the Upper Virgin River Recovery Unit, connectivity with tortoises in the Northeastern Mojave Recovery Unit, and connectivity to vegetation associations moving to higher latitudes in response to climate change. The importance of habitat connectivity within a recovery unit and between recovery units was identified in USFWS's Recovery Plan (USFWS 1994), and emphasized in the Revised Recovery Plan for the Mojave Population of the Desert Tortoise (USFWS 2011). Since then, the needs of habitat connectivity for the tortoise have been analyzed in several scientific papers including Averill-Murray et al. (2021).

In the Final EA, BLM should include the results of the following actions:

- use existing geospatial data on tortoise habitat (e.g., Nussear et al. 2009) for these two recovery units;
- overlay existing geospatial data of past and present development/surface disturbance;
- indicate the spatial extent of the indirect impacts (that extend beyond the project footprint) of this development according to Beier et al. (2008), Beier (2018), Carter et al. (2020), Averill-Murray et al. (2021), and others; and
- overlay the locations of the Proposed Action and likely locations for activities associated with oil and gas exploration, development, and production.

These geospatial layers would indicate where habitat for the tortoise would remain, and whether the configuration of the tortoise habitat would be sufficient to provide connectivity within and between the recovery units and to the north to respond to climate change. This information and analysis should be reported in the Final EA to demonstrate compliance with FLPMA, as well as analysis under FESA in the biological assessment.

BLM Policy – Special Status Species Management: BLM states, “[t]his 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 FESA 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 Final EA 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 ability of the tortoise to respond to climate change through actions such as shifting its range to higher latitudes.

For the second objective, BLM should explain in the Final EA how it is complying with Section (7)(a)(2) of 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 plus oil and gas exploration, development, and production. 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 include direct, indirect, interrelated, and/or interdependent effects under FESA. Under NEPA, ***all impacts*** [emphasis added] are to be analyzed (DOI 2026). Please see additional comments on compliance with FESA below under “Consultation and Coordination, U.S. Fish and Wildlife Service Consultation.”

For the third objective, BLM should demonstrate how it has (1) analyzed and incorporated habitat connectivity for the tortoise and other special status species in the analysis of impacts for the Proposed Action and oil and gas exploration and development; and (2) developed 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. Also, habitat connectivity between recovery units for the tortoise is necessary for its survival and recovery (Averill-Murray et al. 2021).

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).

For the fourth objective, this reinforces BLM’s policy on “Advancing Science.” Please see our comments above under “BLM Policy – Advancing Science” for information how this fourth objective should be implemented with respect to the tortoise.

Please include information in the Final EA to substantiate how the Proposed Action, exploration, development, and production of oil and gas on the Arizona Strip complies with these policies.

BLM Policy – Travel and Transportation Management: The primary objective of this policy is to “establish a long-term, sustainable, multimodal travel network and transportation system of areas, roads, primitive roads, trails and other transportation linear features that address the need for public, authorized, and administrative access to and across BLM-managed lands” (BLM 2016).

BLM finalized the Arizona Strip Travel and Transportation Management Plan (TTM Plan) in 2018. In reviewing the map of routes for this TTM Plan, few or no routes are shown in some of the parcels available for lease under the Proposed Action and the December 2026 Arizona Oil and Gas Lease Sale. For parcels in tortoise habitat, the absence or low density of routes, and therefore absence of the myriad of adverse impacts associated with the presence and use of roads, should be maintained as much as possible. As stated in the biological opinion for the Arizona Strip RMP (USFWS 2007), “Limit new access routes created by the project.”

Five years after finalizing the TTM Plan, Averill-Murray and Allison (2023) reported that for road densities, including all linear features used for travel (including ROWs), land managers should “apply a maximum road density of 0.6 km/km² to areas predominately containing lower-probability tortoise habitat (e.g., probability values of less than 0.6) or less than 0.6 km/km² as a general target for travel management in areas where wildlife conservation is a priority” (e.g., linkage habitats with tortoise populations) and “further reduce road densities in higher-probability habitats.” The reason for this maximum density threshold is because the authors reported that the density above this resulted in declining populations of tortoises. The probability habitat values refer to those reported by Nussear et al. (2009) for the tortoise.

Consequently, BLM should (1) analyze the densities of current routes in the identified parcels for leasing; (2) analyze whether additional roads could be located in tortoise habitat so they would remain below the maximum density threshold reported by Averill-Murray and Allison (2023), using the results of this analysis; (3) determine whether there would be restrictions placed on these new routes (i.e., implementation of section 6.4 Closures and Restrictions in the Travel and Transportation Management Manual (BLM 2016) as authorized under special rules [43 CFR 8341.2) and (43 CFR 8364.1)] to minimize numerous adverse impacts to the tortoise from the presence and use of roads; and (4) identify and implement effective enforcement and monitoring including effective monitoring of incidental take of the tortoise.

Compliance with NEPA, DOI Implementing Regulations, and DOI’s NEPA Handbook: “Table 1-1. Relevant Statutes and Regulations” does not include the National Environmental Policy Act, its implementing regulations for the Department of the Interior (DOI) or the Department of the Interior’s Handbook of National Environmental Policy Act Implementing Procedures (DOI 2026) (NEPA Handbook). Please add this information to the Final EA.

In reviewing 43 Code of Federal Regulations (CFR) 36, BLM is required to comply with the following regulations when preparing an environmental assessment under NEPA:

- The environmental assessment must be “prepared with professional and scientific integrity, using reliable data and resources;”

- “To maintain the scientific quality and integrity of the impact assessment, if in-house expertise is not available for the technical evaluations, another bureau or cooperating agency may be relied on, as needed, to verify the analyses.”

These regulations reinforce BLM’s policy on Advancing Science. BLM is relying on the Final EIS for the RMP from 2007 for this analysis of impacts from implementation of the Proposed Action and exploration, development, and production of oil and gas resources in 2026. The Council contends that for the Draft EA, BLM may have used reliable data and resources but the data used were outdated or selected while other relevant data were not used in the analysis of impacts. Regarding the assertions of using outdated data, for an example of this please see the information we provided above under “Using Outdated Information for Analysis of Impacts.”

Regarding the assertion that the data used were selected while other relevant data were not used, please see the information below under “Oil and Gas Development Assumptions, Assumptions for Development for the Current Proposed Action.”

According to the DOI NEPA Handbook (DOI 2026), BLM is required to comply with the following directives when preparing an environmental assessment under NEPA.

“To the fullest extent possible, bureaus should prepare environmental documents or other NEPA compliance documents concurrently with and integrated with analyses and related surveys and studies required by other Federal statutes and regulations. Bureaus should combine an environmental document or other document prepared in compliance with NEPA with any other agency document to reduce duplication and paperwork.”

We assert that “other NEPA compliance documents” includes biological assessments and initiation of formal consultation to determine effects of a proposed action on a listed species (i.e., Mojave desert tortoise) and its habitat. Consequently, to comply with the DOI NEPA Handbook, BLM should combine the Draft EA with the information needed in a biological assessment and request for formal consultation to reduce duplication and paperwork.

USFWS identified the following contents of a biological assessment (50 CFR 402.12):

- “1) The results of an on-site inspection of the area affected by the action to determine if listed or proposed species are present or occur seasonally” (i.e., tortoise presence-absence survey (USFWS 2019a).
- “2) The views of recognized experts on the species at issue” (i.e., USFWS biologists in Arizona and in the Desert Tortoise Recovery Office, U.S. Geological Survey researchers, Mojave desert tortoise biologists/researchers,).
- “3) A review of the literature and other information” (i.e., a review of current literature).
- “4) An analysis of the effects of the action on the species and habitat, including consideration of cumulative effects, and the results of any related studies.”
- “5) An analysis of alternate actions considered by the Federal agency for the proposed action.”

In reviewing the Draft EA, we did not find information for #1, #2, or #5. For #3 in Appendix C – Issues Analyzed in Brief (page C-30), the review of the literature and analysis of effects were limited to the following information for the tortoise:

Review of literature: “The Mojave desert tortoise is federally listed as threatened. A recovery plan was approved in 1994 and revised in 2011. The desert tortoise is a large, predominantly herbivorous, inhabitant of warm upland plateaus and mountain slopes in deserts. Tortoises are generally confined to creosote scrub and wash woodland habitats below 5,500 feet. High tortoise densities are often associated with native desert grasses which provide significant forage. Suitable tortoise habitat is usually associated with well-drained sandy loam soils in plains, alluvial fans, and bajadas, although tortoises may also occur in dunes, edges of basaltic flow, and other rock outcrops, or in well-drained and vegetated alkali flats. Some of the proposed parcels contain habitat meeting the description of suitable tortoise habitat and tortoises have been found to the north in Utah.”

This information focuses on general habitat requirements with no information on needs for survival and recovery or the available baseline information on the demographic status and trend of the species in the Upper Virgin River Recovery Unit.

Analysis of effects of the action: “BLM is assuming that two wells could be drilled on the leases offered during the ten years of the leases’ primary term . . . with each of these wells disturbing approximately seven acres, for a total development disturbance of 14 acres. Ground disturbing activities that may affect threatened, endangered, or candidate animal species would be addressed through future environmental review should any APDs be submitted.”

Thus, BLM deferred #4, the analysis of effects, to future environmental review.

In 50 CFR 402.14(d), USFWS identified the information to submit when initiating formal consultation. This information included:

- 1) the biological assessment;
- 2) a description of the proposed action in sufficient detail to assess the effects of the action on listed species and critical habitat, including the purpose, duration and timing, location, specific components of the action and how they will be carried out;
- 3) maps, drawings, blueprints, or similar schematics of the action;
- 4) any other available information related to the nature and scope of the proposed action relevant to its effects on listed species or designated critical habitat;
- 5) in the description of the proposed action any measures intended to avoid, minimize, or offset effects of the action; and
- 6) that the federal agency provide the USFWS with the best scientific and commercial data available or which can be obtained during the consultation for an adequate review of the effects that an action may have upon listed species or critical habitat.

As reported above, #1 and #2 are not included in the Draft EA; #3 is limited to a map of the identified parcels with ecological zones that tortoises use; #4 is deferred to future analysis in future environmental review; #5 is deferred, as the only description we were able to find was in Appendix

E – Summary of the Typical Phases of Oil and Gas Development, the potential issuance of leases, and a list of a measures intended to avoid, minimize, or offset impacts that are listed in Appendix G – Reclamation Stipulations. For #6, we presume it is deferred because the RMP is the only document that was mentioned that contains information on the tortoise with references from the scientific literature. Regarding BLM’s Reclamation Stipulations, many of these contain non-committal wording such as “may require mitigation,” or “the Applicant may be required.”

According to the DOI NEPA Handbook, the leasing, exploration, development, and production of oil and gas resources on the Arizona strip are connected actions. DOI requirements for connected actions are that agencies consider the potentially affected environment in determining significance. This includes “any connected actions, as defined in 6.1, the affected area (national, regional, or local) and its resources.” “In considering the potentially affected environment, the Responsible Official should consider, as appropriate to the proposed action, any connected actions, the scope of the affected area (national, regional, or local), reasonably foreseeable trends and planned actions within that area, and the affected area’s natural and cultural resources.” We did not find this information or analysis in the Draft EA.

Thus, for the above reasons the Council concludes that the Draft EA does not comply with DOI’s implementing regulations for NEPA or DOI’s Handbook of NEPA Implementing Procedures. BLM should rectify these deficiencies in the Final EA.

Page 12, Oil and Gas Development Assumptions, Assumptions for Development for the Current Proposed Action: Regarding BLM’s assumption that two wells would be drilled in the next 10 years — when BLM was evaluating existing and past information to estimate the number of wells that would be drilled, did BLM consider:

- The difference in geologic formations in the eastern part of the Arizona Strip District where past exploration has occurred compared to the western part of the Strip, in the locations where previous leasing activity on the Arizona Strip have been. BLM used the number of wells drilled in the eastern part of the Arizona Strip to determine the number that would be drilled under the exploration phase following implementation of the Proposed Action in the western part of the Strip. However, the geologic formations in the eastern part of the Strip differ from the western part.
- the information on available oil and gas potential when comparing the eastern part of the Strip with the western part. This difference is verified in a report BLM provided in the Draft EA and FEIS for the RMP that indicated moderate oil and gas potential in the north-central and extreme western portions of the Arizona Strip (the western portion is identified for leasing in the Draft EA) with southern and eastern portions (available for lease and exploration in the past) are rated as low potential;
- the number of recent expressions of interest in leasing and exploring for oil and gas in the western part of the Arizona Strip. If there has been a high level of interest or more interest than expressed in the past for the eastern part of the Strip, then it is logical to conclude that exploration activities would be greater. If less interest has been expressed, then exploration activities would likely be reduced;
- the current economic conditions and how they compare to those of the past 19 years regarding oil and gas development;

- the current geopolitical conditions and how they affect the availability of oil and gas for public use;
- the average U.S. retail price for gasoline (unleaded regular) in 2007 (\$2.80 per gallon versus the average U.S. retail price in late March 2026 (\$3.79 per gallon). Currently there is more economic incentive to explore and develop oil and gas resources because of higher profits;
- in 2024, the U.S. relied primarily on domestic production for its oil needs, meeting approximately 65–70% of total consumption domestically, while importing about 30–35% of its oil requirements, primarily from Canada, followed by Mexico, Saudi Arabia, Iraq, and Brazil (U.S. Energy Information Administration 2024);
- support from the current administration to develop more onshore public lands for oil and gas production (BLM 2026b);
- the economic forces that have a substantial effect on oil and gas development are different than 19+ years ago, which is the age of the data BLM used to predict development under the Proposed Action.

With gasoline prices up, demand slightly down, and 10 to 12 % of the U.S. crude oil needs affected by the current geopolitical tensions in the Middle East (two of the five countries providing the most imported oil are in the Middle East), we expect interest in oil and gas exploration to be greater than in the past, not less.

In evaluating this information, the Council concludes that the assumptions BLM used for development of the current Proposed Action and future exploration, development, and production of oil and gas resources were limited in their scope. BLM used one criterion, past exploration activity on the Arizona Strip, to predict future exploration in a different part of the Strip with a different geologic history and reports of different oil and gas potential. A simple query on the internet would have revealed there are several factors that affect oil exploration—geological and physical factors, economic and market factors, regulatory and social factors, environmental and technological factors. Yet BLM chose not to consider them. We request that BLM make a reasonable effort to identify and evaluate these factors when developing assumptions on future exploration in the western part of the Arizona Strip. BLM should revise its assumptions using this available information and provide the revised Assumptions for Development for the Current Proposed Action in the Final EA.

Page 15, Affected Environment and Environmental Impacts, Introduction: “This EA is tiered to and incorporates by reference the Arizona Strip Proposed RMP/Final Environmental Impact Statement (FEIS) (BLM 2007). The BLM reviewed the 2007 Proposed RMP FEIS in light of current conditions, available information, and reasonably foreseeable effects. The BLM determined that the analysis in this FEIS remains valid and adequately supports the present EA analysis because there have been no substantial changes or significant new circumstances or information that materially alter the environmental effects previously analyzed.”

The Council disagrees with BLM’s determination with respect to the tortoise and its habitat, including habitat needed for connectivity. Please see our comments above under “Using Outdated Information for Analysis of Impacts.” BLM should revise their information regarding the affected environment and use current information from the scientific literature to analyze environmental impacts for the tortoise and its habitat including habitat needed for connectivity. This information and analysis should be provided in the Final EA.

Pages 24 to 36 Air Quality, Environmental Effects: The issue statement that BLM addressed in the Draft EA under Air Quality was “What quantity of air pollutants would be produced based on the assumptions for analysis? How would air pollutant emissions from subsequent development of leased parcels affect air quality?”

BLM provided a description of the sources of air pollutants and changes in air quality that may occur from implementation of the Proposed Action and associated exploration of oil and gas resources. These changes include increases in fugitive dust (PM₁₀, PM_{2.5}), volatile organic compounds, nitrogen oxides, carbon monoxide, sulfur dioxide, hazardous air pollutants, and greenhouse gases. However, we found limited analysis on the effects of these changes in air quality on the human environment. For example, BLM concludes, “If any pollutant concentration is near or above its standard in a particular area, the combustion of oil and gas products could contribute to or exacerbate existing air quality issues.” This is a direct effect to air quality, but how does this change in air quality affect sensitive receptors in the area such as native vegetation and wildlife? This is an indirect effect.

According to DOI’s National Environmental Policy Act Implementing Regulations Final Rule (91 *FR* (36) 8753) “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.”

When researching the definition of “environmental effect” in NEPA, we found that Congress did not define it in this statute. The dictionary defines “environmental effect” as the effect that the activities of people and businesses have on the environment.” In DOI’s “National Environmental Policy Act Implementing Regulations” (91 *FR* (36) 8738-8762), DOI states 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” or “environmental impact” 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 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, and that this is unauthorized. Under Section 7 of FESA, BLM is required to analyze the direct, indirect, and cumulative effects of its discretionary actions on listed species.

Section 106(b) of NEPA requires that federal agencies in an environmental assessment “set forth the basis of such agency’s finding of no significant impact” on the “human environment.” We found no analysis of how the impacts from increases in various air pollutants would affect native vegetation and wildlife. In the Final EA, BLM should provide sufficient analysis of the effects of these increased pollutants on native vegetation and wildlife, and supporting documentation from available scientific research that these increased levels do not rise to the level of significance, or BLM needs to prepare an environmental impact statement. To comply with NEPA and with FESA, BLM should add this analysis to the Final EA.

Pages 44-45, Consultation and Coordination, U.S. Fish and Wildlife Service Consultation:

“The BLM Arizona Strip District has reviewed the proposed leasing and determined it would comply with threatened and endangered species management guidelines outlined in the Arizona Strip Field Office RMP (BLM 2008).”

In this statement, BLM presents a decision but provides no information to support this decision such as including references from the current scientific literature. Please explain how this decision complies with BLM’s Policy on Advancing Science, or NEPA’s requirement or DOI regulations implementing NEPA that an environmental assessment must be “prepared with professional and scientific integrity, using reliable data and resources.” Also please refer to our comments under “Using Outdated Information for Analysis of Impacts” regarding BLM relying on outdated information in the RMP FEIS with respect to the tortoise and its habitat.

“[L]ocations within the lease parcel(s) have not yet been selected for drilling activities, and no drilling plans have been submitted to the BLM for review. If any APDs are filed in the future (once lease sales have occurred), site-specific environmental review would be conducted at that time and would include analysis of potential impacts to federally-listed species. The BLM would initiate Section 7 consultation with the USFWS if, during site selection for future development, federally listed species are found to have a potential to be present or impacted during lease development.” “No further consultation with the USFWS is required at this stage” (BLM 2026a).

Section 7(d) of FESA requires that “the Federal agency and the permit or license applicant shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures.” In *Conner v. Burford*— Nos. 85-3929 et al. (848 F.2d 1441) (9th Cir. January 13, 1988) the court determined that once BLM issued an onshore lease without absolute surface-use restrictions, it makes an irreversible commitment of resources. This irreversible commitment of resources violates section 7(d) of FESA. Therefore, a comprehensive biological opinion analyzing all foreseeable post-leasing activities (exploration, development, and production) must be completed *before* the lease is sold. Following *Conner v. Burford*, the Ninth Circuit again held that biological opinions need to consider all post-leasing activities. In *Sierra Club v. Marsh*, the Ninth Circuit established that the requirement to use the best available data was a continuing obligation. If new information concerning the impact of an action on a species comes to light, the agency has a duty to reinitiate consultation. This continuing obligation insures that the effect of an action on a protected species is analyzed using only the best available data.

We remind BLM and the USFWS that if a federal agency does not reinitiate consultation, the USFWS would not be setting a precedent by issuing a biological opinion in the absence of an agency requesting formal consultation.

In the biological opinion issued by the USFWS to BLM on November 7, 2007 for the Arizona Strip RMP, reasonable and prudent measures and terms and conditions for the tortoise for the proposed leasing and development of oil and gas on the Arizona Strip included:

- For drilling activities, where technically and economically feasible, use directional drilling, or horizontal, or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in occupied desert tortoise habitat.
- Authorized activities will require monitoring of the desert tortoise population throughout the duration of the project.
- Limit new access routes created by the project.
- Powerlines will be minimized and if built, include anti-perching mechanisms to discourage raptors and corvids. Monitoring of such use may be necessary.
- Powerline alignment should be kept within existing utility corridors.
- Authorized activities will require monitoring of the desert tortoise population throughout the duration of the project.
- All individuals handling tortoises must meet the USFWS desert tortoise monitor or biologist qualifications requirements (see Appendix D). Permitting of these individuals may be done through application for a section 10(a)(1)(a) research and recovery permit, or through project-specific section 7 consultation.
- Authorized biologists will act as biological monitors and be present during all construction activities for the protection of desert tortoises and other listed species. These biological monitors will be responsible for determining compliance with measures as defined in the biological opinion or other agreements between the project proponent and agencies.
- A biological monitor will be assigned each activity within the project site requiring large equipment. A biological monitor will also be assigned to all backfilling, recontouring, and reclamation activities.

Reasonable and prudent measures and terms and conditions are mandatory and BLM must include them in all leases after BLM has completed formal consultation with the USFWS for the Proposed Action and exploration, development, and production of oil and gas resources. Most of these reasonable and prudent measures and terms and conditions in the biological opinion that were issued for the RMP would result in an alternative similar to the one the Council suggested in our scoping comments that BLM did not carry forward in the Draft EA.

In addition to the courts' findings in *Conner v Buford* and *Sierra Club v Marsh*, in 50 CFR 402.16, USFWS lists the conditions under which reinitiation of section 7 consultation is required. Reinitiation of consultation is required and shall be requested by the Federal agency, where discretionary Federal involvement or control over the action has been retained or is authorized by law and:

- (1) If the amount or extent of taking specified in the incidental take statement is exceeded;
- (2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;

- (3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or
- (4) If a new species is listed or critical habitat designated that may be affected by the identified action.

The biological opinion for the RMP is 19 years old. It was issued before significant losses of tortoises were documented (Allison and McLuckie 2018, USFWS 2022, 2025) and before the need for genetic connectivity for tortoises within a recovery unit was identified as a specific recovery objective (i.e., Recovery Objective 2 (Distribution) – Maintain well-distributed populations of desert tortoises throughout each recovery unit)(USFWS 2011) and recovery action 2.11. Connect functional habitat among tortoise recovery units (USFWS 2011, Averill-Murray et al. 2021).

We ask USFWS biologists, who are cc'd, if a 19-year old biological opinion would be correct in its analysis of the current status of the listed population of the desert tortoise and the relative significance of impacts given recovery unit and rangewide data analysis that were not available in 2007 or analysis of effects on the tortoise before 2015. We contend that, as a minimum, condition #2 applies, and that BLM should reinitiate formal consultation with the USFWS for the lease and exploration, development, and production of oil and gas on the Arizona Strip.

To comply with FESA, the Council asserts that BLM should reinitiate consultation with the USFWS for all foreseeable post-leasing activities based on reasonable assumptions of the factors that affect oil and gas exploration, development, and production. BLM should ensure that formal consultation is completed before issuing any leases and that all reasonable and prudent measures and terms and conditions in the relevant biological opinion are added as requirements to the leases. Further, BLM should remove the language explaining its rationale for not consulting with the USFWS at this stage and replace it with language that BLM has initiated consultation with the USFWS and the biological opinion will be included in the Final EA.

Appendix D, Arizona Strip Field Office Oil and Gas Lease Stipulations

Page D-3, Special Status Species Habitat Surveys: “Special status species habitat surveys will be required whenever surface disturbances and/or occupancy proposed in association with oil/gas exploration occur within an area of known or suspected occupancy by special status species.”

Please clarify what parameters of the habitat will be surveyed for when conducting these habitat surveys. For example, is the intent to determine the quality and configuration of the habitat prior to initiating ground disturbance, so BLM and the lessee know what the reclamation standards will be to achieve pre-disturbance conditions?

Page D-3, Desert Tortoise Habitat Areas: “Desert tortoise ACECs will remain open to leasing subject to seasonal restrictions and subject to a waivable no surface occupancy stipulation (WNSO). Surface disturbing activity will be limited to the period from October 15 to March 15 under a seasonal restriction. A BLM authorized officer can allow surface occupancy after consultation with USFWS on the authorization.

The authorized officer may waive this stipulation on a case-by-case basis if it can be shown that:

- (1) Desert tortoise are not present in a specific project location,

- (2) All operations and activities conducted in association with the action take place during the inactive season for desert tortoise (October 15 – March 15).”

We request clarification. Does this stipulation apply only to desert tortoise ACECs or does it apply to desert tortoise habitats that include areas in addition to tortoise ACECs?

Please explain how a determination would be made that tortoises “are not present” and what “a specific project location” means. We ask because the USFWS requires a protocol survey of the action area, not a specific project location, to determine presence-absence of tortoises or tortoise sign. If that survey is positive (i.e., tortoise or tortoise sign is found), a clearance survey of the project site is implemented during the active season for the tortoise, and either tortoise exclusion fencing or authorized biologists and desert tortoise monitors are present during surface disturbing activities. Thus, BLM’s stipulation does not appear to comply with USFWS protocols for the tortoise or terms and conditions the USFWS has required in the past for projects with surface disturbing activities in tortoise habitats. We recommend modifying BLM’s stipulation so it does comply.

Please explain the period of no surface disturbing activities. If this period was identified to address times when tortoise are less active and therefore to minimize mortality or injury from tortoises moving around during surface disturbance activities and road use, this period may need to be shortened. Nussear et al. (2007) reported that the dates that tortoises enter and leave “hibernation” vary both among tortoise populations, within a population, and from year to year. In addition, tortoises, especially juveniles (Wilson et al. 1999), may be active at any time of year including winter (Aiello et al. 2012) if temperatures are sufficiently warm or if there is a rainfall event or available forage. Consequently, there is no inactive season for tortoises, only more active and less active seasons. Please revise this information in the Final EA to include this updated information.

Page D-3, Desert Tortoise Surveys: “The lessee/operator as determined by the authorized officer of the BLM at the time of year when detection of the species is most likely to occur will conduct field surveys. If protocols have been established for surveys of the species, these protocols will be used.” When surveys are required of the lessee/operator, the consultant hired must be found acceptable to the authorized officer prior to the field survey being conducted. Based on the result of the field survey, the authorized officer will determine appropriate buffer zones.”

This wording is confusing. It requires the lessee/operator to conduct the surveys. The lessee/operator is not likely qualified to conduct surveys for the tortoise. We recommend that this be changed to the lessee/operator will be financially responsible for the surveys.

In the survey protocols for the tortoise, the USFWS advises that the action area and the biologists conducting presence-absence surveys should be coordinated with the USFWS prior to conducting these surveys (USFWS 2019a). Clearance surveys (USFWS 2019b) require approval by USFWS of the Authorized Biologist(s) conducting these surveys. We recommend modifying the sentence on protocols to say, “The current protocol surveys for the Mojave desert tortoise established by the USFWS will be implemented,” and “the consultant hired must be found acceptable to the authorized officer prior to the field survey being conducted and must be approved by the USFWS.”

While “the authorized office will determine appropriate buffer zones,” if the USFWS issues a biological opinion, all reasonable and prudent measures and terms and conditions in that document including any buffer zones or other methods to minimize the impacts of the taking will be implemented. If USFWS determines that larger buffer zones than identified by the authorized office are needed, the larger buffer zones would be implemented.

Pages D-4 and D-5, Crucial Mule Deer Summer Habitat, Crucial Deer Winter Range, Crucial Bighorn Sheep Habitat, and Pronghorn Habitat.” For these four stipulations, BLM includes wording that “Off-site mitigation may be required when unreclaimed disturbance totals more than ten acres in two years in crucial habitat. The off-site mitigation must be within the known habitat area but not necessarily within crucial habitat.”

We were unable to find a requirement for off-site mitigation for listed and proposed species including the tortoise. The Council supports mitigation including off-site mitigation for the tortoise and other listed and special status species when other forms of mitigation are not effective in fully offsetting the adverse impacts to these species and their habitats from the Proposed Action and exploration, development, and production of oil and gas resources. We assert that species that are endangered or threatened such as the tortoise are in greater need of mitigation for adverse impacts to their habitats than more abundant species such as deer or pronghorn antelope. We remind BLM of their Special Status Species Management policy and request that BLM explain why we were unable to find a comparable mitigation requirement for desert tortoise habitat or for other species listed under FESA that would be impacted by the Proposed Action and exploration, development, and production of oil and gas resources. In the Final EA, please explain this apparent discrepancy in mitigation for big game species versus species listed under FESA.

In addition, we request that BLM explain the timing (two years) and acreage (more than ten acres) thresholds for identifying the need for off-site mitigation for these three big game species. We make these requests so that BLM may demonstrate how the information in these stipulations complies with BLM policies on Advancing Science (BLM 2015), Habitat Connectivity (BLM 2021), and Special Status Species Management (BLM 2024). In addition, we make this request with respect to BLM’s implementation of FLPMA that requires BLM “to take any action necessary to prevent unnecessary or undue degradation of the lands, implementation of the Administrative Procedure Act that requires that agency decisions not be arbitrary or capricious, and BLM’s obligation under section 7(a)(1) of FESA “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.

Appendix G. Reclamation Stipulations

Because BLM identified in the RMP that most tortoise habitat in the parcels identified for leasing is “open to surface occupancy with standard terms and conditions,” BLM is proposing to implement the stipulations in this Appendix D of the Draft EA. According to BLM these stipulations are designed to provide public land users with a clear understanding of what constitutes prevention of unnecessary or undue degradation and what is required for reclamation. BLM’s unnecessary and undue degradation stipulations that affect the tortoise or its habitat are:

- All surface disturbance, including road construction and associated travel, shall be kept to the minimum necessary to accomplish the task. Road upgrade and realignment requests on BLM lands shall include plans for reclamation and a proposal for a post-operations final alignment.
- Applicants may be required by the authorized officer to provide inventories for threatened or endangered plants and/or animals and cultural resources. All Inventories shall be performed to Bureau standards.

We did not find a stipulation for the lessees to post bonds that would be sufficient to cover the full cost of reclamation activities to pre-project conditions including cleaning up hazardous materials, removing roads and other areas that experienced surface disturbance, and restoring the surface hydrology, soils (including the biological components), and abundance, diversity, and cover, of native vegetation. We understand that posting a bond is required under 43 CFR 2805.20 when BLM grants rights-of-way or leases. BLM should ensure that the lessees post sufficient bonds for effectively implementing all mitigation actions necessary to ensure there is no unnecessary and undue degradation of public lands. The bonds should cover all activities to be implemented for all phases of the leasing and associated activities including mitigation and reclamation to pre-project conditions. BLM should annually review the amounts of the bonds and require the lessees to increase the bonds when the costs for implementing the mitigation and reclamation activities increase from the previous year. Posting and maintaining sufficient bonds is crucial because BLM does not have the resources to implement the removal, mitigation, and restoration of affected natural and cultural resources from lessees’ actions. In addition, FLPMA requires it as an action “to ensure there is no unnecessary and undue degradation of public lands.”

In these BLM stipulations, we did not find the mandatory reasonable and prudent measures and terms and conditions in the biological opinion for the tortoise, issued by BLM, for the adoption of the RMP. Please see our comments above under “Pages 44-45, Consultation and Coordination, U.S. Fish and Wildlife Service Consultation.”

Regarding the unsigned Finding of No Significant Impact (FONSI), we request that after BLM makes the changes requested in this comment letter and the two comment letters the Council provided during public scoping, that these changes should be reflected in the FONSI before it is signed.

We appreciate this opportunity to provide the above comments and trust they will help protect tortoises during any resulting authorized activities.

Herein, we reiterate that the Council wants to be identified as an Affected Interest for this and all other projects funded, authorized, or carried out by the BLM 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 projects 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 comment on them to ensure BLM fully considers and implements actions to conserve these tortoises as part of its directive under FESA and as part of its directive to conserve special status species under BLM's Special Status Species Management Policy.

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 Proposed Action.

Respectfully,



Edward L. LaRue, Jr., M.S.

Desert Tortoise Council, Ecosystems Advisory Committee, Chairperson

Attachments: Appendix A – Identified Future Conditions and Management Actions Relevant to the Tortoise, Tortoise Habitat, and Leasing, Exploration, Development, and Production of Oil and Gas

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**Appendix A. Identified Future Conditions and Management Actions
in the Arizona Strip Resource Management Plan (BLM 2008)
that Are Relevant to the Mojave Desert Tortoise**

For management of the ecological zones in which the tortoise occurs, we list BLM's Identified Future Conditions and Management Actions from the Arizona Strip RMP (BLM 2008).

For the Mojave Desert Ecological Zone

Desired Future Conditions Identified in the RMP:

- Endemic plant species and associated communities such as creosote bush, Joshua tree, Mojave yucca and cacti, will be present along with other shrubs, grasses, and wildflowers. These communities can include stands of young and old shrubs, sparse vegetation, scattered to larger expanses of creosote bush or Joshua trees, seeps, healthy streamside (riparian) vegetation, and other interspersed grassland and shrub habitats.
- Endemic animal species ***such as desert tortoise and chuckwalla will be present and thriving*** [emphasis added] with more than adequate food, water, and cover resources.
- ***There will be no net loss of acres of Mohave Desert plant communities (i.e., long-term or permanent removal from the landscape)*** [emphasis added]. A no net loss objective will not preclude restoration, rehabilitation, or related management actions.
- Treatment emphasis will be to reduce the proliferation of non-indigenous annual plant species, reduce fire intensity and frequency, and improve tortoise structural and forage habitat components.

Management Actions:

- Vegetation treatments can be used in the Mojave Desert Ecological Zone to enhance vegetative diversity, restore native plant communities, maintain or increase wildlife habitat, and reduce or eliminate hazardous fuels. Treatment priority areas will be where desert tortoise habitat has been burned and/or converted to invasive annual grass communities.
- Up to 10,000 acres will be treated in the Mojave Desert Ecological Zone over the life of this RMP (approx. 6% of available habitat). Up to 500 acres may be treated with prescribed fire if associated with scientific research.

For the Mojave-Great Basin Transition Ecological Zone

Desired Future Conditions Identified in the RMP

- Endemic plant species and associated communities such as black brush, Joshua tree, Mojave yucca, and cacti will be present along with other shrubs, grasses, and wildflowers. These communities can include stands of young and old shrubs, sparse vegetation, scattered to larger expanses of black brush to various mixes of black brush, Joshua trees, pinyon-juniper, yucca, and shrub habitats.
- Endemic animal species ***such as desert tortoise, chuckwalla, and desert bighorn sheep will be present and thriving*** [emphasis added] with more than adequate food, water, and cover resources.
- Priority plant species and associated communities such as black brush, Joshua tree, Mojave yucca, and cacti will be present along with other shrubs, grasses, and wildflowers. These communities can include stands of young and old shrubs, sparse vegetation, scattered to larger expanses of black brush to various mixes of black brush, Joshua trees, pinyon-juniper, yucca, and shrub habitats.

- ***There will be no net loss in acres of Transition plant communities (i.e., long-term or permanent removal from the landscape)*** [emphasis added]. A no net loss objective will not preclude restoration, rehabilitation, or related management actions.
- Management of Mojave-Great Basin Transition Ecological Zone plant communities will focus on removing invasive non-native plants, especially cheatgrass, Sahara mustard, and red brome, and preventing habitat degradation due to wildfire.

Management Actions

- Prescribed fire and mechanical treatment methods will only be authorized where doing so will reduce invasive plant species or fire frequency and/or intensity by removing hazardous fuels, or will be done for research.
- Vegetation treatments can be used in the Mojave-Great Basin Transition Ecological Zone to enhance vegetative diversity, restore native plant communities, maintain or increase wildlife habitat, and reduce or eliminate hazardous fuels. Treatment priority areas will be for protection of unburned desert tortoise habitat and restoration and rehabilitation of habitat previously burned and/or converted to invasive, annual grass communities.
- Chemical treatment methods will be used in preference to, but not to the exclusion of, other available tools in the Mojave-Great Basin Transition Ecological Zone.
- Up to 30,000 acres of Mojave-Great Basin Transition Ecological Zone can be treated over the life of this RMP (approx. 23% of available habitat). Up to 500 acres may be treated with prescribed fire if associated with scientific research.

For management of the tortoise and other special status species, we list BLM's Identified Future Conditions and Management Actions from the Arizona Strip RMP (BLM 2008).

All Special Status Species

Desired Future Conditions

- Management of discretionary activities in the Arizona Strip FO will not contribute to the need to list proposed, candidate, state, or BLM sensitive species, ***and will include conservation measures and stipulations benefiting special status species*** [emphasis added].
- The Arizona Strip will provide a block of remote, contiguous habitat that will serve as refugia for populations of special status species.
- ***There will be no net loss in the quality or quantity of special status species habitat throughout the Arizona Strip FO*** [emphasis added].

Management Actions

- Priority for the application of management actions will be for:
 - Species Federally listed under the ESA as endangered or threatened,
 - Species proposed for Federal listing,
 - Species that are candidates for Federal listing,
 - Species included in the Wildlife Species of Concern in Arizona document,
 - Species for which a conservation strategy/agreement has been developed, and
 - Species included on the BLM Sensitive Species Lists.
- Specific actions and direction for managing special status species will be guided by the use of interdisciplinary wildlife HMPs produced cooperatively with the AGFD, USFWS, and other interested participants. Implementation accomplishments will be monitored and reviewed annually and documented in HMP files. HMPs will be amended or revised as necessary to incorporate new information and adjust management.

- ***Management of special status species will be consistent with biological opinions, recovery plans, conservation strategies, BLM policies, and the ESA*** [emphasis added], and will be consistent with achieving all DFCs, to the extent possible
- ***The BLM will continue to cooperate with USFWS to ensure specific actions comply with the ESA. The BLM will continue to undertake active management programs to inventory, monitor, restore, and maintain listed species habitats, control detrimental non-native species, control detrimental public access*** [emphasis added], and re-establish extirpated populations as necessary to maintain the species and their habitats.
- Where actions authorized or permitted may adversely affect a listed or proposed species, or adversely modify designated or proposed critical habitat, the BLM will work cooperatively with USFWS to resolve or mitigate these impacts through implementation of species specific conservation measures (See Appendix F).
- Travel Management –
 - Following completion of route inventory and evaluation, ***roads/routes causing or contributing to mortality of individuals of listed species or degradation of their habitat will be identified. Where practical, such roads/routes will be closed and signed. Where closing such roads would not be practical, seasonal restrictions or other mitigation will be developed to minimize adverse effects to special status species. Where necessary, fences, culverts or other physical barriers will be installed to protect special status species.***[emphasis added].
- Minerals Management –
 - Exploration, drilling, and/or other development activity within a special status species ACEC or WHA/ Vegetation Habitat Management Area (VHA: see Maps 2.4 and 2.5 for WHAs and VHAs) may be restricted seasonally to a period when the species is not active.
 - ***Mineral leasing will include notification to potential lessees of presence or potential for occurrence of special status species within a parcel proposed for leasing. Lessees will also be advised of additional stipulations or other restrictions that will apply at the Application to Drill stage*** [emphasis added] (See Appendix G for lease stipulations by species).

For Desert Tortoise

Desired Future Conditions

- The Mojave population of desert tortoise will be recovered and delisted.
- There will be no net loss in the quality or quantity of desert tortoise habitat within the ACECs or WHA (see Map 2.4).
- Desert tortoise populations within the ACECs and Desert Wildlife Management Area (DWMA) will be healthy and self-sustaining. Populations will be stable or increasing. Population declines will be halted.
- Desert tortoise populations outside of the ACECs and WHA will be healthy and stable. Declines in the WHA will be minimized to the extent possible through mitigation.
- Desert tortoise habitat will provide sufficient forage and cover attributes to support thriving populations of the species.
- ***Habitat connectivity will be maintained, providing sufficiently frequent contact between tortoises to maintain genetic diversity*** [emphasis added].

Management Actions

- Active participation in the recovery of desert tortoise will continue.

- Assistance will be provided in the implementation of recovery tasks identified in the recovery plan.
- Highest quality desert tortoise habitat will be identified based on habitat features, vegetation, and tortoise densities.
- Vegetation Management
 - ***Invasive exotic annual grasses in desert tortoise habitat will be reduced and/or removed*** [emphasis added].
 - ***Vegetative conditions in desert tortoise habitat will be maintained or improved*** [emphasis added] in accordance with DPC [desired plant condition] objectives.
 - Conservation measures for desert tortoise will be implemented for all vegetation management actions in desert tortoise habitat as described in Appendix F. Vegetation management actions will include vegetation treatments, fuels reduction, restoration, and rehabilitation.
- Surface Disturbing Activities
 - ***Effects to desert tortoise from authorized projects will be minimized or eliminated*** [emphasis added]. Project refers to any surface-disturbing activities proposed that may cause disturbance of desert tortoise habitat and/or death or injury of a desert tortoise, with the exception of grazing by livestock and activities associated with fire suppression.
 - To the extent possible, project activities will be scheduled when tortoises are inactive (October 15 through March 15). ***The following project activities will only be authorized between October 15 and March 15: surface disturbance associated with mineral leasing*** [emphasis added]; construction and non-emergency maintenance activities in ROWs; ***and non-emergency maintenance of existing roads***[emphasis added].
 - To the extent possible, project features will be located in previously disturbed areas or outside of desert tortoise habitat.
 - ***Reclamation will be required for activities that result in loss or degradation of tortoise habitat. Habitat will be restored or reclaimed to as close a pre-disturbance condition as practicable. Mitigation measures may be included in decision documents to offset the loss of quality or quantity of desert tortoise habitat*** [emphasis added].
 - ***Compensation may be required to mitigate residual impacts from authorized actions*** [emphasis added].
 - ***Authorized actions that may result in adverse effects to desert tortoises will require implementation of project stipulations including personnel education programs, pre-construction clearances, defined construction areas, operational restrictions, and procedures for moving tortoises out of harm's way*** [emphasis added]. (See Appendix F for a list of stipulations.)
 - ***Proposed actions will be evaluated to ensure they do not contribute to the proliferation of natural predators within desert tortoise habitat*** [emphasis added].
- Travel Management
 - ***Motorized and mechanized travel will be limited to designated roads*** [emphasis added].
 - ***The BLM will maintain or authorize maintenance of existing roads in desert tortoise habitat, except that non-emergency maintenance activities will be conducted from October 15 to March 15. Operators of road graders and other maintenance equipment will be required to attend an educational briefing prior to performing the work*** [emphasis added].
- Minerals Management

- ***Desert tortoise habitat will remain open to leasing subject to seasonal restrictions and subject to a waivable no surface occupancy (WNSO) stipulation*** [emphasis added]. Surface disturbing activity will be limited to the period from October 15 to March 15 under a seasonal restriction.
- The BLM will require plans of operations and bonding for any activity above the level of casual use, pursuant to the surface management regulations (43 CFR 3809). The BLM will approve plans of operation that reduce the chance of take occurring in accordance with these terms and conditions.

For Lands and Realty

Desired Future Conditions

- The BLM will strive to increase and diversify our nation's sources of both traditional and alternative energy resources, improve our energy transportation network, and ensure sound environmental management in accordance with the President's National Energy Policy.
- Land Use Authorizations
 - Individual land use authorizations (ROWs, permits, leases, easements) will be evaluated on a case-by-case basis in accordance with other RMP provisions and NEPA compliance. New land use authorizations will be discouraged within avoidance areas (i.e., ACECs, lands supporting listed species, NHTs, riparian areas, and areas managed to maintain wilderness characteristics) and allowed in such areas only when no reasonable alternative exists and impacts to these sensitive resources can be mitigated.