

DESERT TORTOISE COUNCIL

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Via BLM National NEPA Register and email

18 July 2024

Lisa Moody Attn: GridLiance West Core Upgrades Project Bureau of Land Management Southern Nevada District Office 4701 North Torrey Pines Drive Las Vegas, Nevada 89130 BLM_NV_SNDO_NEPA_Comments@blm.gov

RE: GridLiance West Core Upgrades Transmission Line Project Draft Environmental Impact Statement and Resource Management Plan Amendment (DOI-BLM-NV-S030-2023-0008-RMP-EIS)

Dear Ms. Moody,

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

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

We appreciate this opportunity to provide comments on the above-referenced project. Given the location of the proposed project in habitats occupied by the Mojave desert tortoise (*Gopherus agassizii*) (synonymous with Agassiz's desert tortoise), our comments include recommendations intended to enhance protection of this species and its habitat during activities that may be authorized by the 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)], 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 actions.

The Mojave desert tortoise is among the top 50 species on the list of the world's most endangered tortoises and freshwater turtles. The International Union for Conservation of Nature's (IUCN) Species Survival Commission, Tortoise and Freshwater Turtle Specialist Group, now considers the Mojave desert tortoise to be Critically Endangered (Berry et al. 2021), "... based on population reduction (decreasing density), habitat loss of over 80% over three generations (90 years), including past reductions and predicted future declines, as well as the effects of disease (upper respiratory tract disease/mycoplasmosis). *Gopherus agassizii* (sensu stricto) comprises tortoises in the most well-studied 30% of the larger range; this portion of the original range has seen the most human impacts and is where the largest past population losses have been documented. A recent rigorous rangewide population reassessment of *G. agassizii* (sensu stricto) has demonstrated continued adult population and density declines of about 90% over three generations (two in the past and one ongoing) in four of the five *G. agassizii* recovery units and inadequate recruitment with decreasing percentages of juveniles in all five recovery units."

This status, in part, prompted the Council to join Defenders of Wildlife and Desert Tortoise Preserve Committee (Defenders of Wildlife et al. 2020) to petition the California Fish and Game Commission in March 2020 to elevate the listing of the Mojave desert tortoise from Threatened to Endangered in California. In its status review, the California Department of Fish and Wildlife (CDFW) (2024a) stated, "At its public meeting on October 14, 2020, the Commission considered the petition, and based in part on the Department's [CDFW] petition evaluation and recommendation, found sufficient information exists to indicate the petitioned action may be warranted and accepted the petition for consideration. The Commission's decision initiated this status review to inform the Commission's decision on whether the change in status is warranted."

Importantly, in their April 2024 meeting, the California Fish and Game Commission voted unanimously to uplist the tortoise from threatened to endangered under the California Endangered Species Act based on the scientific data provided on the species' status, declining trend, numerous threats, and lack of effective mitigation (CDFW 2024b).

Description of the Proposed GridLiance Transmission Line Upgrade Alternatives

GridLiance West LLC (Applicant, project proponent), a subsidiary of NextEra Energy, has submitted four ROW grant applications to the BLM to amend portions of their existing ROW grants to construct, operate, maintain, and decommission approximately 155 miles of transmission system upgrades in southern Nevada (proposed project) (Figure 1). The proposed project would include an approximately 155-mile system upgrade from an existing single-circuit 230-kilovolt (kV) transmission line to double-circuit 230-kV or 500-kV overhead transmission lines; new, expanded, or modified substations and switchyards; and ancillary project components.



Figure 1. Location of proposed transmission line upgrade with other utility corridors and land ownership.

Desert Tortoise Council/Comments/GridLiance Transmission Line Upgrade DEIS.7-18-2024

The Applicant has requested a 30-year, 275-foot-wide ROW for the 500-kV transmission line and 150-foot-wide ROW for the 230-kV transmission line for construction, operation, and maintenance of the project. The project would be located predominantly on lands administered by the BLM, Bureau of Indian Affairs, Department of Defense (DoD), and State of Nevada, as well as private lands. The project is located in Clark and Nye counties, Nevada. Eight miles of the ROW would overlap with the Paiute-Eldorado Critical Habitat Unit (CHU) in Southern Nevada (USFWS 1994c) (Figure 2). The transmission line ROW would also intersect 3.6 miles of the Ivanpah Area of Critical Environmental Concern (ACEC).

BLM is the lead agency for the GridLiance West Core Upgrades Transmission Line Project Draft Environmental Impact Statement (DEIS) and Resource Management Plan amendment (RMP amendment). The DEIS analyzes six action alternatives and the no action alternative.

No Action Alternative: BLM would not issue ROW amendments for the Project and the Project would not be constructed. The existing transmission system facilities would continue to be authorized as-is under the currently authorized BLM ROWs, and land uses in the Project area would continue. Additionally, a plan amendment would not be required.

Proposed Action: The Project is an upgrade of an existing overhead transmission system that currently consists of a single-circuit 230-kV transmission line system and seven substations. The proposed upgrade consists of four segments:

- Segment 1: Sloan Canyon Switchyard to Trout Canyon Switchyard. Includes upgrades and expansions at both switchyards. This segment would be upgraded to a double-circuit 500-kV transmission line.
- Segment 2: Trout Canyon Switchyard to Wheeler Pass Substation. Includes upgrades and expansion at the Gamebird Substation. This segment would be upgraded to a double-circuit 500-kV (the 500kV option) or a double-circuit 230-kV (the 230-kV option) transmission line.
- Segment 3: Wheeler Pass Substation to Innovation Substation. Includes construction of the Wheeler Pass Substation, potential construction of the Johnnie Corner Substation, and upgrades at the Innovation Substation. Between Wheeler Pass Substation and Johnnie Corner Substation, the transmission line would be upgraded to a double-circuit capable, single-circuit 500-kV (the 500-kV option) or a double-circuit capable, single-circuit 230-kV (the 230-kV option) line; however, the proposed Johnnie Corner Substation would not be constructed if the transmission line is approved by CAISO as 230 kV. The portion from the proposed Johnnie Corner Substation to Innovation Substation would be upgraded to a double-circuit capable, single-circuit 230-kV system, regardless of the voltage option chosen for the remainder of the system.
- Segment 4: Innovation Substation to Northwest Substation. Includes upgrades at the Desert View Substation. This segment would be upgraded to a double-circuit 230-kV transmission line, regardless of the voltage option chosen for the remainder of the system. The upgraded transmission line would be constructed in an expanded ROW that wholly overlaps with the existing transmission line ROW, except on land administered by the BIA, where the upgraded transmission line would be constructed wholly within the existing transmission line ROW.



Figure 2. Designated critical habitat for the Mojave desert tortoise and modeled habitat (Nussear et al. 2009).

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Decommissioning is included as part of the proposed project. Decommissioning would occur for the existing single-circuit 230-kV transmission line from the Sloan Canyon Switchyard to the Gamebird Substation and from the Pahrump Substation to the Innovation Substation. In Segments 1, 2, and the portion of Segment 3 from the proposed Johnnie Corner Substation to the Innovation Substation, the existing transmission line would be removed, and any disturbances associated with the line (including roads to tower locations not required for access to the upgraded transmission line) would be reclaimed. For the portion of Segment 3 from the Pahrump Substation to the Johnnie Corner Substation, the existing GridLiance transmission line is strung on poles shared with an existing 138-kV transmission line owned and operated by Valley Electric Association (VEA). In this area, the GridLiance 230-kV transmission conductor would be removed, but the poles and existing VEA transmission line would remain. Aside from the replacement of four poles due to structural issues, no decommissioning of the existing line in Segment 4 would be required.

Work areas would be cleared and leveled with heavy equipment to support construction activities. Once the transmission line is constructed, the temporary structure work areas would be partially reclaimed in accordance with BLM-approved Site Restoration and Revegetation Plans.

Access roads are required to all new transmission line structures and substations to support safe construction and operations and management (O&M) of the upgraded transmission line. Removal of the existing 230-kV transmission line would also require road access; however, these roads would be temporary where not required for long-term access to the upgraded transmission line. Access roads to the structures and substations would be constructed or improved to between 16 and 24 feet wide. This would include a 12-to-20-foot road surface and may include a berm or ditch on either side.

In rough terrain, blasting may be required to remove rocks. If the Project requires the use of explosives, GridLiance would submit a Project-specific blasting plan to the appropriate land management agency for approval, which would address the use and storage of explosives, identify possible blasting sites, describe blasting procedures, detail procedures for alerting non-construction personnel or notifying developed properties, and include safety measures and applicable environmental design features and mitigation measures to prevent potential adverse impacts to human health, safety, and the environment.

Spur roads off the main access roads would be constructed to structure pad sites, as necessary. These spur roads would be a permanent part of the access road network to provide access to the work areas at the base of each pole for O&M activities.

Where possible, drainages would be crossed at grade. In areas where this type of crossing is not feasible, appropriate drainage facilities (e.g., culverts, wing ditches) would be designed and constructed and the appropriate permits would be obtained.

GridLiance would be required to post a reclamation bond as a condition of authorization issuance. The value of this bond would be determined based on BLM policy. At the time that the upgraded transmission line would be decommissioned, GridLiance would develop a decommissioning, abandonment, and reclamation plan for BLM, DoD, and BIA review and approval. The plan would include which facilities and access routes would be removed and/or reclaimed and how this would occur.

Decommissioning details would be developed and provided to the BLM when the time for permanent closure is established.

The proposed action also includes amending the Las Vegas RMP (BLM 1998) to allow the Project to conform with the RMP for visual resources. The proposed amendment would modify the visual resource management (VRM) Class from II to IV within the existing 1998 RMP Designated Corridor (Amargosa–Roach) in the southern Spring Mountains, near Wilson Pass, and the VRM Class from III to IV within the project ROW and substation footprints.

Alternative 1: Alternative 1 modifies Segment 2. This alternative follows the designated utility corridor 0.5 mile farther north before turning west to approach the proposed Wheeler Pass Substation. This alternative utilizes more of the designated utility corridor and has two less angle structures and two more tangent structures than the proposed action.

Alternative 2: Alternative 2 is identical to the proposed action, including the need for an amendment to the Las Vegas RMP (BLM 1998), but with the following differences. To avoid creating a hazard to air navigation next to the proposed Southern Nevada Supplemental Airport (SNSA), Alternative 2 would prohibit structure heights from exceeding 130 feet above ground level. To comply with this restriction, Alternative 2 involves installation of two single-circuit 500-kV transmission lines with a horizontal conductor configuration. This adjustment would necessitate a 500 foot-wide ROW (a 250-foot-wide ROW for each of the two single-circuit lines), in contrast to the single 275-foot-wide ROW required for the double-circuit configuration for the Proposed Action. The structures associated with Alternative 2 in the airspace constrained area would be single-circuit tubular steel 500-kV H-frame structures and 500-kV horizontal dead-ends. The acreage and locations where the RMP amendment would apply would be identical to the Proposed Action.

Alternative 3: Alternative 3 would prohibit structures heights from exceeding 130 feet above ground level. This alternative maintains the upgraded GridLiance transmission line on the north side of the existing double-circuit 230-kV NV Energy transmission line until exiting the SNSA air navigation surfaces.

Alternative 4: Alternative 4 would relocate the Wheeler Pass Substation to privately owned lands.

Alternative 5: Alternative 5 involves relocating the Wheeler Pass Substation to an alternative location on BLM-administered lands.

Alternative 6: Alternative 6 is a structure type modification that would use tubular structures (e.g., tubular H-frame, three pole dead-end, or monopole structures) instead of lattice structures in certain locations to minimize impacts on Mojave desert tortoise.

BLM has identified Alternatives 3, 4, and 6 as the agency preferred alternative.

Alternatives Considered but Dismissed from Detailed Analysis

BLM considered five other alternatives:

- Parallel the existing 230-kV transmission line from Gamebird Substation to Pahrump Substation; however, this alternative would require acquisition and demolition of recently constructed homes within the Spring Mountain Motor Resort and Country Club.
- Grant a one-time exemption for the project in the Las Vegas RMP instead of modifying the VRM Class from II to IV within the existing 1998 RMP Designated Corridor (Amargosa–Roach) where the project (500-kV option) is determined to not be in conformance with VRM Class II or modifying the VRM Class from III to IV within the Project ROW and substation footprints where the Project is determined to be not in conformance with VRM Class III.
- Modify the VRM Class from II to IV within just the ROW, not the entire 1998 RMP Designated Corridor.
- Evaluate an underground alternative.
- Deny the ROW amendment grants for the project and use plan amendments to allow for the nomination of ACECs.

Comments on the Draft EIS and RMP Amendment

For the alternative to "use plan amendments to allow for the nomination of areas of critical environmental concern" that was dismissed from further analysis, BLM argued that the nomination of the area as an ACEC "would not meet the BLM's purpose and need, which is to respond to the FLPMA ROW amendment application submitted by GridLiance, and because nomination of an ACEC … unrelated to the project should be evaluated through land use planning efforts." While denying the ROW amendment would not meet the BLM's purpose and need in the DEIS, BLM has opened the door to amend/revise the RMP for the area by proposing to do so in the alternatives analyzed in the DEIS. For example, if the ACEC(s) being nominated overlapped the project area, then that would be geographically related to the project.

In addition, the argument that and ACEC designation would not meet the purpose and need suggests that BLM has already determined that an ACEC designation and management cannot occur where there is a transmission ROW. This perception is contrary to BLM's designation of the Ivanpah ACEC that "was designated in 2014 as part of an amendment to the 1998 Las Vegas RMP under the Silver State Solar South Project EIS and ROD (BLM 2014)" (BLM 2024, page 3-64) and it overlaps the existing GridLiance ROW. BLM should explain how the designation of an ACEC met the purpose and need to respond to a FLPMA ROW request for a utility-scale solar project in the past but does not now.

According to section 202(c)(3) of the Federal Land Policy and Management Act (FLPMA), "[i]n the development and revision of land use plans, the Secretary shall give priority to the designation and protection of areas of critical environmental concern." Because of this directive in the statute and the fact that BLM is looking to amend the RMP for this area, the Council strongly suggests that BLM revise its decision and move forward with a proposal to include ACECs.

In addition, we remind BLM that the designation of one or more ACECs may also be viewed as mitigation for the construction, operation, and maintenance of the expanded GridLiance ROW, thereby complying with BLM's "Reinstating the Bureau of Land Management (BLM) Manual Section (MS-1794) and Handbook (H-1794-1) on Mitigation (BLM 2021)." We recommend that BLM propose designating ACECs that provide connectivity for tortoise movements that include the transmission corridor, and a long linear permanent disturbance, which unless properly managed, would disrupt tortoise connectivity. ACEC designating may also comply with BLM's Instructional Memorandum 2023-005 Habitat Connectivity on Public Lands (BLM 2022). BLM should work with the U.S. Fish and Wildlife (USFWS) Desert Tortoise Recovery Office to determine the best locations for the ACECs.

Affected Environment and Environmental Consequences

Page 3-1, Cumulative Actions: This section describes the methodology used to analyze cumulative effects. It does not cite or use the Council on Environmental Quality's (CEQ's) "Considering Cumulative Effects under the National Environmental Policy Act" (1997), including the eight principles, when analyzing cumulative effects of the proposed action to the affected resource issues. In addition, this CEQ document is referred to in BLM's National Environmental Policy Act Handbook (BLM 2008). BLM should be implementing it.

CEQ states, "Determining the cumulative environmental consequences of an action requires delineating the cause-and-effect relationships between the multiple actions and the resources, ecosystems, and human communities of concern. The range of actions that must be considered includes not only the project proposal but all connected and similar actions that could contribute to cumulative effects." The analysis "must describe the response of the resource to this environmental change." Cumulative impact analysis should "address *the sustainability of resources* [emphasis added], ecosystems, and human communities." For the GridLiance project, this description of this response would apply to the tortoise and its habitat.

CEQs guidance on how to analyze cumulative environmental consequences contains eight principles listed below:

1. Cumulative effects are caused by the aggregate of past, present, and reasonable future actions.

The effects of a proposed action on a given resource, ecosystem, and human community, include the present and future effects added to the effects that have taken place in the past. Such cumulative effects must also be added to the effects (past, present, and future) caused by all other actions that affect the same resource.

2. Cumulative effects are the total effect, including both direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken, no matter who (federal, non-federal, or private) has taken the actions.

Individual effects from disparate activities may add up or interact to cause additional effects not apparent when looking at the individual effect at one time. The additional effects contributed by actions unrelated to the proposed action must be included in the analysis of cumulative effects.

3. Cumulative effects need to be analyzed in terms of the specific resource, ecosystem, and human community being affected.

Environmental effects are often evaluated from the perspective of the proposed action. Analyzing cumulative effects requires focusing on the resources, ecosystem, and human community that may be affected and developing an adequate understanding of how the resources are susceptible to effects.

4. It is not practical to analyze the cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful.

For cumulative effects analysis to help the decision maker and inform interested parties, it must be limited through scoping to effects that can be evaluated meaningfully. The boundaries for evaluating cumulative effects should be expanded to the point at which the resource is no longer affected significantly or the effects are no longer of interest to the affected parties.

5. Cumulative effects on a given resource, ecosystem, and human community are rarely aligned with political or administrative boundaries.

Resources are typically demarcated according to agency responsibilities, county lines, grazing allotments, or other administrative boundaries. Because natural and sociocultural resources are not usually so aligned, each political entity actually manages only a piece of the affected resource or ecosystem. Cumulative effects analysis on natural systems must use natural ecological boundaries and analysis of human communities must use actual sociocultural boundaries to ensure including all effects.

6. Cumulative effects may result from the accumulation of similar effects or the synergistic interaction of different effects.

Repeated actions may cause effects to build up through simple addition (more and more of the same type of effect), and the same or different actions may produce effects that interact to produce cumulative effects greater than the sum of the effects.

7. Cumulative effects may last for many years beyond the life of the action that caused the effects.

Some actions cause damage lasting far longer than the life of the action itself (e.g., acid mine damage, radioactive waste contamination, species extinctions). Cumulative effects analysis needs to apply the best science and forecasting techniques to assess potential catastrophic consequences in the future.

8. Each affected resource, ecosystem, and human community must be analyzed in terms of its capacity to accommodate additional effects, based on its own time and space parameters. Analysts tend to think in terms of how each resource, ecosystem, and human community will be modified given the action's development needs. The most effective cumulative effects analysis focuses on what is needed to ensure long-term productivity or sustainability of the resource.

Note that CEQ recognizes that synergistic and interactive impacts as well as cumulative impacts should be analyzed in the National Environmental Policy Act (NEPA) document for the resource issues.

We request that the EIS be revised to (1) include these eight principles in its analysis methodology of cumulative impacts to the Mojave desert tortoise and the other resource issues in the EIS; (2) analyze the cumulative impacts for the proposed action on the tortoise and other resource issues; (3) ensure that synergistic and interactive impacts are included in this analysis; (4) analyze the sustainability of the tortoise in/near the project area and in the Eastern and Northeastern Recovery Units especially with respect to connectivity between populations in Tortoise Conservation Areas/Critical Habitat Units (CHUs); (5) analyze the sustainability of the other resource issues in the EIS; and (6) include effective science-based mitigation, monitoring, and adaptive management that protect desert tortoises, their habitats, and the other resource issues identified in the EIS through BLM's addition of requirements to the ROW that BLM proposes to issue for the proposed project.

In addition, we request that BLM add this project and its impacts to a BLM database and geospatial tracking system for special status species, including Mojave/Sonoran desert tortoises, which track cumulative impacts (e.g., surface disturbance, paved and unpaved routes, linear projects, invasive species occurrence, herbicide/pesticide use, wildfires, etc.), management decisions, and effectiveness of mitigation for each project. Without such a tracking system, BLM is unable to analyze cumulative impacts to special status species (e.g., desert tortoises) with any degree of confidence.

Cumulative Impacts and Connected Actions: The Council argues that upgrading this transmission line establishes where future utility-scale solar energy projects would be constructed and operated because of the need to be connected via a gen-tie line to the transmission line system to distribute energy generated from these solar projects. Thus, upgrading the GridLiance transmission line seals the fate of tortoise habitat near this transmission line to be developed for more utility-scale solar energy projects. But for the GridLiance upgrade, additional utility scale solar projects would unlikely occur in this part of southern Nevada. This "but for" situation should be explained and analyzed in the EIS.

Please include in the impacts analyses those foreseeable projects that would not occur but for this project. Too often analyses limit direct and indirect impacts to the physical disturbances at the bases of transmission poles or as the result of new access roads, for example, and report acreages for those obvious project-related losses. For this project, we ask that the EIS divulge the full extent of impacts and report acreages of all tortoise habitats, including linkage habitats, which will be temporarily and permanently degraded/lost as the direct result of this project, including renewable energy development that is contingent upon completion of the transmission line. The EIS should include the time needed for degraded/lost habitats to return to pre-project conditions with respect to their ecological functions and values. Temporal loss is frequently not included in the analysis of impacts and therefore not considered in the development of appropriate mitigation to offset those impacts. Please include all of these factors in the cumulative impacts analysis.

Pages 3-1 to 3-123, Affected Environment and Environmental Effects: BLM provided descriptions, analyses, and conclusions in this section of the DEIS. However, we were unable to find references from the scientific literature that supported much of this information. In the regulations for implementing the NEPA, CEQ requires using science in the preparation and analysis of NEPA documents and in decisionmaking (e.g., 40 Code of Federal Regulations (CFR) 1500.1(b), 40 CFR 1502.22(b), 40 CFR 1502.24 and 40 CFR 1507(2)(a)). While BLM provided some citations, much of the information presented lacked scientific references. Please include results from the scientific literature and their citations in the description of the Affected Environment and in the analysis of impacts and conclusions in the Environmental Effects sections of the Final EIS.

Pages 3-9 to 3-11, Issue AIR-2: Greenhouse Gases and Climate Change: The Council was unable to find in this section an analysis of the impacts for the releases of carbon from vegetation bladed/cleared during project construction and O&M activities. Studies around the world have shown that desert ecosystems can act as important sinks to sequester carbon. For example, the California deserts account for nearly 10 percent of the state's carbon sequestration below ground in soil and root systems, and aboveground in biomass (MDLT 2021). "The desert biome is estimated to store 112 Pg of SOC (soil organic carbon) to 1 m in depth, comparable to that of the boreal forest (112 Pg), temperate deciduous forest (122 Pg) and temperate grassland (105 Pg) (Jobbágy and Jackson, 2000)" in Koyama et al. (2018). Protecting this biome can contribute to securing carbon stores (MDLT 2021). However, when plants die (e.g. by clearing/grading), they release carbon from their roots, stems, and leaves into the atmosphere and contribute to climate change.

The clearing of desert vegetation for this project would result in the release of carbon into the atmosphere that has been sequestered in the plants and roots thus contributing to the adverse effects of greenhouse gas emissions and climate change. Mowing desert vegetation is preferred rather than clearing vegetation. Allowing the native vegetation to remain on site allows it to continue to store carbon from the atmosphere and sequester additional carbon during the life of the project.

Given the current climate change conditions, there is an increasing need for carbon sequestration, not carbon release, therefore, an increasing need to, as a minimum, maintain native plants. The BLM should be promoting actions that minimize or eliminate the release of carbon into the atmosphere because of the severe adverse effects climate change has on biodiversity and species survival, especially desert species. Please add this information to the Final EIS and analyze the release of carbon stored in desert plants from blading/clearing/crushing.

Page 3-19, Fuels and Fire Management, Rate of Spread: In this section of the DEIS, BLM reports that modelling indicates that the "ROS [rate of spread]would be less than 20 ch/hr for 50% of the analysis area and 20 to 50 ch/hr for 42%. This rate of fire spread is common in low to moderate fire behavior."

Unfortunately, this analysis does not include those occasions when the wind is high, which is a frequent occurrence in the Mojave Desert, and a wind-driven fire in the Mojave Desert will rapidly spread. Examples of wind-driven fires are the York Fire in 2023 that grew to 77,000 acres in four days (Toohey and Wigglesworth 2023) and the Dome Fire in 2020 that grew to more than 43,000 acres (Olalde 2020) in 9 days and created its own weather. It created downdrafts and fire whirls (sometimes called "firenadoes"). The winds spread the fire further (Mojave National Preserve https://www.nps.gov/moja/learn/nature/dome-fire.htm.) These firenadoes are not uncommon in fires in the southwestern U.S.

Page 3–20, Fire Management: BLM says, "Common management goals of fuels treatments include modifying future fire behavior and restoring certain plant species in an ecosystem, among many others. One project, the Sloan herbicide project, is currently planned within the 5-mile radius of the Project. This project would apply a pre-emergent herbicide over 1,473 acres that have a higher risk of human-caused fires to help reduce fire spread (Table 3.5-7, Figure 3.5-7). This type of fuels treatment can be used for nonnative and invasive plant species that are difficult to control."

BLM implies that it is implementing activities to meet these goals, especially restoring certain plant species in an ecosystem. BLM should provide examples of the activities it has successfully implemented to achieve these goals in the project area. The Council agrees that restoring native vegetation is crucial to minimizing the spread and proliferation on non-native invasive annual plants that fuel wildfires, increase their size and intensity, and can result in changes in vegetation composition. However, applying pre-emergent herbicides also suppresses the germination of seeds of native plant species. It does not contribute to restoring native plants species to an ecosystem, which BLM mentions as a goal above, especially when the seed bank for those species has been depleted. Consequently, BLM needs to reduce the presence of seeds from non-native invasive plants in the seed bank <u>and</u> increase the presence of seeds from native annual and perennial species in the seed bank and their successful germination and growth. An integrated approach is required to be successful. Please see our comments under **Vegetation Resources** below for more information.

Page 3-21, Fuels and Fire Management, Impacts of the Proposed Action: "Adding roads would also create fuel breaks to potentially slow fire spread." BLM provides no citations from the scientific literature to support this claim.

Morrison (2007) found this assumption to be incorrect. Examination of how actual wildfires have ignited and progressed in relation to roads reveals that roads often do not serve as effective firebreaks. The access provided by roads often appears to have an insignificant effect on the ability of firefighters to control large fires. Current road systems increase risk of human-caused fire. In contrast, areas that are distant from roads have significantly less human-ignited fires (Morrison 2007).

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

Brooks and Matchett (2006) mapped the ignition points for fires in the Mojave Desert between 1980 and 2004. They distinguished between human-caused and lightning fires. They reported that most ignition points of human-caused fires occurred along major roadways. For example, between July 1 and 2, 2024, two vehicles travelling on separate roads caught fire and started two wildfires in southern California. Roads provide other ignition sources such as cigarettes and other burning objects tossed from vehicles.

While roads do improve access for firefighters, those same roads provide access to careless drivers, off-highway vehicle recreationists, campers, and arsonists. The great increase in human-caused wildfire ignition due to an expanded road system greatly outweighs the benefits derived from increased access for firefighters (Morrison 2007). Please add this information to this section of the Final EIS and revise the analysis of impacts of the proposed action. This should include that vehicle access by the public on transmission corridor access roads increases the likelihood of wildfire occurrence, and should be minimized insofar as possible.

Page 3-21, Fuels and Fire Management, Impacts of the Proposed Action: "The addition of roads may shorten fire resource response time and act as fuel breaks, minimizing fire spread. This is expected to offset the impacts to tactical decisions that resources may need to consider because of the increased electrical infrastructure. Thus, overall suppression difficulty would remain similar," and "Although the Proposed Action increases ignition sources and infrastructure on the landscape, which may lead to more fires and thus more incidents overall, total suppression difficulty would remain similar to existing levels because of the offset provided by the addition of roads that would create a fire break and shorten fire response times."

BLM provides no citations to support these conclusions. As provided above, there is information in the scientific literature that refutes some of this information, which is based on the best available information in the scientific literature on roads functioning as effective fire breaks, especially in windy environments such as the Mojave Desert. BLM should revise its analysis and conclusions for the impacts of the proposed action on Fuels and Fire Management.

"Impacts from O&M activities are similar to construction impacts but would occur at a lower frequency and with less impact due to less equipment, fewer humans and vehicles on-site, and regularly scheduled maintenance work."

The Council's understanding is that unless BLM closes these roads to public access and effectively block public access, these roads are available and will be used by OHV enthusiasts and other recreational users. Consequently, BLM should revise its claim that there will be fewer people on the roads because the construction phase is completed. It should consider ways to minimize the public's use of new roads, post 15 mile per hour speed limit signs along them, and dedicate new and existing law enforcement personnel to enforce those speed limits.

In the Final EIS, BLM should analyze the impacts of the future use of the access roads by the public. In other parts of the Mojave Desert, the construction of utility access roads has resulted in public use of these roads and establishment of new unauthorized OHV roads diverting from access roads into previously undisturbed tortoise habitat. The myriad of impacts from human access using vehicles to the tortoise and tortoise habitat are well-documented in the scientific literature and summarized in Tracy et al. (2004) as part of the "threats network" to the tortoise. This includes wildfires. BLM should ensure that all impacts from creation and use of access roads by the Applicant and others are analyzed as part of the "but for" analysis, and that appropriate mitigation is implemented to avoid first and then fully offset these impacts.

Page 3-59, Soil Resources: BLM says, "[t]he soil resources analysis area aligns with the study area covered by the Botanical Survey Report." However, the soils resource analysis area should be determined using the extent of the direct, indirect, and cumulative impacts to this resource issue, not vegetation. For example, if water erosion is an impact to soils, how far down gradient from the project area is the erosion likely to occur? The same question should be asked about wind erosion to determine the boundary of the analysis area for the proposed project. We suggest that BLM follow CEQ's (1997) guidance for this determination that includes:

"Cumulative effects are the total effect, including both direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken, no matter who (federal, non-federal, or private) has taken the actions. Individual effects from disparate activities may add up or interact to cause additional effects not apparent when looking at the individual effect at one time. The additional effects contributed by actions unrelated to the proposed action must be included in the analysis of cumulative effects."

and

"Cumulative effects need to be analyzed in terms of the specific resource, ecosystem, and human community being affected. Environmental effects are often evaluated from the perspective of the proposed action. Analyzing cumulative effects requires focusing on the resources, ecosystem, and human community that may be affected and developing an adequate understanding of how the resources are susceptible to effects."

Please revise the Final EIS to explain the criteria that were used to determine the analysis area for soil resources for direct, indirect, and cumulative effects.

Page 3-61 to 3-62, Soil Resources, Impacts of the Proposed Action: The Council found this section to be a description of the activities that would be implemented under this project and not a discussion or **analysis** [emphasis added] of the impacts to soils in the project area. For example, BLM says, "After construction is complete, temporary work areas would be graded to the approximate original contour (unless required for future maintenance efforts), and the area would be revegetated with approved seed mixtures. At this point, the separately managed topsoil piles would be placed on top of the subsoils before revegetation," and "Reclamation procedures would be based on the Site Restoration and Revegetation Plans (Appendix F of the PODs [Plans of Development]) and the Invasive Plant Species and Noxious Weed Management Plans (Appendix E of the PODs)." "Following the removal of all equipment, the disturbance areas associated with the single-circuit 230-kV transmission line that are not necessary for the upgraded transmission line would be reclaimed in accordance with the Site Restoration and Revegetation Plans (Appendix F of the PODs)." This information seems more appropriate for the project description, lacks an analysis of impacts to soils from implementation of the alternatives, and is focused on vegetation more than soils.

If BLM does not analyze the impacts to soil resources, then it is not possible to identify and implement appropriate mitigation to offset these impacts. This may explain why we were unable to find a mitigation section under Soil Resources, because there are mitigation sections for other resource issues including Vegetation Resources, Visual Resources, and Wildlife.

We request that BLM revise this section in the Final EIS to discuss and analyze the impacts of the alternatives to soil resources including the physical (e.g., change in compaction, wind erosion, water erosion, organic matter, etc.), chemical (e.g., soil moisture content, etc.), and biological [e.g., soil crusts, arbuscular mycorrhizal fungi (AMF), etc.] components of the soils in the project area. For compaction, there should be a discussion on how compaction affects the chemical and biological properties of soils. This section should discuss and analyze the effectiveness of mitigation that would be implemented such as topsoil removal, storage, and reuse; implementation of identified measures to eliminate water and wind erosion including inoculation of soils with soil crusts and AMF (Hernandez et al. 2023), etc. Please add this discussion and analysis to the Final EIS.

Page 3-63, Soil Resources, Cumulative Impacts: This section of the DEIS, lists the potential projects that would impact soil resources in the future and describes the impacts of past and current actions in the analysis area. However, we found no analysis of the cumulative effects to soil resources that comply with CEQ's (1997) Considering Cumulative Effects under the National Environmental Policy Act. Please revise the Final EIS to comply with this requirement.

Pages 3-65 to 3-66, Special Designations, Ivanpah Area of Critical Environmental Concern: In the Ivanpah ACEC, "[t]he Project would be constructed in and adjacent to a 3,500-foot-wide BLM-designated transmission corridor, and the ROW for the existing corridor would be abandoned once the existing line is decommissioned. A portion of the Project would be constructed outside the BLM-designated transmission corridor. Since the Ivanpah ACEC is a linear ROW avoidance area (except in designated corridors), the BLM would be required to approve a new linear ROW, 0.83 mile in length, outside a designated corridor."

This information indicates that an RMP amendment must be approved by BLM to allow this additional area for a linear ROW in the Ivanpah ACEC. However, we found no information in this section of the DEIS that BLM would fully mitigate for the direct, indirect, and cumulative impacts if this proposed action is allowed.

BLM's analysis of impacts from this wide linear ROW with long-term loss and degradation of habitat and ongoing disturbance is that "[c]onstruction in the Ivanpah ACEC is likely to take less than 2 months to complete the 3.5-mile segment. The small overall footprint of temporary disturbance represents less than 0.1% of the acreage in the Ivanpah ACEC. The small overall footprint of permanent disturbance represents less than 0.05% of the ACEC's acreage." Our understanding is that the Ivanpah ACEC was designated by BLM in 2014 to be managed for the benefit of the tortoise and apparently as mitigation for an approved solar project.

BLM limits its analysis of the impacts of this proposed action to discount the loss and degradation of tortoise habitat by using a simple math equation, with the impacts resulting in a subtraction of a small amount of acreage/habitat from the ACEC. We found no analysis of the quality, quantity, and configuration of the tortoise habitat as the existing baseline, and the loss/damage to the ecological functions and values of this ACEC to the survival and persistence of tortoises from the proposed action.

We request that the Final EIS provide baseline data on the quality, quantity, and configuration of tortoise habitat in the ACEC, the locations and impacts that occur in/adjacent to this ACEC, and the locations of existing disturbance in/adjacent to the ACEC. Once this information and analysis is completed, BLM should analyze the ecological functions and values that this ACEC provides to the tortoise and then analyze how these would change with the implementation of the proposed ROW expansion. To comply with BLM's Mitigation Policy, BLM should require that appropriate mitigation be implemented to fully offset these impacts including temporal impacts.

Further, BLM claims that "[i]mplementation of Design Features 3–10 would protect desert tortoises from construction disturbance and vehicle traffic and reduce impacts related to tortoise mortality." Design Features 3–10 are not described in this chapter of the DEIS nor is the location of where they are listed in the DEIS provided in this paragraph. Please correct this statement to say that Implementation of Design Features 3–10 would **help** protect desert tortoises from the **direct** impacts of construction disturbance and vehicle traffic **associated with the proposed project** and reduce direct impacts related to tortoise mortality. However, indirect impacts from construction disturbance and vehicle traffic remain despite mitigation including indirect impacts resulting in tortoise mortality.

The impacts of road use are extensive and far reaching. Averill-Murray (2021) noted that edge effect from development including roads/highways limits the availability of this area to provide habitat that is used by tortoises. Morrision (2007) reported that roads cause widespread environmental damage and ecological disruption.

Road construction, use and maintenance impacts wildlife through numerous mechanisms that can include mortality from vehicle collisions, and loss, fragmentation, alteration/destruction of habitat, collection, vandalism, increased predation, and modification of behavior. Field studies (LaRue 1992; Nafus et al. 2013; Von Seckendorff Hoff and Marlow 2002) have shown impact zones from road use eliminate or substantially reduce tortoise numbers along/near roadways. These impacts are attributed to roadkill with roads acting as a population sinks for tortoises.

Nafus et al. (2013) state that the ecologically affected areas along roads, otherwise known as "roadeffect zones," are those in which a change in wildlife abundance, demography, or behavior is observed. 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, 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. For roads with more than 5,000 vehicles per day, the reduction was evident more than 4,000 meters (13,166 feet = 2.49 miles) from the road. They noted that the installation of exclusion fences and other barriers along roadways helped reduce direct tortoise mortalities. However, exclusion fencing needs to be monitored and maintained. It also fragments populations of tortoise and other wildlife.

Nafus et al. (2013) reported that roads may decrease tortoise populations via several possible mechanisms, including cumulative mortality from vehicle collisions and reduced population growth rates from the loss of larger reproductive animals. Other documented impacts from road construction, use, and maintenance include increases in roadkill of wildlife species as well as tortoises, creating or increasing food subsidies for common ravens, and contributing to increases in raven numbers and predation pressure on the desert tortoise.

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Harju et al. (2024) reported that vehicle use on roads causes female tortoises near the road to expend considerably more energy with consequent water loss than they otherwise would (i.e., by pushing them into the energy-demanding movement state). This is likely detrimental to female tortoise survival near the road, as increased movements drive female tortoises into water-limited conditions known to dramatically reduce survival, and because increased activity aboveground increases predation risk (Longshore et al. 2003, Lovich et al. 2023). This impact could also provide a partial explanation for previously noted road effect zones for the Mojave desert tortoise, whereby reduced density and lack of mature adults is not necessarily solely a function of historic direct mortality (Nafus et al. 2013).

The USFWS (1994a, b; 2011) discussed and stressed the importance of connectivity and linkages between populations and within tortoise conservation areas (TCAs). The project area is located near the western edge of the northeastern Mojave Recovery Unit and the northeast edge of the Eastern Mojave Recovery Unit. Therefore, this area is essential in providing connectivity between these two recovery units. Averill-Murray et al. (2021) emphasized that "[m]aintaining an ecological network for the Mojave desert tortoise, with a system of core habitats (TCAs) connected by linkages, is necessary to support demographically viable populations and long-term gene flow within and between TCAs."

"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." Furthermore, "habitat linkages among TCAs *must be wide enough* [emphasis added] to sustain multiple home ranges or local clusters of resident tortoises (Beier and others, 2008; Morafka, 1994), while accounting for edge effects, in order to sustain regional tortoise populations." Consequently, effective linkage habitats are not long narrow corridors. Any development within them has an edge effect (i.e., indirect impact) that extends from all sides into the linkage habitat further narrowing or impeding the use of the linkage habitat, depending on the extent of the edge effect.

Averill-Murray et al. (2021) further notes that "To help maintain tortoise inhabitance and permeability across all other non-conservation-designated tortoise habitat, all surface disturbance could 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 caution that the upper threshold of 5-percent development per square kilometer may not maintain population sizes needed for demographic or functional connectivity; therefore, development thresholds should be lower than 5 percent.

The lifetime home range for the Mojave desert tortoise is more than 1.5 square miles (3.9 square kilometers) of habitat (Berry 1986) and, as previously mentioned, tortoises may make periodic forays of more than 7 miles (11 kilometers) at a time (Berry 1986).

Averill-Murray and Allison (2023) provide a case study on the Mojave desert tortoise from the impacts of road use and stress identifying the entire travel network within management areas and setting limits for road density with lower road densities in areas with greater tortoise numbers. This analysis or an analysis including these data presented above were not conducted in the DEIS.

We strongly recommend that the Final EIS be revised to analyze the entire travel network with the eastern portion of the Eastern Mojave RU and western portion of the Northeastern Mojave RU and to analyze the direct and indirect impacts of road densities. This analysis should include the results from research such as reported by von Seckendorff Hoff and Marlow (2002).

BLM should also apply these comments to the "Vegetation Resources" and "Wildlife" sections of the Final EIS.

The Council on Environmental Quality (CEQ) (2023) recently issued "Guidance for Federal Departments and Agencies on Ecological Connectivity and Wildlife Corridors." The purpose of this document is for federal agencies to consider "how their actions can support the management, long-term conservation, enhancement, protection, and restoration of year-round habitat, seasonal habitat, stopover habitat, wildlife corridors, watersheds, and other landscape/waterscape/seascape features and processes that promote connectivity." CEQ applies this guidance to the following areas:

- Agency planning and decision-making,
- Science and data, and
- Collaboration and coordination.

CEQ identified the focal area of energy development planning and permitting where connectivity and wildlife corridors should be considered early in planning, funding, and decision-making. CEQ directed that federal agencies should have new or updated policies ready to implement by the first quarter of 2024 and make their policies publicly available.

In addition, CEQ identified best practices that should be incorporated into planning and decisionmaking, gathering baseline information to assess public lands for connectivity and wildlife corridor values, using science and data to develop performance measures and metrics to assess whether and how federal agencies collectively are promoting greater connectivity across terrestrial habitats. For the second bullet, science and data, CEQ says. "Federal agencies should address how the best available science and data will inform planning and decision-making, and consider approaches to identify and address gaps in available science and data." CEQ describes the types of science and data to be used and the sharing of science and data.

For the third bullet, collaboration and coordination, federal agencies "should support strategic collaborations and partnerships to advance work on connectivity and [wildlife] corridors," and "should promote both intra- and interagency coordination and collaboration, to ensure that planning and information regarding connectivity and [wildlife] corridor efforts are not siloed within individual agencies or within distinct programs within a single agency."

Because CEQ has identified energy development planning and permitting as a focal area where connectivity and corridors should be considered early in planning, funding, and decision-making, and because these areas are what BLM as the lead agency is undertaking in planning, funding, and decision-making in this DEIS, we request that the BLM as the lead agency explain how the agencies are complying with this CEQ guidance. Please explain how all the alternatives would

comply with the purpose and objective of this guidance including enabling "wildlife to adapt to fluctuating environmental conditions, including those caused by climate change." In addition, the Final EIS should demonstrate how the agencies are implementing "consistent Federal action on connectivity and corridors" with other federal agencies in agency planning and decision-making, science and data, collaboration, and coordination. The Council requests that BLM revise the Final EIS to include this information and analysis particularly for the tortoise.

BLM should apply these comments to the "Wildlife" section of the Final EIS.

Page 3-66 to 3-67, Impacts of the Proposed Action (BCCE) [Boulder City Conservation Easement]: "The Proposed Action would create 2.72 miles of new permanent roads and 0.53 mile of temporary roads, for a total of 3.25 miles of new road disturbance within the BCCE." "The overall footprint of temporary disturbance represents less than 0.07% of the acreage in the BCCE (Section 3.16). The overall footprint of permanent disturbance represents less than 0.04% of the BCCE's acreage. Temporary roads and disturbance areas would be returned to pre-existing conditions through design measures, activities associated with the BLM-approved Site Restoration and Revegetation Plans, Invasive Plant Species and Noxious Weed Plans, and compliance with Clark County HCP management prescriptions (Section 3.11.1.4)."

Again, the analysis of the direct, indirect, and cumulative impacts is not a simple equation of addition and subtraction of the total acres directly impacted. The analysis of the impacts of each alternative is complex and involves numerous factors including temporal losses of habitat; edge effects of authorized and unauthorized disturbances; and the quality, quantity, and configuration/connectivity of the remaining habitat, especially for tortoises, that is not currently impacted or would be impacted under one of the alternatives; the patchy distribution of tortoises in their habitat; and the myriad threats to the tortoise that impact its ability to survive, reproduce, and persist. Linear projects such as transmission lines and their associated roads have long narrow linear footprints that are often more evenly and widely distributed across landscapes. As a result, the influence [or impacts] of roads and transmission lines is likely to far exceed their surface footprint (von Seckendorff Hoff and Marlow 2002, Kuvlesky et al. 2007, Carter et al. 2020). Using these fundamental ecological factors and others, BLM should revise its analysis of the impacts in the Final EIS to the tortoise, especially indirect and cumulative impacts from implementation of the alternatives.

Vegetation Resources

Page 3-75, Vegetation Resources, Special Status Plant Species Impacts: BLM says, "[t]he analysis area is the pre-existing 100-foot ROW; the proposed ROW for the 230-kV option and the 500-kV option of the upgraded transmission line; any access routes, temporary work areas, or other proposed features; plus a 50-foot-wide buffer."

This limited analysis area does not include a discussion of how BLM determined the extent of impacts to vegetation both directly and indirectly from implementation of the proposed project. The construction of new access roads and the improvement of existing access roads may have long-term indirect impacts to downgradient vegetation by reducing or curtailing surface water flows that adversely alter soil moisture content and reduce the survival and growth of

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downgradient vegetation by 300 meters. Please see our comments below under "**Water Resources**" and impacts reported by Devitt et al. (2022) and Schwinning et al. (2011). BLM should revisit its determination of the project area for vegetation resources and explain using information from the scientific literature how it determined that the impacts to vegetation resources from the proposed alternatives would be confined to the identified analysis area. Without this information, BLM's identification of the analysis area for this resource issue appears arbitrary.

Page 3-78, Vegetation Resources, Impact of the Proposed Action, Construction: BLM says, "[c]onstruction would involve the disturbance of 1,854 acres, including 800 acres of permanent impacts and 1,054 acres of temporary impacts." This is the equivalent of three square miles that would experience long-term loss of vegetation. Yet we were unable to find in the DEIS that BLM is requiring mitigation to offset these impacts. Please include mitigation for this long-term loss in the Final EIS to comply with BLM's Mitigation Policy (BLM 2021a,b,c) and fully offset these impacts including the temporal loss.

Although some of the lands would be temporarily used, the impacts to soils and vegetation would not be temporary but long-term. Abella (2010) reported that the time estimated by 29 individual studies for full reestablishment of total perennial plant cover in the Mojave and Sonoran deserts was 76 years for disturbance from activities such as land clearing and road building. Consequently, this long-term impact should be described and analyzed in the Final EIS. BLM should require the implementation of appropriate effective mitigation required to fully offset this temporal loss and acreage loss. Please revise the Final EIS to include this analysis on impacts and implementation of both types of mitigation in tortoise habitat and to comply with BLM's Mitigation Policy.

This absence of mitigation plans or providing incomplete mitigation plans in the BLM NEPA document appears to be increasing in frequency. The Council routinely requests in our scoping comments that all mitigation plans be included in the NEPA document for reasons described elsewhere in this comment letter. We remind BLM that CEQ (2011) issued a rule on implementing NEPA entitled "Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact." In this rule, CEQ stated, "[p]ublic involvement is a key procedural requirement of the NEPA review process, and should be fully provided for in the development of mitigation and monitoring procedures," and "[i]n addition to advancing accountability and transparency, public involvement may provide insight or perspective for improving mitigation activities and monitoring." Consequently, the Council requests that BLM revise the Final EIS and include all the draft mitigation and monitoring plans for the public to review for all resource issues described and analyzed in the Final EIS. These mitigation and monitoring plans should comply with CEQ's 2011 rule.

Page 3-79, Vegetation Resources, Special Status Plan Species Impacts, Cumulative Impacts: In this section of the DEIS, BLM primarily lists the general types of projects that may be developed in the foreseeable future and names specific projects. The analysis of cumulative effects to vegetation resources is limited to stating they have the "potential to impact special-status plant species" and "would occur in previously disturbed areas, as part of expansions or upgrades." Please revise the cumulative effects analysis for vegetation resources by implementing CEQ's requirements that we provided earlier in this letter under "**Page 3-1, Cumulative Actions**." In addition, these comments should be applied to Page 3-82 Noxious Weeds and Invasive Species, Cumulative Impacts; page 3-85, Cacti and Yucca, Cumulative Impacts; and page 3-87, Vegetation Community, Cumulative Impacts.

Under **Soil Resources (page 3-62),** BLM stated, "The short-term goal of reclamation would be to stabilize disturbed areas as rapidly as possible, thereby protecting sites and adjacent undisturbed areas from degradation. The longterm goal would be to return the land to approximate predisturbance conditions. Reclamation of the surrounding grade and vegetation would occur postconstruction."

and

"For areas that have required clearing and/or grading work, reclamation procedures would be based on site-specific requirements and techniques commonly employed at the time the area is to be reclaimed, and would include regrading, spreading topsoil, and revegetating all areas of temporary disturbance."

and for decommissioning

"All areas of temporary disturbance would be reclaimed using weed-free native shrubs, grasses, and/or forbs. Vegetation cover, composition, and diversity would be reclaimed to values commensurate with the ecological setting. This reclamation would improve and restore habitat for the existing soils, vegetation communities, and structure."

These requirements seem appropriate for Vegetation Resources too. We suggest that this verbiage be restated in the Vegetation Resources section of the Final EIS.

Page 3-81, Vegetation Resources, Noxious Weeds and Invasive Species: BLM says. "[t]he Invasive Plant Species and Noxious Weed Management Plans (Appendix E of the PODs [Plans of Development]) provide methods to control the potential occurrence or infestation of noxious weeds during and following construction to prevent the spread of noxious and invasive species. Thus, with the implementation of these aforementioned plans, it is expected that the percentage of noxious weeds and invasive plant individuals would be consistent with or reduced from baseline conditions."

Please see our comments below under Attachment E-1 Weed Management Plan.

Water Resources

Page 3-103, Water Resources, Impacts to Water Quantity: We found no discussion or analysis of how the construction, use, and/or maintenance of the alternatives would or would not affect vegetation communities by modifying surface hydrology and surface flow down gradient to these vegetation communities. Devitt et al. (2022) found that a simple service road built over 27 years before the solar facility was constructed, decoupled the flow of water from upgradient washes to downgradient washes and once decoupled, altered the area in which rainwater harvesting occurred. The decoupling of the wash system led to a significant decline in soil moisture, canopy level NDVI

(Normalized Difference Vegetation Index) values and mid-day leaf xylem water potentials. Plants within the first 300 meters from where the wash was decoupled were placed under significantly greater stress during the higher environmental demand summer months (Devitt et al. 2022). Schwinning et al. (2011) argued that the overall health of desert ecosystems is directly linked to the integrity of their surfaces and such drainage systems.

The design/location of access roads usually focuses on maintaining the integrity of the road and preventing water damage in the most cost effective manner. The design does not focus on ensuring that all downgradient vegetation continues to receive the pre-project flow of water, thus ensuring that soil moisture is adequate for continued plant survival and seed germination. This alteration by construction an access/construction/maintenance road, which is a long linear barrier that allows the passage of surface flows at only a few discrete downgradient locations, would have a substantial impact to much of the vegetation located on the downgradient side of the road and in tortoise habitat.

The DEIS did not specify that when new roads are constructed or existing roads are improved, these impacts would be factored into the design and implementation of road construction and maintenance. There is an obvious linkage between surface water and soil moisture to the success of seed germination and growth and survival of vegetation (and habitat for wildlife). When designing a road, one focus is on ensuring that surface water does not compromise the structural integrity of the road. The impacts to all downgradient vegetation are not a priority. These factors should persuade BLM to revise the surface hydrology analysis to examine the downgradient impacts to vegetation including impacts on tortoise habitat especially for providing cover/protection from predators and temperature extremes, availability of native nutritious forage required by all age classes and reproductive females [(Nagy et al. 1998, Oftedal 2002, Hazard et al. 2010, Drake et al. 2016], and adequate soil moisture for construction of cover sites should be included in this section of the DEIS.

BLM's analysis of the direct, indirect and cumulative impacts of the proposed project for each resource issue appears to be limited. For example, we found no description and analysis of the connectivity between surface water, soils, vegetation, and wildlife in the project area. We found no analysis of the cumulative, interactive, and synergistic impacts of, for example, when surface water quantity is reduced because of construction [i.e., new construction for the 500-kV option could potentially result in a maximum of 15.38 acres (6.9 stream miles) of temporary impacts and 17.51 acres (7.89 stream miles) of permanent impacts; new construction for the 230-kV option could potentially result in a maximum of 14.59 acres (6.17 stream miles) of temporary impacts and 17.40 acres (7.17 stream miles) of permanent impacts)], this water quantity impact also adversely impacts soil moisture and microbiota; which adversely affects vegetation survival, growth, and seed germination; which adversely affects the survival, growth, and reproduction of wildlife, especially special status species such as the tortoise. These interactive impacts between surface water quantities, soil resources, vegetation resources, and wildlife should be discussed and analyzed in the Final EIS and appropriate mitigation and monitoring implemented to fully offset these impacts, including temporal losses. Please revise the cumulative impacts sections of the Final EIS to include the interactive and synergistic impacts as directed by CEQ (1997).

Wildlife

Page 3-115, Wildlife, Impacts from Ground Disturbance and Construction, Impacts of the Proposed Action: "Design features, including burrow avoidance and biological monitoring (Appendix B), would be implemented to avoid impacts to desert tortoise and other special-status species to the greatest extent practicable."

Please revise this sentence to read "...would be implemented to avoid **many direct** impacts to desert tortoise and other special-status species to the greatest extent practicable." Many indirect and cumulative, interactive, and synergistic impacts remain and will not be avoided. One example was provided in our comment in the section above under "Water Resources," in the last paragraph.

Page 3-115: "The implementation of clearance surveys consistent with the USFWS Mojave Desert Tortoise Pre-project Survey Protocol (USFWS 2019a) as described in the BLM Southern Nevada District Office Programmatic Biological Opinion (USFWS 2019b) would further reduce potential mortality to desert tortoise and other wildlife during construction."

Please revise this sentence to say "...would further reduce the potential **direct** mortality to desert tortoise..." Clearance surveys do not reduce mortality to the tortoise from indirect, interactive, synergistic, or cumulative impacts from the proposed project.

In addition, all mitigation plans should be completed and provided in the Final EIS so the public and the decisionmaker can review them and determine the effectiveness of the proposed mitigation. Stating that a mitigation plan will be developed even if this statement includes "using the best available science" is not adequate or appropriate, as the preparers are not always experts on the best available science for that specific subject. When mitigation plans are included in the public review process, this provides the public with the opportunity to provide comments based on their diverse knowledge and experience regarding the adequacy and soundness of the proposed mitigation plans. This public review process increases the likelihood that the mitigation plans when reviewed and finalized will be effective when implemented. Please revise the Final EIS and include all the mitigation plans in this document.

Page 3-116: "The two most common models used are the Nussear model (Nussear et al. 2009), which estimates the probability of habitat being suitable for desert tortoise and the Averill-Murray model (Averill-Murray et al. 2013) which estimates habitat connectivity corridors based on the Nussear model." These models are clear in their disclosure of the assumptions used. BLM should ensure that these models were used correctly and that the assumptions disclosed were considered in the application of the models. Another model of tortoise habitat was more recently developed by Feinberg et al. (2019) for Defenders of Wildlife.

Page 3-116: "The loss of suitable habitat from construction would have minor impacts to the species overall; however, the impacts that would occur would be long-term or permanent, as desert systems take many years to regenerate."

This is a conclusion by BLM and not an analysis of impacts. What is missing from this section is a description and analysis with supporting documentation from the scientific literature of the impacts from the loss of habitat to the tortoise. We reiterate comments made earlier in this letter under pages 3-65 to 3-66, Special Designations, Ivanpah ACEC. We reiterate that the EIS should provide baseline data on the quality, quantity, and configuration of tortoise habitat in the ACEC, the locations and impacts that occur in/adjacent to this ACEC, and the locations of existing disturbance in/adjacent to the ACEC. Once this information and analysis is completed, BLM should analyze the ecological functions and values that this ACEC provides to the tortoise and analyze how these would change with the implementation of the proposed ROW expansion.

Page 3-116: BLM says, "the Proposed Action is unlikely to affect the long-term connectivity of the Ivanpah ACEC and other crucial habitat, as it would create few new obstacles that would prevent terrestrial wildlife dispersal."

The Council disputes this conclusion because of the absence of science to support it. Again, BLM has conducted a simple uninformed analysis rather than researching the scientific literature to determine the needs of the tortoise and the impacts, including cumulative impacts, which can impede or prevent tortoise movements. We refer BLM to the information we provided under **pages 3-65 to 3-66, Special Designations, Ivanpah ACEC** and request that BLM review the scientific literature on the tortoise, its habitat connectivity needs, and how to analyze habitat connectivity (e.g., Averill-Murray et al. 2021, Averill-Murray and Allison 2023, Morrision 2007, Nafus et al. 2013, Beier and others, 2008; Morafka, 1994, Goble 2009, Berry 1986, and CEQ 2023) and revise this section of the Final EIS with the scientific and regulatory literature cited in this analysis.

Page 3-117: "Other seasonal considerations concerning wildlife is water access." The Final EIS should describe that tortoises know where in their home ranges temporary water collects following precipitation events. If this flow of surface water is changed because of construction activity, the loss of this resource would be an adverse impact to the tortoise. BLM should analyze this impact to the tortoise. Please revise this section of the Final EIS to include this and other impacts to the tortoise for water access and availability.

Page 3-117, Operation and Maintenance: "As described in the Raven Management Plan (BLM 2023b), the Proposed Action would incorporate design features and avoidance and minimization measures to reduce raven predation on tortoises."

We searched the DEIS, the BLM NEPA ePlanning web page for this project (https://eplanning.blm.gov/eplanning-ui/project/2025248/570) and the Internet and were unable to find the Raven Management Plan referred to in this sentence. The Council understands that this document is a mitigation plan and should be included in the Final EIS. Per CEQ's (2011) final rule on mitigation and monitoring plans for NEPA documents, the Council requests that this mitigation plan be included as part of the Final EIS for the public to review and provide comments. Please see our comments under **page 3-78**, Vegetation Resources, Impacts of the Proposed Action, Construction regarding this requirement for mitigation plans.

Pages 3-118 to 3-119, Cumulative Impacts: Please revise the cumulative effects analysis for vegetation resources by implementing CEQ's requirements that we provided earlier in this letter under "**Page 3-1, Cumulative Actions**." Recall that cumulative impacts analysis also include interactive and synergistic impacts, which appear to be absent from the analysis for "**Wildlife**."

GridLiance West Core Upgrades Sloan Canyon to Trout Canyon Transmission Line Upgrade Project Plan of Development; Appendix E. Invasive Plant Species and Noxious Weed Plan Invasive Plant Species and Noxious Weed Management Plans

This is one of four Weed Management Plans that GridLiance and BLM provided in the DEIS. The others are for the remaining segments of the proposed transmission line upgrade — Trout Canyon to Wheeler Pass, Wheeler Pass to Innovation, and Innovation to Northwest. The comments provided below apply to all four Weed Management Plans in the four PODs.

Attachment E-1 Weed Management Plan

Under the Plan's Purpose, the Weed Management Plan is directed to be used for specific development projects approved by BLM. It should be revised to include all activities authorized by BLM that are likely to result in ground disturbance and/or the transport of nonnative invasive plants onto or within BLM lands.

Under **Agency Regulations**, we suggest adding a section to the Final EIS that includes relevant Executive Orders.

"List of Noxious Weeds Within or Adjacent to the Project and "List of Other Weeds Within or Adjacent to the Project:" This section implies that these are the only plant species that would be treated/removed/controlled by BLM or the project proponent. Because the ROW would be granted for 30 years, new noxious and/or invasive non-native plant species may be introduced during that time. BLM should insert language in this plan that clarifies that these are the currently identified weeds occurring in the project area but others may occur during the life of the project, must be sought through monitoring, and must be controlled/treated by BLM or the project proponent.

Under "Preconstruction Weed Surveys," only noxious weeds are mentioned. Please add non-native invasive weeds to this section in the Final EIS. This baseline information is needed by BLM to determine whether the methods implemented by BLM or the project proponent are effective.

Under "Identification of Weed Areas," mapping these areas is only required for noxious weeds. Please add non-native invasive weeds to this section in the Final EIS. This baseline information is needed by BLM to determine whether the methods implemented by BLM or the project proponent are effective.

Under "Preventative Measures," the Plan says, "To prevent the spread of noxious and invasive weeds, the proponent would incorporate various BMPs [best management practices] into Project planning and design. Soil disturbance would be minimized to the maximum extent possible. See Table 1 in Exhibit A below."

We strongly recommend adding verbiage that additional BMPs may be added/implemented as they are identified by the scientific literature. Because the GridLiance ROW would be granted for 30 years, it is likely that additional BMPs will be identified as effective deterrents to the introduction, spread, and/or persistence of noxious and invasive weeds during that time.

Under "Control Measures," BLM limits the use of weed control to "chemical (herbicide) treatment or manual treatment (hand-pulling)." We recommend that BLM provide these as examples, and allow the use of other methods (e.g., manual removal) determined to be safe and effective especially to the tortoise.

Under "Pesticide Applicator Training," please add that pesticide applicator personnel would be required to follow all terms and conditions related to weed treatment and pesticide use when applying any licensed pesticide.

Under "Requirements Addressed in the Plan," please add the words in bold font to the existing wording:

- An inspector would ensure that vehicles and equipment are free of soil and debris capable of transporting noxious **and/or non-native invasive** weed seeds, roots, or rhizomes.
- Areas of proposed ground disturbance would be inspected for **non-native invasive weeds and** noxious weeds prior to vegetation clearing. Any infestations would be recorded for reference in clearing the areas of proposed disturbance for construction and for postconstruction monitoring.
- In areas where infestations have been identified or **non-native invasive weeds** or noxious weeds were noted in the field, the Construction Contractor(s) would stockpile cleared vegetation and salvaged topsoil adjacent to the area from which they are stripped to eliminate the transport of soil-borne **non-native invasive weed and** noxious weed seeds, roots, or rhizomes. During reclamation, the Construction Contractor(s) would return topsoil and vegetative material from infestation sites to the areas from which they were stripped.
- Continuing revegetation efforts described in the Project's Site Restoration and Revegetation Plan (POD Appendix F) would ensure adequate vegetative cover to prevent the invasion of **non-native invasive weeds and** noxious weeds.
- Continuing revegetation efforts described in the Project's Site Restoration and Revegetation Plan (POD Appendix F) would ensure adequate vegetative cover to prevent the invasion of **non-native invasive weeds and** noxious weeds.
- Measures identified during the National Environmental Policy Act (NEPA) process [To be included when identified in a relevant BLM NEPA document].

BLM and the project proponent's focus in this Plan appears to be noxious weeds, when it should be invasive non-native weeds and noxious weeds.

In addition, BLM has not provided complete Invasive Plant Species and Noxious Weed Management Plans with the verbiage in brackets in the last bulleted item. Consequently, we were unable to review them to determine whether BLM's conclusion that "the percentage of noxious weeds and invasive plant individuals would be consistent with or reduced from baseline conditions" is correct.

We have additional comments on BLM's compliance with CEQ's rule on mitigation and monitoring plans. Please see our comments above under **page 3-78**, **Vegetation Resources**, **Impacts of the Proposed Action, Construction** on CEQ's (2011) requirements for mitigation and monitoring plans.

Attachment E-2. Pesticide Management Plan

In this attachment, BLM says, "The Invasive Plant Species and Noxious Weed Plan describes the methods that GridLiance West, LLC (GridLiance), proposes to follow in order to identify the invasive plant species and noxious weeds present, and then to actively manage these species through a systematic process of monitoring and treatment throughout the lifecycle of the Sloan Canyon to Trout Canyon Transmission Line Upgrade Project (Project)."

Our review of the Invasive Plant Species and Noxious Weed Plan determined that GridLiance's focus was on noxious plant species and did not address invasive plant species (a.k.a. "invasive weeds"). BLM should ensure that GridLiance's Invasive Plant Species for all four PODs are revised to include invasive weeds (a.k.a. "invasive non-native plants" or "invasive plants").

GridLiance West Core Upgrades Sloan Canyon to Trout Canyon Transmission Line Upgrade Project Plan of Development; Appendix F. Site Restoration and Revegetation Plan

This is one of four Site Restoration and Revegetation Plans that GridLiance and BLM provided in the DEIS. The others are for the remaining segments of the proposed transmission line upgrade — Trout Canyon to Wheeler Pass, Wheeler Pass to Innovation, and Innovation to Northwest. The comments provided below also apply to all four Site Restoration and Revegetation Plans in the four PODs.

Page F-9: "Restoration would be considered successful if identified measures of native perennial vegetation are equal to or exceed a designated percentage of the values for these parameters in undisturbed reference areas. The standards required for the four land management designations are: 100% for R1, 80% for R2, 70% for R3, and 60% for R4."

An R2 High Priority Recovery Area is categorized as, "[m]anagement on these lands is oriented toward actions that reduce human impacts to the landscape for the purposes of recovery of federally listed or special status species (e.g., Mojave desert tortoise [Gopherus agassizii]." Please provide citations from the scientific literature that support establishing 80% of the values for land management designation R2. Please explain why 80% restoration of native perennial vegetation in tortoise habitat is an indicator of vegetation health for the tortoise. Given the status and trend of the tortoise populations in the two recovery units in which the proposed project occurs (e.g., declining density and numbers, many populations below the density needed for viability, reduced survival of juvenile tortoises resulting in little recruitment and aging tortoise populations) (Allision and McLuckie 2018, USFWS 2015, 2016, 2018, 2019, 2020, 2022a, 2022b), this reduced percentage for restoration does not reflect the current ecological needs of the tortoise. In addition, the restoration focuses only on perennial vegetation. Restoration of ecological values must include restoration of native annual vegetation, specifically annual forbs that provide the nutritional content tortoises need for energy and water balance (Henen 2002), protein (Drake et al. 2016), and other important nutritive components (Abella and Berry 2016, Oftedal et al. 2002). Restoring and maintaining these native annual forbs is also crucial to maintaining biodiversity in the Mojave Desert.

We found no citations from the scientific literature to support these percent determinations of success for the wildlife species representative of each category in the project area. Please add these citations in the Final EIS.

We are not sure where the project proponent or BLM expects to find undisturbed reference areas in the BLM's Las Vegas District or nearby. Please explain how such conditions will be found in the Final EIS.

Page F-15 Cactus and Yucca Salvage, Extraction Procedures: A fundamental practice in translocating cactus is to mark the south side of the plant before extracting it. When replanting the plants, the marked side of the cactus is oriented to the south to prevent sun burn in its new location (<u>https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1376-2020.pdf</u>). We ask that the proponent and BLM include this fundamental practice in the Revegetation Plan.

Page F-17, Biocrust Salvage: The Council strongly suggests implementing biocrust restoration actions to regain ecosystem functions in the restoration areas for the proposed project. BLM should require the project proponent to implement the most recent successful results and methodologies from the scientific community (e.g., Chock et al. 2019) in restoring biocrusts, especially because of the important role they play in the growth and survival of native desert plants and soils (Belnap et al. 2008).

Page F-17, Soil Salvage: This section of the Restoration Plan should provide information on subsurface soil biota (e.g., bacteria, fungi, protozoa, nematodes, and microarthropods) (Belnap et al. 2008) and their importance in restoring and maintaining healthy soils and native vegetation in the Mojave Desert. For example, soil fungi include mycorrhizal fungi, which colonize the roots of most desert plant species. These fungi can be very important in obtaining water, nitrogen, phosphorus, and zinc for plants due to their ability to expand into the soil zones beyond the reach of roots, and thus increase the soil volume being explored for water and nutrients. These fungi are especially important under adverse conditions (Belnap et al. 2008). Hernandez et al. (2023) reported that ecological restoration may be facilitated by utilizing cost-effective inoculants of indigenous soil biota and that future restoration practices should consider:

- Potentially negative belowground impacts of invasive species in restoration efforts, especially with threatened and endangered plant species; and
- Evaluating not only aboveground factors, but potential interactions in the rhizosphere.

Please add this information and other recent scientific developments to the restoration plan and revise the plan to include inoculants of indigenous soil biota.

Page F-18. Pre-restoration with Biocrusts and Page F-20, Biocrust Replacement: Significant stands of biocrusts were not observed in the original or proposed ROWs, therefore, salvage and pre-restoration of biocrusts would not be required as part of the restoration effort for this Project."

The Council believes this is a mistake by BLM because of the importance of soil crusts in aiding in successful native plant restoration efforts (Belnap et al. 2008). The Council requests that BLM require salvage of biological soil crusts and pre-restoration of sites identified for restoration, keeping in mind that the goal of restoration is to recreate habitat conditions at least as good, and preferably better, than pre-disturbance conditions.

Pages F-20 and 21, Seeding: The plant palette for the seed mix does not include native herbaceous forbs. Please amend this Restoration Plan to include several native forb species. Please see our earlier comments that explain and cite why native annual forbs are an important component for the restoration of the disturbed areas especially for the Ivanpah ACEC, BCCE, and areas used by tortoises for foraging or connectivity.

Page F-24, Qualitative Monitoring: "Qualitative monitoring would be used to inform the Applicant, contractors, and the BLM as to the progress of recovery and to identify potential problems at an early stage."

The Council suggests that the project proponent and BLM clearly explain when qualitative and quantitative monitoring would be implemented. The frequency of implementing these monitoring methods was not clear in the Restoration Plan. If there is a discrepancy between the information in the qualitative monitoring and quantitative monitoring, the quantitative monitoring should be the data used for decisionmaking.

The Council objects to a five-year monitoring period. The science of restoration in the Mojave Desert is not exact and depends on numerous factors including soil moisture, soil microorganisms (including bacteria and fungi), and biocrusts. Because BLM is not requiring the project proponent to salvage and successfully inoculate the restoration areas with soil microorganisms and biocrusts, prior to revegetation efforts, BLM is reducing the success of the restoration efforts. Consequently, the monitoring period should be longer than five years if BLM wants the monitoring and adaptive management actions to ultimately produce positive restoration results. Please extend the monitoring period to account for this predicted reduced success.

Scoping Comment Letter

In reviewing the DEIS, the Council was disappointed that many of the issues we identified in our scoping comments, dated 23 September 2023 and footnoted below¹, were either not discussed and analyzed, or incompletely discussed and analyzed. We are providing our scoping comment letter with the intent that BLM will revise the Final EIS and include a full discussion and analysis of each issue. These issues include:

- Growth-inducing impacts that would not happen "but for" this transmission line upgrade;
- providing the biological assessment and the project-specific biological opinion, if available, as attachments;

 $[\]frac{1}{https://www.dropbox.com/scl/fi/vu39xarbplgiicp33xlwu/GridLiance-West-Core-Upgrades-Project.9-12-2023.pdf?rlkey=qiom2qj2zho2g40fyrnuodx1y&dl=0}$

- requiring and implementing management actions that result in stable and eventually increasing tortoise populations (or effective mitigation to fully offset all impacts);
- requiring the project proponent to comply with BLM's (2021a) Mitigation Manual (MS-1794) and Mitigation Handbook (H-1794-1; BLM 2021b) especially with respect to direct, indirect, and cumulative impacts on the tortoise/tortoise habitat;
- documenting the unprecedented loss of suitable and occupied desert tortoise habitats throughout southern Nevada where tens of thousands of acres of public lands managed by the BLM have been developed for solar projects, converted into sterile habitats, disrupting linkage corridors, and displacing hundreds of desert tortoises, many of which have subsequently died from predation and other foreseen and unforeseen consequences;
- who will have access to the new and existing access roads and whether the project area will be secured to prevent human access or vandalism, and if so, what methods would be used;
- how BLM will ensure compliance with CEQ's (2023) "Guidance for Federal Departments and Agencies on Ecological Connectivity and Wildlife Corridors;"
- new subsidies for tortoise predators including the common raven from the proposed project and from connected actions and growth-inducing impacts;
- providing a raven management plan for this specific project; and,
- providing mitigation and monitoring plans for all direct, indirect, and cumulative effects to the tortoise and its habitats; the mitigation and monitoring plans should use the best available science with a commitment to implement the mitigation commensurate to impacts to the tortoise and its habitats.

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 <u>eac@deserttortoise.org</u> 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 to conserve biodiversity on lands managed by BLM.

Please respond in an email that you have received this comment letter so we can be sure our concerns have been registered with the appropriate personnel and office for this Project.

Respectfully,

6022RA

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

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 - Ann McPherson, Environmental Review, U.S. Environmental Protection Agency, <u>mcpherson.ann@epa.gov</u>
 - Jon Raby, Nevada State Director, Bureau of Land Management, jraby@blm.gov
 - Theresa Coleman, District Manager, Las Vegas District, Bureau of Land Management, <u>blm_nv_sndo_web_mail@blm.gov</u>
 - Kristina Drake, Desert Tortoise Recovery Office Coordinator, U.S. Fish and Wildlife Service, <u>karla_drake@fws.gov</u>

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