

CALIFORNIA
NATIVE PLANT SOCIETY

May 28, 2019

BLM Director (210)

Attn: Protest Coordinator, WO-210

20 M Street SE Room 2134LM

Washington, DC 20003

(Submitted via ePlanning project website: <https://eplanning.blm.gov/epl-front-office/eplanning/comments/commentSubmission.do?commentPeriodId=75787>)

Re: Protest of West Mojave (WEMO) Route Network Project Final Supplemental Environmental Impact Statement (BLM/CA/DOI-BLM-CA-D080-2018-0008-EIS)

Dear BLM Director:

Defenders of Wildlife, the Desert Tortoise Council and the California Native Plant Society hereby protest the West Mojave (WEMO) Route Network Project Final Supplemental Environmental Impact Statement (FSEIS) (BLM/CA/DOI-BLM-CA-D080-2018-0008-EIS), released on April 26, 2019. Our protest includes responses to the required information as per 43 CFR 1610.5-2.

1. Name, mailing address, telephone number and interest of the person filing the protest:

For Defenders of Wildlife:

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Interest of Defenders of Wildlife: Defenders of Wildlife (Defenders) is a national wildlife conservation organization founded in 1947, with 1.8 million members and supporters in the U.S., including 279,000 in California. Defenders is dedicated to protecting wild animals and plants in their natural communities. To accomplish this, it employs science, public education, legislative advocacy, litigation, and proactive on-the-ground solutions to impede the loss of biological diversity and ongoing habitat degradation.

Defenders has participated in all aspects of the West Mojave Plan from its inception through the most recent Supplemental Draft Environmental Impact Statement, through submitting comment letters and recommendations for management of off-highway vehicle use and livestock grazing, and protection of habitat for numerous special status species, such as the threatened desert tortoise and BLM Sensitive Mohave ground squirrel. Defenders is dedicated to protection and conservation of these and other at-risk species and their habitats in the West Mojave Plan area, and is especially concerned over the ongoing severe decline of desert tortoise populations throughout the plan area, including those within several Critical Habitats for the species designated by the U.S. Fish and Wildlife Service in 1994.

For the Desert Tortoise Council:

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Interest of the Desert Tortoise Council: The Desert Tortoise Council (Council) is a non-profit organization comprised of professionals and laypersons who share a common concern for all species of desert tortoises. Established in 1975, the Council promotes the conservation of viable populations of desert tortoises throughout their historical ranges in the deserts of the southwestern United States and Mexico, including the federally and California threatened Mojave desert tortoise (*Gopherus agassizii*). To accomplish this, the Council uses science and education to promote the conservation of desert tortoises.

The Council has actively participated in the planning process for the West Mojave (WEMO) Route Network Project (Project) to date. It submitted scoping comments on this Project and proposed plan amendment on June 3, 2015, and comments on the West Mojave Route Network Project Draft California Desert Conservation Plan Amendment and Supplemental Environmental Impact Statement for the California Desert District on June 13, 2018. Approval of a plan amendment permitting this Project to go forward will affect the interests of the Council and its members because it will result in adverse

impacts to the Mojave desert tortoise, designated Critical Habitat, other Tortoise Conservation Areas, habitat linkages, and other important habitats. In addition, it will result in unnecessary and undue destruction/degradation of natural resources, which the Mojave desert tortoise (hereafter desert tortoise) needs for its survival and recovery, and contribute to the degradation of environmental quality in the California Desert Conservation Area.

For the California Native Plant Society:

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Interest of the California Native Plant Society: The California Native Plant Society (“CNPS”) is a non-profit environmental organization with nearly 10,000 members in 35 local chapters. CNPS’ mission is to protect California’s native plant heritage and preserve it for future generations through the application of science, research, education, and conservation. CNPS works closely with decision-makers, scientists, and local planners to advocate for well-informed and environmentally friendly policies, regulations, and land management practices. For more than 40 years, CNPS has worked diligently to develop and maintain California’s Inventory of Rare, Threatened or Endangered Plants. CNPS has participated in development of the WEMO Plan for route designation and livestock grazing and submitted comments on the DSEIS in a letter dated June 14, 2018.

2. Statement of the part or parts of the plan being protested (including Chapter, Section, Page, and/or Map): Defenders and the Council protest the following parts of the West Mojave (WEMO) Route Network Project Final Supplemental Environmental Impact Statement (FSEIS):

- 2.1.2.2 Conservation and Management Actions (CMAs) Conformance
- Implementation Decisions for Route Designation/Minimization under Alternatives 2, 3, 4, and 5
- Results of Preliminary Transportation Network Designation Process
- 2.5 Modifying the Plan
- 3.2 Air Quality (pp. 3-4 to 3-11)
- 3.3.1 Geology and Soils (pp. 3-11 to 3-15)
- 3.4 Biological Resources
- Travel and Transportation Inventory Update
- 4.1.2 Analysis Methodology
- 4.2 Air Quality

- 4.2.1.7 Resource-Specific Minimization and Mitigation Measures
- 4.2.2 Greenhouse Gases
- 4.2.2.5 Resource-Specific Minimization and Mitigation Measures
- 4.3.1 Soil Resources
- 4.3.1.5 Resource-Specific Minimization and Mitigation Measures
- 4.4 Biological Resources
- 4.4.1 Vegetation Resources
- 4.4.1.5 Resource-Specific Minimization and Mitigation Measures
- 4.4.1.6 Residual Impacts After Implementation of Mitigation Measures
- 4.4.2 Wildlife Resources
- 4.4.2.6 Resource-Specific Minimization and Mitigation Measures
- 4.4.2.7 Residual Impacts After Implementation of Mitigation Measures
- 4.11 Special Designations and Other Inventoried Areas
- 4.11.5 Resource-Specific Minimization and Mitigation Measures
- 4.11.6 Residual Impacts After Implementation of Mitigation Measures
- 4.15.3 Cumulative Impact Analysis
- 5.3 Growth-Inducing Effects

In addition, our protest is based on inconsistency with the following:

- **Generally: Council on Environmental Quality (CEQ) Regulations for Implementing the National Environmental Policy Act (NEPA) – 40 CFR Section 1500.1(b);**
- **Generally: CEQ Regulation 40 CFR 1502.9(c)(1)(ii);**
- **Generally CEQ Regulation 40 CFR 1502.14(f) and 1502.16;**
- **Generally: Federal Land Policy and Management Act (FLPMA) - 43 U.S.C. 1701;**
- **Generally: Endangered Species Act (ESA) - 16 U.S.C. § 1531 et seq.;**
- **Generally: BLM Manual 6840 (Special Status Species Management);**
- **Generally: California Desert Conservation Area Plan of 1980 regarding route designation and definition of existing routes of travel;**
- **Generally: CEQ’s Regulations for Implementing the National Environmental Policy Act (NEPA) – 40 CFR Sections 1508.7;**
- **Generally: Failure to comply with sections 1.4 and 6.8.3 of BLM Manual H-1790-1 – National Environmental Policy Act Handbook (BLM 2008);**
- **Failure to Account for Adverse Impacts of Desert Tortoise Critical Habitat from Deposition of Dust Generated from Cuddeback and Coyote Dry Lakes;**

- **Failure to Analyze Impacts of the Speed-controlled Connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area;**
- **Failure to Adopt Specific Impact Avoidance and Minimization Measures in Travel Management Area (TMA) Plans;**
- **Determination that Designation of a Transportation Route Network is a Plan Implementation Decision and not a Land Use Plan Decision**

3. Statement of the issue or issues being protested: Defenders of Wildlife, the Council, and CNPS submit this protest based on the following issues:

A. Failure by BLM to comply with the Court’s remand to consider new data and policies, emerging issues, and changing circumstances that have occurred since the 2006 West Mojave Management Plan (WEMO) Plan Record of Decision (ROD) was signed. This applies to biological resources, especially special status species and listed species (e.g., Mojave desert tortoise, desert bighorn sheep, Mohave ground squirrel, listed and sensitive plant species).

This includes failure to comply with the **Council on Environmental Quality’s (CEQ) Regulations for Implementing the National Environmental Policy Act (NEPA) – 40 CFR Section 1500.1(b):** *“NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.”*

And

CEQ Regulation 40 CFR 1502.9(c)(1)(ii): *Significant new circumstances or information relevant to environmental concerns or substantial changes in the proposed action that are relevant to environmental concerns may necessitate preparation of a supplemental EIS following either the draft or final EIS or the Record of Decision.”*

Protest Statement: BLM failed to obtain and use high quality and current scientific information in its analysis of effects of the proposed actions involving designation of off-highway vehicle routes and livestock grazing in the planning area; and failed to account for significant new circumstances or information in its analysis of impacts. In doing so, it failed to identify and adopt various impact avoidance and mitigation measures necessary to prevent significant impacts to the threatened desert tortoise and its designated Critical Habitat, to desert bighorn sheep and its habitat within and adjacent to the Ord Mountain grazing allotment, and numerous listed and sensitive plant species throughout the plan area.

Regarding the nature of the information BLM claims to have used in development of the final WEMO Plan amendment and SFEIS, BLM states: *“The best available information pertinent to the*

decisions to be made was used in developing the WMRNP SEIS. Considerable effort was taken over a period of more than two years to acquire resource data for the Draft SEIS, which was published in March 2015, including acquisition from available geographically-based datasets, contracting data acquisition and analysis for specific resources from regulatory agencies, and conducting field investigations. These data were supplemented by additional resources identified through the public comment process, or by BLM resource staff, following publication of the Draft SEIS. During this period, BLM resource staff in California were also involved in the development of the 2016 DRECP LUPA, which overlaps the WEMO Planning Area, and involves analysis of impacts to the same resources. As a result, data sources used to support the 2016 DRECP LUPA became integrated into the WMRNP. In January 2016, BLM made the decision to delay the WMRNP until the 2016 DRECP LUPA could be finalized, allowing further integration of the 2016 DRECP LUPA data and decisions into the WMRNP process. In the absence of direct quantitative data from these sources, impacts are described based on indirect quantitative data, qualitative data, and/or the professional judgment of the interdisciplinary team of technical specialists using best available information, and no incomplete or unavailable information was deemed essential to a reasoned choice among the alternatives analyzed in this chapter.”

Defenders, the Council, and CNPS demonstrate, below, that BLM failed to use the best information relative to the management of off-highway vehicle use and livestock grazing that was available from the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife, and professional literature up until the time that the draft plan and DSEIS was published in January 2018 and final plan and SFEIS was published in April of 2019.

Desert tortoise: With regard to the status of the desert tortoise in the WEMO Plan area, BLM relied on a single reference from the USFWS dated February 2014, *Status of the desert tortoise and its critical habitat*. However, an updated status report on the species and its critical habitat was issued by the USFWS in 2018. The significant new and relevant information in this 2018 status report are described below under the reference summary for U.S. Fish and Wildlife Service 2018. In addition, in its June 2018 comment letter on the Draft Supplemental Environmental Impact Statement for the proposed Project, the Council provided updated information from the USFWS and other scientific sources and citations to the BLM on the status and trend of the Mojave desert tortoise in the West Mojave Recovery Unit (please see pages 47–68 and 68–91 of June 13, 2018 comment letter to BLM from the Desert Tortoise Council). The Council did this to assist BLM with its NEPA compliance regarding the Affected Environment and Environmental Consequences sections of the FSEIS and plan amendment. However, in the FSEIS, BLM did not incorporate this information or conduct a revised analysis of direct, indirect, and cumulative effects to the desert tortoise, designated critical habitat, habitat needed for linkages, and other desert tortoise habitat using this information.

Desert bighorn sheep: With regard to desert bighorn sheep in the WEMO Plan area, BLM failed to obtain and use any information in the literature, agency reports or studies of the effects of off-highway vehicles and livestock grazing on desert bighorn sheep. This shortcoming renders the impact analysis in the SFEIS incomplete and with no measures to avoid and minimize

adverse impacts. This issue also makes the final WEMO Plan inconsistent with the FLPMA relative to the CDCA, BLM's Special Status Species Management Policy (Manual 6840) and the DRECP.

An outdated, incomplete, and faulty analysis of the impacts of off-highway vehicle use and livestock grazing on the threatened desert tortoise (*Gopherus agassizii*), desert bighorn sheep, and other special status species renders BLM's adoption of Alternative 5 of the plan as well as the SFEIS as a whole, ineffective in meeting the Court's directive with respect to the desert tortoise, desert bighorn sheep, other special status species including listed and sensitive plants, and their habitats. In the CNPS comment letter on the DSEIS comment letter, CNPS noted that a "lack of specific information in the DSEIS makes it impossible to determine the impacts that route designation will have on sensitive biological resources." Specifically, this analysis lacks but should include:

- The status and trend of Mojave desert tortoise in plan area and how alternatives will affect this in the future;
- Recent scientific articles on indirect, regional, and cumulative impacts of vehicles on tortoises/wildlife and habitats;
- The quantity, quality, and configuration of critical habitat for the Mojave desert tortoise in plan area and how the alternatives will impact this in the future, including its ability to provide the physical and biological features needed for survival and recovery;
- Recent scientific articles on weeds/invasive plants in the west Mojave Desert, their conduits for spreading and preference for disturbed soils (e.g., roadways), their competition with native species and poor nutritional values for the Mojave desert tortoise, and how alternatives will affect their occurrence in the future with respect to the status and trend of the tortoise and physical and biological features of critical habitat;
- Climate change, especially impacts of drought on perennial woody vegetation for cover from temperature extremes and predation, availability of nutritional forage and how these changes, exacerbated by OHV use, affect the future survival and recovery of the MDT and function of critical habitat (please see issue item J, below).
- Identify what plant taxa constitute a "species of concern" and what criteria were used to identify these species.
- Conduct surveys for all biological resources including but not limited to rare plants, rare animals, and vegetation communities along all proposed routes in the WEMO Plan area; and report the results of these surveys in detail and provide for public review and comment.

The high quality and currently available scientific information BLM failed to use and consider in development of the final WEMO Plan and Final Supplemental Environmental Impact Statement, and why such information is relevant, include the following:

Desert Tortoise

Allison, L., and A. McLuckie. 2018. Population Trends in Mojave Desert Tortoises (*Gopherus agassizii*). *Herpetological Conservation and Biology* 13(2):433–452.¹

Relevance: The authors reported:

- **Prevailing declines in the abundance of adults overall and in four of the five recovery units indicate the need for more aggressive implementation of recovery actions and more critical evaluation of the suite of future activities and projects in tortoise habitat that may exacerbate ongoing population declines** (emphasis added).
- Adult densities in the Western Mojave Recovery Unit declined at -7.1% annually.
- Of the four recovery units in which we used two-pass surveys, the probability of encountering a juvenile was consistently lowest in the Western Mojave Recovery Unit.
- Declining adult densities through 2014 have left the Western Mojave adult numbers at 49% and in the Eastern Mojave at 33% of their 2004 levels. Such steep declines in the density of adults are only sustainable if there were suitably large improvements in reproduction and juvenile growth and survival. However, the proportion of juveniles has not increased anywhere since 2007, and in these two recovery units the proportion of juveniles in 2014 has declined to 91% and 77% of their representation in 2004, respectively.
- The negative population trends in most of the TCAs for Mojave Desert Tortoises indicate that **this species is on the path to extinction under current conditions** (emphasis added).

Berry, K., L. J. Lyren, J. Yee, and T. Bailey. 2014. Protection Benefits Desert Tortoise (*Gopherus agassizii*) Abundance: The Influence of Three Management Strategies on a Threatened Species. *Herpetological Monographs*, 28(1):66-92. 2014.²

Relevance: The authors reported:

- Surveying an area of 260 km² in the western Mojave Desert to evaluate relationships between condition of Agassiz's Desert Tortoise populations (*Gopherus agassizii*) and habitat on lands that have experienced three different levels of management and protection.

¹ http://www.herpconbio.org/Volume_13/Issue_2/Allison_McLuckie_2018.pdf

² <http://dx.doi.org/10.1655/HERPMONOGRAPHS-D-14-00002>

- For comparisons, the fenced Desert Tortoise Research Natural Area (Tortoise Natural Area) was most protected; and Critical Habitat for the desert tortoise in the Western Rand Area of Critical Environmental Concern was moderately protected. Critical habitat in this region is located in designated management areas: the Western Rand Area of Critical Environmental Concern, western parts of the Rand Mountains Management Area, and Fremont–Kramer Desert Wildlife Management Area and Area of Critical Environmental Concern.
- The management area with the longest history of protection, a fence, and legal exclusion of livestock and vehicles (i.e., Desert Tortoise Natural Area) had significantly more live tortoises and lower death rates than the other two areas.
- **Densities of live tortoises were significantly higher inside the Tortoise Natural Area fence than outside in critical habitat (6 X)** (emphasis added) or private lands (4 X), and sign counts further corroborate the finding. In contrast, critical habitat and private lands had significantly lower densities of adult tortoises and lower tortoise sign counts by greater than 50%.
- Crude annual death rates for adult tortoises were lowest in the Tortoise Natural Area (2.8%/yr), followed by private lands (6.3%/yr) and critical habitat (20.4%/yr). The high death rates in critical habitat were of particular concern: shell-skeletal remains composed 25.6% of on-plot tortoise sign, whereas in both the Tortoise Natural Area and private lands, shell-skeletal remains were less than 12% of the total tortoise sign. **When causes of death could be determined, they included vehicles, gunshot, and predation by ravens and mammals** (emphasis added).
- Tortoise sign was negatively correlated with vehicle tracks in critical habitat.
- The positive association of debris from firearms with abundance of tortoise sign in critical habitat may have ominous implications: 25.6% of tortoise sign was composed of dead tortoises in this management area.
- The study confirmed that the Tortoise Natural Area, with higher densities of Desert Tortoises, has benefited from the protective fence and elimination of grazing and vehicle use. Despite the emergence and spread of a chronic, infectious disease (mycoplasmosis) throughout the western Mojave Desert, **adult tortoise densities at the Tortoise Natural Area were significantly higher than in critical habitat not only in our study area but also throughout the West Mojave Recovery Unit** (emphasis added).
- One critical question, addressed in the 1970s for the Tortoise Natural Area, was whether posting of signs alone was a sufficient and effective method for marking the boundary and eliminating unauthorized recreational vehicle use and sheep grazing. Because posting was ineffective, the Bureau of Land Management constructed the hog-wire

fence in 1979–1980. **Also ineffective was posting of signs to limit recreational vehicle use to existing routes and specific areas in the critical habitat portions of our study area, even after decades of effort by the Bureau of Land Management** (emphasis added). As a result, the Bureau of Land Management closed and fenced a portion of the critical habitat in 2002, and this area remained closed with the exception of a year (2008–2009), when the area was reopened. Because of continued noncompliance by off highway vehicle users, the area was again closed.

Chafee, M., and K. Berry. 2006. Abundance and distribution of selected elements in soils, stream sediments, and selected forage plants from desert tortoise habitats in the Mojave and Colorado deserts, USA. *Journal of Arid Environments* 67 (2006) 35–87.³

Relevance: The authors reported:

- Of elements in soils that might have been toxic to tortoises, only Arsenic (As) seemed to be anomalous region-wide. Some soil and plant anomalies were clearly anthropogenic. In the Rand and Atolia mining districts, soil anomalies for As and other elements, and plant anomalies primarily for As, extend as far as 15km outward from the present area of mining; soils containing anomalous Hg were found at least 6 km away from old piles of tailings. The anomalous concentrations of As and Mercury (Hg) may have been the source of elevated levels of these elements found in ill tortoises from the region.
- Although tortoises have many adaptations and exaptations to deal with droughts that commonly occur in desert, some of these same adaptations or exaptations may contribute to concentrations of potentially toxic substances in their tissues during drought years when free water in the form of rain and succulent green forage are unavailable.
- Locally, anthropogenic activity, such as mining, recreation, or military use, may add element concentrations to those of the natural surface chemistry derived from local geology. The chemistry of surface materials such as soil and stream sediments may be, in turn, assimilated by plants, including species consumed by desert tortoises. Thus, the surface chemistry of tortoise habitats may have an impact on their health.
- Soil samples collected in the vicinity of the Rand and Atolia districts in the Western Mojave contained anomalously high concentrations of one or more of the ore-related elements As, Au, Sb, and W. Plots of these anomalous concentrations show that they extend as far as 15km outward from the past and recent areas of mining and are probably a result of wind-transported dust, as well as occasional flash floods, that carried material away from these areas.

³ www.elsevier.com/locate/jaridenv

- Arsenic is probably the most potentially toxic element to tortoises of all those determined for this study. High As concentrations were found almost exclusively in plant samples collected in or near areas known to be contaminated by mining of As-rich ores (Western Mojave—Northern Section – Rand and Atolia Mining Districts, and, to a lesser extent, Goldstone).
- Availability of potentially toxic elements to tortoises is likely to be dependent in part on the type and extent of historic and current anthropogenic activities (e.g. mining, vehicles) that either disturb the surface or add to existing soil, sediment, and plant chemistries through dust or airborne particulate matter.
- **The sites with elevated levels greater than 0.05 ppm of Hg in the Western Mojave Study Area provide an indication of the potential source of the Hg found in livers of ill desert tortoises at the Desert Tortoise Research Natural Area north of California City. Likewise, the elevated levels of As in soils and plants in the Western Mojave Study Area and at other sites support the findings of elevated As levels in tissues of ill tortoises from these same areas (emphasis added).**

Corn, S. 1994. Recent trends of desert tortoise populations in the Mojave Desert. Fish and Wildlife Research 13. U.S. Department of the Interior, National Biological Survey, Washington, D.C. 9 pp.⁴

Relevance: The authors reported:

- Adult desert tortoises construct water catchments and drink from these puddles during rainfall (Medica et al. 1980; Turner and Berry 1984), and surface activity of tortoises increases after rains. Differences in activity can be drastic. **For example, one biologist observed 40 tortoises while driving along a 6.6-km stretch of dirt road in the Ivanpah Valley, California, during a rainstorm on 28 April 1980. Two days later the ground was still damp, but four people observed only two tortoises during several hours of laying out a study grid (emphasis added) (P. A. Medica, personal communication).**

This information supports the need for BLM to implement and enforce seasonal vehicle use closures on dirt roads within occupied desert tortoise habitat and, at a minimum in all occupied critical habitat, when localized and regional precipitation events result in standing water on compacted roads and trails. BLM has not adopted any seasonal vehicle use restrictions within the plan area to address this issue.

Doak, D., P. Kareiva, and B. Klepetka. 1994. Modeling Population Viability for the Desert Tortoise in the Western Mojave Desert. Ecological Applications, 4(3), 1994, pp. 446-460.⁵

⁴ <https://pubs.er.usgs.gov/publication/70129555>

⁵ <http://www.jstor.org/stable/1941949>

Relevance: The authors reported:

- **Our most obvious conclusion is that populations of the desert tortoise in the Western Mojave desert are in grave danger. Our demographic analyses concur with field data that show tortoise populations rapidly declining** (emphasis added).
- **Although the current demographic rates for the desert tortoise paint a gloomy picture of continued decline, our results suggest that preventable anthropogenic impacts may play a large role in that decline. Indeed, management to decrease the direct human harassment and killing of adult tortoises, along with the cessation of livestock grazing on desert lands, might alone reverse current declines** (emphasis added).

SWCA Environmental Consultants. 2012. Conservation Plan for the Bureau of Land Management's Superior-Cronese Desert Tortoise Management Area. Prepared for: Bureau of Land Management, National Office, 1620 L Street NW, Washington, D.C. 10036. Technical Representative: Kim Tripp. Michael W. Tuma, Principal Investigator.

Relevance: The author reported:

- **Despite the long history of the BLM in planning and implementing efforts to recover desert tortoise, the long-term viability of tortoise populations on BLM-managed lands remains questionable in the face of both historical and novel threats** (emphasis added). This may be due in part to the inconsistent formulation and implementation of BLM conservation plans and measures, as well as the complicated nature of the numerous threats to desert tortoise populations, including the manner in which many threats combine to produce cumulative effects. Implementation of management strategies may be more effective if they are based on area-specific conservation plans.
- **The Superior-Cronese plan area is a popular destination for recreationists, particularly OHV users** (emphasis added). Numerous trails proliferate throughout the plan area, particularly adjacent to the communities within and along its southern border. **Numerous BLM-designated Open Routes access a considerable portion of the plan area, and illegal OHV use occurs in washes and "free play" areas adjacent to Open Routes** (emphasis added).
- Areas identified within the habitat model as being high for desert tortoise occurrence probability should receive management priority. Within the plan area, three large habitat areas are evident, including the Grass Valley/Gravel Hills area, the Mud Hills/Calico Mountains area, and the Alvord Mountain/Cronese Mountains area. A relatively small habitat area is located in the Iron Mountain vicinity.
- Road closures should prioritize redundancies, particularly adjacent to urbanized areas, roads that service former mineral extraction sites, and roads that were constructed for

livestock management purposes to access allotments that no longer used. **Road closure efforts should seek to: 1) make access difficult or impossible, 2) restore habitat to natural conditions, and 3) be successfully enforced by BLM patrols** (emphasis added).

- OHV use has become more popular within the plan area over the past 20 years, and recreationists from the region utilize trails there. OHV recreationists target an area in the central portion of the plan area west of the Calico Mountains in the vicinity of the Mud Hills and extending southwestward toward Rainbow Basin and Owl Canyon.

Tuma, M., C. Millington, N. Schumaker, and P. Burnett. 2016. Modeling Agassiz's Desert Tortoise Population Response to Anthropogenic Stressors. Journal of Wildlife Management; DOI: 10.1002/jwmg.1044.

Relevance: The authors reported:

- Prominent land uses in the Superior-Cronese study area include off-highway vehicle use, utility development, military activities, mining, and agriculture.
- **For the Superior-Cronese study area, the human presence threat model caused the most precipitous and significant decline** (emphasis added).
- The threat conditions for tortoise populations in the Superior-Cronese study area were more complex. Though all threats there were modeled as patchily distributed, **human presence caused significantly greater declines in modeled tortoise populations because it contributed to habitat degradation and higher mortality rates constantly in time** (emphasis added). The human presence threat, though patchy in distribution, was widely distributed, mainly because of the study area's proximity to Barstow, California and outlying communities, the proliferation of roads and off-highway vehicle routes in and adjacent to the study area, and the study area's bisection by several linear features, including freeways, electrical and gas transmission lines, and railroads.
- **For the Superior-Cronese, land managers should focus on reducing human access to this conservation area, and making it more remote, particularly in areas identified as having higher tortoise occurrence potential** (emphasis added). The most effective ways that land managers can promote remoteness in the conservation area include closing and restoring routes and trails, limiting recreational permits, and increasing law enforcement to prevent illegal activities.

USFWS. 1994. Desert Tortoise (Mojave Population) Recovery Plan. USFWS Region 1, Portland, Oregon.⁶

Relevance: The USFWS's Recovery Plan:

⁶ http://ecos.fws.gov/docs/recovery_plans/1994/940628.pdf

- Includes a detailed population viability analysis for the Mojave desert tortoise. In this analysis, **the minimum viable density of a Mojave desert tortoise population in 1994 was 10 adult tortoises/mi² (3.9 adult tortoises per km²)** (emphasis added). This assumed a male-female ratio of 1:1 (USFWS 1994a, page C25) and certain areas of conserved habitat (reserves) with most of these areas geographically linked by adjacent borders or corridors of suitable tortoise habitat. **Populations of Mojave desert tortoises with densities below this amount are in danger of extinction** (emphasis added) (USFWS 1994, page 32).
- The analysis of population viability included (1) population density as of the early 1990s and size of reserves (i.e., areas managed for the desert tortoise) and (2) population numbers (abundance) as of the early 1990s and size of reserves.
- As population densities for the Mojave desert tortoise decline, reserve sizes must increase, and as population numbers (abundance) for the Mojave desert tortoise decline, reserve sizes must increase (USFWS 1994).
- Reserve design (USFWS 1994) and designation of Critical Habitat were based on the population viability analysis from numbers (abundance) and densities of populations of the Mojave desert tortoise in the early 1990s. **Inherent in this analysis is that the lands be managed with reserve level protection (USFWS 1994a, page 36) or ecosystem protection as described in section 2(b) of the FESA, and that sources of mortality be reduced so recruitment exceeds mortality** (emphasis added) (that is, $\lambda > 1$) (USFWS 1994, page C46).
- **Because the density and abundance of desert tortoises has declined in the Western Mojave Recovery Unit since the early 1990s, the minimum viable density and the size of reserves for recovery for the Mojave desert tortoise would now be greater than reported in the 1994 Recovery Plan** (emphasis added).

U.S. Fish and Wildlife Service. 2015. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2013 and 2014 Annual Reports. Report prepared by Linda Allison the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, NV.⁷

Relevance: The USFWS reported:

- Population densities and tortoise abundance in the Western Mojave Recovery Unit declined substantially between 2004 and 2014.

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https://www.fws.gov/nevada/desert_tortoise/documents/reports/2013/201314_rangewide_mojave_desert_tortoise_monitoring.pdf

- The population densities of the Fremont-Kramer, Ord-Rodman, and Superior-Cronese populations in 2014 were 2.6, 3.6, and 2.4 tortoises per km², respectively (Table 10; USFWS 2015). **The tortoise densities in the Western Mojave Recovery unit were 2.8 tortoises per km². These densities are below the viable level of 3.9 breeding individuals/km² (10 breeding individuals per mi²)** (emphasis added) reported in the recovery plan (USFWS 1994).
- Between 2004 and 2014, these three desert tortoise populations declined by 50.6, 56.5, and 61.5 percent, respectively (USFWS 2015). The Mojave desert tortoise in the Western Mojave Recovery Unit declined 50.7 percent during this period.

U.S. Fish and Wildlife Service. 2018. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2017 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.⁸

Relevance: The USFWS reported:

- In the Western Mojave Recovery Unit, line distance sampling surveys conducted in 2017 estimated the density of adult desert tortoises in the following critical habitat units, as follows:
 - Fremont-Kramer: 4.1/km²
 - Ord-Rodman: 3.2/km²
 - Superior-Cronese: 1.7/km²

U.S. Fish and Wildlife Service. 2018. Status of the desert tortoise and its critical habitat. Desert Tortoise Recovery Office, Reno, NV. 24 pp.⁹

Relevance: The USFWS reported:

- Increased human access can accelerate illegal collection and release of desert tortoises and their deliberate maiming and killing, as well as facilitate the spread of other threats associated with human presence, such as vehicle use, garbage and dumping, and invasive plants.
- Populations with densities below approximately 10 adults per square mile (3.9 per square kilometer) are in danger of extinction (see page 32 of USFWS 1994).

⁸ https://www.fws.gov/nevada/desert_tortoise/documents/reports/2018/2017_rangewide-mojave-desert-tortoise-monitoring.pdf

⁹ https://www.fws.gov/nevada/desert_tortoise/documents/misc/status-desert-tortoise.pdf

- **Across its range, desert tortoises in areas under the highest level of conservation and management remain subject to numerous threats, stresses, and mortality sources** (emphasis added).
- **In 2004, desert tortoise conservation areas surveyed in the Western Mojave Recovery Unit supported an average density of approximately 5.7 adults per square kilometer (14.8 per square mile). In contrast, surveys in the same areas in 2014 indicated that densities had decreased to 2.8 adults per square kilometer (7.3 per square mile)** (emphasis added). Historical survey data from numerous plots in the Western Mojave Recovery Unit during the late 1970s and early 1980s suggest that adult desert tortoise densities ranged from 50 to 150 per square mile.
- In 2014, 3 of the 5 recovery units supported densities below 3.9 adult animals per square kilometer [Western Mojave (2.8), Eastern Mojave (1.5), and Colorado Desert (3.7), which is the minimum density recommended to avoid extinction in the 1994 recovery plan.
- The revised recovery plan (USFWS 2011) identifies human activities such as urbanization and the proliferation of roads and highways as threats to the desert tortoise and its habitat; these threats are examples of activities that have a clear effect on the physical and biological features of critical habitat.
- **Surface disturbance from off-highway vehicle activity can cause erosion and large amounts of dust to be discharged into the air. Recent studies on surface dust impacts on gas exchanges in Mojave Desert shrubs showed that plants encrusted by dust have reduced photosynthesis and decreased water-use efficiency, which may decrease primary production during seasons when photosynthesis occurs** (emphasis added) (Sharifi *et al.* 1997). Sharifi *et al.* (1997) also showed reduction in maximum leaf conductance, transpiration, and water-use efficiency due to dust. Leaf and stem temperatures were also shown to be higher in plants with leaf-surface dust. **These effects may also impact desert annuals, an important food source for desert tortoises** (emphasis added).
- Unauthorized off-highway vehicle use continues to disturb habitat and result in loss of vegetation within the boundaries of critical habitat; although there is no documentation of the death of desert tortoises as a direct result of this activity, it likely occurs. Additionally, the habitat disturbance caused by this unauthorized activity exacerbates the spread of invasive plants, which displace native plants that are important forage for the desert tortoise, thereby increasing the physiological stress faced by desert tortoises.

BLM's failure to obtain and use this 2018 report on the status of the desert tortoise and its Critical Habitat has rendered its analysis of the effects of off-highway vehicle use and livestock grazing outdated and seriously deficient. BLM's analysis fails to consider the implications on

ongoing injury and mortality of off-highway vehicle use on desert tortoise population viability in the plan area, which the USFWS confirms through annual line distance sampling and reports has now dropped below the minimum viable density of 3.9/km² to 2.8/km² as of 2014.

Furthermore, this decline in density, systematically documented through monitoring beginning in 2004, is ongoing and, according to the Allison and McLuckie (2018): *“Declining adult densities through 2014 have left the Western Mojave adult numbers at 49% and in the Eastern Mojave at 33% of their 2004 levels. Such steep declines in the density of adults are only sustainable if there were suitably large improvements in reproduction and juvenile growth and survival. However, the proportion of juveniles has not increased anywhere since 2007, and in these two recovery units the proportion of juveniles in 2014 has declined to 91% and 77% of their representation in 2004, respectively.”*

To remedy this serious issue, BLM needs to issue a new Supplemental Draft Environmental Impact Statement for the WEMO Plan that (1) incorporates the information on desert tortoise population declines and the fact that the density of adults has dropped below the minimum viability threshold (as calculated in 1994), and (2) develops alternatives that will effectively overcome the issue of ongoing declines of all age classes of desert tortoises and steadily increase the densities of all size classes of desert tortoises in order to put the species on a consistent and sustained trajectory toward recovery. Although the intent of the 2006 WEMO Plan was to manage for the desert tortoise, the data indicate that the measures in this plan to manage for the Mojave desert tortoise have not been effective.

U.S. Fish and Wildlife Service. 2016. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2015 and 2016 Annual Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.¹⁰

Relevance: The USFWS reported:

- In 2015 and 2016, the density of adult desert tortoises in critical habitat units in the Western Mojave Recovery Unit were as follows:
 - Fremont-Kramer: 4.5/km²
 - Superior-Cronese: 2.6/km²

U.S. Fish and Wildlife Service. 2015. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2013 and 2014 Annual Reports. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.¹¹

Relevance: The USFWS reported:

¹⁰ https://www.fws.gov/nevada/desert_tortoise/documents/reports/2015/201516_rangewide-mojave-desert-tortoise-monitoring.pdf

¹¹

https://www.fws.gov/nevada/desert_tortoise/documents/reports/2013/201314_rangewide_mojave_desert_tortoise_monitoring.pdf

- In 2014, the density of adult desert tortoises in critical habitat units in the Western Mojave Recovery Unit were as follows:
 - Fremont-Kramer: 4.7/km²
 - Superior-Cronese: 2.5/km²
 - Ord-Rodman: 3.5/km²

- **The regional and range-wide trends in adult Mojave desert tortoise densities indicate that overall this threatened species is experiencing large, ongoing population declines, and some recovery units experienced over 50% decline of adult tortoises since 2004** (emphasis added).

- **Population recovery will necessitate accelerated, prioritized recovery activities** (emphasis added). Targeted effectiveness monitoring, where possible, will complement this larger monitoring program that provides a composite view of all recovery activities. Both types of monitoring will be needed to characterize the effectiveness of recovery activities where the list of threats is so large and varied.

U.S. Fish and Wildlife Service. 2014. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2012 Annual Report. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.¹²

Relevance: The USFWS reported:

- In 2012, the density of adult desert tortoises in critical habitat units in the Western Mojave Recovery Unit were as follows:
 - Fremont-Kramer: 2.2/km²
 - Superior-Cronese: 4.4/km²
 - Ord-Rodman: 4.6/km²

U.S. Fish and Wildlife Service. 2013. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2011 Annual Report. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.¹³

¹²

https://www.fws.gov/nevada/desert_tortoise/documents/reports/2012/2012_Rangewide_Mojave_Desert_Tortoise_Monitoring.pdf

¹³

https://www.fws.gov/nevada/desert_tortoise/documents/reports/2011/2011_Rangewide_Mojave_Desert_Tortoise_Monitoring.pdf

Relevance: The USFWS reported:

- In 2011, the density of adult desert tortoises in critical habitat units in the Western Mojave Recovery Unit were as follows:
 - Fremont-Kramer: 3.5/km²
 - Superior-Cronese: 3.4/km²
 - Ord-Rodman: 3.2/km²

U.S. Fish and Wildlife Service. 2012. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2010 Annual Report. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.¹⁴

Relevance: The USFWS reported:

- In 2010, the density of adult desert tortoises in critical habitat units in the Western Mojave Recovery Unit were as follows:
 - Fremont-Kramer: 2.5/km²
 - Superior-Cronese: 2.6/km²
 - Ord-Rodman: 7.5/km²

U.S. Fish and Wildlife Service. 2012. Range-wide Monitoring of the Mojave Desert Tortoise (*Gopherus agassizii*): 2008 and 2009 Reporting. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.¹⁵

Relevance: The USFWS reported:

- In 2008 and 2009, the density of adult desert tortoises in critical habitat units in the Western Mojave Recovery Unit were as follows:
 - Fremont-Kramer (2008) : 0.4/km²
 - Superior-Cronese (2008): 1.4/km²
 - Ord-Rodman (2008): 3.8/km²

 - Fremont-Kramer (2009) : 3.3/km²
 - Superior-Cronese (2009): 4.9/km²
 - Ord-Rodman (2009): 7.1/km²

¹⁴ https://www.fws.gov/nevada/desert_tortoise/documents/reports/2010/2010_Rangewide-mojave-desert-tortoise-monitoring.pdf

¹⁵

https://www.fws.gov/nevada/desert_tortoise/documents/reports/2012/200809_Rangewide_Mojave_DT_Monitoring_20120928.pdf

U.S. Fish and Wildlife Service. 2009. Range-wide Monitoring of the Mojave Population of the Desert Tortoise: 2007 Annual Report. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.¹⁶

Relevance: The USFWS reported:

- In 2007, the density of adult desert tortoises in critical habitat units in the Western Mojave Recovery Unit were as follows:
 - Fremont-Kramer: 2.7/km²
 - Superior-Cronese: 6.3/km²
 - Ord-Rodman: 8.2/km²

- Appendix D provides density estimates for each recovery unit in the years 2001 through 2005. In the Western Mojave, the revised estimate is 4.4 tortoises/km² in 2004, up 30% to 6.1 in 2005, then down 25% to 4.7 tortoises/km² in 2007. This does not reflect realistic changes in population size in such a large area over one-year periods, but it is a consequence of the relatively imprecise annual estimates. When the annual estimates are imprecise, it should not be expected that there will be a close match from one year to the next. Over a period of many years, however, any underlying trend in the number of tortoises should be obvious through this “background noise.”

Revised estimates of adult desert tortoise density per critical habitat unit in the Western Mojave Recovery Unit for years 2001-2005 are as follows:

Critical Habitat Unit	2001	2002	2003	2004	2005
Fremont-Kramer	5.5	4.7	3.4	6.1	5.7
Superior-Cronese	4.3	8.1	7.8	4.5	6.7
Ord-Rodman	10.1	13.1	4.1	5.2	8.1

U.S. Fish and Wildlife Service. 2006. Range-wide Monitoring of the Mojave Population of the Desert Tortoise: 2001-2005 Summary Report. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.¹⁷

¹⁶

https://www.fws.gov/nevada/desert_tortoise/documents/reports/2007_Rangewide_Desert_Tortoise_Population_Monitoring.pdf

¹⁶.

https://www.fws.gov/nevada/desert_tortoise/documents/reports/rangewide_monitoring_report_20061024.pdf

Relevance: The USFWS reported:

- **Low tortoise densities across recovery units from 2001-2005 may also represent continued decline of populations throughout the Mojave Desert since the species was emergency listed as Endangered in 1989** (emphasis added).
- Comprehensive monitoring for desert tortoise recovery requires an empirical survey of land modification and uses on public lands such as grazing; roads, highways, and associated traffic; and recreation. We need the assistance of the land management agencies in identifying current management and uses of the land being monitored for tortoise density. Several agencies already collect relevant information for their internal uses. While the resolution of the range-wide monitoring program is too coarse to describe local desert tortoise populations and may only provide indirect information on management effectiveness, data collected on threats and management actions and synthesized with range-wide population data may help inform where to ask more focused questions for experimental follow-up. Similarly, population data collected through the range-wide monitoring program provides a landscape context for evaluation of different management regimes or suites of threats and may provide a framework for more directed and specific research at more local levels.
- Fully integrating the elements of monitoring described above (tortoise population data within recovery units, habitat and threats, management actions, and local research on effectiveness of management actions) will provide a comprehensive perspective of recovery.

Desert Bighorn Sheep

California Department of Fish and Wildlife. 2016. Desert Bighorn Sheep 2016 Helicopter Survey Results: Ord Mountains. Desert Bighorn Sheep Program. Sacramento, CA. 4 pp.

Relevance: The CDFW reported:

- 76 desert bighorn sheep were observed in the Ord Mountains during the 2016 survey/25 ewes, 35 rams and 16 lambs.
- The total population estimate was 82 desert bighorn sheep.
- **10 cattle were observed, which were dispersed between bighorn, with both species occupying the same habitat. Cattle were located primarily on the east side of Ord Mountain and the west side of East Ord Mountain** (emphasis added).

California Department of Fish and Wildlife. 2016. Desert Bighorn Sheep 2016 Helicopter Survey Results: Newberry & Rodman. Desert Bighorn Sheep Program. Sacramento, CA. 4 pp.

Relevance: The CDFW reported:

- 95 desert bighorn sheep were observed in the Newberry Mountains/45 ewes, 17 rams and 33 lambs.
- The total population estimate was 107 desert bighorn sheep.
- No desert bighorn were observed in the Rodman Mountains.

Drew, M.L., et al. 2014. Health Status and Microbial (Pasteurellaceae) Flora of Free-Ranging Bighorn Sheep Following Contact with Domestic Ruminants. Wildlife Society Bulletin; DOI: 10.1002/wsb.393. 9 pp.

Relevance: The authors reported:

- Contact between bighorns and domestic livestock occur and have the potential for transmitting infectious organisms.
- **5 of 18 bighorns having contact with domestic ruminants in the study had evidence of pneumonia at necropsy, one after contact with cattle and 4 after contact with domestic sheep** (emphasis added).
- **Management actions to minimize the potential for contact between domestic livestock, especially domestic sheep, and bighorns are warranted** (emphasis added).

Wehausen, J. 1990. Cattle Impacts on Mountain Sheep in the Mojave Desert: Report III. White Mountain Research Station Bishop, CA 93514. Final Report Created under Interagency Agreement No. FG 7468-A1 with the California Department of Fish and Game. 61 pp.

Relevance: The author reported:

- **There was a high probability that viral diseases introduced to the native sheep from cattle were having a significant effect on population parameters of the sheep through high lamb mortality** (emphasis added).
- Cattle can be implicated as the probable long term reservoir of bluetongue (BT) and epizootic hemorrhagic disease (EHD).
- **Bighorn sheep, like some other North American wild ungulates, appear to contract BT and EHD only as an acute disease, thus carry the virus for only a relatively short time until they die or recover** (emphasis added).

- **Cattle are known to contract BT and EHD as a chronic disease with little or no influence on their health, thus cattle are a likely long term disease reservoir for BT and EHD (emphasis added).**
- In the Cady Mountains, cattle grazed much of the area during the study, overlapping most of the range used by bighorn ewes.
- Of 14 blood samples obtained from bighorn sheep in the Cady Mountains in 1986 and 1988, 35.7% were positive for BT, 30.8% were positive for EHD, and 7.7% were positive for Parainfluenza-3 (PI-3). This is clearly a population of substantial exposure to BT and EHD.
- In the Marble Mountains, regular domestic livestock grazing is not known to have ever occurred.
- Of 77 blood samples obtained from bighorn sheep in the Marble Mountains between 1983 and 1988, 1.3% were positive for BT, 3.9% were positive for EHD, and 5.4% were positive for PI-3. This population clearly qualifies as one of low exposure to BT/EHD.
- In the Granite Mountains, cattle have so altered the perennial grass (mostly *Stipa speciosa*) and other forage on the lower slopes of the canyon that the cattle themselves are forced to climb high up the slopes in the heat summer to find enough forage . Both these observations represent situations with potential for competition with bighorn sheep .
- In the Old Woman Mountains, the depressed status of bighorn sheep population correlates with both with the wet period at the beginning of the decade, and with the expansion of cattle grazing to the west side of the range, where it did not occur in the previous grazing episode. It seems reasonable to postulate a disease process and cattle as a likely source.

Although we provided much of this information to BLM in a June 13, 2018 comment letter, we were unable to find where it was used in the FSEIS's Affected Environment or Environmental Consequences sections, including the Cumulative Impacts section, or how it was used to develop/modify/analyze the alternatives and specific impact avoidance and minimization measures.

Special Status Species - Plants

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 23 May 2019].¹⁸

¹⁸ <https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants>

Relevance: CNPS reported:

- **CNPS Inventory of Rare and Endangered Plants is a widely-recognized resource that directly guides rare plant protection, conservation planning, and land acquisition and management in California** (emphasis added).
- The 8th edition is available online, where conservationists, consultants, planners, researchers, and resource managers use it on a daily basis to help educate landowners and public policy makers about the importance of rare plant stewardship and conservation.
- Individuals preparing environmental documents [California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA)] often use the Inventory to determine the potential for resource conflicts and to develop project-specific lists of rare plants to target during botanical surveys. Conservationists and resource managers use the same information to review environmental documents and prepare public testimony to influence decision-makers.

BLM has failed to use this informative CNPS inventory in development of the SFEIS including the impact analysis and development of impact avoidance and minimization measures. Rather, the FSEIS (3-27) primarily utilizes data from a 2018 version of the California Natural Diversity Database (CNDDDB). Consequently, the FSEIS only reports the acreage for each special status species that occurs within the WEMO planning area that **have been documented** in the CNDDDB. The FSEIS continues to include only vague information on the inventory of and potential impacts to sensitive botanical resources. This renders the FSEIS deficient in assessing adverse impacts to Special Status Plant Species and, therefore, similarly deficient in impact avoidance and minimization measures.

Impacts from Off-highway vehicle use: In comments on the DSEIS, CNPS identified that more than half the mileage of routes proposed in Alternative 4 occur in areas with no sensitive botanical resources. We concluded that “just because 3,200 miles of designated routes occur where no documented sensitive botanical resources are known does not mean that there are no sensitive botanical resources present in these location.” Given that the routes designated as open for OHV use in FSEIS Alternative 5 are roughly identical to those in DSEIS Alternative 4, our analysis and comments remain relevant, especially on the need for BLM to conduct detailed inventories of Special Status Plants in proximity to all designated open routes. As noted in our DSEIS comments, “vast portions of the WEMO planning area have yet to be surveyed comprehensively by botanists. Areas with no documented sensitive botanical resources should be prioritized for surveys prior to route designation.” The analysis of botanical resources in the FSEIS remains inadequate.

The analysis of impacts to Special Status Species of plants is hindered by the fact that the FSEIS only relies upon data included in the CNDDDB. As a result, the calculated acreage of potential impact is only as accurate in relation to the dataset that was used. As mentioned above and in CNPS's DSEIS comment letter, BLM should have conducted surveys for special status plants along routes in order to fully document the potential impacts to these resources. Also, it should be noted that many of the occurrences in the CNDDDB are historical, and have not been updated in greater than 20 years. Furthermore, many of these occurrences lack information on population numbers and trends. Data of this type are necessary in any comprehensive analysis of impacts to rare species. The FSEIS (4-64) concludes that the "WMRNP SEIS would result in direct and indirect impacts, both adverse and beneficial, to several special status plant species addressed in this Plan." It is unclear how BLM made this determination, given the inadequacy of the data used in the FSEIS.

Impacts from livestock grazing: The FSEIS (4-64) concludes that "cattle generally do not prefer to graze BLM special status plant species because they often occur in unique habitats, such as rocky, mountainous habitats, where the potential for grazing is low. In addition, the potential for livestock to trample BLM special status plants is low because livestock are not concentrated where special status plant populations exist." While it may be true that many rare plants do occur in rocky, mountainous habitats, many others (e.g. *Eriophyllum mohavensis*, Barstow wooly sunflower) occur in relatively, flat areas that could be optimal for grazing. Still, others (e.g. *Calochortus striatus*, striped adobe lily) occur in wetland and riparian habitats that are especially vulnerable to damage from cattle grazing. BLM has provided no data to support these conclusions. If BLM did perform such surveys and used the results in preparing the impact analysis of continued livestock grazing under Alternative 5, that information needs to be provided for public review and comment in an additional SFEIS. In addition, the FSEIS lacks a sufficient analysis of the impacts of livestock grazing on Unusual Plant Assemblages, including those in the Ord Mountain Allotment (e.g., Seeps, Springs and Wetlands, such as at Kane Spring and Willow Spring). Absent this key information, the current SFEIS and BLM's adoption of Alternative 5 is flawed, a violation of NEPA, FLPMA, and BLM Management Policy for Special Status Species Management (Manual 6840), and Areas of Critical Environmental Concern (Manual 1613), described in greater detail below.

B. BLM's compliance with laws, regulations, executive orders, BLM handbooks, and policies: BLM failed to follow the federal laws and implementing regulations of the Federal Land Policy and Management Act (FLPMA) - 43 U.S.C. 1701; Endangered Species Act (ESA) - 16 U.S.C. § 1531 et seq.; Executive Orders 11644, 11989, and 13195; and BLM Manual 1613 – Areas of Critical Environmental Concern, 2930 - Recreation Permits and Fees, and 6840 – Special Status Species Management. In addition, BLM has not demonstrated that implementation of any of its alternatives would comply with the California Endangered Species Act. In at least one annual report to the USFWS, BLM reported the mortality of Mojave desert tortoises from OHV use in the West Mojave plan area. Mortality or incidental take of the tortoise is a violation of the California Endangered Species Act unless take is authorized by an incidental take permit issued by the California Department of Fish and Wildlife.

Federal Land Policy and Management Act (FLPMA) - 43 U.S.C. 1701:

Section 102(a)(8) of FLPMA requires that *“the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use.”*

Section 102(a)(11) of FLPMA requires that *“regulations and plans for the protection of public land areas of critical environmental concern be promptly developed.”* The definition of areas of critical environmental concern is *“areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.”*

Section 202(a)(3) requires the Secretary of Interior, through the BLM, to *“give priority to the designation and protection of areas of critical environmental concern.”*

Section 601(a)(b) requires *“...the immediate and future protection and administration of the public lands in the California desert within the framework of a program of multiple use and sustained yield, and the maintenance of environmental quality.”*

Endangered Species Act (ESA) - 16 U.S.C. § 1531 et seq.:

Section 7(a)(1) of the ESA requires the Secretary of Interior to *“review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act.”*

The ESA defines conservation as *“to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, ...”*

Executive Order 11644 - Use of off-road vehicles on the public lands:

This Order requires BLM to develop operating conditions, public information, appropriate penalties for violations of regulations adopted pursuant to the order, and the monitoring of the effect of the use of OHVs on lands under its jurisdiction.

Executive Order 11989 – Off-Road Vehicles on Public Lands to amend Executive Order 11644:

This Order added Section 9(a) that directs that “if a determination is made that OHV use will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat, or cultural or historic resources of an area or trail on public lands, that the agency immediately close the area or trail to the type of vehicle causing the damage, until such time as it is determined that such effects have been eliminated and that measures have been implemented to prevent future recurrence.”

Executive Order 13195 – Trails for America in the 21st Century:

Section 1 directs federal agencies to protect, connect, promote, and assist trails of all types throughout the United States. This will be accomplished by: (a) Providing trail opportunities of all types, with minimum adverse impacts and maximum benefits for natural, cultural, and community resources...” Section 4 states that “nothing in this Executive Order shall be construed to override existing laws, including those that protect the lands, waters, wildlife habitats, wilderness areas, and cultural values of this Nation.”

BLM Manual 2930 - Recreation Permits and Fees:

“02. Objectives

Section E. Establish a permit and fee program that provides needed public services; satisfies recreation demand within allowable use levels; minimizes user conflicts; and protects and enhances public lands, recreation opportunities, and sustainable healthy ecosystems. This includes managing recreation programs and facilities in a manner that protects the resources, the public and their investment, and that also fosters pride of public ownership.

Section F. Assure that recreational users assume an appropriate share of the cost of maintaining recreation programs and facilities and protecting the resources.

Section G. Issue recreation permits in an equitable manner for specific recreational uses of the public lands and related waters as a means to manage visitor use; provide for visitor health, safety, and enjoyment; minimize adverse resource impacts”

BLM Manual 1613 – Areas of Critical Environmental Concern:

“.6 Monitoring and Management of ACECs - FLPMA requires BLM to give priority to the designation and protection of ACECs. Protection is afforded by implementing management prescriptions set forth in the approved Resource Management Plan or plan amendment. Follow-up monitoring is also essential for ensuring the protection of ACEC values and resources Given

FLPMA's mandate that BLM give priority to designation and protection of ACECs, implementation and monitoring of ACECs is subject to the following requirements and guidelines:

.61 ACEC Implementation Schedules – An implementation schedule must be prepared for each ACEC. Such schedules shall identify the priority, sequence, and costs of implementing activities associated with protection of the ACEC resources or values, including monitoring activities. The ACEC implementation schedule shall be maintained and used as the basis for tracking and reporting on ACEC implementation.

.62 ACEC Activity Plans – Site-specific activity plans may be prepared but are not required.

.63 ACEC Monitoring – Resources in an ACEC are assumed to be sensitive. Therefore, essential monitoring is critical to ensure that protection of the identified resource values occurs and to keep the managing official aware of how well the Resource Management Plan provisions are accomplishing their objectives. If needed, modification to the RMP will be identified early so that protection is accomplished.

.65 Annual Status Reports on ACECs – annually report on the progress made in implementing and monitoring ACECs to track accomplishments in managing ACECs. The report includes management measures undertaken.”

BLM Manual 6840 – Special Status Species Management:

02 Objectives. The objectives of the BLM special status species policy are:

A. To conserve and/or recover ESA-listed species and the ecosystems on which they depend so that ESA protections are no longer needed for these species.

B. To initiate proactive conservation measures that reduce or eliminate threats to Bureau sensitive species to minimize the likelihood of and need for listing of these species under the ESA.”

04 Responsibility.

E. District Managers and Field Managers are responsible for implementing the BLM special status species policies and program within their area of jurisdiction by:

1. Implementing conservation strategies for BLM special status species as contained in approved recovery plans, cooperative agreements, and other instruments the BLM has cooperatively participated in the development of.

2. Conducting and maintaining current inventories of BLM special status species on BLM-administered lands.

3. Ensuring that all actions undertaken comply with the ESA, its implementing regulations, and other directives associated with ESA-listed and proposed species.

4. Ensuring that the results of formal Section 7 consultations, including mandatory terms and conditions in incidental take statements that are consistent with 50 CFR 402 regulations, are implemented and documented in the administrative record.

7. Monitoring populations of Bureau special status species to determine whether management objectives are being met. Records of monitoring activities are to be maintained and used to evaluate progress relative to such objectives. Monitoring shall be conducted consistent with the principles of adaptive management as defined in Department of the Interior policy, as appropriate.”

In administering the provisions of the ESA, BLM “shall use the best scientific and commercial data available” and “shall comply with all applicable sections of the ESA as follows:

A. Section 2 (Findings, purposes, and policy). The BLM shall, consistent with Section 2 of the ESA, seek to conserve endangered and threatened species and shall utilize its authorities in furtherance of the purposes of the ESA.”

ESA Section 7(a)(1) requires the BLM to “use its authorities to further the purposes of the ESA by implementing programs for the conservation of threatened and endangered species and the ecosystems upon which they depend.” BLM can carry out these responsibilities by:

- *Developing and implementing activities that provide for the conservation and recovery of species listed pursuant to the ESA;*
- *Undertaking actions designed to maintain the integrity of the primary constituent elements of federally designated critical habitat on BLM-administered lands;*
- *Ensuring that BLM actions are not likely to jeopardize the continued existence of any endangered species or threatened species or destroy or adversely modify designated critical habitat;*
- *Developing and implementing agency land use plans, implementation plans, and actions in a manner consistent with conservation and/or recovery of listed species;*
- *Monitoring and evaluating ongoing management activities to ensure conservation objectives for listed species are being met.*

Based on the ongoing severe decline of desert tortoise populations, as documented by the USFWS and the destruction and degradation of its critical habitat within the WEMO Plan area, BLM has effectively violated the applicable provisions of FLPMA; the ESA; Executive Orders 11644, 11989, and 13195; and BLM Manual 2930 (Recreation Permits and Fees), 1613 (Areas of Critical Environmental Concern), and 6840 (Special Status Species Management). BLM has also failed to effectively monitor the status and trend of the desert tortoise populations and its critical habitat; assess how ongoing off-highway vehicle use and livestock grazing is directly, indirectly, and cumulatively affecting the survival and recovery of the Mojave desert tortoise

and its critical habitat; develop and implement measures to avoid or mitigate adverse impacts; and develop and implement effective restrictions on these activities necessary to ensure that the desert tortoise and its ecosystem is conserved.

The failure to address the current status and trend of desert bighorn sheep within and adjacent to the Ord Mountain grazing allotment, and the effects of livestock and grazing on desert bighorn sheep, have also rendered the SFEIS seriously deficient relative to the requirements of NEPA, FLPMA and BLM Manual 6840.

An incomplete and faulty analysis of the impacts of off-highway vehicle use and livestock grazing on the threatened desert tortoise (*Gopherus agassizii*) and desert bighorn sheep render BLM's adoption of Alternative 5 of the plan as well as the SFEIS as a whole, ineffective in meeting its legal, regulatory and policy goals for management of the desert tortoise, desert bighorn sheep and their habitats, as follows:

BLM failed to use the latest scientific information in its analysis in the SFEIS on how implementation of each of the alternatives will result in the sustained yield of the desert tortoise and maintenance of environmental quality for this species. This analysis should include the functions of the physical and biological features of critical habitat needed for survival and recovery as required under Federal Land Policy and Management Act (FLPMA), Endangered Species Act (ESA), executive orders, and BLM Manual on Special Status Species Management.

We requested that BLM include an implementation plan, enforcement plan, and monitoring plan with each action alternative (please see pages 42-44 of Desert Tortoise Council's June 13, 2018 comment letter on DSEIS). "Agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases." (40 CFR 1505.3). We consider the route designation in the West Mojave Planning Area of the California Desert Conservation Area an important case. As stated before, we request that BLM include these plans to show how, when, and where its management plan will be implemented and determine its effectiveness through monitoring as required by the Federal Land Policy and Management Act (FLPMA) and other laws, executive orders, and policies. We were unable to find this requested addition in the FSEIS. For example, without a monitoring plan, BLM will not be able to determine the extent of changes to impacts from the proposed mitigation measures to biological resources to determine if they are helping or hurting these resources or if BLM is achieving its stated goals in the FSEIS for biological resources. In addition, implementation and monitoring are included in BLM Manuals for special status species and ACECs.

The development of the alternatives and the implementation, enforcement, monitoring, and adaptive management of the selected alternative are not supported by regulations and policies as well as scientific literature. Their development and implementation should follow a scientific process, which BLM must develop in an additional SFEIS for the plan.

C. BLM failed to develop and present appropriate mitigation as required by CEQ's Regulations for Implementing NEPA (40-CFR 1502.14(f) and 40 CFR 1502.16) – Mitigation: CEQ's

regulations state that an EIS shall “Include appropriate mitigation measures not already included in the proposed action or alternatives.” [40 CFR 1502.14(f)], and “Means to mitigate adverse environmental impacts” (40 CFR 1502.16).

Protest Statement: Because BLM failed to obtain and use high quality and current scientific information in its analysis of effects of the proposed actions involving designation of off-highway vehicle routes and livestock grazing in the planning area; and failed to account for significant new circumstances or information in its analysis of impacts. In doing so, it failed to identify and adopt appropriate impact avoidance and mitigation measures necessary to prevent significant and ongoing impacts to the threatened desert tortoise and its designated Critical Habitat, to desert bighorn sheep and its habitat within and adjacent to the Ord Mountain grazing allotment, and plants falling in the category of Special Status Species throughout the plan area, including the Ord Mountain grazing allotment.

Mitigation for the direct, indirect, and cumulative impacts to the Mojave desert tortoise, its critical habitat, habitat linkages, other tortoise habitats, and other special status species is weak at best. This is likely because BLM did not use current information to describe the affected environment/current status of special status species and their habitats/critical habitats in the FSEIS. Consequently, the environmental consequences section presented in the FSEIS would be flawed if the affected environment section was not accurate.

To remedy BLM’s failure to follow 40 CFR 1502.14(f) and 1502.16, BLM should first revise its Affected Environment and Environmental Consequences sections of the FSEIS using the best current scientific information to determine the extent of the impacts to special status species and their habitats/critical habitats, including cumulative impacts. BLM should then develop a mitigation plan with monitoring and adaptive management to ensure that the mitigation is implemented and is effective.

D. BLM provided a faulty rationale for rejecting the 1980 CDCA Plan requirements regarding route designation and definition of existing routes of travel: BLM’s rationale for rejecting the 1980 CDCA Plan requirements regarding route designation and definition of existing routes of travel to be used in the designation process is arbitrary and capricious. In the final WEMO Plan of April 2019, BLM states the following in Chapter 2, page 4:

“The current language in the CDCA Plan within “Limited” areas provides a 1980 inventory that is interpreted to be the universe of routes from which “approved routes” can be identified. The [1980] CDCA Plan’s MVA Element discussion of allowable vehicle use in OHV “Limited” areas reads as follows:”

“At the minimum, use will be restricted to existing routes of travel. An existing route of travel is a route established before approval of the Desert Plan in 1980, with a minimum width of two feet, showing significant surface evidence of prior vehicle use or, for washes, history of prior use.”

“The language creates an unmanageable situation 35 years after the approval of the CDCA Plan. For one thing, the 1980 route network continues to be in dispute due to the limitations of the source data. Also, there is much confusion over the interpretation of the sentence “At the minimum, use will be restricted to existing routes of travel.”

Protest Statement: BLM fails to understand the specific provisions of the 1980 CDCA Plan regarding route designation, route inventory and what constitutes existing routes of travel. It has made value judgements in support of dismissing these requirements, failed to examine the administrative history of the plan and, therefore, made arbitrary and capricious decisions.

With regard to confusion over the interpretation of the sentence, “At the minimum, use will be restricted to existing routes of travel”, BLM fails to understand this meant that the minimum level of restriction on such use would be to those routes that existed at the time the CDCA Plan was approved in 1980, and that it was anticipated that routes designated for use in Limited Use Class would be more restricted to adequately protect sensitive resources and minimize user conflict (emphasis added). Furthermore, during the interim period pending final route designation decisions, BLM approved specific limitations on what routes were available for use in order to prevent route proliferation:

“ACCESS AND ROUTES OF TRAVEL PENDING IMPLEMENTATION”

“Since 1973, BLM has managed access and recreation and recreation-vehicle use under the Interim Critical Management Program (ICMP). An integral part of that program was the release of a series of 22 maps covering the entire CDCA. These maps illustrate the ICMP designations, through the use of a color code, and a network of access routes compiled from existing maps, public input and field review. These maps show access in far greater detail than the small-scale desertwide map which simply showed designations.”

“With approval of the Desert Plan, the new designations have become effective. There are, however, major changes in designations from the ICMP, and BLM will not immediately be able to get on-the-ground signing or road approvals. For this reason, BLM will continue to use at least parts of the ICMP maps as they relate to access routes. These routes will apply in areas of Classes I, M and L, which are not “open,” “limited,” or “preliminarily recommended (suitable or nonsuitable) wilderness areas.” The color coded designations on the ICMP maps will not apply.”

The 1980 CDCA Plan, Appendix VI (Recreation) also specifies or defines what constitutes existing routes of travel:

“Existing Routes of Travel. Existing routes of travel are those vehicle routes (roads, ways and washes) identified as being in existence as of December 31, 1977 (the date of full CDCA aerial photo coverage). The term “identified” is used in the context of being recognizable on aerial photographs, maps and records available to the BLM during the preparation of the California Desert Plan.”

“In completing route designations in the Northern and Eastern Mojave Plan amendment to the CDCA Plan in 2002, BLM followed a much different course than it has done over decades in the WEMO Plan area, as described in Appendix Q.2 Route Inventory Method:”

“The first task was to identify the “existing” route network in Category I habitat [for the desert tortoise]. To be “existing”, a route is to have been established before approval of the CDCA Plan (1980), and have a width of 2 feet (minimum), and show significant surface evidence of prior use by vehicles, or, for washes, have a history of prior use.”

“A blue-line vehicle route inventory set of maps for the CDCA was produced in 1980, based on aerial photos taken in the 1977 – 1979 timeframe, with considerable ground-truthing in some areas. Lacking a completely ground-truthed inventory of 1980 routes, ...BLM adopted a “baseline” inventory generated from field verification of routes gathered from multiple sources. Those sources, including the Interim Critical Management Program (ICMP) maps from 1974, the 1977 – 1979 CDCA maps that were generated based on the aerial photos for the 1980 CDCA Plan, subsequently updated “Desert Access Guide” maps, 7.5-minute USGS topographical maps, information from BLM field rangers, and almost 10 years of route inventory data.”

BLM needs to follow the 1980 CDCA Plan regarding motorized vehicle access including compliance with procedures for completing an inventory of existing routes, interim route designation pending final route designation decisions. The issues with route designation in the WEMO Plan area are a result of BLM not following procedures established in the 1980 CDCA Plan. These issues include route proliferation, ongoing destruction of sensitive resources, user conflicts and overall degradation of environmental quality in the CDCA. Based on our review and analysis of BLM’s route designation in the WEMO Plan area, all these issues have been created by BLM, and can only be resolved by BLM following the motorized vehicle access and route designation procedures established in the 1980 CDCA Plan.

E. BLM failed to comply with CEQ’s Regulations for Implementing the National Environmental Policy Act (NEPA) for Cumulative Impacts – 40 CFR Sections 1508.7:

"Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

And,

Failure to comply with sections 1.4 and 6.8.3 of BLM Manual H-1790-1 - NATIONAL ENVIRONMENTAL POLICY ACT HANDBOOK (BLM 2008)¹⁹:

¹⁹ https://www.ntc.blm.gov/krc/uploads/366/NEPAHandbook_H-1790_508.pdf

“The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment” (40 CFR 1500.1(c)).”

“The cumulative effects analysis provides a basis for evaluating the cumulative effect relative to any regulatory, biological, socioeconomic, or physical thresholds. Describe how the incremental effect of the proposed action and each alternative relates to any relevant thresholds.”

BLM’s Manual H-1790-1 references the Council on Environmental Quality’s handbook on cumulative effects (CEQ. 1997. Considering Cumulative Effects Under the National Environmental Policy Act²⁰).

CEQ (1997) Considering Cumulative Effects under the National Environmental Policy Act: CEQ (1997) provides eight principles of cumulative impacts analysis (CEQ 1997, Table 1- 2). These are:

- 1. *“Cumulative effects are caused by the aggregate of past, present, and reasonable future actions;”*
- 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;”*
- 3. *“Cumulative effects need to be analyzed in terms of the specific resource, ecosystem, and human community being affected;”*
- 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; Cumulative effects on a given resource, ecosystem, and human community are rarely aligned with political or administrative boundaries;”*
- 5. *“Cumulative effects on a given resource, ecosystem, and human community are rarely aligned with political or administrative boundaries;”*
- 6. *“Cumulative effects may result from the accumulation of similar effects or the synergistic interaction of different effects;”*
- 7. *“Cumulative effects may last for many years beyond the life of the action that caused the effects;” and*
- 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.”*

In addition, CEQ (1997) presents a method to determine the cumulative impacts using trend analysis. *“Trend analysis assesses the status of resources, ecosystems, and human communities over time...” “Changes in the occurrence or intensity of stress over time can also be determined. Trend analysis provides the historical context that is critical to assessing the cumulative effects*

²⁰ https://ceq.doe.gov/publications/cumulative_effects.html).

of proposed actions. Specifically, trend analysis can assist the cumulative effects analyst by: Identifying cumulative effects problems, Establishing appropriate environmental baselines, and Projecting future cumulative effects."

CEQ (1997) states, *"The consequences of human activities will vary from those that were predicted and mitigated." "[M]onitoring for accuracy of predictions and the success of mitigation measures is critical." "Adaptive management provides the opportunity to combine monitoring and decision making in a way that will ensure protection of the environment and societal goals."*

Protest Statement: The BLM failed to provide an adequate and accurate analysis of the cumulative effects of each alternative to the density/viability of desert tortoise populations in the Western Mojave Recovery Unit under current conditions or in the future (Action Alternatives). Regarding designated Critical Habitat for the desert tortoise, the BLM failed to provide an analysis of the cumulative effects of each alternative, including baseline information, on the quality and quantity of the physical and biological features essential for the survival and recovery of the tortoise, how these features would change, and whether these features would be able to perform their function of providing habitat for a viable population of desert tortoises with implementation of BLM's Project and plan amendment.

Defenders and the Council demonstrate, below, that BLM failed to comply with 40 CFR Section 1508.7, BLM's Manual H-1790-1, and the document it references, *Considering Cumulative Effects Under the National Environmental Policy Act* (CEQ 1997).

BLM's analysis of cumulative effects from the alternatives was presented in a table and the amount was footnoted as *"Total acres of disturbance is equal to existing disturbance from routes designated as Open/Limited and stopping/parking/camping."* It appears that BLM's cumulative impact analysis is limited to quantifying the impact as the change in the amount of habitat disturbance from baseline or current conditions to future conditions for each alternative. BLM did not implement the guidance provided in the BLM's Manual H-1790-1 or CEQ's *Considering Cumulative Effects Under the National Environmental Policy Act*. However, it did reference and use CEQ's *Guidance on the Consideration of Past Actions in Cumulative Effects Analysis*. The public is given the impression that BLM decided to use some of CEQ's documents in preparing its Environmental Consequences section but not others with no explanation for this inconsistency. This selective use of CEQ's documents gives the public the impression that BLM made arbitrary and capricious decisions about how to conduct its analysis, what it would analyze, and what results it would present in the FSEIS.

A discussion of relevant thresholds was not found in the document. Relevant thresholds would include the population viability for the Mojave desert tortoise. The USFWS's 1994 Recovery Plan provides information on the density of tortoises needed to achieve viability (USFWS 1994). This information did not appear to be used in the section on cumulative impacts.

BLM's failure to include the current information on the status and trend of the Mojave desert tortoise and designated Critical Habitat means that the information BLM used to form the foundation for its cumulative impact analysis on the desert tortoise and its Critical Habitat/linkage habitats/other habitats was outdated, seriously deficient, and wrong. This inadequate information means that BLM was unable to adequately and correctly address the eight principles of cumulative impacts analysis as described by CEQ, referenced by the BLM's Manual H-1790-1, and both documents prepared to ensure compliance with 40 CFR Section 1508.7. In addition, BLM's analysis fails to consider the implications on ongoing injury and mortality of off-highway vehicle use on desert tortoise population viability in the plan area.

For example, BLM failed to show what the impacts from the use of roads would be on the desert tortoise. BLM states that its goal is to "*...designate and implement a route network throughout DT ACECs that would provide for public access, authorized uses, and the following desired results:*

- *Fewer losses of tortoises to crushing, poaching, pet collection, intentional vandalism, and similar activities requiring vehicle access;*
- *Less degradation and loss of occupied designated critical habitat (first priority), unoccupied suitable habitat (second priority), and future climate refugia (third priority);*
- *Maintaining large blocks of unfragmented habitat; and*
- *Prevent use of transportation linear disturbances which will allow for natural and assisted habitat restoration."*

BLM also states, "*Therefore, the extent of mortality of desert tortoises is anticipated to increase as the density of roads and the number of animals increase. At some point, vehicle use on roads (and other activities that accompany vehicle use) would likely reduce the number of desert tortoises to a point where the level of mortality also decreases, simply because fewer desert tortoises live in the region.*" This general description fails to analyze what the impacts would be/what changes would occur to the current tortoise populations in the plan area regarding its survival and recovery from implementation of each alternative. BLM failed to analyze the impact or implication of such reduced densities on the survival and recovery of the tortoise.

To remedy this issue, BLM needs to use the best available information, analyze it, and show what the changes would be for the tortoise regarding status, trend, and physical and biological features of critical habitat (from the 1994 designation) for each alternative:

- Update the section on the Affected Environment with respect to the status and trend of the Mojave desert tortoise and its Critical/linkage habitats/other habitats since listing/designation;
- Provide an analysis, not a description, of what the impacts /outcomes would be on the status and trend of the tortoise and its Critical Habitat/linkage habitats/other habitats from implementation of each alternative. Each of the 8 principles from CEQ (1997) should be addressed in this analysis with emphasis on the indirect impacts of routes

(e.g., the Road Effect Zone) with the extent of these indirect impacts overlaid on a map of the routes for each alternative; and,

- Develop and implement a monitoring plan per CEQ (1997) to quantify how OHV use and grazing are affecting the desert tortoise and its Critical Habitat/linkage habitats/other habitats.

F. Failure to Account for Adverse Impacts to Desert Tortoise Critical Habitat and Special Status Species of Plants from Deposition of Dust Generated from Cuddeback and Coyote Dry Lakes:

BLM intends to designate Cuddeback and Coyote Dry Lakes as open to unlimited off-highway vehicle use. It failed to recognize and analyze the effects of dust generated from disruption of the dry lake bed surface by vehicle use on adjacent desert tortoise Critical Habitat and habitat for Special Status Species of Plants downwind from the playa surfaces.

Under Alternatives 5, BLM's adopted alternative, Coyote dry lake and Cuddeback dry lake would be OHV Open use. BLM's analysis stated, *"While this plan amendment decision would not increase the overall recreational use of routes, it may transfer recreational use to areas which are more prone to soil erosion. Therefore, this decision would increase soil erosion in the local area of Coyote dry lake and Cuddeback dry lake."*

Protest Statement: BLM's analysis failed to quantify the amount and extent of dust generated from disruption of surface soil crusts on Cuddeback and Coyote Dry Lakes, and its impact to desert tortoise Critical Habitat and habitat of Special Status Plant Species adjacent to and downwind from these lake beds. While BLM recognized that arsenic-laden soil exists on the Cuddeback Dry Lake, it failed to analyze the effects of such dust generated from disruption of the playa crust from off-highway vehicles. It dismissed this impact by simply stating, *"...continued use may have an already existing direct adverse impact on air quality, including impacts for fugitive dust with high arsenic concentrations."*

In the Council's comment letter on the Draft SEIS, it informed the BLM in numerous ways how opening Cuddeback Lake (located in the Fremont-Kramer ACEC and Critical Habitat Unit) and Coyote Lake (located in the Superior-Cronese ACEC and Critical Habitat Unit) to unrestricted vehicle use and introducing new competitive vehicle events into the Ord-Rodman Critical Habitat Unit are inconsistent with BLM's mandate under FLPMA to manage designated desert tortoise critical habitat primarily for the conservation and recovery of Agassiz's desert tortoise.

We do not believe that BLM adequately addressed any of the following comments submitted by the Council because the Preferred Alternative in the Final SEIS is exactly the same as the Preferred Alternative in the Draft SEIS.

Council's comment on Page 6: "...it is not clear that the BLM is aware that there have been significant decreases in tortoise populations, ranging from 51 to 62%, in these three areas since 2004 [Cuddeback Lake, Coyote Lake, Ord-Rodman ACEC] (USFWS 2015) or that increasing

vehicular recreational activity in critical habitat areas is counterproductive to tortoise recovery.” [During the formulation of the West Mojave Plan between 1998 and 2004, for which LaRue was the BLM’s biologist helping formulate the plan, several vehicle recreation enthusiasts asked that areas south of Cuddeback Lake be redesignated as an open area because it was already seriously impacted by vehicles, which was rejected as part of the planning process *before* there was a 50+% decrease in tortoises from the region.]

Council’s comment on Page 6: “We contend that the Preferred Alternative given in the Draft SEIS [which remains unchanged in the Final SEIS] will result in adverse modification of critical habitat by opening designated areas in the two basins encompassing Cuddeback Lake and Coyote Lake, introducing competitive vehicle events into these and other areas designated as critical habitat, and rescinding educational permits to recreational vehicle users in the Rand Mountains.”

Council’s comment on Pages 13 and 14: “Among the most bothersome proposals is PA IV given on page 2-9 stating that BLM’s Preferred Alternative would designate Cuddeback Lake (located in the Fremont-Kramer CHU and ACEC) and Coyote Lake (located in the Superior-Cronese CHU and ACEC) for unrestricted vehicle recreation in the hearts of these two critical habitat areas. If adopted and implemented, these actions would violate the objective given on page ES-8, which states: “When revising the route network, pay particular attention to tortoise critical habitat and identified sensitive locales.” If this objective is to be achieved, BLM must not designate these two lakebed areas, which are designed tortoise critical habitat, for unrestricted vehicle use. Furthermore, implementing these decisions would violate 43 CFR 8342.1, which is stated on page 2-13 as follows: “Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.”

Council’s comment on Pages 18, 19, and 20: “We do not believe that the Draft SEIS [or Final SEIS] foresees or even begins to analyze the following impacts and issues associated with designating Cuddeback and Coyote lakes, which are in critical habitat, as open to motorized vehicle use:

“1. The BLM does not consider the ancillary impacts of cross-country vehicle travel, much of it from Highway 395, which is the most proximate paved road, located eight miles west of Cuddeback Lake. Getting to the lake is likely to be a significant impact, particularly when existing cross country vehicle travel is already rampant in the area that is currently designated as “Limited.”

“2. Similarly, if Cuddeback Lake is open to unrestricted vehicle recreation, recreationists using the nearby Spangler Hills Open Area are very likely to travel between the two areas, including cross country vehicle travel. What title does BLM intend to apply to these lakes to attract unrestricted vehicle use? Will they be called “Open Areas?”

“3. It is naïve to assume that recreationists are going to stay on the lakebed; rather, it is likely to be used as a focal staging area with adjacent tortoise habitats suffering from vehicle impacts associated with the new concentration of people and vehicles.”

“4. Given the new use of the lakebed, we are concerned that a future event, like the “King of the Hammers,” which attracts 30,000 to 40,000 people each year into Johnson Valley, will be staged in the new lakebed recreation areas. The Draft SEIS [and Final SEIS] fails to clearly outline how this new designation would allow or disallow various vehicle uses in the region.”

“5. Disruption of the lakebed soils are more than likely to result in wind-blown dust accumulating in tortoise habitats to the east of the lake. This was an observed impact resulting from filming Disney’s “Holes” on the Cuddeback lakebed in 2003.” [Note: Since that time, it has come to our attention that the soils in the lakebed are already contaminated with hazardous materials from runoff from local mines. Recreational vehicle use will predictably result in more loose, windblown soils being deposited into adjacent habitats occupied by tortoises.]

“6. Currently designated as critical habitat, the BLM has been unable to control vehicle impacts along Lockheed Road south of Cuddeback Lake and the vehicle concentration area just east of Highway 395 along 20 Mule Team Road. Given that, how will they control impacts after the lakebed has been designated for unrestricted vehicle recreation? The Draft SEIS [and Final SEIS] does not indicate that ranger patrols would be increased in the area to prevent cross-country vehicle use in this designated Limited Use Area. Nor does the Draft SEIS [or Final SEIS] indicate if the Limited Use designation would be rescinded from the lake bed area.” [Note: Since making this statement on June 13, 2018, the BLM, without public input, has created two camping/staging areas along Cuddeback Road that are surrounded by either wooden or metal perimeter fences. Both areas are within the Fremont-Kramer ACEC and serve as focal points for recreational activity, which is already rampant in the area.]

“7. The Draft SEIS [and Final EIS] fails to anticipate that the increased human use of the Cuddeback and Coyote lake areas will serve as new food sources for common ravens. Campers will unknowingly provide food materials to ravens while they are away from their camps recreating, and the increased raven presence in the areas is likely to adversely affect hatchling and subadult tortoises.”

“8. The Draft SEIS (and Final EIS] fails to anticipate that increased human presences around the two lakebeds will predictably result in collection of tortoises for pets and release of pets by visitors. The tortoise shown below [see comment letter] was observed beside Cuddeback Road on 30 April 2018 within a mile of the barren area pictured above [see comment letter]. The tortoise’s scutes show slight evidence of pyramiding, which is indicative of captive tortoises. Even if it is not a released pet, the Council contends that the likelihood of releasing pet tortoises into the area will increase with an increased human presence.”

Despite our efforts to remind BLM of this information and valid concerns, BLM persisted with the same proposal in the Final SEIS as was presented in the Draft SEIS without any additional constraints or changes. We find that BLM has not been responsive to our concerns and is not fulfilling its responsibilities under FLPMA and NEPA.

Council's comment on Pages 27 and 28: "BLM states: *"In general, the lakebeds do not support wildlife, and are not associated with wildlife corridors or **special-status wildlife** [bold emphasis added]. Therefore, this decision would not have any direct effect on wildlife resources on the lakebeds."* The Council's response: "In fact, both of these lake beds are designated as desert tortoise critical habitat."

The Final SEIS fails to reveal that both Cuddeback Lake and Coyote Lake are designated critical habitat for Agassiz's desert tortoise. Neither Cuddeback Lake nor Coyote Lake were excluded from the critical habitat designation in 1994 because they are surrounded by habitats deemed to contain one or more of the primary constituent elements of critical habitat for the tortoise and necessary for the conservation and recovery of Agassiz's desert tortoise.

Using aerial photography and software to locate the interface between dry lake bed and adjacent vegetated habitats, we found that barren portions of Cuddeback Lake can be delineated as shown below in Figure 1. The yellow push pins delineate the lake bed while the red push pins demark areas one mile east of the eastern lake shore, which suggests a minimum of about one mile of vegetated habitat to be impacted by windblown dust encouraged by unrestricted vehicle use. Transferring these data to USA Topo software, we are able to determine the acreage of the lake bed that is designated critical habitat and adjacent vegetated areas within one mile downwind of the barren areas, which are shown in Figure 2.

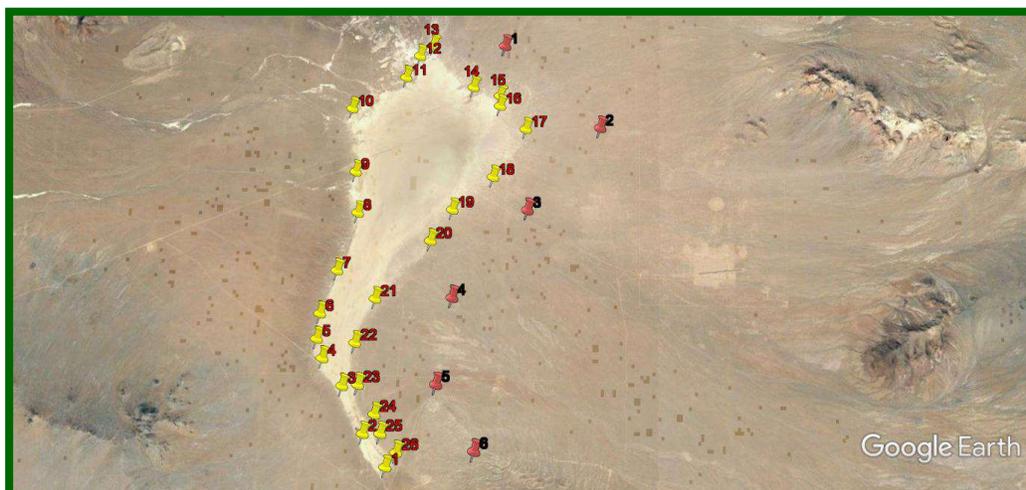


Figure 1. Aerial photograph of Cuddeback Lake showing interface between barren and vegetated areas (yellow push pins) and adjacent areas located one mile east, downwind of the lake bed (red push pins)

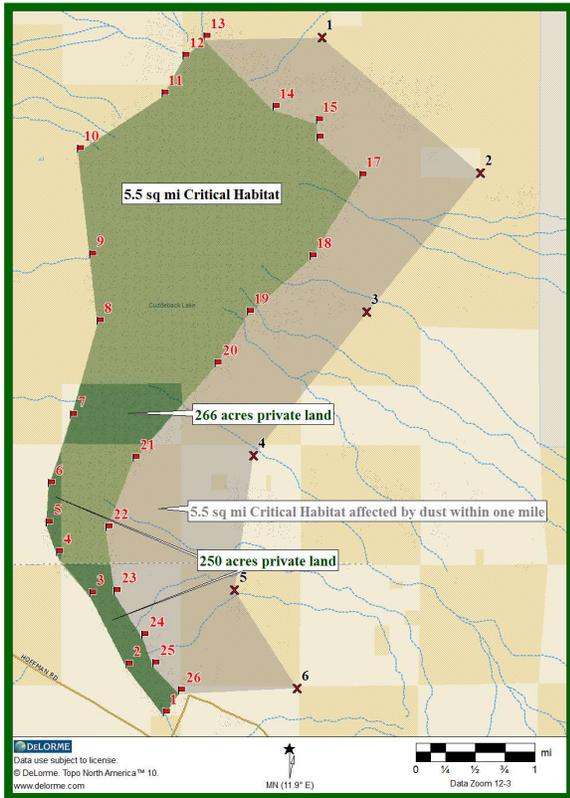
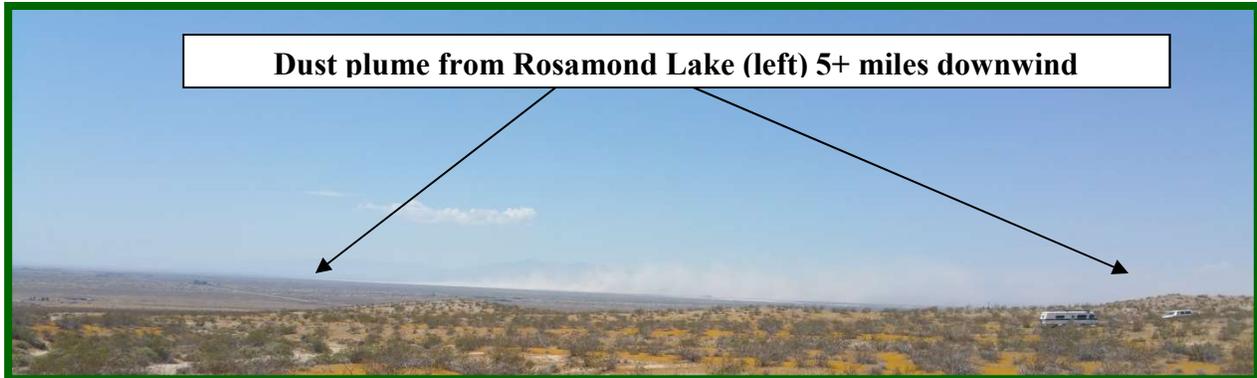


Figure 2. Locations of critical habitat jeopardized by the BLM’s Preferred Alternative, including public and private lands, and areas within one mile east of the lake likely to be impacted by increased fugitive dust.

We found no information in the FSEIS documenting (a) impacts to 5.5 square miles of critical habitat on the Cuddeback Lake bed by unrestricted vehicle use; (b) how the BLM plans to keep recreationists off the ±500 acres of private lands on the lake bed; or (c) how increased fugitive dust resulting from this newly-authorized use will likely impact an additional 5.5 square miles of vegetated critical habitat, assuming dust travels only 1.0 mile, which is a conservative estimate. We state that the linear distance of fugitive dust travel of one mile is conservative based on a recent observation where fugitive dust from Rosamond Lake on Edwards Air Force Base was travelling more than five miles east of the lake, which is off limits to vehicle use (photo taken on May 5, 2019):



In summary, BLM did not analyze the indirect or cumulative impacts of vehicles accessing and using these lakes as open areas with respect to the primary constituent elements of designated Critical Habitat for the Mojave desert tortoise - 1) Sufficient space to support viable populations within each of the recovery units and provide for movements, dispersal, and gene flow; 2) sufficient quantity and quality of forage species and the proper soil conditions to provide for the growth of such species; 3) suitable substrates for burrowing, nesting, and overwintering; burrows, caliche caves, and other shelter sites; 4) sufficient vegetation for shelter from temperature extremes and predators; and 5) habitat protected from disturbance and human-caused mortality. The resulting degradation and loss of these primary constituent elements in the Fremont-Kramer and Superior-Cronese Critical Habitat Units will not contribute to helping the tortoise populations in these areas reverse their status of having densities below viability and their multi-decade downward trends since listing in 1990.

G. BLM Failed to Analyze Impacts of the Speed-controlled Connector between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area: BLM intends to approve a competitive off-highway vehicle route between the remaining Johnson Valley OHV Area and the Stoddard Valley OHV Open Area with appropriate mitigation measures to protect wildlife. Such “appropriate mitigation measures” have not been specifically identified.

Protest Statement: The proposed competitive connector route between the Johnson and Stoddard Valley Open Areas will be located, in part, in Critical Habitat for the desert tortoise, although outside of the Ord-Rodman ACEC. BLM has failed to analyze the impact of off-highway vehicle use of this route on the desert tortoise and its Critical Habitat and identify the specific impact mitigation measures that would be applied.

H. BLM Failed to Adopt Specific Impact Avoidance and Minimization Measures in Travel Management Area (TMA) Plans: Among the land use plan decisions BLM has adopted are establishing 9 TMAs, which is an optional planning tool to frame transportation issues and help delineate travel networks to address specific uses and resource concerns each with a corresponding management plan. Each TMA guides establishment of travel networks or a designated route system.

Protest Statement: The 9 TMAs fail to include specific impact avoidance and minimization measures to address specific resource impact issues. BLM has listed potential measures that **may** be implemented at some future, unspecified date if monitoring reveals unacceptable impacts are occurring that prevent achieving the stated biological goals and objectives.

BLM needs to correct this deficiency by developing a list of specific impact avoidance and minimization measures based on known, current adverse impacts, such as the documented severe and ongoing decline in desert tortoise populations and destruction and degradation of Critical Habitat within the plan area. Another deficiency under Alternative 5 includes BLM's lack of measures to address impacts of livestock grazing on the desert tortoise, its Critical Habitat, desert bighorn sheep in the Ord, Newberry and Rodman Mountains, and Special Status Plant Species throughout the plan area. **Relative to livestock grazing, BLM intends to simply "Determine if studies are needed to assess grazing impacts and determine any adaptive management prescriptions that may be required."** (emphasis added).

BLM is obligated to analyze the impacts of livestock grazing under provisions of NEPA; absent such analysis, the SFEIS is wholly deficient. BLM must analyze the impacts of livestock grazing on the desert tortoise and its Critical Habitat, the BLM Sensitive Mohave ground squirrel and its habitat; desert bighorn sheep and its habitat within the Ord Mountain Allotment, and Special Status Plant Species throughout the plan area. The impact analysis for desert bighorn sheep needs to address competition for water, forage and space, and transmission of diseases from domestic livestock to desert bighorn sheep. Lastly, BLM has failed to adopt specific CMAs from the DRECP amendments to the CDCA Plan specific to desert bighorn sheep.

Once the impact analysis is complete, BLM is required to develop specific impact avoidance and minimization measures to achieve not only the biological goals and objectives of the TMA and the WEMO Plan as a whole, but also to comply with BLM's statutory obligation to conserve threatened and endangered species, and BLM's management policy for Special Status Species as per Manual 6840.

BLM needs to base the impact analysis of continued livestock grazing using high quality and current literature, inventories, and studies on the condition and trend of affected species and their habitats within the plan area.

I. BLM's Determination that Designation of a Transportation Route Network is a Plan Implementation Decision and not a Land Use Plan Decision. BLM states in the SFEIS that *"Unlike land use planning decisions, implementation-level decisions included in this Proposed LUP A/FSEIS are not subject to protest under the BLM planning regulations, but are subject to an administrative review process, through appeals to the Office of Hearings and Appeals, Interior Board of Land Appeals pursuant to 43 CFR, Part 4 Subpart E."* Thus, BLM has segmented or removed one of its core decisions in the WEMO Plan, namely designation of specific routes (Transportation Route Network), from challenge via Protest.

Protest Statement: BLM's determination that designation of specific routes of travel that constitutes the overall Transportation Route Network is arbitrary and unreasonable because it immunizes it from Protest procedures. Furthermore, designation of specific routes is a core component of the WEMO Plan, and BLM specifically asked the public to comment on specific routes and provide reasons as to why they are either appropriate or inappropriate under route designation criteria including compliance with 43 CFR 8342.1. As such, the only administrative remedy available to the public is to file a formal appeal to the Office of Hearings and Appeals of the Interior Board of Land Appeals, a time-consuming and complex process that is beyond the capability of the general public to effectively utilize. To correct this issue, BLM needs to make the designation and implementation of routes of travel subject to Protest to the BLM Director.

J. BLM Failed to Analyze the Impacts of Climate Change on the Mojave Desert Tortoise and Each Critical Habitat Unit in the Affected Environment and Environmental Consequences Sections and Providing Contradictory Statements on Impacts to Biological Resources from Greenhouse Gas Emissions/ Route Designations/OHV Use: In the FSEIS under Impacts Common to All Alternatives, BLM states *"The environmental consequences section evaluates the effects of the proposed action and alternatives. The effects of greenhouse gases to the environment, and BLM resources, are a cumulative effect and not an environmental consequence of the proposed actions. No additional analysis of greenhouse gas effects to the environment is provided in this section."*

BLM limited its analysis of climate change to greenhouse gas emissions, ozone, and a limited discussion on dust. Under Biological Resources in the Environmental Consequences section, BLM mentions impacts to climate refugia, wildlife corridors and habitat linkages, and habitat areas. For the last topic, BLM provides a limited discussion of the impacts of new travel routes and climate change. *"New travel routes that create disturbances and exacerbate climate effects to vulnerable species in large habitat areas that currently offer buffers to outside stressors could affect some climate adaptation options. Activities such as off-highway vehicle recreation can impact wildlife habitat by causing fragmentation, reducing patch size, and increasing the ratio of edge to interior. These effects can be adverse to species, which require large blocks of contiguous habitat, or corridors linking patches of habitat (or linking management units such as Critical Habitat Units for desert tortoise). Severing or impinging upon linkages may be especially significant in relation to the ability of wildlife species to move in response to greenhouse gases. The presence of routes can inhibit animal movement due to reluctance of individuals to cross even narrow routes (Ouren and others 2007)."*

Under *"Resource-Specific Minimization and Mitigation Measures"* BLM states *"Because no adverse direct or indirect impacts to global greenhouse gases were identified, no resource-specific minimization or mitigation measures were developed for GHG emissions."*

Protest Statement: BLM failed to analyze information on climate change and its effects on the desert tortoise population (including viability) and Critical Habitat in its description of the Affected Environment and Environmental Consequences of the FSEIS. BLM failed to analyze the current condition and likely future changes to the quality and quantity of the primary

constituent elements within each Critical Habitat unit in the plan area using the best available science.

BLM failed to analyze the effects of increasing the number and miles of authorized off-highway vehicle routes of travel on the future survival and recruitment of the perennial vegetation in critical habitat for the tortoise and its effects on the availability of plant species essential for adequate nutrition to support growth and reproduction.

BLM provided contradictory information regarding eliminating the need for minimization and mitigation. The last two paragraphs appear to contradict each other. One describes impacts from off-highway vehicle recreation/designation of new routes and climate effects on biological resources while the other says no impacts to greenhouse gases were identified so no minimization and mitigation measures are identified.

Defenders and the Council demonstrate below that BLM failed to use the best information relative to the current impacts of climate change on the Critical Habitat Units of the desert tortoise in the plan area.

According to the Committee on Climate Change greenhouse gas emissions are causing climate change (<https://www.theccc.org.uk/tackling-climate-change/the-science-of-climate-change/climate-variations-natural-and-human-factors/>):

Relevance: the authors reported:

- Recent climate data available for the southwestern United States show that the area is already experiencing the effects of climate change. The average daily temperatures for the 2001–2010 decade were the highest in the southwestern United States from 1901 through 2010 (Overpeck et al. 2012) (https://link.springer.com/chapter/10.5822/978-1-61091-484-0_1) with temperatures almost 2.0 degrees Fahrenheit (1.1 degrees Celsius) higher than historic averages, with fewer cold snaps and more heat waves (Overpeck et al. 2012).
- Climate change models for the southwestern United States for the 21st century predict seasonal air and surface temperatures in all seasons will increase (Overpeck et al. 2012), with greater warming in summer and fall than winter and spring. Droughts in parts of the southwestern United States are projected to become greater in intensity (Overpeck et al. 2012) (i.e., more frequent and/or longer in duration) with a precipitation decrease westward through the Sonoran and Mojave Deserts.
- Perennial vegetation is being impacted by prolonged drought conditions in the Mojave Desert. The negative effects of long-term drought on Sonoran, Great Basin, and Mojave Desert perennial plants are well documented (Goldberg and Turner 1986; Turner 1990; Bowers 2005; Hereford et al. 2006; Miriti 2006; Hamerlynck and McAuliffe 2008;

Hamerlynck and Huxman 2009; Ralphs and Banks 2009, as cited in Huggins et al. 2010) (https://www.researchgate.net/profile/Philip_Rundel/publication/232674364_The_Effects_of_Long-Term_Drought_on_Host_Plant_Canopy_Condition_and_Survival_of_the_Endangered_Astragalus_jaegerianus_Fabaceae/links/0c96052c7a1eac79cb000000/The-Effects-of-Long-Term-Drought-on-Host-Plant-Canopy-Condition-and-Survival-of-the-Endangered-Astragalus-jaegerianus-Fabaceae.pdf), and include high shrub mortality, shrub canopy deterioration, and low recruitment.

- In a portion of the Superior-Cronese Critical Habitat Unit, die-offs of desert shrubs have been documented. Data from plant transects reveal that total shrub cover and volume have decreased significantly by roughly 10% between 2000 and 2009 (Huggins et al. 2010). Mortality of these long-lived shrubs has been high (48%), and the recruitment of new shrubs (5%) has been too low to maintain their populations at previous levels (Huggins et al. 2010). If the climate models for the Southwest and Mojave Desert are correct, drought periods will become longer and more frequent. These climatic conditions will result in reduced reproduction and recruitment and elevated mortality of the native perennial vegetation needed by the desert tortoise for shelter from harsh weather conditions and cover from predators (i.e., primary constituent element/physical and biological feature 4 - sufficient vegetation for shelter from temperature extremes and predators).

To remedy this serious issue, in the Affected Environment section BLM needs to describe the current status of the desert tortoise, including population viability, and the current condition (quality, quantity, and configuration) of each Critical Habitat Unit with respect to availability of the primary constituent elements/physical and biological features required by the desert tortoise. The Environmental Consequences section should include an analysis of how the current status of the desert tortoise and condition of each Critical Habitat Unit in the plan area will change in the future with respect to the survival and recovery of the tortoise and the purpose of designating Critical Habitat for the desert tortoise – areas that provide the primary constituent elements/physical and biological features identified for the desert tortoise by the USFWS (<https://www.govinfo.gov/content/pkg/FR-1994-02-08/html/94-2694.htm>) as necessary for survival and recovery. This analysis should be done using the best available scientific information.

BLM should develop and implement scientifically-based minimization and mitigation measures for impacts to the desert tortoise/critical habitat from climate change and OHV activities and grazing. Such measures should include scientifically-based monitoring and adaptive management.

4. A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issue or issues were discussed for the record.

Defenders of Wildlife submitted the following documents, by date, during development of the WEMO Plan, each of which includes documentation addressing issues:

- October 23, 2012: Comment letter on WEMO Plan process including recommendations.
- June 4, 2015: Comment letter on Draft West Mojave Route Network Plan and Draft Supplemental EIS.
- January 25, 2016: Additional comments on Draft West Mojave Route Network Plan and Draft Supplemental EIS, submitted jointly by Defenders of Wildlife and the Council.
- June 4, 2018: Comment letter on West Mojave Route Network Project Draft Supplemental Environmental Impact Statement, submitted jointly by Defenders of Wildlife and Sierra Club.

The Desert Tortoise Council submitted the following documents, by date, during development of the WEMO Plan:

- June 3, 2015: Comment letter on Draft Supplemental Impact Statement for West Mojave Route Designation.
- January 25, 2016: Additional comments on Draft West Mojave Route Network Plan and Draft Supplemental EIS, submitted jointly by the Council and Defenders of Wildlife.
- 13 June 2018: Comment letter on Draft Supplemental Environmental Impact Statement (Draft SEIS) and draft Land Use Plan Amendment (Draft LUPA) for the West Mojave Route Network.

CNPS submitted the following document on the Draft Supplemental Impact Statement for West Mojave Route Designation:

- June 14, 2018: Comments on the Draft Supplemental Environmental Impact Statement for the West Mojave Route Network Project (DOI-BLM-CA-D080-2018-0008-EIS).

Additional documents cited in this protest are submitted in conjunction with the protest using BLM's electronic filing portal. To separate filings will be made due to the size of the document files.

5. A concise statement explaining why the State Director's decision is believed to be wrong: Defenders of Wildlife and the Council explain, in item #3, above, why we consider the BLM State Director's decision on the WEMO Plan to be wrong due to inconsistencies with specific federal laws, regulations, and BLM Policies.

In summary, those inconsistencies have resulted in the BLM State Director approving Alternative 5 and its associated FSEIS that is wrong, as follows:

- Failure to use current, high quality information, including scientific studies and literature has resulted in a flawed impact analysis for impacts of off-highway vehicle use and livestock grazing on the threatened desert tortoise and its Critical Habitat, the Mohave ground squirrel and its habitat, desert bighorn sheep and its occupied habitat in the plan area, and Special Status Plant Species throughout the plan area. We have identified such high quality information, scientific studies and literature that BLM failed to use in development and adoption of Alternative 5 and the associated FSEIS.
- Failure to demonstrate how adoption of Alternative 5 will achieve the biological goals and objectives for the desert tortoise and its Critical Habitat, the Mohave ground squirrel and its habitat, desert bighorn sheep and its habitat, and Special Status Plant Species and their habitat; and prevent the unnecessary or undue degradation of public land and their associated biological resources in the plan area.
- Failure to provide a reasonable rationale for rejecting the 1980 CDCA Plan requirements regarding route designation and definition of existing routes of travel, including development of an alternative based on the 1980 CDCA Plan requirement that route designation would be based on routes that existed in 1980. BLM arbitrarily decided that existing documentation to determine what routes existed in 1980 was insufficient, despite having complete aerial photographic coverage of the CDCA acquired in 1977, maps of routes, including a set of 22 maps covering the entire CDCA showing the routes that existed at that time.
- Failure to account for the cumulative impacts from all ongoing land uses on public lands in the plan area, and specifically those anticipated due to climate change; and failure to include impact avoidance and minimization measures to lessen or offset the impacts of climate change on the desert tortoise and its Critical Habitat, the Mohave ground squirrel and its habitat, desert bighorn sheep and its habitat, and Special Status Plant Species within the plan area. For example, BLM failed to increase measures to avoid and minimize impacts to these species and their habitat from off-highway vehicle use and livestock grazing relative to the increased adverse effects of climate change over time.
- Arbitrarily determining that designation of a Transportation Route Network is a Plan Implementation Decision and not a Land Use Plan Decision, thus exempting it from administrative challenge through the BLM's public protest process. We consider designation of a Transportation Route Network a key component of the WEMO Plan. We argue that the designation process is a component of the land use planning process; and that implementing that network on the ground with signs, barriers, law enforcement, etc. is an implementation phase of the plan with on-the-ground actions.

This concludes the formal Protest of BLM's adoption of Alternative 5 and the associated FSEIS for the West Mojave Plan amendment to the CDCA Plan.

Sincerely,



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