



***Bureau of Land Management
Director's Summary Protest Resolution
Report***

**Haiwee Geothermal Leasing
Area Final Environmental
Impact Statement and
Proposed Amendment to the
California Desert
Conservation Area Plan**

April 3, 2020

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Acronyms

ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
BMP	Best Management Practice
CDCA	California Desert Conservation Area
CDNCL	California Desert National Conservation Land
CFR	Code of Federal Regulations
CMA	Conservation Management Action
DFA	Development Focus Area
DRECP	Desert Renewable Energy Conservation Plan
DSEIS	Draft Supplementary Environmental Impact Statement
EIS	Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act of 1976
FLPMA	Federal Land Policy and Management Act
HGLA	Haiwee Geothermal Leasing Area
LRWQCB	Lahontan Regional Water Quality Control Board
LUPA	Land Use Plan Amendment
LWC	lands with wilderness characteristics
MGS	Mohave Ground Squirrel
NEPA	National Environmental Policy Act
NSO	No Surface Occupancy
RFDS	Reasonably Foreseeable Development Scenario
RMP	Risk Management Plan
RMPA	Resource Management Plan Amendment
UUD	unnecessary or undue degradation
WIU	Wilderness Inventory Units

Protesting Party Index

Protester	Organization	Determination	Tracking Number
Lisa Belenky; Ileene Anderson ¹	Center for Biological Diversity	Denied – Issues and Comments	PP-CA-HGLARMPA-20-01
Judith Decker	Eastern Kern County Resource Conservation District	Dismissed – No Standing	PP-CA-HGLARMPA-20-02
Lorelei Oviatt	Kern County Planning and Natural Resources	Dismissed – No Standing	PP-CA-HGLARMPA-20-03
Donald Zdeba	Indian Wells Valley Water District	Dismissed – No Standing	PP-CA-HGLARMPA-20-04
Mick Gleason	Indian Wells Valley Groundwater Authority	Dismissed – No Standing	PP-CA-HGLARMPA-20-05
Danielle Murray; Linda Castro, Jeff Aardahl; Wendy Schneider, Alex Daue ²	Conservation Lands Foundation; California Wilderness Coalition (CalWild); Defenders of Wildlife; Friends of the Inyo; The Wilderness Society	Denied – Issues and Comments	PP-CA-HGLARMPA-20-06
Sophia Anne Merk	NPLNews	Dismissed – Comments only	PP-CA-HGLARMPA-20-07

¹This letter was cosigned by multiple parties. In this report, it is referenced as Lisa Belenky et al., Center for Biological Diversity et al.

² This letter was cosigned by multiple parties. In this report, it is referenced as Danielle Murray et al., Conservation Lands Foundation et al.

FLPMA – Consistency with the California Desert Conservation Area Plan

Center for Biological Diversity et al.

Lisa Belenky et al.

Issue Excerpt Text: The CDCA Plan anticipated that there would be multiple plan amendments over the life of the plan and provides specific requirements for analysis of Plan amendments. Those requirements include evaluating “the effect of the proposed amendment on BLM management’s desert-wide obligation to achieve and maintain a balance between resource use and resource protection.” CDCA Plan at 121. The proposed Plan Amendment goal in the FEIS affects all resources and must conform to all aspects of the CDCA Plan but BLM failed to consider the plan amendment in the context of the CDCA as a whole. Instead, it appears that BLM has addressed only a few plan elements of the CDCA Plan in its analysis in considering these proposed plan amendments.

Conservation Lands Foundation et al.

Danielle Murray et al.

Issue Excerpt Text: BLM cannot allow Geothermal Leasing within Areas of Critical Environmental Concern (ACECs) and California Desert National Conservation Lands (CDNCLs) by merely modifying the “goals and objectives” of the DRECP to eliminate the “no surface occupancy” prohibition on these designated conservation lands. This is a violation of FLPMA and the DRECP...It appears, however, that BLM is using the current process to adjust and modify the Special Unit Management Plans applicable to the Ayer’s Rock, Mohave Ground Squirrel, Rose Springs, and Sierra Canyons ACECs – which do contain language noting that “ACECs are closed to geothermal leasing and development unless they overlap with a DFA where geothermal is allowed. Where there is overlap, ACECs are open to geothermal leasing with an NSO stipulation. There are several improprieties with BLM’s approach to removing the NSO stipulation in the Special Management Plans in an effort to adjust or modify allowable uses in these ACECs. First, the NSO stipulation is not a “goal and objective,” as BLM defines these terms in the DRECP, and, thus, BLM cannot erase the NSO stipulation by claiming to amend the goals and objectives in the DRECP.

Center for Biological Diversity et al.

Lisa Belenky et al.

Issue Excerpt Text: All of the three existing noncompetitive Federal geothermal lease applications have portions of the proposed projects outside of the Development Focus Area (DFA) on lands that are currently designated at ACEC and CDNCL (Appendix L, Figure L-4). While the FEIS states that the DRECP’s CMA will be applied in these areas, the FEIS fails to acknowledge that these leases are wholly inconsistent with the purposes of the ACEC and CDNCL designations. In addition, the FEIS fails [to] provide adequate analysis of the impacts even with application of the CMAs, but instead appears to rely wholly on the CMA – disturbance caps for compliance with the CDCA Plan as amended.

Summary:

The Bureau of Land Management’s (BLM) Haiwee Geothermal Leasing Area (HGLA) Resource Management Plan Amendment (RMPA) was inconsistent with the California Desert Conservation Area (CDCA) Plan as a whole. The BLM failed to acknowledge that the leases are inconsistent with the purposes of the Area of Critical Environmental Concern (ACEC) and California Desert National Conservation Lands (CDNCL) designations and therefore inconsistent with the CDCA Plan.

The BLM cannot simply eliminate the “no surface occupancy” stipulation as the action is not part of the goals and objectives, but a management action that meets the goals and objectives for protecting and conserving the resources.

Additionally, the BLM failed to adequately analyze the impacts of the leases on the CDCA Plan designations.

Response:

BLM land use planning requirements are established by Sections 201 and 202 of the Federal Land Policy and Management Act of 1976 (FLPMA, 43 U.S.C. 1711-1712) and the regulations in 43 Code of Federal Regulations (CFR) 1600. The BLM’s *Land Use Planning Handbook* (H-1601-1) provides supplemental guidance for implementing the BLM land use planning requirements. As noted in H-1601-1 (p. 11), decisions in land use plans guide future land management actions by establishing goals and objectives for resource management (i.e., desired outcomes) and the measures needed to achieve these goals and objectives (i.e., management actions and allocations).

Additionally, the BLM has the authority to amend land use plans under 43 CFR Part 1610.5-5. Plan amendments change one or more of the terms, conditions, or decisions of an approved land use plan. These decisions may include those relating to desired outcomes and/or measures to achieve desired outcomes, including allocations and resource restrictions (BLM *Land Use Planning Handbook*, H-1601-1, p. 45). Plan amendments may be prompted by several different needs, one of which is the need to consider a proposal or action that does not conform to the current plan, such as the case here.

The BLM’s *Land Use Planning Handbook* (BLM H-1601-1) in Appendix C, *Program/Resource-Specific Decision Guidance*, provides the land use plan decisions for the fluid minerals program, which includes geothermal resources. The BLM is to identify the areas closed to leasing, areas open to leasing with standard terms and conditions, major or moderate constraints (e.g., no surface occupancy or controlled surface use stipulations), and the specific lease stipulations, conditions of approval, and best management practices that would be employed to accomplish resource condition objectives (H-1601-1, Appendix C, pp. 23–24).

As identified in Section 1.3.1.1 of the Final Environmental Impact Statement (FEIS), the BLM’s decisions to be made are to determine whether to:

- Keep the allowable uses for geothermal leasing as currently allocated (Alternative D, the No Action Alternative), or
- Change the allowable uses for geothermal leasing to be available with standard terms and conditions, major constraints, such as a No Surface Occupancy stipulation, and/or moderate constraints, such as Controlled Surface Use and/or Timing Limitations, to meet the goals and objectives for sensitive resources.

The goals and objectives for the special designations are not being amended; the amendment would change the allowable use in specific areas of the HGLA, namely changing the allocation from “closed to leasing” to “open with standard terms and conditions” or “open with major and/or moderate constraints.” Alternatives A, B, and C addressed variations of the potential change in allocations and included a suite of stipulations to protect and conserve sensitive resources and biological and cultural values that would continue to allow BLM to meet the goals and objectives for those values. For example, the NSO-HGLA-2 in Appendix K, *Stipulations*, is applicable to Alternatives B and C and notes that the purpose is for the “protection of cultural and historical resources found within the Rose Springs ACEC.” Also applicable to Alternatives A–C are stipulation CSU-HGLA-1, which states the purpose is to “conserve the Mojave ground squirrel and its habitat,” and stipulation CSU-HGLA-2, which states that the purpose is to “protect federally listed threatened and endangered species...”

CSU-HGLA-3 states that the purpose is to consider effects to historic properties and cultural resources, and TL-HGLA-1 states that the purpose is to conserve the desert tortoise and its habitat. Additionally, the FEIS also states that “Most ACEC/CDNCL-specific CMAs would be applicable within the ACECs/CDNCLs,” includes the prohibition of long-term vegetation removal, unless compatible with Mohave ground squirrel conservation and management, and the establishment of exclusion fencing to reduce livestock grazing in areas managed and protected for Mohave ground squirrel. Additional CMAs specific to the protection of Mohave ground squirrel are included in Section II.4.2, *Conservation and Management Actions*, of the DRECP Land Use Plan Amendment (LUPA)” (FEIS p. 70), which also includes the CMAs noted on pages 70 and 73 of the FEIS that are “designed to protect Mohave ground squirrel...”

The discussion regarding adequate impact analysis of the allocation and leases on the special designations in the CDCA Plan is found in the *NEPA – Impact Analysis – Special Management Areas* section of this report.

FLPMA – Multiple Use Mandate

Conservation Lands Foundation et al.

Danielle Murray et al.

Issue Excerpt Text: FLPMA requires that BLM manage Federal public lands “on the basis of multiple use and sustained yield...” This requires that BLM “manage the public lands and their various resource values so they are utilized in the combination that will best meet the future needs of the American people” and make “the most judicious use of the land.” Under the multiple-use mandate, “there is no presumed preference for oil and gas development over other uses” of public lands and minerals. This presumption also extends to other types of development, including geothermal leasing and development. Federal courts have consistently rejected efforts to affirmatively elevate energy development over other uses of public lands. In the seminal case, *NM ex rel. Richardson v. BLM*, the Tenth Circuit put to rest the notion that BLM must manage chiefly for energy development, declaring that “It is past doubt that the principle of multiple use does not require BLM to prioritize development over other uses.” Other Federal courts have agreed. By proposing to make the entire HGLA available for leasing, exploration and development instead of restricting leasing, exploration and development to the DFA, BLM is violating FLPMA.

Summary:

The BLM is violating FLPMA’s multiple-use mandate by creating an area that elevates the HGLA for geothermal development over other uses.

Response:

Section 102(a)(7) of FLPMA declares that it is the policy of the United States that management of the public lands be on the basis of “multiple use” and “sustained yield.” Section 103(c) of FLPMA defines “multiple use” as the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people.

FLPMA’s multiple-use policy does not require that all uses be allowed on all areas of the public lands. Through the land use planning process, the BLM evaluates and chooses an appropriate balance of resource uses that involves tradeoffs between competing uses. Rather, the BLM has wide latitude for allocating the public lands to particular uses and employing the mechanism of land use allocation

to protect for certain resource values or, conversely, develop some resource values to the detriment of others, short of unnecessary and undue degradation.

All alternatives considered in the HGLA PRMPA/FEIS, as described in Section 2.2, *Alternatives* (pp.10 through 11 of the HGLA PRMPA/FEIS), provide an appropriate balance of uses on the public lands that meet the stated purpose and need and are consistent with applicable statutes, regulations, and BLM policy.

The HGLA PRMPA/FEIS satisfies FLPMA’s multiple use policy.

NEPA – Range of Alternatives

Center for Biological Diversity et al.

Lisa Belenky et al.

Issue Excerpt Text: [Many significant issues remain inadequately analyzed in the FEIS for the preferred alternative and specifically include...]...failing to consider alternatives that would allow for development in the DFA only in order to reduce impacts to sensitive resources for which the MGS Conservation Area, ACEC and CDNCL were established.

Summary:

BLM failed to consider an alternative that allowed development only in the Development Focus Area (DFA).

Response:

The BLM must analyze a reasonable range of alternatives, but not every possible alternative to a proposed action:

In determining the alternatives to be considered, the emphasis is on what is ‘reasonable’ rather than on whether the proponent or applicant likes or is itself capable of implementing an alternative. ‘Reasonable alternatives’ include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.

BLM’s *National Environmental Policy Act (NEPA) Handbook*, H-1790-1, at 50 (citing Question 2a, CEQ, *Forty Most Asked Questions Concerning CEQ’s NEPA Regulations*, March 23, 1981); see also 40 CFR Section 1502.14.

The BLM developed a reasonable range of alternatives that meet the purpose and need of the HGLA PRMPA/FEIS and that address resource issues identified during the scoping period. The HGLA PRMPA/FEIS analyzed four alternatives, which are described in Section 2.2, *Alternatives*, as well as the two alternatives described in the Draft Supplementary Environmental Impact Statement (DSEIS) that were eliminated from further analysis. The alternatives analyzed in the HGLA PRMPA/FEIS cover the full spectrum by varying in: 1) geographical location of areas identified as available for geothermal development; 2) the location of sensitive resources that may be subject to certain stipulations established to protect sensitive resources or no-surface occupancy; and 3) resource protection and conservation measures (see HGLA PRMPA/FEIS p. 10). Specifically, under Alternative C, the HGLA would remain under the current management as specified by the CDCA Plan, as amended by the DRECP; authorize portions of three pending leases within the HGLA in areas established as DFA; and deny portions of pending lease applications within ACECs (FEIS p. 11). Additionally, Alternative D, the No Action Alternative, notes that “Any proposed geothermal facilities in the DFA would be under the CDCA Plan, as amended” (HGLA PRMPA/FEIS p. 11).

The BLM considered a reasonable range of alternatives in the HGLA PRMP/FEIS in full compliance with NEPA.

NEPA – Impact Analysis – Lands with Wilderness Characteristics

Conservation Lands Foundation et al.

Danielle Murray et al.

Issue Excerpt Text: BLM’s proposal to simply withdraw lands with wilderness characteristics from the unit if they overlap with extensive geothermal resources is arbitrary and capricious because BLM fails to provide any examination or analysis of the direct, indirect and cumulative impacts of withdrawing these lands on the wilderness resource within the area. Indeed, the DRECP LUPA requires BLM to first examine the impacts from potential development to the WIU, including considering avoidance measures (LUPA-WC-2) and compensatory mitigation (LUPA-WC-3), which is described in more detail below. Also, as noted in the FEIS, the DRECP LUPA has one goal for wilderness characteristics, which is to “Ensure that adequate consideration and protection is given to lands with wilderness characteristics outside of designated Wilderness and Wilderness Study Areas and that these areas are managed to protect wilderness characteristics where appropriate in concert with other multiple-use and sustained-yield objectives.” BLM’s proposal to withdraw lands with wilderness characteristics from the WIU fails to comply with the goal that “adequate consideration” is given to lands with wilderness characteristics...BLM’s proposal to withdraw certain lands from having wilderness characteristics, regardless of the fact that BLM is not managing them for their wilderness characteristics is arbitrary and capricious.

Summary:

BLM failed to provide any analysis of the direct, indirect and cumulative impacts of withdrawing lands with wilderness characteristics (LWC) in the HGLA on the wilderness resource within the area.

Response:

The BLM’s authority for managing lands to protect or enhance wilderness characteristics is derived directly from Section 202 of FLPMA, which gives the Secretary of the Interior authority to manage public lands for multiple use and sustained yield. BLM has a responsibility under Sections 201 and 202 of FLPMA to maintain updated inventories for LWCs and to consider protection of and impacts to this resource in Risk Management Plan (RMP)-level planning (per IM No. 2011-154).

FLPMA makes it clear that the term “multiple use” means that not every use is appropriate for every acre of public land, and that the Secretary can “make the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use...” (FLPMA § 103(c)). Further, FLPMA directs that the public lands be managed in a manner “that, where appropriate, will preserve and protect certain public lands in their natural condition” (FLPMA § 102(a)). FLPMA authorizes the Secretary of the Interior to use land use planning as a mechanism for allocating resource use, including wilderness character management, amongst the various resources in a way that provides for current and future generations. The DRECP LUPA has a single goal for wilderness characteristics, which is to “ensure that adequate consideration and protection is given to lands with wilderness characteristics outside of designated Wilderness and Wilderness Study Areas and that these areas are managed to protect wilderness characteristics where appropriate in concert with other multiple-use and sustained-yield objectives” (HGLA PRMP/FEIS p. 55). However, as noted in Section 3.20, *Lands with Wilderness Characteristics* (HGLA

PRMPA/FEIS p. 55), a targeted amendment to address a specific project or proposal such as this “may not in all circumstances require consideration of an alternative that would protect wilderness characteristics. In these situations, the NEPA document associated with the plan amendment must still analyze effects of the alternatives on lands with wilderness characteristics.”

Accordingly, the BLM considered and analyzed the effect on lands with wilderness characteristics in the HGLA PRMP/FEIS in Section 4.20 (pp. 91–94). For example, the FEIS states,

Extensive geothermal development would be incompatible with protecting and preserving lands with wilderness characteristics. If extensive geothermal reserves are located within any part of the HGLA identified as having wilderness character, these lands should be withdrawn from WIU # CDCA 131-1. However, at this time it is not known whether these lands contain any geothermal resources, or if they do, whether these resources are of sufficient quantity or sufficient quality to be exploited profitably. The BLM would apply BMPs (conditions of use, mitigation measures, and reclamation standards) to prevent unnecessary degradation to lands identified as having wilderness characteristics, until the existence and nature of the geothermal resource is confirmed and understood. BMPs and stringent reclamation requirements would be implemented, particularly with respect to initial exploration. Exploration may not find geothermal reserves and may not lead to development. BLM would not want to allow actions that would diminish wilderness characteristics unnecessarily (p. 55).

Further analysis notes, “Geothermal exploration and development could increase numbers of people and levels of activity within a specific area or within the area as a whole, diminishing opportunities for solitude” (p. 90) and

If the RFD scenario were to be located on private, not public lands, development associated with these leases would likely be mostly or entirely outside of the area identified to have wilderness characteristics. State Land Section 16 (Deep Rose) is also excluded from the LWC, but is centrally located within the boundaries of the LWC, rather than along its periphery. Additional geothermal leases could be developed entirely on public lands within the HGLA, well within the area identified to have wilderness characteristics (p. 92).

The BLM properly analyzed the effects of the plan amendment on LWCs. Consideration of possible withdrawal of lands with wilderness characteristics is consistent with applicable law and the DRECP LUPA.

NEPA – Impact Analysis – Soil Resources

Center for Biological Diversity et al.

Lisa Belenky et al.

Issue Excerpt Text: [Many significant issues remain inadequately analyzed in the FEIS for the preferred alternative and specifically include...] Failing to adequately assess the impacts to soils, including the loss of intact cryptobiotic soil crusts, desert pavements and other stable soils from increased development and groundwater extraction...”

Summary:

The BLM failed to adequately assess the impacts to soil including loss of cryptobiotic soil crusts, desert pavement, and groundwater extraction.

Response:

NEPA directs that data and analyses in an Environmental Impact Statement (EIS) must be commensurate with the importance of the impact (40 CFR 1502.15), and that NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail (40 CFR 1500.1(b)). The BLM is required to take a “hard look” at potential environmental impacts of adopting the HGLA PRMPA/FEIS.

The level of detail of the NEPA analysis must be sufficient to support reasoned conclusions by comparing the amount and the degree of change (impact) caused by the proposed action and alternatives (BLM Handbook H-1790-1, § 6.8.1.2). The BLM need not speculate about all conceivable impacts, but it must evaluate the reasonably foreseeable significant effects of the proposed action.

A land use planning-level decision is broad in scope. For this reason, analysis of land use plan alternatives is typically broad and qualitative rather than quantitative or focused on site-specific actions. The baseline data provides the necessary basis to make informed land use plan-level decisions. The analysis focuses on the direct, indirect, and cumulative impacts that could potentially result and identifies impacts that may result in some level of change to the resources, regardless of whether that change is beneficial or adverse.

The FEIS noted that the analysis conclusions from the HGLA Draft RMPA/EIS has not changed, and therefore was incorporated by reference. In the Draft EIS, on page 4-36, the BLM analyzed soil movement from groundwater loss or subsidence noting,

Exploration and/or construction activities on steep or unstable soils in the HGLA could result in landslides, subsidence, or other mass movements. Mass movements often result from a combination of several factors such as the location of construction sites on unstable soils or steep hillsides, inappropriate placement of fills, modification of surface flow, or inadequate drainage structures. Two characteristics that decrease the stability of soils are cave-in potential and shrink-swell potential. A number of HGLA soils are unstable due to cave-in potential, shrink-swell potential, and/or steepness (slopes $\geq 15\%$).

Regarding analysis for the noted soil types, the BLM noted that

...soils data are not available for the entire HGLA. The Soils Technical Report previously prepared for the Coso Geothermal Study Area (Rockwell International 1980) provides soils data for 63 percent of the HGLA, but does not include the northern portion of the HGLA. It is likely that the soils in this area are similar to the soils included in the Soils Technical Report due to geologic and landform similarity. Additionally, a general description of the soils surrounding the Haiwee Reservoir is provided in the “Draft Progress Report: Total Maximum Daily Load for Copper for the Haiwee Reservoir” prepared by the California State Water Quality Control Board, Lahontan Regional Water Quality Control Board (LRWQCB) (LRWQCB 2001)... (p. 20)

Although not specifically noted in the affected environment, it is anticipated that the desert pavement and cryptobiotic surface types occur in the planning area. Further the analysis of the soil types and associated surface types were analyzed in Section 4.5 of the HGLA PRMPA/FEIS, which incorporated by reference the detailed analysis from the Draft EIS (BLM 2012) and Supplemental Draft EIS (BLM 2019).

The “anticipated impacts from geothermal exploration and development included physical disturbance (e.g., movement or removal), changes to erosion patterns, and changes to the largely undisturbed conditions within the initial RFD impact areas...” (HGLA Draft RMPA/EIS, p. 4-35). Also noted in the impact analysis is recognition that site-specific “soils investigations and mapping would take place prior to final facility planning and construction as part of any future permitting

studies to identify areas of high erosion hazard and unstable or expansive soils,” as well as identify any desert pavement and/or cryptobiotic surface types (Draft EIS, p. 4-36).

The BLM properly analyzed the effects of the plan amendment on soil resources.

NEPA – Impact Analysis – Water Resources

Center for Biological Diversity et al.

Lisa Belenky et al.

Issue Excerpt Text: Failing to adequately address and evaluate impacts to water quantity and quality from the geothermal development in the HGLA, and instead relying on future analysis of adequacy of to-be-developed monitoring, management and mitigation plans for individual project.

Conservation Lands Foundation et al.

Danielle Murray et al.

Issue Excerpt Text: ...the FEIS would allow limited groundwater use under a new BMP that only partially complies with CMA SW-23. It fails to comply with many things that are required by that CMA. The preferred alternative (A) posits the possibility of two flash geothermal plants, which would require very small amounts of water initially, but, inevitably (as demonstrated by the Coso plants), significant replacement water over the long term as the geothermal water resources decrease due to losses through the evaporative cooling process. The FEIS does stipulate that future geothermal plants would have to comply with the DRECP, including the Conservation Management Actions, but fails to analyze the implications of applying the full set of CMAs. The partial inclusion of the groundwater CMA set by implication inappropriately constrains BLM’s required duties under NEPA to take a hard look at groundwater usage requirements.

Summary:

The BLM failed to adequately analyze impacts to water resources from the development of geothermal resources, especially the failure to analyze application of Conservation Management Action (CMA) SW-23 and the full set of CMAs from the DRECP. The BLM improperly relied on future analysis and adequacy of to-be-developed monitoring, management and mitigation plans for individual projects.

Response:

NEPA directs that data and analyses in an EIS must be commensurate with the importance of the impact (40 CFR 1502.15), and that NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail (40 CFR 1500.1(b)). The BLM is required to take a “hard look” at potential environmental impacts of adopting the changes in geothermal leasing allocation in the HGLA PRMPA/FEIS.

The level of detail of the NEPA analysis must be sufficient to support reasoned conclusions by comparing the amount and the degree of change (impact) caused by the proposed action and alternatives (BLM Handbook H-1790-1, Section 6.8.1.2). The BLM need not speculate about all conceivable impacts, but it must evaluate the reasonably foreseeable significant effects of the proposed action.

A land use planning-level decision, such as the geothermal leasing allocation, is broad in scope. For this reason, analysis of land use plan alternatives is typically broad and qualitative rather than quantitative or focused on site-specific actions. The baseline data provides the necessary basis to make informed land use plan-level decisions. The analysis focuses on the direct, indirect, and

cumulative impacts that could potentially result from on-the-ground changes. This analysis identifies impacts that may result in some level of change to the resources, regardless of whether that change is beneficial or adverse. As noted in the FEIS (p. 1), BLM’s change in allowable use or the issuance of a lease does not authorize any ground-disturbing activities. Site specific approval is required for an activity to explore for or develop geothermal resources. Such approval could only be acquired following more extensive site- and project-specific subsequent NEPA analysis.

The HGLA PRMPA/FEIS analysis of effects of geothermal development reflects a general approach, based on the previous analysis from the Draft EIS and Supplemental EIS, on the Reasonably Foreseeable Development Scenario (RFDS), and on additional geographic specific information. The HGLA PRMPA/FEIS noted that much of the previous analysis from the Draft RMPA/EIS and SEIS had not changed, and therefore was incorporated by reference, but also included additional information regarding the affected environment as noted in the “Groundwater” paragraphs on pages 24–26 and the environmental consequences as described in Section 4.6, *Groundwater Resources*, and supported by Appendix G, *Numerical Groundwater Flow Modeling*, Appendix O, *Supplemental Water Resources Data*, and the *Summary of Modeling Effort in Support of Water Consumption Estimates for the Haiwee EIS* report.

Regarding reliance on future mitigation plans, NEPA requires the BLM to include a discussion of measures that may mitigate adverse environmental impacts (40 CFR 1502.14(f), 40 CFR 1502.16(h)). Potential forms of mitigation include: (1) avoiding the impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (3) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or (5) compensating for the impact by replacing or providing substitute resources or environments (40 CFR 1508.20).

The HGLA PRMPA/FEIS includes groundwater-level triggers (i.e., standards) and other mitigation measures to protect groundwater resources. In addition, lease terms will include a protective groundwater resources stipulation, SA-HGLA-10, that is intended to prevent impacts to groundwater supplies. As stated in Section 2.4.1 of the HGLA PRMPA/FEIS, stipulations would be in place to address potential groundwater impacts and lease stipulations and procedures for the HGLA will be applied as outlined in the Preliminary EIS (BLM 2008a). Additionally, the DRECP amendment CMA-23 also requires limits and studies in relation to the use of water in the area of the HGLA.

The BLM complied with NEPA’s requirement to analyze the environmental impacts to groundwater resources from geothermal leasing allocations in the HGLA PRMPA/FEIS.

NEPA – Impact Analysis – Special Management Areas

Conservation Lands Foundation et al.

Danielle Murray et al.

Issue Excerpt Text: In its Final Environmental Impact Statement and Proposed Amendment to the California Desert Conservation Area Plan, BLM fails to discuss or examine how changing the management goals and objectives of these ACECs to allow for industrialized geothermal exploration, drilling and development will “conserve, protect and restore” the nationally significant values of the existing ACECs...Despite acknowledging that its proposed action will harm the ecological, biological and cultural values for which these ACECs were designated, BLM fails to provide any evidence or analysis showing that it is meeting the “conserve, protect and restore” management mandate under the 2009 Omnibus Public Land Conservation Act. In fact, BLM cites no authority, Best Management Practice (BMP), or management requirement adhering to this management mandate. The record here shows that BLM’s Preferred Alternative will harm the

ecological, wildlife and cultural resources these ACECs were designed to protect, and this runs headlong into BLM’s requirements under the Omnibus Public Land Management Act to “conserve, protect and restore” these resources. For this reason, BLM’s Preferred Alternative is arbitrary and capricious and contrary to the Omnibus Public Land Management Act and the Administrative Procedure Act...Moreover, BLM provides no analysis, examination or explanation of how increasing geothermal exploration, drilling and development will “conserve, protect and restore” the conservation values of the California Desert National Conservation Lands. And, as above, all evidence in the FEIS establishes that BLM’s Preferred Alternative will undermine the conservation and resource values within these conservation lands.

Conservation Lands Foundation et al.

Danielle Murray et al.

Issue Excerpt Text: BLM failed to analyze the direct, indirect and cumulative impacts of the Preferred Alternative to ACECs and CDNCLs and instead deferred this analysis until some future time, claiming only that the impacts on ACECs and other resources “will be determined in future NEPA assessments.” Without any analysis or examination, BLM asserts that the “Effects of geothermal exploration, development, utilization, and ultimate reclamation on ACECs/CDNCLs would be expected to have little or no adverse effects.” BLM cannot meet its NEPA obligations in this manner, especially since BLM has already prepared a so-called Reasonably Foreseeable Development Scenario (RFD), which projects management actions and activities – including future development – which are likely to occur in the planning area over the next 15-20 years...Having conducted a RFD scenario and projected the possible future consequences of eliminating the NSO requirement and issuing three geothermal leases, BLM cannot then defer examination of direct and indirect impacts on special management areas, under the case cited above.

Conservation Lands Foundation et al.

Danielle Murray et al.

Issue Excerpt Text: BLM’s cumulative impacts analysis completely ignores any examination of the cumulative impacts on ACECs, LWC and other special management areas. In fact, BLM’s cumulative impacts analysis never even mentions these special management areas and conservation resources, let alone actually examining potential cumulative impacts. In short, BLM violated NEPA by failing to take a hard look at the cumulative impacts of permitting geothermal leasing, drilling and development on lands with wilderness characteristics within the HGLA, as well as the beneficial impacts that avoiding lands with wilderness characteristics would have on other resources, including scenic viewsheds, cultural resources, wildlife habitat, recreation opportunities and nonmarket economic values.

Summary:

The BLM violated NEPA by not analyzing the impacts on ACECs and CDNCLs in the FEIS and deferring this analysis to a later NEPA assessment and failed to adequately analyze the cumulative effects of geothermal leasing on special designations. The BLM also failed to conserve, protect, and restore the special-designation area values. BLM failed to provide any evidence or analysis showing that it is meeting the “conserve, protect, and restore” management mandate under the 2009 Omnibus Public Land Conservation Act.

Response:

NEPA directs that data and analyses in an EIS must be commensurate with the importance of the impact (40 CFR 1502.15) and that NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail (40 CFR 1500.1(b)). The

BLM is required to take a “hard look” at potential environmental impacts of adopting the changes in geothermal leasing allocation in the HGLA PRMPA/FEIS.

The level of detail of the NEPA analysis must be sufficient to support reasoned conclusions by comparing the amount and the degree of change (i.e., impact) caused by the proposed action and alternatives (BLM Handbook H-1790-1, § 6.8.1.2). The BLM need not speculate about all conceivable impacts, but it must evaluate the reasonably foreseeable significant effects of the proposed action.

A land use planning-level decision, such as the geothermal leasing allocation, is broad in scope. For this reason, analysis of land use plan alternatives is typically broad and qualitative rather than quantitative or focused on site-specific actions. The baseline data provides the necessary basis to make informed land use plan-level decisions. The analysis focuses on the direct, indirect, and cumulative impacts that could potentially result from on-the-ground changes. This analysis identifies impacts that may result in some level of change to the resources, regardless of whether that change is beneficial or adverse.

As noted on pages 47–48 of the HGLA PRMPA/FEIS, the DRECP Amendment identified CDNCLs and identified CMAs to conserve, protect, and restore the landscapes in accordance with the Omnibus Public Land Conservation Act of 2009 (PL 111-11). However, as further noted, PL 111-11 does not “include or define a process for developing specific management direction to conserve, protect, and restore resource values on the identified conservation lands...[but] the DRECP provides management direction to meet the objectives of PL 111-11...” The section continues with details noting that the CMAs apply to all National Conservation Lands identified under PL 111-11 in the CDCA and that they provide specific management goals or guidelines addressing Special Designation Areas, including the ACECs and CDNCLs, within the HGLA. For example, the CMAs provided in the DRECP Amendment include “umbrella actions” or standard practices for ensuring appropriate biological conservation and management through implementation of avoidance and minimization for activities and specific actions that would apply to all CDNCLs and ACECs (see specifically pp. 27–54 of the DRECP Land Use Plan Amendment Record of Decision). As described in Section 1.3.1, page 8, and Section 1.3.2, page 9, of the HGLA PRMPA/FEIS, the HGLA proposed amendment does not change the land use designations established under the DRECP Amendment. “Stipulations required for geothermal development will focus on protection of those special resource values should a decision be made to allow geothermal development in these areas” (p. 9 of the HGLA PRMPA/FEIS). As such, the ACECs, CDNCLs, and other allocations are still intact, along with the CMAs intended to “conserve, protect, and restore” the resources within the special designations. All alternatives identified in the HGLA PRMPA/FEIS would implement stipulations to protect sensitive resources and their associated significant biological, cultural, and scenic values or would not allow geothermal exploration and development in sensitive areas/ACEC/NCLs, as currently detailed in the DRECP Amendment.

The HGLA PRMPA/FEIS analysis of effects of geothermal development on ACECs and CDNCLs reflects the previous analysis from the HGLA Draft EIS/RMPA and Supplemental EIS, assumptions from the RFDS, and on additional geographic specific information. The HGLA PRMPA/FEIS noted that the analysis conclusions from the Draft RMPA/EIS and Supplemental EIS have not changed, and, therefore, they were incorporated by reference, but the Final EIS also included additional information to further present the affected environment and the environmental consequences (p. 15). Additionally, should the BLM issue geothermal leases in the future, those impacts would not occur until BLM authorized development following additional NEPA analysis and a lease issuance. Therefore, the analysis in the FEIS addresses both direct and indirect impacts for the entire HGLA based on the Reasonably Foreseeable Development (RFD) scenario. Additional site specific NEPA analysis would be conducted during the permitting review process for subsequent proposed exploration, drilling, and utilization activities.

Section 4.7.2, *Impacts by Alternative*, pages 69–74 of the FEIS, provides analysis of the effects of the amendment on the Desert Tortoise, Mojave Ground Squirrel, and other special status species with habitat within the ACECs and CDNCLs. For example, when discussing the impacts to the Mohave Ground Squirrel, the FEIS (HGLA PRMPA/FEIS pp. 69–70) notes:

All four ACECs would be open for geothermal development under Alternative A and may result in the permanent loss of 276 acres and temporary disturbance of 128 acres of Mohave ground squirrel habitat, depending on the location of development under the RFD. Development of the RFD under Alternative A could increase potential fragmentation of Mohave ground squirrel habitat by allowing development throughout the HGLA, including ACECs/CDNCLs specifically identified for Mohave ground squirrel protection.

Cumulative impacts for special status species, discussed in Section 4.21.2.6 of the HGLA PRMPA/FEIS (p. 99), notes,

Concerning listed species, the accelerated loss of habitat, combined with the increased potential for losses of burrowing or slow-moving species, such as the Mohave ground squirrel and desert tortoise, would represent the most significant cumulative impact from the HGLA RFD and other nearby developments. Development consistent with the proposed action, in conjunction with other projects, would diminish habitat availability and quality, and potentially result in the “taking” of these species. CMAs, stipulations, permitting requirements, and agreements between the CDFW and the BLM, including compliance with Section 7 of the ESA, could minimize such impacts. An increase in the number of roads and transmission lines would result in additional losses from collisions.

For cultural resources, the analysis in the HGLA Draft RMP/EIS provides a discussion of the general and alternative specific impacts associated with geothermal actions on cultural resources. The analysis describes the amount of area that could be affected

...under Alternative A the CDCA Plan would be amended to reflect the delineated HGLA as open to geothermal leasing for direct and indirect use, and 22,805 acres of BLM-administered lands or Federal mineral estate would be made available for geothermal exploration, development, and utilization. Under this alternative the BLM would authorize the three pending non-competitive lease applications for 4,277 acres. The reasonably foreseeable development of HGLA’s geothermal resources under Alternative A would result in the clearing and grading of an estimated 384 acres, or 1.7% of the planning area, for well sites, well fields, the geothermal generating facilities, and associated infra-structure. (HGLA Draft RMP/EIS, p. 4-79)

Cumulative impacts on cultural resources, discussed in Section 4.21.2.7, notes that

...cumulative effects are manifested in terms of the loss of historic properties due to ground disturbance associated with construction or operations and maintenance and any alterations of the significant characteristics of historic properties, such as visual, auditory, or atmospheric intrusions. Those historic properties considered to be especially sensitive to indirect effects are typically those for which integrity of setting, feeling, and association are contributors to the property’s NRHP eligibility and its ability to convey a sense of its own significance. Increased visual, auditory, or atmospheric degradation to properties that are eligible under NRHP Criteria A, B, and C, and that retain integrity of setting, feeling, and association, would result in permanent cumulative impacts. However, most of the land in the project area is under Federal jurisdiction and, therefore, is subject to protection afforded by cultural resource laws and evaluation of effects in accordance with NEPA and Section 106 of the NHPA, and cumulative impacts would be minimal or unlikely. (HGLA PRMPA/FEIS, p. 99).

All alternatives identified in the HGLA PRMPA/FEIS would implement stipulations to protect sensitive resources and their associated significant biological, cultural, and scenic values or would not allow geothermal exploration and development in sensitive areas/ACEC/CDNCLs, as currently detailed in the DCRECP LUPA. As noted above in the response to FLPMA – Consistency with the

CDCA, several standard terms and conditions would be included that address the values for which the ACEC and/or CDNCL was designated, such as stipulation NSO-HGLA-2 for the “protection of cultural and historical resources found within the Rose Springs ACEC,” stipulation CSU-HGLA-1 to “conserve the Mojave ground squirrel and its habitat,” stipulation CSU-HGLA-2 to “protect federally listed threatened and endangered species,” stipulation CSU-HGLA-3 to “consider effects to historic properties and cultural resources,” and TL-HGLA-1 to “conserve the desert tortoise and its habitat.”

NEPA – Response to Comments

Center for Biological Diversity et al.

Lisa Belenky et al.

Issue Excerpt Text: The BLM in response to comments regarding the proposed plan amendment (and other comments) is also inadequate in violation of NEPA. 40 C.F.R. § 1503.4(a)...The responses in the FEIS are vague and non-responsive – ignoring many substantive comments from the public and specifically from the Center. For example, the Center’s comments requested the inclusion of a dry-cooling requirement, which BLM rejected without providing reasonable justification despite the Rose Valley being in very arid region...[the response] is unsupported in the FEIS because a majority of the year, air temperatures would accommodate dry cooling coupled with new technology that minimizes water uses and during the day in the hot summer months other renewable energy sources are plentiful including solar power. Thus, while dry cooling may limit the production somewhat it does not make geothermal production technologically infeasible in this area. Therefore, specific NEPA analysis fails to formulate feasible alternatives to minimize impacts, meet the UUD standard, or avoid undue impairment.

Summary:

The BLM violated NEPA by providing vague and unresponsive responses in the FEIS, ignoring substantive comments provided by the public, including the suggested inclusion of dry cooling.

Response:

The BLM is required to assess, consider, and respond to all substantive comments received (40 CFR 1503.4). Substantive comments are those that reveal new information, missing information, or flawed analysis that would substantially change conclusions (BLM Handbook H-1601-1, pp. 23–24).

In compliance with NEPA, the BLM considered all public comments submitted on the Draft HGLA RMPA/EIS. The BLM complied with 40 CFR 1503.4 by performing a detailed comment analysis that assessed and considered all substantive comments received. Appendix Z of the HGLA PRMPA/FEIS presents the BLM’s responses to all substantive comments, including the response to alternative forms of technology, such as dry-cooling (see Section Z2.1.3 Common Response #3, Adequacy of Studies/Technologies Proposed and response L-14). The HGLA PRMPA/FEIS is based on an RFD scenario that makes reasonable assumptions to analyze possible future environmental effects that could result from the greater level of impacts attributable to other cooling mechanisms; if the dry-cooling technology is pursued, its impacts would be analyzed in a site-specific analysis.

The BLM summarized the issues raised by each comment letter and provided a meaningful response. The BLM’s response identifies any modifications to the alternatives, improvements to the impacts analysis, or factual corrections made as a result of public comment. The BLM’s response also explains why certain public comments did not warrant further agency response. The comment response process ensures that every comment is considered at some point when preparing the HGLA PRMPA/FEIS.

The BLM adequately responded to public comments on the HGLA Draft RMP/EIS.

NEPA – Consideration of Opposing Views

Center for Biological Diversity et al.

Lisa Belenky et al.

Issue Excerpt Text: NEPA also requires agencies to explain opposing viewpoints and their rationale for choosing one viewpoint over the other...The Center submitted several journal articles and analyses as attachments regarding groundwater related impacts and related issues as part of our comments on the DSEIS in 2019. The response to comments does not even mention this articles/analysis violating NEPA’s instruction to respond to “any responsible opposing view which was not adequately discussed in the draft statement.” 40 C.F.R. § 1502.9(b).

Summary:

The BLM violated 40 CFR 1502.9(b) by failing to respond to opposing views that commenters submitted.

Response:

The BLM is required to discuss and respond to any responsible opposing view that was not adequately discussed in the draft statement (40 CFR 1502.9). In compliance with NEPA, the BLM considered all public comments submitted on the Draft HGLA RMPA/EIS and HGLA PRMPA/FEIS. The BLM complied with 40 CFR 1502.9 by performing a detailed comment analysis that assessed and considered all substantive comments received. Appendix Z of the HGLA PRMPA/FEIS presents the BLM’s responses to all comments, including reviews of the suggested additional literature received (see Appendix Z, *Common Response #2*). Common Response #2 addresses comments submitted by the Center for Biological Diversity and other commenters related to groundwater impacts and measures taken by the BLM to ensure groundwater impacts are accounted for, monitored, and mitigated. As described in HGLA PRMPA/FEIS Section 4.6, *Water Resources*, and Common Response #2, any future NEPA analysis will develop site-specific hydrologic studies, potential impacts, and mitigation measures specific to proposed water use and technology.

The BLM reviewed the submitted journal articles related to groundwater impacts and information provided in the comment letters and determined that the information was substantially the same as the information provided in the FEIS. The BLM’s response identifies any modifications to the alternatives, improvements to the impacts analysis, or factual corrections made as a result of public comment. The BLM’s response also explains why certain public comments did not warrant further agency response.