



CENTER for BIOLOGICAL DIVERSITY

Because Life is Good!

November 22, 2010

Via Facsimile (916) 978-4388

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Re: Protest of the Bakersfield Field Office's December 8, 2010 Competitive Oil & Gas Lease Sale (DOI-BLM-C060-2010-0189)

This protest is filed on behalf of the Center for Biological Diversity (the "Center") pursuant to 43 C.F.R. §§ 4.450-2; 3120.1-3. The Center formally protests the inclusion of all 21 parcels included in the Bureau of Land Management's ("BLM") December 8, 2010 competitive oil and gas lease sale in California. For the reasons outlined below in the Statement of Reasons, we respectfully request the BLM withdraw from consideration all parcels currently included in the December 8, 2010 competitive lease sale.

INTRODUCTION

BLM proposes to offer for sale 10 parcels containing 2,743 acres of federal mineral estate for competitive oil and gas leasing. Final EA at 1.¹ BLM owns the surface and mineral rights on approximately 613 of these acres. The remaining 2,130 acres are split-estates, where private parties own the surface rights and BLM owns subsurface mineral rights. *Id.* All of 10 parcels subject to the sale are located in habitat for threatened and endangered species, including the San Joaquin kit fox, giant kangaroo rat, blunt-nosed leopard lizard, Tipton kangaroo rat, and San Joaquin antelope squirrel. Leasing and development of these parcels will cause cumulatively significant impacts to these species and their diminishing habitats. Further, the leasing and eventual development of the parcels will result in substantial emissions of greenhouse gases ("GHG"), particularly methane. These gases constitute a serious contribution to the ongoing and serious risks from climate change.

As explained below, the Final EA only provides a cursory and unspecific consideration of the significant impacts associated with oil and gas development activities – including impacts to air and water quality, sensitive species, and climate change. Therefore, the BLM cannot rely on the Final EA but should withdraw the NEPA document and prepare an analysis that adequately considers the full potential impacts of the lease sale. Despite the Center's lengthy and detailed comments submitted on the Draft EA, BLM made virtually no changes in response. Instead, the

¹ As we pointed out in our comments on the Draft EA, the document was unpaginated, making it difficult to cite. The Final EA is also unpaginated. In the future, we request that the agency include page numbers.

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agency's FONSI responds to comments by simply noting where the issues the Center raised are discussed in the EA. See e.g., FONSI at 2 ("Beginning on page 41 of the EA, specific species impacts are addressed including blunt nose leopard lizard, giant kangaroo rat, Tipton kangaroo rat, and the San Joaquin kit fox."); *id.* ("Global warming is addressed in Section 3 under Climate Change on page 12 of the EA."). In addition to violations of NEPA, the BLM has also violated FLPMA and the MLA by failing to undertake required analysis and consultation before issuing this lease sale. These and other bases of this protest are detailed below in the Statement of Reasons.

INTEREST OF THE PROTESTING PARTY

The Center is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 220,000 members and online activists throughout the United States, including many members who live in California and the San Joaquin Valley, as well as members who enjoy recreating in, studying, and enjoying the scenic qualities of remaining undeveloped public lands in the Bakersfield BLM District by viewing native, imperiled, and sensitive species in their habitats. This protest is made on behalf of our board members, our staff, our members, and members of the public with an interest in protecting the biological resources of this area, air and water quality, and in ensuring that impacts to global warming are adequately addressed in all federal actions.

On September 17, 2010, the Center submitted comments on BLM's Draft EA for the December 8, 2010 lease sale, thereby exhausting administrative remedies. Because the BLM made only minor changes between the Draft and Final EA and no substantive changes to the proposal, and the issues raised in this protest are identical to those raised in our EA comments. The Center authorizes Sarah Uhlemann, a staff attorney for the organization, to submit this appeal on the Center's behalf.

REQUEST FOR RELIEF

Given this level of importance, and particularly due to the legal violations described in the Statement of Reasons below that have occurred or will occur on the date of the sale of the parcels at issue here, the Center respectfully requests that:

1. The BLM withdraw all parcels from the lease sale and suspend any decision to lease the proposed parcels until the agency has complied with federal law and considered all new information, changed circumstances and other relevant issues;
2. The BLM prepare a full Environmental Impact Statement ("EIS") before approving parcels for competitive lease. A full EIS is required due to the impacts the project will have on the San Joaquin kit fox and other federal and state protected species, as well as the impacts from greenhouse gas emissions on climate change. The EIS must provide a full analysis of all impacts; and

3. The BLM require mitigation measures, including those listed in EPA's Gas STAR program, to leakage and prevent unnecessary emissions of greenhouse gases, in order to comply with the Federal Land Policy and Management Act and the Mineral Leasing Act's

STATEMENT OF REASONS

I. The EA fails to take a hard look at the December 8, 2010 lease sale's environmental consequences in violation of NEPA.

A. The National Environmental Policy Act

NEPA is the "basic charter for protection of the environment." 40 C.F.R. § 1500.1(a). In enacting NEPA, Congress declared a national policy of "creat[ing] and maintain[ing] conditions under which man and nature can exist in productive harmony." *Or. Natural Desert Ass'n v. BLM*, 531 F.3d 1114, 1120 (9th Cir. 2008) (quoting 42 U.S.C. § 4331(a)). NEPA is intended to "ensure that [federal agencies] . . . will have detailed information concerning significant environmental impacts" and "guarantee[] that the relevant information will be made available to the larger [public] audience." *Blue Mtn. Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998).

Under NEPA, before a federal agency takes any "major Federal action[] significantly affecting the quality of the environment," the agency must prepare an EIS. *Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1067 (9th Cir. 2002) (quoting 43 U.S.C. § 4332(2)(C)). "An EIS is a thorough analysis of the potential environmental impact that 'provide[s] full and fair discussion of significant environmental impacts and . . . inform[s] decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.'" *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004); 40 C.F.R. § 1502.1.

Alternatively, an agency may issue an environmental assessment ("EA") to determine whether the proposed action will "significantly affect" the environment and thus require an EIS. 40 C.F.R. § 1501.4; *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000). An EA "[s]hall include brief discussions of the need for the proposal, of alternatives as required by § 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted." 40 C.F.R. § 1508.9. To assess whether a project will have significant impacts, the agency must evaluate the unique characteristics of the area; whether the action is related to other actions that will result in cumulatively significant impacts; whether the action may adversely affect listed species; and whether the action threatens a violation of substantive law. *Id.* § 1508.27(b).

If the EA reveals that the proposed action will significantly affect the environment, then the agency must prepare an EIS. 40 C.F.R. §§ 1501.4, 1508.9. If the agency decides, based on the EA, not to prepare an EIS, then the agency must provide a convincing statement of reasons why the action's effects are insignificant. *Blue Mtns.*, 161 F.3d at 1212. The statement of reasons is crucial to determining whether the agency took a hard look at the potential environmental

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impacts of the project. *Id.*; see also *Marble Mtn. Audubon Soc'y v. Rice*, 914 F.2d 179, 182 (9th Cir. 1990) (“An agency must set forth a reasoned explanation for its decision and cannot simply assert that its decision will have an insignificant effect on the environment.”). Moreover, if an EA raises “substantial questions” as to whether a project “may cause a significant degradation of some human environmental factor,” the agency must prepare an EIS. *Id.*

If an environmental impact is considered in a programmatic EIS, then that impact does not have to be re-examined in a site-specific EIS. See *Headwaters v. Bureau of Land Mgmt.*, 914 F.2d 1174, 1178 (9th Cir. 1990). However, to tier to a programmatic EIS, the programmatic EIS must account for specific impacts of the proposed project and contain details concerning the proposed project and its impacts. See *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 810 (9th Cir. 1999).

B. The EA fails to adequately describe and consider existing environmental conditions.

As the Ninth Circuit has held, the agency must sufficiently describe the pre-action environment, or the “baseline conditions which exist in the vicinity.” *Half Moon Bay Fishermans' Marketing Ass'n v. Carlucci*, 857 F.2d 505 (9th Cir. 1988). Otherwise, “there is simply no way to determine what effect the proposed [action will have] on the environment and, consequently, no way to comply with NEPA.” *Id.* Here, BLM fails to adequately describe the current condition of the project area and its resources, including the effects of climate change and the current status and distribution of protected species.

1. The EA fails to adequately describe global warming and its impacts on the affected area.

As described in the Center’s comments on the Draft EA, the Final EA fails to provide a meaningful discussion of the changing environmental baseline conditions due to climate change. In comparison to previous BLM Bakersfield District oil and gas lease sale EAs, the EA for the December 8, 2010 lease sale provides more description of climate change and its current effects on the project area. However, the discussion continues to provide only topical information regarding anthropogenic contributions of GHGs, anticipated temperature changes, and generalizations regarding how global warming is expected to impact southern California, without the site-specific, substantive analysis required. See EA at 13-15.

Agency experts have acknowledged that “climate change has already caused—and will likely continue to cause—physical changes, including drought, floods, glacial melting, sea level rise, and ocean acidification” as well as “biological changes, such as increases in insect and disease infestations, shifts in species distribution and abundance, and changes in the timing of natural events (referred to as phenological changes), among others.”² In addition, agency experts

² GAO, *Climate Change: Agencies Should Develop Guidance for Addressing the Effects on Federal Land and Water Resources*, GAO-07-863 (Aug. 7, 2007), available at: <http://www.gao.gov/new.items/d07863.pdf>. The Center submitted a hard copy of this study, as well as most of the other studies referred to in this comment, with its December 14, 2009 comments on the Bakersfield BLM Field Office’s Draft EA for the March 10, 2010 Oil & Gas Leasing (DOI-BLM-C060-

have acknowledged that "climate change is likely to adversely affect economic and social goods and services supported by federal resources, including recreation, tourism, infrastructure, water supplies, fishing, ranching, and other resource uses."³

Despite clear evidence that impacts from climate change are happening and have already altered the environment at the local level, BLM continues to claim that "[i]t is often difficult to discern just how global climate change is affecting resources." EA at 14. However, there is substantial scientific literature demonstrating how climate change is affecting and will continue to affect resources in California under low and high emissions scenarios.

In an apparent response to our comments on previous oil and gas leasing EAs, BLM's Final EA, just like its Draft, generally acknowledges some impacts to California described by the California Climate Change Center.⁴ The EA lists potential impacts as: decreased snow pack in the Sierra Nevada, rising sea levels, contractions of species' ranges, rising sea levels, and increased wildlife danger. EA at 14. Further, the agency cites predictions that frequency, intensity, and duration of conditions conducive to air pollution formation may increase as a result of climate change, as well as changes in precipitation.⁵ *Id.* However, outside of parroting back the information provided by the Center and others in previous comments, BLM provides no independent analysis of effects of climate change in California. *See id.* at 13, 14.

While we appreciate the agency's efforts to address our concerns, it is the agency's to duty to fully consider impacts and objectively analyze the environmental baseline for the project. It is not sufficient for the agency to simply list impacts. *See Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F. Supp. 908, 922 (D. Or. 1977) ("Conclusory statements which do not refer to scientific or objective data supporting them do not satisfy NEPA's requirement for a 'detailed statement.'"); *Ocean Advocates v. U.S. Army Corps of Eng'rs*, 361 F.3d at 1128 ("[g]eneral statements about possible effects . . . do not constitute a hard look").

Further, the agency fails to address other important localized impacts of climate change. For example, the final report of the U.S. Global Change Research Program reports weather changes and also describes how increased susceptibility to wildfires during droughts has threatened roads and other transportation infrastructure due to fire threat or reduced visibility.⁶ In California there are predictions for earlier and reduced runoff; water constraints on electricity production in thermal power plants by 2025; annual heat-related death rates in Los Angeles that are two to three times higher than 1990s levels (~165) under a lower emissions scenario, and by five to seven times under a higher emissions scenario, by the 2090s; range reductions of up to 80 percent for two-thirds of the more than 5,500 native plant species before the end of this century;

2009-0175-EA). We refer BLM to that comment for the studies. For any citations in this comment not included in our December 14, 2009 comments, we provide a URL.

³ *Id.*

⁴ Cayan, et al. 2007. Our Changing Climate: Assessing the Risks to California. California Climate Change Center.

⁵ California Climate Action Team, 2006: Climate Action Team Report to Governor Schwarzenegger and the Legislature. California Environmental Protection Agency, Sacramento, 107 pp.

⁶ *See* Cayan, et al., *supra* n. 5, at 67.

and the decline of high-elevation forests by 60 to 90 percent by the end of the century. *Id.* at 56, 91, 131.

Further, EPA has explicitly acknowledged that climate change resulting from elevated GHG levels would result in human health risks such as heat-related mortality, exacerbated air quality, aggravated risks for respiratory infection, aggravation of asthma, and potential premature death for people in susceptible groups.⁷ The World Health Organization has estimated that as of the year 2000, 154,000 deaths and the loss of 5.5 million daily adjusted life years per year worldwide already attributable to global warming.⁸ These figures have mounted over the past nine years and will continue to grow until effective emissions reductions are implemented. In addition, the EPA has acknowledged the harms associated with the climate crisis, highlighting many of these impacts.⁹

The EPA has also issued a determination under the Clean Air Act that GHGs emitted from new motor vehicles and engines are endangering the public health and welfare by resulting in “changes in air quality, increases in temperatures, changes in extreme weather events, increases in food- and water-borne pathogens, and changes in aeroallergens.”¹⁰ The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (“IPCC”), a conservative synthesis of the most reliable scientific knowledge available about climate change, leaves absolutely no question that the emissions of GHGs and the resulting changes to Earth’s climate are endangering the public health and welfare.¹¹ For instance, the IPCC has concluded that it is “virtually certain” that air quality will decrease due to increasing temperatures.¹² The EA mentions none of these very serious threats to humans from climate change.

Climate change is not only already affecting human health, but also the survival of imperiled species. For example, as the climate warms, many species in the United States are already shifting their ranges northward and to higher elevations. Seventy percent of 23 central California butterfly species have advanced their first flight date over 31 years, by an average of 24 days, with climate variables explaining 85 percent of variation in flight date and warmer, drier winters driving the early flight.¹³ The northern boundary of the sagem skipper butterfly has expanded from California to Washington State (420 miles) in just 35 years.¹⁴ During a single

⁷ 73 Fed. Reg. 44,354, 44,426 (July 30, 2008); Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act (Dec. 2009) (“Endangerment TSD”). Available at: <http://www.epa.gov/climatechange/endangerment.html#findings>.

⁸ World Health Organization, 2002. The World Health Report 2002. Available at: www.who.int/whr/2002/en/index.html.

⁹ 73 Fed. Reg. at 44,426-27.

¹⁰ See EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act (Dec. 7, 2009) (“Endangerment Finding”); see also EPA, Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act (Dec. 2009) (“Endangerment TSD”). Available at <http://www.epa.gov/climatechange/endangerment.html#findings>.

¹¹ Bernstein 2007; Meehl 2007; Christensen 2007.

¹² *Id.*

¹³ Forister, M.L. and A.M. Shapiro, Climatic trends and advancing spring flight of butterflies in lowland California, *Global Change Biology* 9:1130-1135 (2003).

¹⁴ GCRP Report (citing Crozier (2003); Crozier (2004)).

year – the warmest on record (1998) – the sagem skipper butterfly moved 75 miles northward.¹⁵ Due to a warming climate over the past 136 years in the American West, over 70 percent of the southernmost populations of the Edith's checkerspot butterfly have gone extinct.¹⁶ Although the northernmost populations and those above 8,000 feet elevation in the cooler climate of California's Sierra Nevada are still viable, the geographic range of the Edith's checkerspot butterfly is still shifting northward and to higher elevations.¹⁷ Meanwhile, due to a failure of synchronicity between checkerspot butterflies and the resources on which they depend, local population extinctions during extreme drought and low-snowpack years in California have been documented.¹⁸ Indeed, because their change in range is slow, most species are not expected to be able to keep up with the rapid climate change projected in the coming decades.¹⁹

The climate crisis is the most significant and pervasive threat to biodiversity worldwide, affecting both terrestrial and marine species from the tropics to the poles. The IPCC finds that the resilience of several ecosystems is likely to be overcome this century by a dangerous brew of climate change, associated disturbances (such as flooding, drought, wildfire, insects and ocean acidification) and other environmental drivers such as pollution and overexploitation of resources.²⁰ Along with increases in global average temperatures beyond 1.5-2.5° C and accompanying increased levels of atmospheric CO2 concentrations will come major changes in ecosystem structure and function, species' ecological interactions, and species' geographical ranges.²¹

The EA dismisses any concerns to California species from climate change, stating simply "there is a lot of new information indicating the type and nature of impacts on particular biological resources (butterflies, polar bears, etc), [but] it is often difficult to discern just how global climate change is affecting resources at the local or regional level." EA at 14. However, this information is unquestionably available, and it is the agency's duty under NEPA to seek and provide that information to public. See *Blue Mtns Biodiversity Project*, 161 F.3d at 1212 (NEPA is intended to "ensure that [federal agencies] . . . will have detailed information concerning significant environmental impacts" and "guarantee[] that the relevant information will be made available to the larger [public] audience").

BLM clearly failed to incorporate the ongoing and projected impacts of climate change. This failure violates NEPA's requirement to sufficiently analyze the environmental baseline

¹⁵ Parmesan, C. & G. Yohe. 2003. A globally coherent fingerprint of climate change impacts across natural systems. *Nature* 421: 37-42. Parmesan, C. & G. Hector. 2004. Observed Impacts of Global Climate Change in the U.S. Prepared for the Pew Center on Global Climate Change.

¹⁶ GCRP Report at 80 (citing Parmesan, C., 1996: Climate and species range. *Nature*, 382(6594), 765-766.

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.* The GAO recognized that "some rare ecosystems, such as alpine tundra, California chaparral, and blue oak woodlands in California may become extinct altogether." GAO-07-863 at 26.

²⁰ Bernstein et al. (2007). Summary for Policymakers. In: Synthesis Report in Climate Change 2007: A Report of the Intergovernmental Panel on Climate Change. Available at <http://www.ipcc.ch>. See also Hayhoe, K., et al. (2004). Emissions pathways, climate change, and impacts on California. *PNAS* 101 no. 34:12422-12427.

²¹ *Id.*

conditions to allow a full assessment of the sale's impacts to affected resources. *Half Moon Bay*, 857 F.2d at 510. Further, despite our comments on this failure in the Draft EA, BLM failed to make any changes in its Final EA. Instead, in response to our comments, BLM simply states that "[g]lobal warming is addressed in Section 3 under Climate Change on page 12 of the EA." FONSI at 2. This conclusory response is inadequate.

2. The EA fails to account for the status of increasingly-imperiled species and diminishing habitat.

In describing the current status of the affected environment, the EA fails to account for threatened, endangered, and sensitive species and their diminishing habitat. The EA provides absolutely no discussion of the current status, habitat requirements, population trends, or recovery efforts for three of the listed species that are found on the parcels proposed for listing, including the blunt-nosed leopard lizard, giant kangaroo rat, and Tipton kangaroo rat. EA at 21. The EA simply notes that the species are federally listed and may inhabit the leasing parcels. *Id.* This is grossly insufficient. There is no way for the agency or the public to evaluate the impacts of the leasing and potential development of the area without some description of current condition of imperiled wildlife that will be affected. *Half Moon Bay*, 857 F.2d at 510.

Although the EA does include some description of effects of oil and gas drilling on the gravely imperiled San Joaquin kit fox, the agency fails to consider the history and status of the San Joaquin kit fox. The kit fox has been listed as "endangered" since 1967, and has continued to decline ever since. Much remaining San Joaquin kit fox habitat is fragmented and degraded from livestock grazing and oil and gas drilling. Cypher (2000). The species has been fractured into three large populations and 10 smaller subpopulations, resulting in a very limited genetic exchange capacity. *Id.* This in turn makes kit fox populations more susceptible to genetic bottlenecks, and places a premium on remaining populations, wherever they occur, and what little connected habitat the kit fox has left. *Id.*

In 1998, FWS released a final recovery plan for the kit fox and 10 other San Joaquin threatened and endangered species. The plan emphasizes that because "habitat loss is the primary cause of [the species'] endangerment in the San Joaquin Valley," a central component for their recovery is a "network of conservation areas and reserves that represent all of the pertinent terrestrial and riparian natural communities" in the Valley.²² Rec. Plan at xi. The recovery plan makes clear that the "most important aspect of habitat protection is that land uses maintain or enhance species habitat values." *Id.* Accordingly, "[e]xisting natural lands" that are "occupied by the covered species" are to be conserved, and "large blocks" of land are to be protected "whenever possible" and connected to each other "by natural land or land with compatible uses to allow for movement of species." *Id.* (referring to such blocks to "stepping stones"). For the kit

²² FWS, Recovery Plan for Upland Species of the San Joaquin Valley, California (1998) ("Recovery Plan"). In addition to the kit fox, the other species covered by the Recovery Plan include the California jewelflower, palmate-bracted bird's-beak, Kern mallow, San Joaquin woollythreads, Bakersfield cactus, Hoover's woolly-star, giant kangaroo rat, Fresno kangaroo rat, Tipton kangaroo rat, and blunt-nosed leopard lizard, in addition to 23 candidate species including the San Joaquin antelope squirrel, short nosed kangaroo rat, Tulare grasshopper mouse. *Id.* at viii.

fox in particular, the recovery plan recognizes that it is “one of the species that will be hardest to recover,” and as such, its “needs are given higher priority” than those of other species. *Id.*

The recovery plan also recognizes the giant kangaroo rat as a “keystone species” in its communities, because it “modifies the surface topography of the landscape and changes the mineral composition of the soil.” *Id.* The burrows created by the giant kangaroo rat – which is also listed as endangered and the “favored prey of San Joaquin kit foxes” – “provide refuges and living places for many small animals” such as the endangered blunt-nosed leopard lizard. Further, the “areas over and around their burrows provide a favored microhabitat” for the California jewelflower and San Joaquin woolly-threads, both of which are also endangered and present in the leasing parcels. *Id.*

Further, the BLM once again fails to mention, let alone consider, alarming new information that the kit fox is in even greater peril than previously thought. Indeed, as the Center has repeatedly informed BLM in comments and protests on Bakersfield lease sales, recent information indicates that the kit fox could be extinct in 24 years if current management (including by BLM) continues.²³ Yet, there is no mention in the EA of this alarming downward trend, let alone a discussion of the significance of the lease sale in light of it.

The analysis of the existing condition of the California condor in the EA is also incomplete. We appreciate that BLM has deferred offering 40 acres that occur within condor critical habitat, and we agree that the agency should defer leasing on any land within the condor’s range until a biological opinion is complete. See EA at 5. The EA states that no leases occur in either the condor’s historic range, based on Figure 1 of U.S. FWS’s Recovery Plan, or in “current use areas” based on GPS data from FWS. Final EA at 17-18. However, the FWS’s Recovery Plan historic range map is at an extremely broad scale, and parcels 4, 5, 6, 7, and 8 are very close to that range, so it remains unclear whether the parcels are within or outside that range.²⁴

Further, the map provided by the agency’s Final EA indicates that parcels 4, 5, 6, 7, and 8 are within roughly 5 miles of a “Condor Range.” It is unclear whether this marked area reflects the historical range or “current use areas.” If the map reflects “current use areas,” the agency certainly should have considered the impacts of parcels – located just a few miles away – on condors. The BLM should re-assess whether the proposed project may affect the California condor and, as detailed below, fully evaluate potential impacts from this proposed project.

BLM’s failure to discuss the current status of species that will be impacted the leasing and development of these parcels is contrary to NEPA, which requires BLM to accurately describe baseline environmental conditions. *Half Moon Bay*, 857 F.2d at 510; see also *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989) (NEPA ensures that agencies “will have available, and will carefully consider, detailed information concerning significant

²³ McDonald-Madden et al. 2008. Subpopulation Triage: How to Allocate Conservation Effort among Populations; *Conservation Biology*, Volume 22, No. 3, 656-665.

²⁴ See, e.g., USFWS, Recovery Plan for the California Condor (1996) at 3 (Figure 1); California Department of Fish and Game, Range Map for Nonlead Centerfire Rifle & Pistol Ammunition (Ridley-Tree Condor Preservation Act, Sec. 2). Available at <http://www.dfg.ca.gov/wildlife/hunting/condor>.

environmental impacts,” and “the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process”).

C. BLM fails to take a hard look at the sale’s impacts by only considering impacts resulting from a subset of the proposed action.

While we provide detailed comments regarding the specific impacts of lease sale below, one fundamental flaw infects every part of EA’s analysis. Instead of analyzing the impacts that may result from the leasing, exploration, and eventual development of all potential wells across the 10 parcels proposed for leasing – covering 2,743 acres of land – the EA unlawfully assumes that *only one well* will ultimately be drilled and only a single acre of land will be disturbed. EA at 25. BLM refers to this assumption as its “Reasonably Foreseeable Development” scenario (“RFD”).

By using the RFD, instead of considering the impacts of the leasing action that the agency is actually proposing, the agency artificially minimizes the potential environmental impacts of the sale. Under the agency’s bifurcated environmental analysis process, at the leasing stage, the agency must consider all potential impacts of leasing, exploration, and drilling of numerous wells on all the parcels it proposes. 43 C.F.R. Part 3120. While ultimately, it may be true that only one lessee actually submits an Application for Permit to Drill (“APD”) on the proposed leases, the agency can consider the impacts of that one drilling permit *at that time*. At this stage, however, the agency must evaluate the impacts as though all parcels will be developed. NEPA’s implementing regulations require agencies to consider the effects of their actions, and do not allow consideration of only a subset of the action. 40 C.F.R. § 1508.8 (agency must consider all “reasonably foreseeable” direct and indirect effects of a project).²⁵

There is also no support for BLM’s assumption that only one well will be drilled, and thus only one acre of land will be permanently disturbed as a result of the lease sale. EA at 5. The lease sale will irretrievably commit over 2,700 acres of land to potential development, and “all of [the parcels] are classified as having *high potential* for occurrence of hydrocarbons.” *Id.* at 23 (emphasis added). BLM’s conclusion that only one well from the 2,700 acres of leased lands will be drilled is questionable. Further, even if only one well is drilled, it is likely that more than one acre of land will be affected. The agency must not only consider the direct impacts of the construction of the pad and drilling equipment, the agency must also consider construction of roads and pipelines required for oil transport. A recent analysis by the BLM office in Montana, North Dakota, and South Dakota assumed that the “maximum area cleared per well pad would be 3.5 acres (about 380 ft. x 400 ft.)” and the “maximum area cleared per access road per well

²⁵ NEPA also requires that environmental analysis be conducted at “the earliest possible time” and to the “the fullest extent possible.” See *N.M. ex rel. Richardson v. BLM*, 565 F.3d 683, 718 (10th Cir. 2009); 40 C.F.R. §§ 1501.2, 1502.22. This is particularly true in the context of this leasing sale, because leasing is when public resources are irreversibly and irretrievably committed. *Pennaco*, 377 F.3d at 1160. BLM must consider the extent of disturbance that the agency is actually permitting to occur, not the amount of disturbance that the agency surmises might occur through use of the RFD.

would be 17 acres (about 40 ft. x 18480 ft.).²⁶ BLM fails to provide adequate support for its assumptions.

Moreover, the EA fails to address the different effects resulting from surface as opposed to directional drilling, even though most of the proposed parcels are split-estates. Directional drilling – the practice of drilling at a slant adjacent to and outside of BLM boundaries to extract privately-owned oil and gas from beneath the surface – can have numerous environmental impacts that are unique, depending on the location. The EA fails to note that there are such unique impacts here, and further fails to consider them. *See* 40 C.F.R. § 1500.2(d) (one of NEPA’s fundamental policies is to “emphasize real environmental issues and alternatives”).

BLM not only fails to analyze the true impacts action proposed, but also forecloses BLM, other agencies, and the public from identifying “significant environmental issues” that are “deserving of study” at this early stage. BLM simply cannot assume that only one well will actually result from its proposal and that no other impacts from these lease sale will occur. *See Blue Mts.*, 161 F.3d 1208, 1211 (9th Cir. 1998) (agency must supply a convincing statement of reasons to explain why a project’s impacts are insignificant).

D. The EA fails to analyze the nature, intensity, and extent of the lease sale’s actual impacts.

Although the EA identifies some potential risks from the proposed lease sale, BLM fails to provide sufficient discussion and analysis of the extent, likelihood, or cumulative effects.

1. Impacts to threatened, endangered, and sensitive species and their habitat

a. Impacts to the San Joaquin kit fox

Although the EA lists some potential impacts that the lease sale and eventual oil and gas development will have on threatened and endangered species, it does not discuss the likelihood of such occurrences, population-level effects on San Joaquin kit fox, or strategies to avoid adverse impacts.

There is no question this lease sale will impact kit fox because proposed parcels are in kit fox habitat. As the EA notes, studies demonstrate 50 percent lower abundance of kit foxes in areas of “high intensity” oilfield sites and even in areas of “moderate” intensity of development. EA at 44-45 (citing Spiegel (1996)). Further, as the Recovery Plan acknowledges, petroleum field development is a fundamental threat to the kit fox’s survival in the southern half of the San Joaquin Valley “due to grading and construction for roads, well pads, tank settings, pipelines, and settling ponds” and “[h]abitat degradation [that] derives from increased noise, ground vibrations, venting of toxic and noxious gases, and release of petroleum products and waste waters.” Recovery Plan at 130.

²⁶ *See* Climate Change Supplementary Information Report, Montana, North Dakota, and South Dakota BLM (Aug. 2010) at 79, http://www.blm.gov/pgdata/etc/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/eas.Par.61972.File.dat/SIR.pdf.

The EA acknowledges that kit foxes can be killed from being struck by vehicles, drowned in oil or sumps, crushed by heavy equipment, entombed, or trapped in spilled oil or sumps, pipes, and oil well cellars. EA at 45. The EA further notes that construction of well pads, roads, pipelines, and related facilities alters and/or fragments habitat. *Id.* Indeed, “[o]ilfields are often places of continual human disturbance from well drilling, maintenance, and monitoring, operation of production facilities, transportation of produced oil, and associated industrial activities.” *Id.* As such, oilfields become areas that are fundamentally incompatible with kit fox viability over the long term.

Despite briefly naming the potential harm to individual foxes, the EA fails to actually discuss how vehicle strikes, habitat disturbance, and other adverse impacts resulting from the lease sale will affect these species’ population. Each quarter, the Bakersfield BLM proposes and approves lease sales in kit fox habitat. Although each time, the agency notes that impacts to kit fox may occur, the agency apparently does not maintain survey and monitoring data evaluating the actual effects of those past leases. It is unclear how BLM is ensuring that impacts from past and ongoing projects have remained within the amount of approved take.

Further, because the agency lacks survey and monitoring data regarding the impacts of past sales, the does not estimate the how many foxes will be impacted by the December 18, 2010 lease sale. As the EA describes, one study found that, from 1980 to 1985, “43 [kit foxes] died from oil field-related causes (35 hit by vehicles, 1 accidentally entombed, 3 drowned in spilled oil, 1 drowned in an oil sump, 2 entrapped in pipes, and 2 died entrapped in a well cellar).” It is unclear whether drilling has increased since this time, and thus even higher death rates may be expected. The agency entirely fails to estimate the impact of taking that many kit fox will have on the species locally and population-wide. BLM’s failure to substantively consider how the lease sale may affect any of these species or provide a “convincing statement of reasons” why the action’s effects are insignificant violates NEPA. *Blue Mountains*, 161 F.3d at 1212.

Additionally, the Recovery Plan for the kit fox designates three “core areas” for kit fox recovery. Recovery Plan at 133. The EA acknowledges that drilling may occur in the Western Kern County core kit fox area. EA at 47. The agency deems this impact “negligible” because it will “require[] a 4:1 compensation ratio for permanent disturbance” in core areas. However, the EA fails to describe what type of “compensation” will be required, whether the “compensated” habitat will be connected to currently used habitat, or how the agency will ensure the quality of habitat will actually compensate for habitat lost.

Courts have repeatedly emphasized that merely identifying potential impacts, without considering their nature, intensity, and extent, is insufficient to satisfy NEPA. *Ocean Advocates v. U.S. Army Corps of Eng’rs*, 361 F.3d at 1128 (“[g]eneral statements about possible effects and some risks do not constitute a hard look absent a justification why more definitive information could not be provided”); *Defenders of Wildlife v. Babbitt*, 130 F. Supp. 2d at 128 (setting aside EIS where it “states that noise would be increased and both the pronghorn and their habitat would be disturbed” but contains “no analysis of what the nature and extent of the[se] impacts will be”). BLM’s refusal to consider the intensity and extent of such impacts to listed and threatened species is inconsistent with these requirements.

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Further, BLM continues to rely on outdated programmatic biological opinions that do not account for changing information regarding the species' status.²⁷ Indeed, in their recent study, McDonald-Madden et al. found that if current management continues, the San Joaquin kit fox may be extinct within 24 years.²⁸ Given this alarming new information, BLM must reinstate consultation with FWS under section 7(a)(2) of the ESA regarding the impacts to the San Joaquin kit fox from all projects that may affect the species in the area, including the oil and gas leasing program.

b. Impacts to the California condor

Historically, California condors ranged from British Columbia to Baja (Meretsky 2000), but because of human activity, their numbers dropped to the brink of extinction. Condors were listed as a critically endangered species in 1967,²⁹ and remain one of the most endangered vertebrate species. While the California condor's numbers are slowly rising, this is due entirely to intensive conservation efforts, and the species still faces numerous human-induced threats and are not currently considered to be self-sustaining.³⁰ Currently, there are only 337 California condors left in the world, and only 92 in the wild in California.³¹ Of these numbers, a portion of remaining condors reside in relative proximity to the proposed leasing sites on border of Kern and San Luis Obispo Counties.

As noted above, it is unclear from the information provided by BLM whether the lease parcels are adjacent to the condor's historical range or current use areas. Further, while the agency claims to have relied on FWS GPS data to analyze where "current use areas" are located, the agency does not describe the areas' proximity or cite or summarize the data upon which it relied. Because the parcels are proximity to condor habitat, BLM should re-assess whether the proposed project may affect the California condor and, as detailed below, fully evaluate potential impacts from this proposed project.

Condors are incredibly susceptible to many of the dangers presented by human disturbances and encroachment. In fact, in one National Wildlife Refuge that allowed oil and gas development, FWS estimated the 63 percent of critical condor habitat was lost.³² Impacts may include habitat destruction from the actual production facilities, as well as road and pipeline construction, and elimination of food sources from the infrastructure.³³ Condors are known to

²⁷ 2001 BiOp; Caliente Resource Management Plan and its Biological Opinion, FWS File # I-I-97-F-64 ("CRMP BiOp").

²⁸ McDonald-Madden et al. 2008. Subpopulation Triage: How to Allocate Conservation Effort among Populations; *Conservation Biology*, Volume 22, No. 3, 656-665.

²⁹ 32 Fed. Reg. 4001 (1967).

³⁰ Meretsky, V. J., N. F. R. Snyder, S.R. Beissinger, D.A. Clendencn, J.W. Wiley. 2000. Demography of the California Condor: Implication for Reestablishment 14(4): 957-967

³¹ Condor Population Status Summary. Population Size and Distribution as of November 30, 2009.

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³² US General Accounting Office. 2003. National Wildlife Refuges: Opportunities to Improve the Management and Oversight of Oil and Gas Activities on Federal Lands (GAO-03-517). Washington D.C., USA 73p.

³³ GAO-03-517.

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use a wide acreage of habitat; they separate their nesting area from their foraging areas and have been known to fly more than 200 km and traverse their entire habitat range in one day.³⁴ Therefore, the agency must estimate the total amount of condor habitat that may be lost to the lease sale, including this large amount of space they can cover in one day. Further, habitat fragmentation is of particular concern because all California condors come from only a small number of captive condors and have a very limited amount of genetic variability.³⁵ To prevent the condors from become inbred, it is important to retain as much habitat connectivity as possible.

In addition, general human activity associated with oil and gas extraction could discourage condor use of habitat that may otherwise be suitable for nesting, perching, roosting, or foraging.³⁶ Project related noise, such as from detonations, gas compressors, diesel-powered electric generators, could cause adult birds to repeatedly flush from, or eventually abandon, an active nest, or prevent them from choosing otherwise suitable habitat as a nest site. Moreover, condors have been documented landing on oil pads and other production equipment, presenting a threat to their health and safety and reducing their fear of humans.³⁷ In 2002, FWS had to flush a condor from an oil pad and remove oil from its face and wings. FWS concluded that the condor became immersed in oiled while trying to tear an oily rag from a pipe. FWS has found numerous other condors with oil on their heads, while photographs and reports demonstrate habituation of condors to oil drilling equipment.³⁸ Oil and gas operations have been very harmful to nesting condors as well. At least one chick has died after its father dipped its head in a pool of oil and rubbed against the chick.³⁹ The BLM entirely fails to consider any of these impacts to condors.

c. Other species

There numerous other species in the lease sale area that could be affected by the lease sale that are not meaningfully considered at all in the EA in violation in NEPA, including at least the following:

- Blunt-nosed leopard lizard - Federally and State Endangered; State fully-protected
- Short-nosed kangaroo rat - BLM sensitive; Federal Candidate Species
- Giant kangaroo rat - Federally and State Endangered
- Tipton kangaroo rat - Federally and State Endangered
- San Joaquin Antelope Squirrel - Federally Endangered
- Pallid bat - Species of Special Concern (CA)
- Tulare grasshopper mouse - Species of Special Concern (CA)
- San Joaquin pocket mouse - Special Animal (CA)

³⁴ Meretsky, V.J., N.F.R. Snyder. 1992. Range Use and Movements of California Condors. 94(2): 313-335.

³⁵ Cohn, J. P., 1993. The Flight of the California Condor. BioScience. 43 (4): 206-209.

³⁶ U.S. Dep't of Interior, USFWS. Biological Opinion on the Proposal to Lease Oil and Gas Resources within the Boundaries of the Los Padres National Forest, California (Feb. 23, 2005).

³⁷ GAO-03-517.

³⁸ U.S. Forest Service. Effects of the Leasing Decision on the California Condor and other T&E Species (Aug. 12, 2005).

³⁹ *Id.*

- Burrowing owl - Species of Special Concern (CA)
- Mountain plover - Species of Special Concern (CA)

The EA provides virtually no analysis of impacts to these species. Instead, believing that it only need to consider the impacts of the one well BLM anticipates will be drilled as a result of the lease, the BLM summarily concludes impacts to species are negligible. EA at 43-48. Further, the agency claims that it will defer consideration of effects until actual drilling is proposed. *Id.* BLM's failure to substantively consider how the lease sale may affect any of these species or provide a "convincing statement of reasons" why the action's effects are insignificant violates NEPA. *Blue Mountains*, 161 F.3d at 1212.

d. Foreseeable oil spills and contamination present significant risks wildlife.

The effects of oil and gas production on wildlife include harm caused by oil, gas, and brine spills.⁴⁰ These spills can injure or even kill wildlife by destroying the insulating capacity of feathers and fur and by depleting the oxygen availability in water. The effects of exposure to these toxic substances can lead to reduced fertility, organ damage, immune suppression, and cancer. The impact of spills lasts for decades, in some areas raising salt concentrations in soils and destroying an areas ability to support vegetation, an affect that continues to spread years later.

Exposure to brine (a mixture of water, salts, other minerals, and oil commonly used in oil production) can be lethal to young waterfowl, including damaging feathers, killing needed vegetation and decreasing needed nutrients in their water supply. Brine production and its effects need to be more fully examined by the BLM, especially considering the extent to which brine is used. Over 19.8 million gallons of brine were produced from wells on a National Wildlife Refuges during one year and much of this brine was re-injected back into the ground.

The harmful impacts of oil spills are true for even small spills; for instance, a study of National Wildlife Refuges in Louisiana found that level of oil contamination near oil and gas facilities were lethal to most species of wildlife despite the lack of occurrence of any large spills. Further, spills are not an infrequent occurrence in oil and gas production either. In one report, nearly 20 percent of oil and gas production facilities examined reported spills.⁴¹ The report also noted the response to spills tends to vary, and that agency staff are often ill-equipped and ill-trained in how to deal with such spills. For example, the January 2007 oil spill at the Sespe Oil Field – Tar Creek Lease released more than 800 gallons of oil and an unknown amount of wastewater into Tar Creek, and coated more than three miles of Tar Creek with oil along the edge of the Sespe Condor Sanctuary.⁴²

Aside from actual spills, oil and gas extraction have also been found to lead to contamination from toxic substances such as mercury and polychlorinated biphenyls ("PCBs").⁴³

⁴⁰ GAO-03-517.

⁴¹ *Id.*

⁴² U.S. Dept. of Fish and Game, Environmental Incident Report: Vintage Production California LLC Tar Creek Crude Oil and Produced Water Spills (Jan. 30, 2007 and Feb. 6, 2007).

⁴³ GAO-03-517.

Such substances are used in equipment such as compressors, transformers, and well production meters. Further, mercury has been linked to organ and reproductive damage in various species, and PCBs are a known carcinogen in animals. *Id.* At least one condor has died from an excess level of mercury in its body.⁴⁴ Mercury, along with a host of other chemicals, is often used in oil/gas operations.⁴⁵ There is also a risk of wildlife drinking contaminated water. These potential impacts are not considered at all in the EA, in violation of NEPA.

2. Greenhouse gas emissions from the lease sale and subsequent oil and gas development

There is no question that BLM must rigorously explore both how the proposed lease sale will impact climate change through the direct and indirect release of GHGs, and also how this lease, when considered with similar activities, will cumulatively affect the environment through climate change. *See e.g., Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 508 F.3d 508, 550 (9th Cir. 2007) (agency failed to evaluate adequately global warming impacts of changes to fuel efficiency standards for vehicles); *Mid States Coalition for Progress v. Surface Transp. Bd.*, 345 F.3d 520 (8th Cir. 2003) (increased coal consumption and global warming pollution was reasonably foreseeable effect of railroad expansion to transport coal). Further, as the EA acknowledges, Secretarial Order 3226 requires the agency to "consider and analyze potential climate change impacts . . . when making major decisions affecting DOI resources." Order 3226 § 4(a) (as amended, Jan. 16, 2009).

According to EPA's Inventory of U.S. GHG Gases and Sinks, oil and gas systems are the largest human-made source of methane emissions and account for 24% of methane emissions in the United States – 2% of the U.S.'s total GHG emissions.⁴⁶ As BLM admits, in California in 2006, oil and gas production contributed 18.64 million tons of CO₂e. EA at 33, citing CARB 2007.

The American Petroleum Institute ("API") has listed the various components of the oil and gas industry that must be considered for green house gas emissions. This includes "all direct activities related to producing, refining, transporting, and marketing crude oil and associated natural gas, and refined products."⁴⁷ Further, as the California Air Resources Board ("CARB") explains in more detail, emissions stem from:

- Exploration, which includes CO₂ emissions from truck motors used in vibroseis or other exploratory operations;
- Well development, which includes GHG emissions from pad clearing, road construction, rigging up and drilling, the use of drilling fluids, casing placement, and well completion and testing (including emissions from hydraulic fracturing and the flaring and venting of flowback gases);

⁴⁴ Wiemeyer 1988.

⁴⁵ GAO-03-517.

⁴⁶ EPA's Inventory of U.S. GHG Gases and Sinks: 1990-2006 (Apr. 2008).

⁴⁷ Shires, T.M. and C.J. Loughran. *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry*, American Petroleum Institute (February 2004) ("API Compendium") (cited in EA at 33); see also <http://ghg.api.org/documents/CompendiumErrata205.pdf> (errata).

- Primary and secondary production phases, which include GHG emissions from the installation and use of compressor engines, well treatment and workovers, wellsite visits, wellsite facilities (including separators, heater treaters, gas conditioning, dehydration, wastewater disposal, and evaporation ponds), leaks from primary and secondary production equipment (e.g., pipelines, valves, etc.), and accidental releases (e.g., well blowouts); and
- Site abandonment, which includes GHG emissions from plugging activities and site reclamation.⁴⁸

While the EA acknowledges that each of these phases emit GHGs, EA at 33, BLM fails to actually calculate the emissions at each stage. Instead, BLM wrongly claims “[o]nly rough estimates of the amount of greenhouse gasses produced by one well is possible since greenhouse gas emissions are based on the amount of oil produced,” citing EPA 1999. *Id.* BLM then calculates emissions for the one well it expects to be drilled by “assum[ing] that a new well produces an average of 4,000 barrels per year” – resulting in 0.01 tons of methane emitted. *Id.* BLM makes no attempt to quantify CO₂ or N₂O emissions, even though oil and gas development releases both.⁴⁹

This calculation substantially underestimates the actual emission from the lease sale. The Montana, North Dakota, and South Dakota BLM recently issued a Climate Change Supplementary Impact Report (“Climate Impact Report”) in which the agency attempts to calculate GHG emissions from oil and gas leasing in those states.⁵⁰ While we have concerns with results of that analysis, the Report states that emissions from each stage in the drilling process can be estimated from the following models and documents:

- *AP 42 Fifth Edition, Volume 1* (USEPA 1998, 2000, 2006)⁵¹
- USEPA Mandatory GHG Reporting Rule (GPO 2010b)⁵²
- USEPA NONROADS 2008⁵³

⁴⁸ Zahniser, A., Characterization of greenhouse gas emissions involved in oil and gas exploration and production activities, review for California Air Resources Board (undated). Available at: www.wrapair.org/WRAP/ClimateChange/GHGProtocol/meetings/071025/Characterization_of_O&G_Operations_Sector_Emissions.pdf (cited in Draft EA at 31).

⁴⁹ See Shires, *supra* n. 53.

⁵⁰ BLM, Climate Change Supplementary Information Report, Montana, North Dakota, and South Dakota BLM (Aug. 2010) at 79. Available at: http://www.blm.gov/pgdata/etc/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/cas.Par.61972.File.dat/SIR.pdf.

⁵¹ USEPA, 1998. *AP 42, Fifth Edition, Volume 1, Chapter 1: External Combustion Sources*. Section 1.4: Natural Gas Combustion (July). Available at: <http://www.epa.gov/ttn/chieff/ap42/ch01/index.html>; USEPA, 2000. *AP 42, Fifth Edition, Volume 1, Chapter 3: Stationary Internal Combustion Sources*. Section 3.2: Natural Gas-fired Reciprocating Engines (Aug.). Available at: <http://www.epa.gov/ttn/chieff/ap42/ch03/index.html>; USEPA, 2006. *AP 42, Fifth Edition, Volume 1, Chapter 13: Miscellaneous Sources*. Section 13.2.1: Paved Roads and Section 13.2.2: Unpaved Roads (Nov.). Available at: <http://www.epa.gov/ttn/chieff/ap42/ch13/index.html>.

⁵² GPO, “Mandatory Greenhouse Gas Reporting: General Stationary Fuel Combustion Sources,” U.S. Government Printing Office (2010); 40 C.F.R. Part 98.

- EPA's MOBILE6.2.03 model⁵⁴
- API's *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry*⁵⁵
- *Protocol for Equipment Leak Emissions Estimates* (USEPA 1995)⁵⁶

Instead of performing an in-depth analysis using available data and methodology, BLM makes only a feeble attempt to calculate emissions using questionable and outdated methodology. Further, the Montana, North Dakota, and South Dakota BLM's Climate Impact Report estimates emissions "for each [oil exploration and development] activity . . . on a 'per well' annual basis (in short tons per year) for each well type."⁵⁷ If other BLM offices can estimate emissions on a per well basis, Bakersville BLM can as well.

Additionally, BLM concludes that it need not assess greenhouse gas emissions associated with the ultimate consumption of the oil extracted from the leases. EA at 32. While BLM claims there is no reliable methodology for estimating these emissions, the BLM is nonetheless obligated to consider *all* effects, including reasonably foreseeable indirect effects of its action. See 40 C.F.R. § 1508.8(a), (b) (agency must consider direct and indirect effects, including effects "later in time or further removed in distance, but are still reasonably foreseeable"). There is no question that consumption of the oil extracted from the lease sale is "reasonably foreseeable," and must be considered by the agency.

Based on its false assumption that only one well will be drilled as a result of the lease sale, and also on its insufficient calculation of greenhouse, BLM concludes that the lease sale's emissions "would be undetectable on a nationwide basis and would be expected to have a very minor influence on global climate change." EA at 33. As described above, BLM substantially underestimates the emissions from this lease proposal. As a result, the EA failed to explain how the emissions will contribute to the environmental problems already associated with, and projected to result from, climate change. See *NHTSA*, 538 F.3d at 1190-91 (requiring analysis of global warming impacts, and noting effects on plants, animals, human health, sea rise, and weather patterns).

E. The EA fails to adequately discuss cumulative impacts.

Under NEPA, BLM is required to analyze all environmental impacts of the proposed action, including the cumulative effects. 42 U.S.C. §4332(C)(i); 40 C.F.R. § 1508.25. A cumulative effect "is the impact on the environment which results from the incremental impact

⁵³ The NONROADS model and additional information is available at: <http://www.epa.gov/omswww/nonrdmdl.htm>.

⁵⁴ USEPA, User's Guide to MOBILE6.1 and MOBILE6.2 (Mobile Source Emission Factor Model), (Aug. 2003) EPA420-R-03-010.

⁵⁵ See Shires, *supra* n. 53.

⁵⁶ USEPA, *1995 Protocol for Equipment Leak Emission Estimates*. EPA-453/R-95-017. USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, (Nov. 1995). Available at: <http://www.epa.gov/ttnchie1/efdocs/equiplks.pdf>.

⁵⁷ Climate Change Supplementary Information Report, Montana, North Dakota, and South Dakota BLM (Aug. 2010) at 124.

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." 40 C.F.R. § 1508. As demonstrated below, BLM fails to address the sale cumulative effects in two primary ways: by failing to consider the cumulative effect to resources from this lease sale in combination with the extensive past, present, and reasonably foreseeable oil and gas and other development in the area; and by failing to consider the sale's incremental contribution to climate change.

1. The EA fails to consider the cumulative effect of the lease sale with the extensive past, present, and reasonably foreseeable oil and gas and other development.

In the context of oil and gas leasing on federal lands, courts have interpreted NEPA to require a "comprehensive" analysis of the "successive, interdependent steps culminating in oil and gas development and production," including the "effects of oil and gas activities beyond the lease sale phase." *Connor v. Buford*, 848 F.2d 1441, 1444-45 (9th Cir. 1988). Accordingly, BLM's EA must include "a 'useful analysis of the cumulative impacts of past, present and future projects'" – including but not limited to the many past, present, and reasonably foreseeable oil and gas and other commercial, residential, and industrial development – to affected resources including the air, water, wildlife, plants, and the climate. *Churchill County v. Norton*, 276 F.3d 1060, 1080 (9th Cir. 2001); 40 C.F.R. § 1508.7.

First, the EA fails consider the cumulative impacts of the lease sale because it fails to substantively describe the substantial effects that current, past, and future oil and gas development has had and will continue to have on the area. BLM acknowledges that oil and gas development in the area has been substantial:

There are over 75 oil and gas fields in the Valley, including several giant fields (more than 100 million barrels of oil each) and supergiants (more than 1 billion barrels each). As of the end of 2008, cumulative production in the area was about 12.4 billion barrels of oil equivalent. In recent years, the Valley has accounted for about 85-90% of California's development completions. . . . Between 2005 and 2009, there were a total of 11,530 wells drilled in DOGGR District 4, which is mainly Kern County. In the same 5 years, there were a total of 1,153 federal wells drilled throughout California. Approximately 90% of those wells were in Kern County.

EA at 23; *see also id.* at 24 ("The San Joaquin Valley is expected to continue as the primary source of oil in California's oil and gas development.").

Despite this acknowledgement, in discussing cumulative effects, BLM simply states that, in the next 10 years, up to 2200 oil and gas will be drilled in the undefined "Valley Planning area," affecting 147 acres of land per year. EA at 52. The agency provides no detail as to when and where the drilling may occur, or any substantive discussion of the effects additional drilling will have on affected resources – including air and water quality, species and habitat, and the climate, in clear violation of NEPA. BLM must provide meaningful context for its numbers. The

agency fails to provide a “useful analysis” of such effects that includes “discussion and an analysis in sufficient detail.” *Ocean Advocates*, 361 F.3d at 1128.

In examining the sale’s cumulative effects, BLM must include: more detailed information about the exact location of past, present, and reasonably foreseeable future projects or operations and their relation to protected species habitat, riparian areas, wetlands, perennial, intermittent and seasonal waters, and other ecologically important or sensitive areas; the nature and extent of past environmental damage or contamination caused by spills or other accidents at those locations; and the amount of road construction and other infrastructure associated with the sale and its attendant facilities. This includes an analysis of oil and gas operations on surrounding public and private lands, as well as other development and impacts from the use of rodenticides that are impacting many species in the area, including the San Joaquin kit fox and its prey. For example, there are currently two large-scale solar energy projects proposed in the Carrizo Plain that, if approved, could also significantly impact kit fox and other listed species in this area.

2. The EA fails to consider the sale’s incremental contribution to climate change.

Although BLM acknowledges greenhouse gas emissions are contributing to global warming, and the EA attempts to quantify emissions from the project, the agency fails to evaluate the “incremental impact” that these emissions will have on the climate in light of other past, present, and reasonably foreseeable actions. As the Ninth Circuit recently clarified, impacts from climate change are “precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.” See *NHTSA*, 538 F.3d at 1190-91.

The cumulative effects analysis under NEPA is specifically designed to assess the impact of an action that “may seem unimportant in isolation” but “may have dire consequences when combined with other actions.” *Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 893 (9th Cir. 2007). Thus, a given lease sale may appear to have an “individually minor” effect on the environment, but the oil and gas development activities authorized by the lease sale, in combination with other sources of greenhouse gases, are “collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7; *City of Los Angeles v. NHTSA*, 912 F.2d 478, 501 (D.C. Cir. 1990) (“we cannot afford to ignore even modest contributions to global warming. If global warming is the result of the cumulative contributions of myriad sources, any one modest in itself, is there not a danger of losing the forest by closing our eyes to the felling of the individual trees?”) (J. Wald, dissenting).

The EA’s discussion of significant impacts on climate change is inadequate. See EA at 52. BLM acknowledges that “the effects of project species GHG emissions are cumulative, and without mitigation their incremental contribution to global climate change could be considered cumulative considerable.” *Id.* at 32. Further, BLM also acknowledges that the San Joaquin Valley Air Pollution Control District (“SJVAPCD”) has issued guidance for determining significance under the California Environmental Quality Act (“CEQA”).⁵⁸ EA at 21. Because BLM has no final internal guidance regarding determining significance, we agree that BLM

⁵⁸ SJVAPCD District Policy Addressing GHG Emission Impacts for Stationary Source Project under CEQA when Serving as the Lead Agency (Dec. 2009) (cited at Draft EA at 34).

consider this, as well as other air district's CEQA direction, as guidance for determining NEPA significance.

As the EA acknowledges, SJVAPCD has determined that projects implementing certain industry-specific "Best Performance Standards" ("BPS") would be deemed to have a "less than significant individual and cumulative impact on global climate change." SJVAPCD District Policy at 6. Alternatively, if a project's "GHG emissions have been reduced or mitigated by at least 29%," as compared to SJVAPCD "business as usual" model, a no significance determination may be issued. *Id.* SJVAPCD has developed BPSs for oil and gas production facilities.⁵⁹ Specifically, the project must "[m]inimize fugitive GHG emissions by applying leak standards" and inspection and maintenance requirements, in accordance with current VOC reduction requirements. *Id.*

The EA readily acknowledges the Best Performance Standards, and appears to acknowledge their relevance to this lease. However, BLM never actually describes whether its lease actually complies with those BPSs. EA at 53. In fact, since the EA denies that GHG contributions from the lease will be substantial, and fails to even consider lease stipulations that would require even modest mitigation for GHG emissions, we assume the project does not meet the BPSs. Nor does the agency claim the project's GHG emissions have been reduced by 29 percent compared to SJVAPCD "business as usual" model. Even though the agency itself chose to use the SJVAPCD approach to analyze the significance of its emissions, the agency entirely fails to comply with that approach. *See Sugar Cane Growers Coop. v. Veneman*, 289 F.3d 89, 97 (D.C. Cir. 2002) ("Referencing a requirement is not the same as complying with that requirement"). The public is left without sufficient information to determine whether the lease sale and oil and gas development will have a significant effect on climate change.

Further, BLM also failed to take a hard look at the sale's impact on efforts to reduce greenhouse gas emissions. As a party to the 1992 United Nations Framework Convention on Climate Change, the U.S. has committed to take the actions necessary to avoid dangerous anthropogenic interference with the climate system. Leading scientists, including NASA's James Hansen, believe that we must reduce atmospheric CO₂ concentrations from their current levels of over 385 parts per million ("ppm") to below 350 ppm to avoid climate catastrophe.⁶⁰ Recent research also suggests that in order to stabilize atmospheric levels of greenhouse gases, CO₂ emissions must be reduced not just to 80 percent below 1990 levels, but to "nearly zero" by mid-century.⁶¹

BLM's failure to analyze how its approval of the lease sale affects our nation's ability to reduce its greenhouse gas emissions is particularly concerning because the combustion of fossil fuels is the largest source of greenhouse gases globally. Scientists have stated unambiguously

⁵⁹ See Best Performance Standard (BPS) for Production/Processing/Refineries (July 1, 2010). Available at:

http://www.valleyair.org/programs/bps/Final_Cover_BPS_Oil_Gas_ProductionProcessingRefineries.pdf.

⁶⁰ Hansen, J. et al., 2008, Target Atmospheric CO₂: Where Should Humanity Aim?, available at

<http://arxiv.org/ftp/arxiv/papers/0804/0804.1126.pdf>.

⁶¹ Matthews, H.D., and Caldeira, K., Stabilizing Climate Requires Near-Zero Emissions, 35 *Geophys. Res. Letters* L04705 (2008) (emphasis added).

that we cannot both continue to consume fossil fuels and maintain a stable climate system. BLM is required to discuss the already deteriorated state of the environment, and fairly judge the need and effects of the sale through its alternatives analysis.

In sum, there is no question NEPA requires the agency to fully evaluate the direct, indirect, and cumulative impacts of its leasing and oil and gas development. *Ctr. for Biological Diversity v. NHTSA*, 508 F.3d at 1217. We implore the agency to take more seriously its obligation to consider and evaluate the substantial risk of climate change-related disaster if U.S. greenhouse gas emissions continue unchecked.

F. BLM failed to consider reasonable alternatives

NEPA requires an agency to consider a range of reasonable alternatives to its proposed action. *ONDA v. BLM*, 531 F.3d 1114 (9th Cir. 2008). The purpose of NEPA's alternatives requirement is to ensure agencies do not undertake projects "without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means." *Envtl. Defense Fund, Inc. v. U.S. Army Corps of Engrs.*, 492 F.2d 1123, 1135 (5th Cir. 1974). An agency may feature only two alternatives and still be in compliance with NEPA only when "all reasonable alternatives have been considered and an appropriate explanation is provided as to why an alternative was eliminated." *Native Ecosystems Council v. U.S. Forest Serv.*, 428 F.3d 1233, 1246 (9th Cir. 2005); *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228-1229 (9th Cir. 1988).

Here, the EA considered only two alternatives: the Proposed Action and a No Action alternative. EA at 5-6. Thus, BLM did not consider alternatives limiting all lease sales to Non-Surface Occupancy ("NSO") stipulations so that a thorough, up-to-date analysis of resources could be completed, including an assessment of the current status of the San Joaquin kit fox and other sensitive species and an assessment of cumulative impacts from the thousands of wells in the area. Further, BLM did not consider any alternatives that involve leasing only some of the proposed units. For example, the EA failed to consider eliminating units currently occupied by San Joaquin kit fox, or eliminating all parcels in undisturbed habitat. Because the EA failed to include these reasonable alternatives or others it is inadequate pursuant to NEPA.

Further, the agency must consider an alternative that would require specific mitigation of greenhouse gas emissions. EPA has recommended a variety of mitigation measures as part of its Gas STAR program.⁶² While the agency further, in a study released in November 2007, the Four Corners Air Quality Task Force details a number of strategies to reduce methane in oil and gas development.⁶³ Based on those suggestions, we specifically request that an alternative requiring the following mitigation be considered:

⁶² EPA's Gas STAR website provides a variety of specific, technical suggestions for reducing emissions from many components of oil and gas production. Those specifications are available at: <http://www.epa.gov/gasstar/tools/recommended.html>.

⁶³ Oil and Gas Section, Four Corners Air Quality Task Force, Report of Mitigation Options (Nov. 1, 2007), available at www.nmenv.state.nm.us/aqb/4C/Docs/4CAQTF_Report_FINAL_OilandGas.pdf.

- Improving the efficiency of compressors, boosting waste heat recovery for compressors and boilers including the deployment of combined-heat-and-power systems that could sell excess power back to the grid, and replacing gas-driven compressors with electrical compressors when appropriate.
- Replacing or retrofitting pneumatic devices – widely used as liquid level controllers, pressure regulators, and valve controllers – which are one of the largest sources of vented methane emissions from the natural gas industry. Such retrofits cost as little as \$30 and reduce the rate of methane vented to the atmosphere. Methane emission reductions range from 45 to 260 thousand cubic feet (Mcf) per device per year and – by producing more natural gas for sale – typically pay themselves back in 6 months to a year with substantial savings beyond that time.
- “Green Completions,” which allow for gas that would otherwise be flared or vented to the atmosphere to be captured and put in the pipeline for sale, reducing methane emissions and increasing revenues both for operators and for taxpayers though increased royalties. Green completions could recover 25.2 billion cubic feet (Bcf) of methane per year in the U.S.
- Flash Tank Separators to recover methane during the production process, with recovery rates of about 90 percent.
- Detecting and fixing leaks, a common sense measure by which fugitive losses can be dramatically reduced through a Directed Inspection and Maintenance Program.

Finally, the EA states that additional alternatives were “considered but not further analyzed.” See EA at 6. Yet the only other alternatives considered involve privatizing the mineral rights, for example, through a land exchange. These alternatives would not have any positive impact on conservation. See *Envtl. Defense Fund*, 492 F.2d at 1135 (agency should “intensely consider[] more ecologically sound courses of action” as alternatives). BLM’s failure to examine such other viable alternatives renders the EA inadequate. *Muckleshoot Indian Tribe*, 177 F.3d at 814.

G. The EA does not adequately discuss mitigation measures

NEPA’s implementing regulations require that “[f]ederal agencies shall to the fullest extent possible ... [u]se all practicable means ... to restore ... the human environment and avoid or minimize any possible adverse effects of their actions.” 40 C.F.R. § 1500.2(f). To this end, NEPA requires a discussion of all relevant mitigation measures, and further, the agency must discuss “the probability of the mitigation measures being implemented.” CEQ, NEPA’s Forty Most Asked Questions at § 19b (citing 40 C.F.R. §§ 1502.16(h), 1505.2). Further, simply identifying mitigation measures, without analyzing the effectiveness of the measures, violates NEPA. Agencies must “analyze the mitigation measures in detail [and] explain how effective the measures would be.” *Nw. Indian Cemetery Pro. Ass’n v. Peterson*, 764 F.2d 581, 588 (9th Cir. 1985) (“[a] mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA”).

Although it relies on stipulations and other mitigation measures to conclude that the sale's adverse impacts will not be significant, the EA fails to assess the probability that such measures would be implemented and enforced, or explain how effective the measures will be. For example, although the EA acknowledges that kit foxes could be hit by vehicles, drowned, crushed, and trapped, it then simply concludes that "[s]pecies surveys, avoidance of habitat features and implementation of measures to minimize take are also standard requirements." EA at 42. As noted above, the agency also fails to describe the kit fox core area habitat "compensation" it intends. This is not an adequate discussion of the impacts or mitigation measures, and amounts to little more than a listing that is inadequate under NEPA. Further, BLM's failure to discuss mitigation measures renders unsubstantiated the EA's conclusion that the leasing will not have a significant impact on the environment. See *Surfrider Fnd. v. Dalton*, 989 F. Supp. 1309, 1321 (S.D. Cal. 1998) (to reach a finding of no significant impact, the EA must show that impacts can be mitigated by "specific remedial measures").

H. BLM failed to analyze in the EA whether the alternatives will meet federal and state air quality standards.

Under NEPA, BLM must analyze whether the alternatives will meet federal and state air quality standards. See 40 C.F.R. §1508.27(10) (requiring agency to evaluate "[w]hether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment"). Moreover, the action cannot cause or contribute to any new violation of the National Ambient Air Quality Standards ("NAAQS") or delay timely attainment of any standard or any required interim emission reduction or other milestones. 40 C.F.R. Part 93. BLM must also demonstrate conformity with section 176(c) of the Clean Air Act ("CAA"), 42 U.S.C. § 7606(c), and its implementing regulations under 40 C.F.R. Part 93, Subpart W, which prohibit federal agencies from "engag[ing] in, support[ing] in any way or provid[ing] financial assistance for, license or permit, or approv[ing] any activity which does not conform to an applicable implementation plan."

As stated above, California and the San Joaquin Valley already experience some of the worst air quality in the nation, and the Valley is already in nonattainment for ozone and PM2.5. The Valley's population is predicted to double by 2040.⁶⁴ In addition to the activities resulting from this lease sale, there is extensive oil and gas development in the immediate area and region, which is a significant source of the area's air pollution problem.⁶⁵ With up to 2200 new oil and gas wells drilled over the next 10 years, Kern County oil and gas wells are emitting large amounts of NOx emissions. *Id.* at 51, 10 (stating that of the total baseline (1990) emissions for NOx (787 tons per day in the summertime), 15 percent came from Kern County oil and gas emissions (117.3 tons per day)). With "[t]he climate and geography of the [Central] Valley creat[ing] optimal conditions for forming and trapping air pollution," projected growth in the

⁶⁴ Tietz, M.B. et al. 2005. Urban Development Futures in San Joaquin Valley. Public Policy Institute of California.

⁶⁵ While the BLM includes some discussion of the air quality, there is inadequate information presented in the EA from which to evaluate the cumulative environmental impacts of the lease sale as well as from the projected future increases in air pollution that would result from all of these activities. This renders BLM's air quality analysis inadequate under NEPA.

area, and the Valley's particular vulnerability to air pollution due to its topography, climate, and growing population, it is imperative that BLM demonstrate that it is meeting state and federal air quality standards.

In addition, BLM failed to ensure that the emissions resulting from the lease sale conform to the State of California's State Implementation Plan ("SIP") as required by section 176(c) of the CAA. *See also* EA at 5. Although the EA deems itself to be in "conformity" with the SIP, the agency provides virtually no supporting analysis. *Id.* at 34. The agency concludes that emissions are "well below de minimis levels," comply with the SIP, and "are well below 10% of regional emissions," and therefore, "no further conformity analysis is necessary." *Id.* Presumably, BLM bases this conclusion on its artificially cabined assumption that only one well will actually be drilled from this lease. However, BLM's analysis is woefully inadequate. What are "de minimis levels" when much of the Valley is in nonattainment? It is unclear whether BLM is in compliance with air quality standards or the SIP, when no analysis is provided to show that this is the case. *See Mazurek v. Armstrong*, 520 U.S. 968, 972 (1997) (BLM cannot rely on an environmental review documents that lack air pollution and ozone level statistics).

I. An EIS was required.

The lease sale will result in significant impacts, as described throughout this comment, and an EIS is required. 43 U.S.C. § 4332(2)(C).

1. There are substantial questions as to whether the lease sale may have significant impacts, and therefore an EIS must be prepared.

As discussed above, the EA does not adequately assess the lease sale's environmental effects including cumulative effects, consider reasonable alternatives, adequately describe the environmental baseline, analyze the effectiveness of mitigation measures, or demonstrate conformity with air quality standards. As a result, substantial questions remain about whether the leasing will have a significant effect. *LaFlamme v. Fed. Energy Regulatory Comm'n*, 852 F.2d 389, 397 (9th Cir. 1988) (an EIS is required if there are "substantial questions whether a project may have a significant effect"). An EIS is therefore required to complete a thorough and comprehensive study of the lease sale's impacts.

2. The lease sale meets NEPA's significance threshold, and therefore an EIS must be prepared.

In determining whether a project's effects will be "significant," NEPA's regulations require BLM to consider several significance factors. These factors include: unique characteristics of the area, effects on public health, highly controversial or uncertain effects, whether the action is related to other actions with individually insignificant but cumulatively significant impacts, whether action may adversely affect listed species or habitat, and whether the action threatens a violation law. 40 C.F.R. § 1508.27(b).

Here, it is clear that a full EIS evaluating all impacts of the lease sale is warranted, as a number of the significance factors are triggered. The air pollution that will result from the

authorized oil and gas development activities will affect public health, particularly project area already experiences some of the worst air quality in the nation and is projected to continue to deteriorate due to global warming. *Id.* Further, the authorized development will occur within or near areas with “[u]nique characteristics” like ecologically-important habitat for imperiled species like the kit fox and the condor. *Id.* § 1508.27(b)(3). Further, BLM admits in its EA that, for climate change impacts, “further work is needed on how to quantify cumulative uncertainties across spatial scales, and the uncertainties associated with complex intertwined natural and social systems.” EA at 21. Accordingly, effects of oil and gas development on climate change is “controversial” and “highly uncertain” and also requiring an EIS. 40 C.F.R § 1508.27(b)(5). And, as discussed above, the cumulative impacts of this and other projects in the area on imperiled species and climate change are “cumulatively significant impact[s],” requiring an EIS. *Id.* § 1508.27(b)(7).

Further, the lease sale may adversely affect the San Joaquin kit fox and other endangered and threatened species weighs particularly heavy in favor of preparation of an EIS. *Id.* § 1508.27(b)(9). There can be no serious dispute that the lease sale will adversely affect the kit fox and other species. See EA at 45-48. In total, the EA leaves substantial questions as to whether the lease sale will result in significant impacts, and because the lease sale will “significantly” affect the environment within the meaning of NEPA, an EIS should be prepared. 40 C.F.R. § 1508.27(b).

J. The EA improperly tiers to the Caliente RMP, which must be supplemented.

The BLM’s failure to provide sufficient environmental review is not cured by tiering to earlier NEPA documents. 40 C.F.R. § 1502.20; EA at 1. The EA tiers to the Caliente RMP EIS, which was finalized in 1997. The Caliente RMP EIS is outdated and did not evaluate the effects of greenhouse gas emissions and climate change to affected resources, or new information and changed circumstances for the kit fox and other species. BLM cannot lawfully rely on the RMP’s EIS to support its determination of no significance – indeed, BLM’s NEPA Handbook states that “actions whose impacts are expected to be significant and which are not fully covered in an existing EIS must be analyzed in a new or supplemental EIS.” BLM, NEPA Handbook at pp. 1-2.

Courts have consistently held that when confronted with new and significant information “not previously evaluated and considered,” agencies must prepare a supplemental NEPA document. *Westlands Water Dist. v. U.S. Dep’t of the Interior*, 376 F.3d 853, 873 (9th Cir. 2005); 40 C.F.R. § 1502.9(c)(1)(ii); *Friends of the Clearwater v. Dombeck*, 222 F.3d 552, 557 (9th Cir. 2000) (agency “cannot simply rest on the original document” and it must “continue to take a hard look at the environmental effects of [its] planned action, even after a proposal has received initial approval”).

In this case, at the very minimum, BLM should have reviewed whether new information precluded the agency’s reliance on the Caliente RMP EIS, and whether supplemental environmental documentation is necessary. Supplemental NEPA analyses are necessary because these RMP-level NEPA analyses do not address global warming, greenhouse gas emissions from oil and gas operations, and new information and changed circumstances regarding threatened and

endangered species, and do not quantify or consider measures to improve the efficiency of and thereby reduce the waste from oil and gas production. Accordingly, BLM must supplement the Caliente RMP EIS before tiering to and incorporating it by reference for purposes of approving the December 8, 2010 lease sale.

II. BLM Violated FLPMA and the MLA

In addition to complying with NEPA, BLM's lease sale must comply with the Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. §§ 1701 *et seq.*, and the Mineral Leasing Act ("MLA"), 30 U.S.C. §§ 181 *et seq.* Under both of these statutes, BLM is empowered and obligated to ensure that oil and gas lease decisions conserve natural resources and do not degrade public lands.

Specifically, pursuant to FLPMA, BLM must "take any action necessary to prevent unnecessary or undue degradation of the [public] lands." 43 U.S.C. § 1732(b). Written in the disjunctive, BLM must prevent degradation that is "unnecessary" and degradation that is "undue." *Id.* This protective mandate applies to BLM's planning and management decisions. *Utah Shared Access Alliance v. Carpenter*, 463 F.3d 1125, 1136 (10th Cir. 2006). Where GHG emissions are avoidable, they constitute "unnecessary" and "undue" degradation. *Id.*

Under the MLA, BLM must prevent waste in oil and gas operations. Specifically, the MLA requires that "[a]ll leases of lands containing oil or gas . . . shall be subject to the condition that the lessee will, in conducting his explorations and mining operations, use all reasonable precautions to prevent waste of oil or gas developed in the land." 30 U.S.C. § 225; *see also* 30 U.S.C. § 187 ("Each lease shall contain . . . a provision . . . for the prevention of undue waste").

Further, under BLM regulations, BLM must "*require* that all operations be conducted in a manner which protects other natural resources and the environmental quality . . . and results in the maximum ultimate recovery of oil and gas with minimum waste." 43 C.F.R. § 3161.2. Waste is defined as any act or failure to act resulting in: "(1) A reduction in the quantity or quality of oil and gas ultimately producible from a reservoir . . . ; or (2) avoidable surface loss of oil or gas." *Id.* § 3160.0-5. Avoidable losses of oil or gas include venting or flaring without authorization, operator negligence, failure of the operator to take "all reasonable measures to prevent and/or control the loss," and an operator's failure to comply with lease terms and regulations, order, notices, and the like. *Id.*

Applying these statutes, there is a clear link between GHG emissions, degradation, and waste. BLM can help prevent "undue" and "unnecessary" degradation caused by climate change by avoiding oil and gas development in areas vulnerable to climate change and by mitigating GHG emissions for projects. 43 U.S.C. § 1732(b). Further, by adopting measures that avoid leakage and the need for flaring, BLM can meet its MLA obligation to require that operations "protect[] natural resources and the environmental quality . . . and result[] in the maximum ultimate recovery of oil and gas with minimum waste." 43 C.F.R. § 3161.2. Accordingly, there are a number of mitigation measures BLM must require, including those included in EPA's Gas

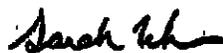
STAR program, that will minimize leakage and prevent unnecessary emissions of GHGs, as provided in the alternative section above.⁶⁶

Lastly, NEPA requires BLM to analyze whether its proposed action will comply with all federal laws and regulations. See 40 C.F.R. §1508.27(10) (requiring agency to evaluate “[w]hether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment”). The BLM must fully assess whether its proposed lease sale, which currently contains no GHG mitigation measures, much less the specific mitigation measures recommended by EPA and others, complies with FLPMA’s prohibition on undue and unnecessary degradation, as well as the MLA’s prohibition on waste. 43 U.S.C. §§ 1732; 3161.2.

Conclusion

The December 8, 2010 Oil and Gas Competitive Leasing proposal presents significant environmental consequences for wildlife, particularly to listed and sensitive species. However, the Final EA fails to adequately analyze these consequences, and fails to present any scientific data to support its claim that the leasing will not have a significant impact on the area’s environmental resources. San Joaquin kit fox and the many other listed and special status species will suffer irreparable damage if their habitat is allowed to be destroyed and fragmented by additional oil and gas extraction activities. BLM also failed to adequately address impacts regarding greenhouse gas emissions related to this project. Accordingly, the Center formally protests the lease sales and urges BLM to withdraw all of these sales until it has prepared adequate environmental review and complied with FLPMA and the MLA.

Sincerely,



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⁶⁶ See EPA’s Gas STAR, described on page 21 of this comment. More information is available at: <http://www.cpa.gov/gasstar/tools/recommended.html>.

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