CENTER *for* BIOLOGICAL DIVERSITY

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RE: PROTEST OF BLM'S JUNE 23, 2009 COMPETITIVE OIL AND GAS SALE

This protest is filed on behalf of the Center for Biological Diversity (the "Center"), Ventana Conservation and Land Trust, and Los Padres ForestWatch pursuant to 43 CFR 3120.1-3. The Center and Ventana Conservation and Land Trust formally protest the inclusion of all 21 parcels included in the Bureau of Land Management's ("BLM") June 23, 2009 competitive oil and gas lease sale in California; Los Padres Forest Watch joins this protest with respect to parcels 1-6 and 10-11. For the reasons outlined below in the attached Statement of Reasons, we respectfully request the BLM withdraw from consideration all parcels currently included in the June 23, 2009 competitive lease sale.

INTRODUCTION

In May, 2009, the Bureau of Land Management's ("BLM") California Office announced its intent to hold a competitive oil and gas lease sale on June 23, 2009. The lease sale includes 21 parcels totaling 35,287.06 acres of public land in Monterey County, California. The BLM's Hollister Field Office manages the lands subject to the lease sale, most of which are split estates.

The BLM failed to provide an Environmental Impact Statement ("EIS") or even an Environmental Assessment ("EA") for the June 23, 2009 Competitive Oil and Gas Lease Sale, as required by the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321, et. al. Instead, BLM inappropriately relied on and tiered to a very general Resource Management Plan ("RMP") and associated EIS released in 2006. BLM's lack of adequate NEPA analysis for this lease sale provides no basis for its conclusion that the lease sale would not have a significant impact on the environment. Adopting Alternative C from the RMP and EIS in their Record of Decision ("ROD"), the BLM stated that it chose to balance "resource conservation and ecosystem health with commodity production and public use of land" for the Southern Diablo Mountain Range

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and Central Coast of California.[1] That decision does not excuse development of a more complete and site specific environmental review in an EIS, or at the very least a detailed site specific EA, analyzing the foreseeable environmental impacts of leasing these 21 parcels for oil and gas exploration and development.

While the Notice of Competitive Lease Sale references the ROD, and the mitigation measures it adopted, the analysis provided in the 2006 EIS falls far short of the site specific analysis required by NEPA for the proposed June 23, 2009 sale. Not only is the EIS extremely general, especially with respect to oil and gas development activities, but it also fails to consider *any* of the greenhouse gas ("GHG") emissions for any actions – including oil and gas leasing or development in the region – and, as a result, also fails to consider the associated impacts of the lease sales on climate change. Such an assessment must be made *now*, not some time in the future. This is especially true here, where the BLM has available the information it needs to conduct such an analysis, and no viable legal excuse for refusing to do so.

The 2006 RMP and EIS provides only a cursory and unspecific consideration of important impacts associated with oil and gas development activities – including impacts to air and water quality, endangered species, as well as the complete omission of any discussion of GHGs or climate change. Therefore, the BLM cannot rely on the EIS alone but, instead, must conduct an additional site-specific environmental review that identifies and analyzes all of the likely environmental impacts of this lease sale.

In addition to violations of NEPA, the BLM has also violated the ESA, 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.

I. 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. The Center's board, staff and members have advocated on behalf of protections for threatened and endangered species for more than 20 years. 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.

Established in 2000, the Ventana Conservation and Land Trust was a founding member of the California Land Trust and is also member of the National Land Trust Alliance. Ventana Trust provides expert advice on a number of issues involving the care and ownership of land for conservation purposes. In addition to fee ownership of certain parcels of unique and exceptional lands containing wetlands and cultural resources in southern Monterey County, the Trust also conserves under easement other properties including wetland environments in Ventura and Los Angeles Counties. The Trust nursery and field office is situated in a remote valley about one mile east of the SilverPeak Wilderness in the Nacimiento River watershed.

[1] Hollister Field Office Proposed RMP/Final EIS, 2-1.

The Trust and its staff have a long-standing and extensive working relationship with the agricultural and wilderness communities of southern Monterey County. The Trust staff has advised numerous local residents about landscape preservation, historic landscape reconstruction, and preservation and enhancement of streambeds and watersheds. The Ventana Conservation and Land Trust is the only conservation organization with a specific focus on the interior or southern Monterey County. Because the Trust is familiar with the Endangered Species Act, cultural resource law and other practices related to government conservation efforts, the staff has worked on a number of programs to increase landowners' of the importance of maintaining cultural and natural resources, including watershed and air quality attributes that characterize this region. The Trust believes the development of oil and gas leases as illustrated in the bid documents will seriously impact regional viewsheds, water quality, air quality and rural lifestyle attributes. For this reason, the Trust became involved in this issue.

Los Padres ForestWatch is a nonprofit conservation organization working to protect public lands along California's Central Coast, including the Los Padres National Forest, the Carrizo Plain National Monument, and other lands administered by the U.S. Bureau of Land Management. ForestWatch is supported by more than 700 members, many of whom are residents of Monterey County and who value this region's public lands for their wildlife habitat, scenic landscapes, and outdoor recreation opportunities. ForestWatch has participated in several oil and gas lease sales throughout the state of California since 2005, and is particularly concerned about the proposed lease sale because of the parcels' remoteness and close proximity to Fort Hunter Liggett wildlands and the neighboring Ventana Wilderness. As such, ForestWatch joins this protest with respect to parcels 1-6 and 10-11.

II. REQUEST FOR RELIEF

Given the high level of importance, and the legal violations described in the Statement of Reasons that have occurred or will occur on the date of the sale of the leases for the split estate 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 all relevant federal laws and considered all relevant information at a sufficient level of detail.

2. Before any lease sale of these parcels is approved, the BLM prepare a full site-specific NEPA review in an Environmental Impact Statement for the sale, rather than relying on the EIS prepared for the 2006 RMP. A new EIS is required because of the cursory attention paid to oil and gas development activities in the EIS supporting the RMP, and the lack of detailed analysis of the specific impacts associated with lease sales, including, but not limited to, analysis of the impacts the project will have on federal and state protected species (e.g., the California condor, the San Joaquin kit fox, purple amole, and the California red-legged frog), and impacts on air and water quality. The environmental review for the lease sale in an EIS must include a full analysis of the greenhouse gases that will be emitted into the atmosphere as a result of the project, and the foreseeable impacts an increase in these emissions will have on climate change, a

discussion that was entirely omitted in the 2006 EIS. At the very least, before approving the lease sale of these parcels, the BLM must prepare an EA, to assess the environmental impacts of the site-specific leasing project, and determine if further analysis is required through the development of an EIS.

3. The BLM withdraw all parcels from the lease sale and suspend any decision to lease the proposed parcels until the agency has complied with the Endangered Species Act by ensuring against jeopardy through consultation regarding the foreseeable site specific impacts to listed species and habitats from oil and gas exploration and development on these parcels.

III. STATEMENT OF REASONS

A. The BLM Should Have Prepared an Environmental Impact Statement, or at the very least an Environmental Assessment, for the June 23, 2009 Competitive Lease Sale, as required by the National Environmental Policy Act.

In support of the proposed lease sale at issue here, the BLM improperly relied upon a June 2006 EIS, prepared for a broad and very general RMP, as well as on an outdated Biological Opinions ("BiOp").[2] The 2006 EIS was prepared for the proposed RMP for the Southern Mountain Diablo Range and Central Coast of California,[3] however, the RMP EIS is incomplete and insufficient for a site-specific lease sale, as it addressed only generalized impacts associated with resource management, and omitted any discussion of greenhouse gas (GHG) emissions and climate change. Such an omission is indefensible considering current scientific understanding of climate change and global warming tipping points, as well as the stated policy of the government to incorporate climate change into its decisionmaking process.[4] Furthermore, the EIS fails to adequately assess the impacts oil and gas exploration and development will have on local air and water quality, or specific impacts on threatened and endangered species in the region, such as the California condor and the San Joaquin kit fox. Though the 2006 EIS acknowledges that the condor and kit fox inhabit the region, and that energy and mineral development could impact the habitat of such species, it fails to provide any further analysis of species specific impacts and disturbances.

Without sufficient contemplation of these serious impacts, reliance on the 2006 EIS for the June 23, 2009 lease sale is not legally justifiable, and does not satisfy the BLM's duties under NEPA. The BLM is thus required to prepare an EIS, or at the very least an EA, identifying and analyzing the likely environmental impacts of the June 23 lease sale, as well as a range of alternatives that would avoid such impacts. The EIS must consider not only the direct impacts, but also the indirect and cumulative impacts of the leasing, a requirement which is particularly relevant in the context of climate change. Should the BLM conduct an EA first, rather than an

[2] Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA), U.S. Department of the Interior, Bureau of Land Management, Hollister Field Office, at 5.
[3] The Center commented on the Draft RMP/EIS, noting that it failed to disclose and analyze the direct, indirect, and cumulative impacts of management actions to biological, air, soil, and water resources, as mandated by NEPA.
[4] See, e.g., The Secretary of the Interior, Order No. 3226, Amendment No. 1, Climate Change and the Department of the Interior (January 16, 2009).

EIS, and subsequently determine that that the lease sale has the potential to "significantly affect the quality of the human environment," or that substantial questions exist over whether its proposed action may significantly impact the environment, the BLM must go one step further and complete an EIS. The point at which this assessment must be made is now, at the proposal of a lease sale, before these split estate leases are actually sold. Although the Documentation of Land Use Plan Conformance and NEPA Adequacy ("DNA") claims that the 2006 EIS is adequate because "site-specific inputs related to the proposed action are analyzed after an Application for Permit to Drill (APD) has been received," assessment at that late phase in the planning process is unacceptable, especially when the BLM has the information it needs to conduct such an analysis now. A site specific EIS must be prepared while a full range of alternatives are still available and before any exploration occurs on the leased parcels.

The 2006 EIS states that "[i]n the event that an Application for Permit to Drill (APD) is submitted, a site specific evaluation will be made by BLM to ensure compliance with NEPA requirements." However, this site specific evaluation must be done earlier in the process, at the time of a proposed lease sale. Stipulation No.1 states that "Prior to authorization of any surface disturbing activities, a preliminary environmental review will be conducted to identify the potential presence of habitat for these species." [5] Because BLM is aware that all of these parcels may have habitat for listed species the environmental review should be done now, for all of these parcels and not piecemeal at a later time. At minimum, a site-specific environmental review for all of the parcels in the lease sale will provide a far better basis for cumulative impacts review, as well as review of indirect impacts to the affected species throughout the lease sale area. Moreover, these are *not* No Surface Occupancy leases. The lease sales may allow some surface disturbance, such as surveying and staking, data collection, etc, without first conducting any additional site-specific NEPA analysis,

Leasing a parcel of land is the first step in the oil and gas exploration and development process on federal lands. Once a lease is issued, the lessee has contractual rights and the BLM does not have the right to deny an application for permit to drill.[6] Further, once the lease is issued BLM's ability to prohibit surface disturbing activities will also be limited.[7] Because issuing the lease limits the BLM's ability to avoid environmental impacts, including impacts to listed species, through adoption of alternative, BLM must undertake a meaningful alternatives analysis at this stage as required by NEPA. By waiting to assess the environmental impacts of oil and gas development associated with the lease sale, the BLM will be unable to fully comply with "the heart of the environmental impact statement," as they will be unable to present a truly illustrative range of alternatives. NEPA demands that agencies not "commit resources prejudicing selection of alternatives before making a final decision."[8] Without an analysis of a full range alternatives, including a no action alternative for this specific sale, the BLM is unable to sharply define the environmental impacts to provide the decisionmaker and the public with "a clear basis for choice among the options."[9] NEPA analysis must be prepared such that it serves

[5] Notice at 21.
[6] *See* 43 C.F.R. § 3101.1-2.
[7] Notice at 21 (surface disturbing activities will only be prohibited where the action is likely to jeopardize listed or proposed species or where it is inconsistent with recovery needs outlined in an approved recovery plan).
[8] 40 CFR § 1506.1.
[9] National Environmental Policy Act, 1502.14

"as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made."[10] For all of these reasons, the BLM must prepare an EIS before the proposed lease sale.

Furthermore, an EIS is required at the earliest stage at which the BLM has relevant information regarding environmental impacts, and this information is available at the leasing stage. For example, the BLM can estimate the number of wells that will result from this lease sale, the likely surface disturbances associated with exploration and drilling, the sensitive species living in the region, and the approximate GHG emissions that will result from development and eventual consumption of the end product. Therefore, the BLM must complete an EIS, as required by NEPA.

Making these lands available for oil and gas exploration and drilling also represents a decision in principle about future consideration, committing the country to continued oil and gas development, consumption of dirty fossil fuels and the increase of greenhouse gas emissions in the earth's atmosphere. By conducting this lease sale, the BLM is "making a major decision affecting DOI resources," and pursuant to an order issued by the Secretary of the Interior in January 2009, the "BLM must "[c]onsider and analyze potential climate change impacts," when "undertaking" such decisions.[11] This lease sale sets a precedent for exploration, drilling and eventual commercial production, a precedent which, for both ethical and legal reasons, must minimally be preceded by the completion of an EIS.

Not only must the BLM prepare an EIS because it has available the necessary information to do so, but also because NEPA regulations and Ninth Circuit case law demand it. An impacts analysis must be conducted at "the earliest possible time."[12] This requirement has been repeatedly upheld by the Ninth Circuit, which continuously finds that agencies must perform an EIS for any lease sale that does not preserve an absolute right for the issuing agency to prevent all surface disturbances. This requirement was first elaborated in *Conner v. Burford*, where the court explained that "an EIS must be prepared before any irreversible and irretrievable commitment of resources" is made.[13] Though no-surface occupancy (NSO) leases prohibit surface disturbances and as such do not require site-specific EISs, non-NSO leases do not contain absolute prohibitions on surface disturbing activities.[14] As such, the *Conner* court held

[10] 40 CFR §§ 1502.2(f), (g); 40 CFR § 1506.1.
[11] Secretary of the Interior, Order No. 3226, Amendment No. 1, "Climate Change and the Department of the Interior," January 16, 2009.
[12] 40 C.F.R. § 1501.2.
[13] *Conner v. Burford*, 836 F.2d 1521, 1527 (9th Cir. 1988); *see also Kern v. BLM*, 284 F.3d 1062, 1072 (9th Cir. 2002) ("NEPA is not designed to postpone analysis of an environmental consequence to the last possible moment. Rather, it is designed to require such analysis as soon as it can reasonably be done."). The Ninth Circuit is not alone, as the Tenth Circuit recently emphasized "the inquiry is necessarily contextual. Looking to the standards set out by regulation and by statute, assessment of all "reasonably foreseeable" impacts must occur at the earliest practicable point, and must take place before an "irretrievable commitment of resources" is made." *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 2009 U.S. App. LEXIS 9028, at *92 (10th Cir. Apr. 28, 2009)(citations omitted) (holding that impacts of the future oil and gas production were reasonably foreseeable at the lease sale stage, site specific NEPA analysis was required prior to issuing the leases, and BLM's failure to conduct NEPA analysis was arbitrary and capricious).
[14] *Id*. at 1530

that the BLM had "violated NEPA when it sold non-NSO leases without an EIS."[15] This holding was reiterated in *Bob Marshall Alliance v. Hodel*, another Ninth Circuit case, in which the court determined that the sale of oil and gas leases require preparation of an EIS, unless the leases prohibit any and all surface disturbance "in the absence of specific government approval."[16]

This requirement was also upheld and strengthened in *Pit River Tribe v. United States Forest Service*, a case quite analogous to the present matter. In *Pit River*, the United States Forest Service (USFS) issued lease extensions on several leases.[17] While, the leases contained limited restrictions on surface disturbance, they did not contain absolute prohibitions.[18] The USFS had relied on previous EISs and EAs that addressed geothermal energy development to attempt to satisfy their NEPA requirements, but the court found that these previous assessments failed to "adequately address the potential impacts of leasing."[19] The Ninth Circuit court further explained that "[u]nder NEPA and our case law, the agencies were required to complete an environmental impact statement before extending the leases" and that "[t]his obligation was not satisfied by the earlier environmental reviews."[20] These EISs and EAs were in fact considerably more detailed and specific with respect to the leasing activities than is the EIS relied on by the BLM in the present matter, yet the court required the preparation of new site specific analysis.[21]

All of these cases demonstrate that a site-specific EIS must be prepared before a government agency can issue non-NSO leases for oil and gas development. In the present matter, the proposed oil and gas leases do not contain NSO stipulations, and as such, the BLM is required to prepare a new site specific EIS which analyzes the foreseeable significant impacts to the environment that may result from the June 23, 2009 lease sale before the sale occurs and before BLM makes any irretrievable commitment of resources.

1. The 2006 RMP EIS provides only general analysis of the RMP's environmental impacts on resources including air and water quality and impacts on sensitive species and habitat.

The 2006 RMP EIS takes a very general, non-detailed look at the RMP's potential environmental impacts. This generalness verges on vagueness within the discussions of oil and gas development on lands governed by the RMP. As a result, the RMP EIS cannot be relied upon and tiered to for the June 23, 2009 lease sale. This site-specific sale requires a new and more detailed analysis, which must consider, among others, the impacts oil and gas development will have on water and air quality, GHG emissions and climate change, endangered and threatened species, and nearby wilderness or wilderness study areas.

a. The 2006 EIS provides insufficient discussion and assessment of impacts on air quality.

[15] *Id*. at 1526
[16] *Bob Marshall Alliance v. Hodel*, 852 F. 2d 1223, 1227 (9th Cir. 1988).
[17] *Pit River Tribe v. United States Forest Service*, 469 F. 3d 768, 777 (9th Cir. 2006).
[18] *Id*. at 782-83.
[19] *Id*. at 783.
[20] *Id*. at 784.
[21] *See id*. at 773-74.

With respect to air quality, the 2006 EIS briefly mentions that energy and mineral development results in air pollution from engine exhaust and fugitive dust from the transport of materials.[22] The EIS, however, makes no effort to quantify such emissions, or to discuss the impacts of air pollution on the surrounding environment. This lack of detail is unacceptable, given the serious implications oil and gas development has on air quality.

Oil and gas development generally results in the waste of mineral resources, which in turn results in the emission of greenhouse gases such as methane and carbon dioxide.[23] For example, methane gas is frequently vented during drilling and well testing, and carbon is released from fuel combustion.

Additional impacts associated with leasing of the parcels in Monterey country are also severe. First, development of the leases would require a pipeline to link oil and gas with the regional system. Construction of this pipeline would result in considerable air quality impacts, none of which were mentioned or discussed in the 2006 EIS. Additionally, considering the low quality of oil in fields close to the proposed lease-sale parcels, it is reasonable to believe that the quality of oil associated with the June 23, 2009 lease sale parcels will be similarly low. The extraction of such oil often leads to particularly negative air quality impacts, due to increased flaring,[24] Oil development that requires heating or flaring poses serious risks to air quality impacts.[25] Therefore, the consideration of air quality impacts is all the more important before the proposed lease sale at issue here proceeds.

It is also important and imperative to remember that these air quality impacts would affect not only the areas immediately surrounding the developed parcels, but also the nearby rural and largely agricultural communities. Decreased air quality would have serious health implications for the local communities surrounding the lease area. In addition, the Ventana Wilderness lies directly west of the proposed lease parcels, and it is designated as a Class I air quality area by the California Air Resources Board, meaning that more stringent air quality standards must be maintained in the region.[26]

All of these air quality impacts must be considered within the context of the air basin in which they will occur, namely the North Central Coast Air Basin. This basin has serious air quality issues already, and oil and gas development will only make these conditions worse. Though the basin is designated as either "attainment" or "unclassifiable" for most Federal air quality standards, it is designated as a "maintenance" area for the Federal 1-hour ozone

[22] Hollister Field Office Proposed RMP/Final EIS, 4.1-2.
[23] *See* US EPA, 2009 U.S. Greenhouse Gas Inventory Report – Chapter 3, Energy, at 42. (2009), available at http://www.epa.gov/climatechange/emissions/usinventoryreport.html.
[24] *See* Rachel Henderson & Robert Fickes, Final Technical Report - Oilfield Flare Gas Electricity Systems (OFFGASES) Project at 7 (April 28, 2008), available at http://www.osti.gov/bridge/servlets/purl/936728-3CQq5u/936728.pdf
[25] *See* EPA Enforcement Alert, Frequent, Routine Flaring May Cause Excessive, Uncontrolled Sulfur Dioxide Releases, 3 Office of Regulatory Support 9 (October 2000), available at http://www.epa.gov/compliance/resources/newsletters/civil/enfalert/flaring.pdf.
[26] Hollister Field Office proposed RMP/Final EIS, Appendix A – Figure 12; 3.1-1.

standard.[27] Further, it fails to meet several of the more stringent California standards. It is designated as "non-attainment transitional" for the State 1-hour standard for ozone, and as "nonattainment" for the California ozone and PM_{10} standards.[28] Within this context, commitment to oil and gas development from the June 23, 2009 lease sale is not only irresponsible without further analysis, but is also unlawful because the BLM has failed to comply with NEPA and its implementing regulations in refusing to conduct such an analysis. As such, the BLM must provide to the public and decisionmakers a more detailed review of the foreseeable environmental impacts through the preparation of a new and updated EIS.

Considering that the North Central Coast Air Basin is designated as "maintenance" for Federal 1-hour ozone and "nonattainment" for California ozone standards, it is important to note that ozone, a harmful pollutant, is indirectly created as a result of oil and gas development activities. Specifically, volatile organic compounds (VOCs) and nitrogen oxide (NO_x) are both emitted from refineries, motor vehicles and other sources of combustion, all of which are activities associated with oil and gas development.[29] VOCs and NO_x then react with sunlight to create ozone, which greatly decreases air quality in the United States, particularly in the summertime.[30] In addition to this mechanism of creating ozone, oil and gas development also causes considerable GHG emissions which contribute to global warming, as is discussed in more depth below. The EPA has determined, through simulated climate change models, that in every region in the U.S., including California, global warming will lead to increases in summertime ozone concentrations.[31]

An EIS, therefore, must not only analyze oil and gas exploration and development's direct impacts on air quality and ozone, it must also analyze how the GHG emissions resulting from oil and gas exploration, development and consumption will indirectly and cumulatively impact air and ozone quality in the region. This analysis must be completed now, before the parcels are sold and the leases effective.

b. The 2006 RMP EIS provides insufficient discussion and assessment of impacts on water quality.

Oil and gas development can also have serious implications for water quality. The 2006 EIS acknowledges that extraction can impact both surface and groundwater quality through sedimentation and introduction of contaminants, as well as decrease the availability of water to downstream users if development activities divert water from aquatic resources. Disappointingly, this is the extent of the BLM's assessment. Considering the lease sale parcels are located in two major watersheds in the region and adjacent to a reservoir, the recent development of the Nacitone Watersheds Management Plan, and the highly agricultural focus of the surrounding communities, the EIS's limited review is insufficient, and the agency must assess the water quality issues in more depth in a new EIS.

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[27] Hollister Field Office Proposed RMP/Final EIS, 3.1-5.
[28] *Id*.
[29] US EPA Global Change Research Program, Assessment of the Impacts of Global Change of Regional U.S. Air Quality: A Synthesis of Climate Change Impacts on Ground-Level Ozone, at 1-4 (April 2009), *available at* http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=203459.
[30] *Id*. at 1-4, xii.
[31] *Id*. at xxiii, 3-12

First, since the development of the 2006 RMP EIS, the Nacitone Management Steering Committee, supported by the Monterey County Water Resources Agency, developed the Nacitone Watersheds Management Plan in order "to identify the existing conditions of and stresses to water quality, recommend enhancement or management measures, and suggest alternative land use practices, with recommendations and implementation concepts that address water quality in the watershed."[32] Consideration of this plan, and an attempt to harmonize oil and gas plans with it, is a necessary component of an EIS for the lease sale, mandating the creation of a new site specific analysis.

The Nacitone watersheds include two adjacent watersheds, the Nacimiento and San Antonio River watersheds, both of which are located in Monterey County, the location of the proposed lease sale.[33] Outlining goals to "maintain and protect the quality of surface water and groundwater" in the watersheds,[34] the Plan specifically mentions the need for coordination and communication between counties, jurisdictional entities, regulatory entities [specifically including the BLM], community groups and residents.[35] The BLM, however, failed to consider this plan, or the possible incompatibility of oil and gas exploration and development with the maintenance of high water quality in Monterey County and the larger watershed areas. Despite the numerous direct and indirect impacts that oil and gas development will have on water quality, the 2006 EIS makes no mention of these watersheds or the foreseeable impacts on them. Thus, how oil and gas development, in addition to other industrial and agricultural activities in the area, would impact water quality has never been fully analyzed or disclosed by the BLM.

Furthermore, a large number of the proposed lease sale parcels are located within the Nacimiento and San Antonio watersheds, and the most southern cluster of lease-sale parcels are located directly adjacent to the watersheds draining into the San Antonio River and reservoir.[36] This reservoir is designed to assist agricultural interests in the Salinas Valley during low water summer months and also to prevent saltwater intrusion in this important agricultural region.[37] It is also a vital resource for Monterey County. Recent estimates suggest that over 500,000 individuals visited the San Antonio and Nacimiento Reservoirs for recreation purposes, such as camping, fishing, hiking, swimming, rafting, boating, nature study, and picnicking, in 2006.[38] Likewise, it is an important source of clean water for Monterey and San Luis Obispo residents.[39] These varied and important uses of the local watersheds, and the nearly unavoidable impacts of oil and gas extraction on water quality, must be assessed prior to the proposed lease sale.

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[32] Draft Nacitone Watersheds Management Plan, p.6, *available at* http://www.mcwra.co.monterey.ca.us/Agency_data/Nacitone%20Study%20Group/Public%20comment%20period%20versions/FullDraftWMP2-2.pdf.
[33] *Id.* at 9.
[34] *Id*. at 85.
[35] *Id*. at 99.
[36] See Draft Nacitone Watersheds Management Plan, at 10; Hollister Oil and Gas Sale, June 2009 Map, Bureau of Land Mangement.
[37] Draft Nacitone Watersheds Management Plan, at 19.
[38] Id. at 60-61, 75.
[39] Id. at 62.

Compatibility with new and existing management regimes, as well as more detailed analysis of water quality issues, is an important aspect that must be fully and fairly considered pursuant to NEPA. Their absence in the 2006 EIS necessitates the development of a new, site-specific EIS for the lease sale.

c. The 2006 RMP EIS provides insufficient discussion and assessment of impacts on special status species and nearby wilderness areas.

The 2006 RMP EIS also provides only the barest of assessments of the impact oil and gas leasing will have on special status species in the region. Many of the parcels proposed for leasing lie directly in the habitat of the federally listed endangered kit fox.[40] The lease sale parcels are also within the range of the California condor which has been known to be adversely impacted by oil and gas activities. Additionally, most of the parcels are in relatively close proximity to many other listed, rare, and special status species including, but not limited to, the red-legged frog, the bank swallow, the California tiger salamander, robust spineflower, Monterey spineflower, and Mexican flannelbush and vernal pool habitats. The 2006 RMP EIS does nothing more than list the special status species located within the management area, provide maps of their distribution,[41] and list some general disturbances associated with oil and gas development that may affect special status species generally.[42] This review is hardly adequate to support a lease sale affecting more than 35,000 acres of Federal lands.

Moreover, all three clusters of parcels proposed for lease sale are located in close proximity to the Ventana Wilderness Area and the Bear Mountain Wilderness Study Area. The most north-western of the clusters is located directly east of these protected areas.[43] As such, a complete EIS must discuss the potential environmental impacts of oil and gas development on these sensitive and highly protected areas. Impacts on air and water pollution, and contribution to global warming, are not limited to the actual parcel areas, and could easily affect these proximate, and highly sensitive, areas.

2. The 2006 RMP EIS fails to address greenhouse gas emissions and climate change.

The BLM's complete failure to consider GHG emissions renders it woefully incomplete. Among other considerations, a complete EIS would: quantify GHG emissions from oil and gas operations, as well as detail the cumulative impact of those emissions with respect to global warming; consider measures to reduce GHG emissions and thereby improve efficiency of and reduce waste from oil and gas development; address the overall impacts of global warming on the environment; discuss the cumulative impacts of oil and gas development on a region already likely to experience strains on its environment and resources as a result of global climate change; and discuss the cumulative impacts the consumption of the oil and gas produced will have on increasing atmospheric levels of GHG emissions and global climate change.

[40] Hollister Field Office Proposed RMP/Final EIS, Appendix A, Figure 6 – Significant Plant and Animal Communities Southern Section.
[41] Id.
[42] Id. at 4.6-3.
[43] Id. at Appendix A, Figure12 - Wilderness.

Since the issuance of the 2006 EIS, much new information on greenhouse gas emissions and climate change has become available. This new information is briefly discussed below and must be considered by the BLM before moving forward with the June 23 oil and gas lease sale.

To begin, in *Massachusetts v. EPA*, the Supreme Court acknowledged that "[t]he harms associated with climate change are serious and well recognized."[44] Likewise, the Interior Secretary recently issued Secretary Order No. 3226, which requires BLM to "consider and analyze potential climate change impacts" when undertaking long-range planning exercises, including "management plans and activities developed for public lands."[45] Recently, the District Court for the District of Montana held that Secretarial Order 3226 "is not a statement of policy or procedure but a definitive statement of that which is required of the BLM, or other agencies, before the sale of oil and gas leases." The court further explained that "rules and regulations of the Secretary of the Interior have the force and effect of law, and an Order issued pursuant to those rules and regulations carries the same force and effect." [46] Finally, NEPA, as interpreted by recent case law, also requires the BLM to consider greenhouse gas emissions and climate change, including how climate change has and will continue to impact the affected environment.[47]

An analysis of GHGs and climate change is particularly important within the context of oil and gas development. Oil and gas production, processing, transmission, and distribution activities emit GHG pollution into the atmosphere, contributing to global warming.[48] The emissions from these activities can be calculated using existing emissions factors, including the GHG quantification methods outlined by the American Petroleum Institute ("API") Compendium.[49]

Without inclusion of this information, the BLM cannot adequately describe the existing environment, nor can it properly analyze the proposed project's reasonably foreseeable direct, indirect and cumulative impacts on this environment. In other words, absent a complete analysis of the project's likely greenhouse gas emissions and the likely impacts these emissions will have on climate change, the BLM cannot demonstrate how its proposed action will have no significant impact on the environment. NEPA regulations require that when considering whether its proposed action may have a significant affect on the environment, an agency must analyze the impacts "in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. [. . .] Both short- and long-term effects are relevant."[50] The BLM must complete a new EIS – or at least a new EA – that puts the proposed lease sale into context by explaining the true nature of greenhouse gas emissions and climate change and

[44] *Massachusetts v. EPA*, 127 S. Ct. 1438, 1455 (2007).
[45] Interior Sec'y Order No. 3226.
[46] *Montana Environmental Information Center et al v. United States Bureau of Land Management*, No. 9:2008cv00178 (Mo. Dist. Ct. 2008).
[47] *See Center for Biological Diversity v. National Highway Traffic Safety Administration*, 508 F.3d 508 (9th Cir. 2007).
[48] US EPA, 2009 U.S. Greenhouse Gas Inventory Report, Chapter 3 – Energy, at 39, 42, *available at* http://www.epa.gov/climatechange/emissions/usinventoryreport.html.
[49] *See* American Petroleum Institute, Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry, February 2004, Available at http://www.api.org/ehs/climate/new/upload/2004_COMPENDIUM.pdf.
[50] 40 CFR 1508.27(a).

by fully assessing the project's impacts within this environmental context. As it is now well understood that any contribution to GHG emissions has a cumulative impact on global warming,[51] an analysis of such impacts at this stage is imperative to sound environmental and land management decisionmaking.

a. *The RMP EIS failed to describe global warming as part of the environmental setting.*

Since the release of the 2006 RMP EIS relied upon by the BLM here, a great detail of information concerning how increasing levels of GHG emissions in the atmosphere will lead to catastrophic and irreversible climate change has become available. In short, it is now well-understood and accepted that "[w]arming of the climate system is unequivocal" and evident from "observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level."[52] Most of these observed increases in global average temperatures are "very likely" the result of the "observed increase in anthropogenic GHG concentrations."[53] This warming has, is and will continue to have impacts on the human environment, and is briefly detailed below.[54]

1. *The Environmental Protection Agency's Proposed Endangerment Finding for Greenhouse Gas Emissions under the Clean Air Act*

On April 24, 2008, the Administrator of the Environmental Protection Agency ("EPA") issued a proposed rule finding "that atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202(a) of the [CAA]."[55] In this proposed finding, the Administrator concluded that the six greenhouse gases in the atmosphere that together constitute the root of the climate change problem (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) endanger the public health and welfare of current and future generations and that regulation under the Clean Air Act ("CAA") of sources of these gases is appropriate. The Administrator explained that the "[t]he scientific evidence" presented in support of her finding was the product of decades of research by thousands of scientists from the U.S. and around the world. Id. at 18,904. In its proposed finding and the accompanying Technical Support Document ("TSD"), the EPA concluded that "the case for finding that greenhouse gases in the atmosphere endanger public health and welfare is compelling and, indeed, overwhelming."[56]

i. Proposed Endangerment Finding: Public Health

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[51] *See, e.g., CBD v. NHTSA*, 508 F.3d 508 (9th Cir. 2007).
[52] EPA, Technical Support Document, Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, at ES-2 (April 17, 2009), *available at* http://epa.gov/climatechange/endangerment.html (*hereinafter* "TSD").
[53] *Id.*
[54] *See*, e.g., *TSD*; EPA, "Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Proposed Rule," 74 Fed. Reg. 18886-18910 (April 24, 2009) (*hereinafter* "Endangerment Finding").
[55] Proposed Endangerment Finding, 74 Fed. Reg. 18886 (April 24, 2009).
[56] Endangerment Finding, 74 Fed. Reg. 18904.

In the Proposed Endangerment Finding and its supporting TSD, the EPA Administrator detailed currently observed climatic and related effects of greenhouse gases, including evidence showing a rise in global sea level in the 20th century and that "annual average Arctic sea ice extent has shrunk by 2.7 ± 0.6 percent per decade, with larger decreases in summer of 7.4 ± 2.4 per decade."[57] NASA data indicates that "Arctic sea ice set a record low in September 2007, 38 percent below the 1979-2007 average."[58] One year later, "Arctic sea ice reached its second lowest extent on record."[59] In addition, the western U.S. is "experiencing reduced snowpack and earlier peaks in spring runoff," which is currently having and will continue to have detrimental impacts on the region's already-strained water supplies.[60]

The Proposed Endangerment Finding also discusses greenhouse gas emissions' future and projected climatic and related effects.[61] Here, the Administrator explains that "[f]uture warming over the course of the 21st century . . . is very likely to be greater than observed warming over the past century."[62] "About a third of that warming is projected to be due to [already-committed] climate change."[63] All regions of the U.S. are expected to warm during the next century, and "most areas of the U.S. are expected to warm by more than the global average."[64] The largest warming, however, is "projected to occur in winter over northern parts of Alaska."[65]

Additionally, "[d]rought is expected to increase in the western U.S." where water demands are already very limited.[66] The American west will also face water shortages "due to a range of interconnected factors," including "decreased snowpack, earlier snowmelt resulting in peak winter and decreased summer flows…."[67]

The Administrator concluded that these and other current and projected changes as a result of climate change "pose serious risks to public health."[68] The Administrator explains that greenhouse gas emissions contributing to climate change do not "cause direct adverse health effects such as respiratory or toxic effects," but rather the health impacts discussed in detail in the Proposed Endangered Finding and its supporting Technical Support Document occur as a "result of elevated atmospheric concentrations of greenhouse gases via climate change."[69] Some of the risks to public health from climate change, include, for example, increased risks of morbidity and mortality resulting from "unusually hot days and nights, and from heat waves" and impacts on regional ozone pollution.[70] In sum, the Administrator used her judgment to

[57] Proposed Endangerment Finding, 74 Fed. Reg. 18898.
[58] *Id.*
[59] *Id.*
[60] *Id.*
[61] *See id.* at 74 Fed. Reg. 18899.
[62] *Id.*
[63] *Id.*
[64] *Id.* at 74 Fed. Reg. 18900.
[65] *Id.*
[66] *Id.*
[67] *Id.*
[68] *Id.* at 74 Fed. Reg. 18901.
[69] *Id.*
[70] *Id.*

decide that the "[m]ortality and morbidity" brought on by climate change are "clearly public health problems."[71]

ii. Proposed Endangerment Finding: Welfare Effects

The EPA Administrator also concluded that "current and projected levels of greenhouse gases and resultant climate change" are "clear[ly]" "adversely affecting, and will continue to adversely affect, public welfare," as defined by the CAA.[72] The CAA defines "effects on welfare" as including, but not limited to, "effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being."[73] The Proposed Endangerment Finding, as well as its supporting TSD, describe the various effects greenhouse gas emissions will have on climate change and the public welfare, such as further straining western U.S. water supplies, contributing to further sea level rise, intensifying storm impacts along the Gulf and Atlantic coasts, continuing ocean acidification, and exacerbating "ongoing environmental change and environmental pressures in settlements, particularly in Alaska where indigenous communities are facing major environmental challenges from sea ice loss and coastal erosion . . .."[74] Accordingly, the Administrator also proposed to find that greenhouse gas emissions' impacts on climate change detrimentally affects public welfare.[75]

2. *Climate Change Impacts on Species: U.S. Fish and Wildlife Service's Recent Actions Regarding the Polar Bear and the American Pika*

On May 15, 2008, the U.S. Fish and Wildlife Service ("Service") issued its final rule listing the polar bear as a threatened species under the Endangered Species Act ("ESA").[76] The final rule recognized that because of their specialized habitats and life history constraints, polar bears are particularly susceptible to negative population impacts from sea ice loss resulting from climate change.[77] The primary threat to the polar bear, as evidenced in the final listing decisions, is the melting of sea ice habitat.

In short, the listing decision explained that average Arctic air temperatures have been increasing at almost twice the rate of the rest of the world in the past 100 years.[78] Using moderate projections of future GHG emission levels, the average temperatures in the Arctic are projected to increase an additional 9º F by the end of this century.[79] Due to this warming, the Arctic sea ice, the polar bear's primary habitat, is melting very rapidly.[80] The listing rule

[71] *Id.* at 74 Fed. Reg. 18902.
[72] *Id.*
[73] *See id.*
[74] *Id.* at 74 Fed. Reg. 18903; *see also, e.g.*, TSD.
[75] *See* Proposed Endangerment Finding, 74 Fed. Reg. 18886.
[76] Department of Interior, "Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Polar Bear (*Ursus maritimus*) Throughout Its Range; Final Rule," 73 Fed. Reg. 28212-28303 (May 15, 2008).
[77] *Id.* at 73 Fed. Reg. 28270.
[78] *Id.*
[79] *Id.* at 73 Fed. Reg. 28230.
[80] *Id.* at 73 Fed. Reg. 28220-28225.

detailed ways in which impacts from global warming will affect virtually every aspect of the polar bear's existence, including but not limited to: reduction in hunting season, more larger open water areas that must be traversed, increasing the risk of drowning during long distance swimming, reductions in the availability of ice-dependent prey such as ringed seals and increased human/bear interactions.[81] The combined effects of these impacts of global warming on individual bears' reproduction and survival ultimately translates into impacts on polar bear populations, which will translate into population declines and extirpations.[82]

Almost one year after listing the polar bear as threatened throughout its range due to global warming's impact on its sea ice habitat, the Service announced its decision to consider listing another animal experiencing strain on its survival because of climate change – the American Pika. On May 7, 2009, the Service published in the Federal Register notice of a 90-day petition finding and initiation of status review for the American pika.[83] This notice indicates that the Service has found that the petition to list the pika as threatened or endangered under the Endangered Species Act ("ESA") submitted by the Center in 2007, contains substantial information indicating that a listing may be warranted.

More specifically, the Service found that listing may be warranted due to the present or threatened destruction, modification, or curtailment of the pika's habitat or range as a result of the effects of global climate change. The range of the pika and its habitat within that range are likely to decrease as surface temperatures increase. The Service's finding also highlights the petition's assertion that immediate action to reduce greenhouse gas emissions, particularly in the United States, is necessary and required in order to ensure the pika's survival. The petition, and the Service's response, underscore the significant threat global warming presents to wildlife.[84]

3. *Climate Change in California*

The failure of the BLM to even mention climate change in the 2006 EIS prevents any semblance of compliance with NEPA. This omission is particularly egregious when taken within the context of climate change in California, where the effects of global warming have been and will continue to be quite dramatic.

The impacts of climate change in California thus far have been more extreme than those in much of the United States,[85] and scientific literature on the impacts of GHG emissions on California is well developed and easily accessible. [86] For example, the California Climate Change Center ("CCCC") has recently evaluated the present and future impacts of climate

[81] *See id.* at 73 Fed. Reg. 28256-28280.
[82] *Id.* at 73 Fed. Reg. 28257.
[83] "90-Day Finding on a Petition to List the American Pika," 74 Fed. Reg. 21,301-10 (May 7, 2009).
[84] *See* Center for Biological Diversity, Before the Secretary of the Interior, Petition to List the American Pika (*Ochotona Princeps*) as Threatened or Endangered under the Endangered Species Act (October 1, 2007); 74 Fed. Reg. 21301-10.
[85] Moser, et al. 2009. The Future is Now: An Update on Climate Change Science Impacts and Response Options for California, at 16, *available at* http://www.energy.ca.gov/2008publications/CEC-500-2008-071/CEC-500-2008-071.PDF.
[86] Reports issued by California agencies are available at http://www.climatechange.ca.gov, and IPCC reports are available at http://www.ipcc.ch/.

change to California.[87] In sum, the report found that the severity of the impacts facing California is directly tied to atmospheric concentrations of greenhouse gases.[88] As aptly noted in a report commissioned by the California EPA:

> Because most global warming emissions remain in the atmosphere for decades or centuries, the choices we make today will greatly influence the climate our children and grandchildren inherit. The quality of life they experience will depend on if and how rapidly California and the rest of the world reduce greenhouse gas emissions.[89]

Some of the impacts to California, and the estimated ranges of severity – in large part dependent on the extent to which emissions are reduced – are summarized as follows:

- A 20-40% decrease in snowpack by 2100, including earlier melting and runoff, as well as increased risk of winter flooding.
- An increase in water temperatures at least commensurate with the increase in air temperatures.
- Likely sea level rise of up to 35 inches.
- An increase in the intensity of storms, the amount of precipitation and the proportion of precipitation as rain versus snow.
- Profound impacts to ecosystem and species, including changes in the timing of life events, shifts in range, and community abundance shifts. Depending on the timing and interaction of these impacts, they could be catastrophic.
- A 200-400% increase in the number of heat wave days in major urban centers.
- An increase in the number of days meteorologically conducive to ozone (O_3) formation.
- Up to a 51% increase in the number of large wildfires.[90]

By including analysis of greenhouse gas emissions, providing details as to the ranges of proposed impacts, and indicating that the higher-range of impact estimates are projected if greenhouse gas emissions continue to increase under a "business as usual" scenario, decisionmakers and the public will be better informed of the magnitude of the climate crisis and the urgency with which it must be addressed.

b. *The EIS does not address climate tipping points*

In addition to a general analysis of climate change impacts, any thorough discussion must now acknowledge and consider climate tipping points. Dr. James Hansen, from NASA's

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[87] Moser, et al. 2009. The Future is Now: An Update on Climate Change Science Impacts and Response Options for California.
[88] *Id*. at 23; Hayhoe, K., et al. 2004. Emissions pathways, climate change, and impacts on California. PNAS 101 no. 34.12422-12427, available at http://www.pnas.org/content/101/34/12422.full.
[89] Cayan, et al. 2007. Our Changing Climate: Assessing the Risks to California. California Climate Change Center. Available at: http://www.climatechange.ca.gov/biennial_reports/2006report/index.html.
[90] *See* Our Changing Climate: Assessing the Risks to California. 2007.; The Future is Now: An Update on Climate Change Science. 2009.

Goddard Institute for Space Studies, has warned that we are approaching numerous tipping points – points which, once passed, will cause feedback mechanisms to drive global warming at accelerating rates beyond human control.[91]

NEPA and its implementing regulations require that an agency "evaluate reasonably foreseeable significant environmental effects on the human environment," even where information relevant to making this evaluation is "incomplete or unavailable."[92] If this is the case, the agency must clearly show that the information is "lacking" by providing what credible scientific information it does have on these reasonably foreseeable impacts and making an effort to analyze impacts based on this information.[93] The information that the agency must provide depends on the costs of obtaining the information.[94]

For example, the agency must include "information relevant to reasonably foreseeable adverse impacts," even if it is "incomplete," if it is "essential to a reasoned choice among alternatives and the overall costs of obtaining it aren't exorbitant."[95] Even where the costs are exorbitant, or the means of obtaining the information are unknown, the agency must still provide information on reasonably foreseeable adverse impacts. This information includes:

> "(1) A statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; (3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and (4) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community."[96]

Under this section, reasonably foreseeable "includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason."[97]

Despite these legal mandates, the 2006 EIS fails to make any mention of climate tipping points and the dangerous impacts of abrupt climate change. The attainment of reaching dangerous "tipping points" toward dangerous anthropogenic climate change is "reasonably foreseeable," for which there is available scientific information. Even if the BLM failed to include this information because they believed the information to be "incomplete or unavailable," they clearly violated the above-described NEPA regulation of describing the incomplete or unavailable information and why it cannot obtain and describe it at this stage of the process.

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[91] See Hansen, J. et. al., *Target Atmospheric CO_2: Where Should Humanity Aim?* The Open Atmospheric Science Journal. 2:217-231. (2008).
[92] 40 CFR 1502.22.
[93] *Id.*.
[94] *See id.*
[95] *Id.* at § 1502.22(a).
[96] *Id.* at § 1502.22(b).
[97] *Id.*

To begin with, it is well accepted that there will be tipping points, and there is ample evidence demonstrating that unchecked greenhouse gas emissions will result in abrupt climate change.[98] Scientific understanding of tipping points has evolved rapidly in the past several years. Though in 2001 the IPCC suggested that substantial impacts would result from a temperature rise of 1-4°C, it is now well understood that much smaller increases in temperature could have substantial and irreversible impacts.[99] Specifically, a rise in mean global temperature of just 1.5°C above pre-industrial levels could prove to be a catastrophic tipping point, potentially triggering irreversible melting of the Greenland ice sheet.[100] Such melting would ultimately result in a seven meter sea level rise over and above that resulting from the thermal expansion of the oceans.[101] With a rise to just 2°C, the effects would likely be even more severe, including the transformation of 16% of ecosystems worldwide, the loss of 97% of coral reefs globally, the displacement of millions of people from the world's coastlines, falling agricultural yields in the developed world, and increased water stress for one to three billion people. Warming above 2°C would be even more catastrophic. Because of this, it is vital to reduce greenhouse gas emissions to a level that minimizes the chance of exceeding a 2°C temperature increase and reaching a disastrous tipping point.

Several other studies have attempted to quantify when such a threshold may be reached. A recent estimate by Hansen and colleagues suggests that prolonged time spent over 350 ppm CO_2 will result in catastrophic impacts.[102] The present global mean of CO_2 is 385 ppm, already putting us in the "dangerous zone" for experiencing such impacts.[103] Hansen and his colleagues used "paleoclimate data to show that long-term climate has high sensitivity to climate forcings," making the 385 ppm number alarming.[104] They concluded:

> If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and ongoing climate change suggest that CO_2 will need to be reduced from its current 385 ppm to at most 350 ppm, but likely less than that. The largest uncertainty in the target arises from possible changes of non-CO_2 forcings. An initial 350 ppm CO_2 target may be achievable by phasing out coal use except where CO_2 is captured and adopting agricultural and forestry practices that sequester carbon. If the present overshoot of this target CO_2 is not brief, there is a possibility of seeding irreversible catastrophic effects.[105]

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[98] *See* Meehl M.L. et al. 2007. Global Climate Projections in *Climate Change 2007: The Physical Science Basis: Contribution of Working Group I to the Fourth Assessment Report of the IPCC*. (S. Solomon et al., eds., Cambridge Press)

[99] Vespa, M., 2009. Why 350? Climate Policy Must Aim to Stabilize Greenhouse Gases at the Level Necessary to Minimize the Risk of Catastrophic Outcomes. 36 *Ecology L. C.* 185, 188.

[100] *Id*. at 189.

[101] *Id*.

[102] Hansen J. et al. 2008. Target Atmospheric CO_2: Where Should Humanity Aim? *The Open Atmospheric Science Journal* 2: 217-231. (Previous estimates considered 450 ppm the threshold for catastrophic climate change.)

[103] *Id.*

[104] *Id.* at 218.

[105] *Id.* at 217. As discussed further below, because climate forcing from anthropogenic non-CO_2 greenhouse emissions are approximately offset by cooling affect of anthropogenic aerosol emissions, Hansen et al. (2008) consider future CO_2 change as approximating the net human-made forcing change, with several caveats.

Due to the slow response time for the full effects of anthropogenic greenhouse gas emissions to be manifested in the climate system, "[w]arming 'in the pipeline,' mostly attributable to slow feedbacks, is now about 2°C. No additional forcing is required to raise global temperature to at least the level of the Pliocene, 2-3 million years ago, a degree of warming that would surely yield 'dangerous' climate impacts."[106]

Hansen and his colleagues also define several concepts: "(1) the *tipping level*, the global climate forcing that, if long maintained, gives rise to a specific consequence, and (2) the *point of no return*, a climate state beyond which the consequence is inevitable, even if climate forcings are reduced. A point of no return can be avoided, even if the tipping level is temporarily exceeded. Ocean and ice sheet inertia permit overshoot, provided the climate forcing is returned below the tipping level before initiating irreversible dynamic change."[107]

However, reducing atmospheric CO_2 concentrations to 350 ppm would not be enough to stabilize Arctic sea ice and save imperiled species such as the polar bear and the entire Arctic web of life:

> Stabilization of Arctic sea ice cover requires, to first approximation, restoration of planetary energy balance. Climate models driven by known forcings yield a present planetary energy imbalance of +0.5-1 W/m2. Observed heat increase in the upper 700 m of the ocean confirms the planetary energy imbalance, but observations of the entire ocean are needed for quantification. CO_2 amount must be reduced to 325-355 ppm to increase outgoing flux 0.5-1 W/m2, if other forcings are unchanged. A further imbalance reduction, and thus CO2 ~300-325 ppm, may be needed to restore sea ice to its area of 25 years ago.[108]

The best basis for determining tipping points may be the use of paleoclimate data. Based on such data, Hansen and colleagues have estimated that remaining at CO_2 concentrations above 350 ppm for a prolonged period of time is likely to invoke tipping points.[109] Paleoclimate data also indicate that in the past, at temperatures expected to be reached by 2100, Greenland and Antarctica contributed several meters to sea level.[110] The rate of rise at this temperature was approximately 1.6m/century.[111] Thus, the current CO_2 level of 385 ppm is not only "dangerous," but catastrophic and could lead to tipping points this century. Reaching any single tipping point can bring severe economic and ecological consequences.

Ultimately, these authors conclude

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[106] *Id.* at 225 (internal citation omitted.)
[107] *Id.*
[108] *Id.* at 226 (internal citations omitted) .
[109] Hansen et al. 2008.
[110] Overpeck J. et al. 2006. Paleoclimatic Evidence for Future Ice-Sheet Instability and Rapid Sea-Level Rise. *Science* 311: 1747.
[111] Rohling E.J. et al. 2008. High Rates of Sea-level Rise during the Last Interglacial Period, *Nature Geoscience* 1:38.

> [w]ith simultaneous policies to reduce non-CO_2 greenhouse gases, it appears still feasible to avert catastrophic climate change. [. . .] We must begin to move now toward the era beyond fossil fuels. Continued growth of greenhouse gas emissions, for just another decade, practically eliminates the possibility of near-term return of atmospheric composition beneath the tipping level for catastrophic effects. [. . .] The stakes, for all life on the planet, surpass those of any previous crisis. The greatest danger is continued ignorance and denial, which could make tragic consequences unavoidable.[112]

But perhaps more worrisome is the linkage between tipping points, such that reaching one tipping point may in turn trigger a second. An example is the connection between Arctic sea ice and permafrost melt rates. Permafrost refers to permanently frozen land; this surface stores large amounts of carbon. As permafrost thaws under the heat of global warming, it releases carbon, often as methane.[113] Methane has a global warming potential that is approximately 25 times greater than that of carbon dioxide over 100 years. The release of methane as permafrost thaws creates a positive feedback loop that may result in a climate tipping point.[114] Recent evidence indicates that the loss of Arctic sea ice, one tipping point, accelerates permafrost thaw, a second tipping point. The multiplicative effect of reaching several tipping points on a similar time scale would drastically increase the costs associated with climate change.

While no one may be able to predict with certainty the exact date on which a threshold for abrupt climate change may be reached, as described above, there is ample evidence that unchecked greenhouse emissions will result in abrupt climate change. Ample evidence also exists showing that among the many consequences of climate change, "tipping points" carry the greatest threat to wildlife, human welfare, and economic security. Thus, abrupt climate change is a reasonably foreseeable adverse impact, as defined under the NEPA regulations described above, of continuing our fossil fuel consumption which this oil and gas lease sale is designed to facilitate. Moreover, given the nature and science of tipping points, any increase in emission levels, which will certainly be a result of this proposed lease sale, could bring us even closer to the tipping point, and must be thoroughly considered in a new EIS.

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[112] *Id.* at 229.

[113] Christensen T.R. et al. 2004. Thawing Sub-Arctic Permafrost: Effects on Vegetation and Methane Emissions, *Geophys. Res. Letters* 31: L04501; In our comments submitted on January 12, 2009 on the EA for the proposed lease sale at issue here, the Center also discussed scientific evidence on black carbon, a short-lived pollutant that contributes to global and regional warming and present particularly troublesome problems for the Arctic. These comments are not repeated here, but are attached hereto and are incorporated by reference. *See* Comments from Center for Biological Diversity on Environmental Assessment for Oil & Gas Competitive Leasing Certain Parcels within the Bakersfield Field Office March 11, 2009 at 10-11. EA No. CA-160-09-001. (Submitted January 12, 2009).

[129] *Id.*

3. Leasing the Parcels Will Have a Cumulatively Significant Impact on the Environment.

NEPA requires consideration of whether the action is related to other actions with individually insignificant but cumulatively significant impacts in determining the intensity of the action's impact.[115] Under NEPA, the BLM is required to analyze all environmental impacts of the proposed action, including direct, indirect and cumulative effects.[116] Direct effects are those effects actually caused by the proposed action, indirect effects "are caused by the action and are later in time or farther removed in distance, *but are still reasonably foreseeable*," connected effects "are interdependent parts of a larger action and depend on the larger action for their justification," and a cumulative effect "is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."[117]

In the context of oil and gas leasing on federal lands, courts have interpreted these provisions of 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."[118] NEPA demands that such analysis not only be comprehensive, but also detailed and quantified. Accordingly, an agency "must . . . include a 'useful analysis of the cumulative impacts of past, present and future projects.'"[119] An agency cannot merely mention the likelihood of future oil and gas operations. An assessment of cumulative effects must include a "useful analysis," including "discussion and an analysis in sufficient detail" to assist the agency in its decision-making process and its efforts to avoid environmental impacts.[120] Finally, the agency must also consider the degree to which the proposed action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration in evaluating the intensity of the action's impact.

The 2006 EIS fails to adequately analyze the cumulative impacts of the proposed lease sale, as required by NEPA. Though it briefly mentions cumulative impacts of the RMP on a broad level, with respect to each type of "environmental consequence," such consideration is limited to vague generalizations about air pollution and water quality degradation, and statements such as this: "the significance of…cumulative impacts [on wildlife habitat and biological resources] would depend upon the species present within the area, the existing conditions of the habitat within the surrounding area, the type of activity proposed to occur, monitoring and reclamation efforts, and existing or proposed management goals and

[115] 40 C.F.R. § 1508.8 (effects include ecological, aesthetic, historical, cultural, economic, social or health impacts, whether direct, indirect, or cumulative).
[116] 42 U.S.C. §4332(C)(i); 40 C.F.R. § 1508.25.
[117] *See generally* 40 C.F.R. § 1508.
[118] *Connor v. Buford*, 848 F.2d 1441, 1444-45 (9th Cir. 1988).
[119] Churchill County v. Norton, 276 F.3d 1060, 1080 (9th Cir. 2001)(citing Muckleshoot Indian Tribe v. U.S. Forest Service, 177 F.3d 800, 809-10 (9th Cir. 1999).
[120] *Id.*

objectives."[121] The EIS contains almost no specific analysis of the cumulative impacts of oil and gas development on the region. The RMP mentions only that the U.S. Geological Survey has estimated the existence of "more than two billion barrels of undiscovered recoverable reserves in the 35 oil and gas fields in the Planning Area throughout the 588,197 acres of split estate" and "that 'the probability of a new field discovery on public lands in the Hollister Resource Area over the Plan life (15 years) is less than 5 percent.'"[122] This estimate was made over three years before the announcement of the proposed lease sale, and it is unlikely that there would be a proposed sale at all if the probability of discovery of a new field in among these parcels were really only 5%.

Beyond this background information about the scope of oil and gas exploration in the area, the only discussion of cumulative impacts states that there will be beneficial off-site and cumulative impacts – such as increased jobs and income and decreased transportation costs for construction materials – and that "[p]otential adverse off-site impacts" such as "reduced habitat quality from erosion and sediment transport to off-site streams, increased vehicular traffic (including commercial vehicles), increased noise and dust generation, decreased visual quality, and decreased scenic recreation opportunities."[123] Effectively, there is *no* discussion of the potential *adverse cumulative* impacts of the foreseeable oil and gas exploration and development on the lease sale parcels.

As a result of this omission, the EIS fails to provide adequate information on the RMP's impacts when considered in light of past, present and future activities taking place in the area. The BLM must adequately consider and provide to the public this information. Such analysis should include, among other things, consideration of oil and gas operations on surrounding public and private lands, as well as other development related impacts and impacts affecting the local environment and sensitive species such as the endangered San Joaquin kit fox. Moreover, the analysis must also include the cumulative impacts of the greenhouse gas emissions of the oil and gas lease. There is no such analysis in the EIS.

By omitting any substantive discussion of the cumulative impacts of oil and gas development in the Hollister District, or in California as a whole, the BLM improperly implies that the activities likely to result from the proposed lease sale will function in a vacuum. That is, the BLM fails to appreciate that the proposed action will be reacting in conjunction with present and future (federal or non-federal) actions likely to take place in the region. This deficiency makes the EIS insufficient in and of itself. The complete failure to even mention the foreseeable cumulative impacts of the RMP on greenhouse gas emissions and climate change adds significantly to the EIS' incompleteness. To be complete the EIS must include discussion of the probable greenhouse gases likely to result from the future wells associated with this specific lease sale, and also the cumulative impact of these emissions with all activities currently taking place in the region, as well as with foreseeable future lease sales and future oil and gas activities in the area. As the BLM estimated in the EIS that there could be up to 15 exploratory and

[121] BLM Hollister Field Office, Proposed Resource Management Plan/Final Environmental Impact Statement for the Southern Mountain Diablo Range and Central Coast of California at 4.1-4, 4.3-5, 4.5-6 (June 2006). *See* BLM Hollister Filed Office Proposed RMP/Final EIS, Section 4 – Environmental Consequences.
[122] *Id*. at 3.12-2.
[123] *Id*. at 4.12-4

development wells drilled on federal lands in the Planning Area, as well as roads, pipelines, seismic exploration,[124] and flaring associated with the exploration and drilling, they must include an assessment of the cumulative impacts of such activity with other drilling activities, including an analysis of the cumulative impact of greenhouse gas emissions.

Additionally, a complete analysis of greenhouse gas impacts from oil and gas development must include the emissions released into the atmosphere as a result of consumption of oil and gas produced as a result of this sale. Without such consumption, the oil and gas leasing program would serve no purpose, and oil and gas companies would not be bidding for rights to develop such a large area of public lands. The oil and gas leasing program, and the desire to explore and produce oil and gas, exists only because the companies intend that the product will be consumed in one form or another by consumers to fuel their cars, homes and businesses. As such, activities related to oil and gas leasing and development are causes of and necessary for consumption, which leads to the emission of greenhouse gas pollutants into the atmosphere. Indeed, such an analysis is imperative here, considering the "combustion of fossil fuel . . . was the largest source of GHG emissions in the U.S., and accounted for approximately 80 percent of total CO_2e emissions."[125] This cumulative impacts analysis must be completed at this stage.

Finally, in *Center for Biological Diversity v. NHTSA*, the 9th circuit recently found that the cumulative impacts analysis carries particular importance, noting that "[t]he impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct."[126] The Court faulted the agency's cumulative impacts analysis for failing to "discuss the *actual* environmental effects resulting from those emissions or place those emissions in context of . . . other rulemakings."[127] Importantly, the court pointed out that "the fact climate changes are largely a global phenomenon that includes actions that are outside the agency's control . . . does not release the agency from assessing the effects of its actions."[128] The court expressed particular concern with regard to the non-linear aspect of "irreversible adverse climate change" or "tipping points" wherein a seemingly small change in emissions can evoke a dramatic climate response.[129] This indicates that increases perceived as small cannot be immediately disregarded as insignificant. Accordingly, the BLM must consider the cumulative impacts of its action, including the cumulative impacts of the project's greenhouse gas emissions and greenhouse gases resulting from consumption of the oil and gas produced as a result of the lease sale.

Despite all of these impacts, direct, indirect and cumulative, the only mitigation measures listed in the EIS are the "use of appropriate 'no surface occupancy' stipulation controls" and to follow those mitigation measures included in the 1993 Hollister Oil and Gas RMP Amendment and Final EIS.[130] However, these leases are not being proposed as "no surface occupancy;" rather BLM is relying on a suite of "stipulations" and promises of later NEPA review to issue these leases. As discussed throughout this protest, this violates both the letter and spirit of NEPA

[124] *Id*. at 4.12-2
[125] EPA, "Mandatory Reporting of Greenhouse Gases; Proposed Rule," 74 Fed. Reg. 16448-16731 (April 10, 2009).
[126] *Center for Biological Diversity v. NHTSA*, 508 F.3d 508, 550 (9th Cir. 2007).
[127] *Id.* at 549.
[128] *Id.* at 550 (internal quotations removed).
[129] *Id.* at 554.
[130] *Id*. at 4.12-4, Appendix D.

which requires review of foreseeable impacts at the earliest practicable time in the process—that time is now for these lease sales.

4. BLM Failed to Disclose or Analyze the Extent to Which Leasing the Parcels May Adversely Affect Wildlife Including the San Joaquin Kit Fox, California Condor, California Red-legged Frog, Other Listed Rare and Sensitive Species, and Vernal Pool Habitats.

Current survey and monitoring data is necessary to evaluate the likely impacts oil and gas leasing will have on the federally listed endangered species in the project area as well as other special status species. The 2006 RMP EIS does not provide up to date status and monitoring information for special status species in this area and BLM has provided no additional information suggesting that it has obtained current baseline information on special status species.

Moreover, among other impacts that are not adequately addressed, the RMP EIS fails to provide detailed analysis of how ancillary development associated with oil and gas production (power lines, pipelines, and roads) will impact the condor, the kit fox, other listed, rare, and sensitive species, and vernal pool habitat.

The BLM's failure to undertake site specific NEPA analysis and to prepare a Biological Assessment for this lease sale, and consult with the Fish and Wildlife Service pursuant to the ESA are unsupportable given that BLM admits that oil and gas development on any or all of these parcels may affect listed species.

a. 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[131], and are still one of the most endangered vertebrate. The lease sale parcels are all within the historic and current range of the condor.[132] While their 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.[133] The condor is the subject of one of the largest species recovery efforts in U.S. history, and the U.S. Fish & Wildlife Service has spent upwards of $40 million to stave off their extinction. In a comment letter on a Forest Service leasing proposal in the Los Padres National Forest, the Department of Justice took note of the "superhuman" efforts of the Fish & Wildlife

[131] 32 Fed. Reg. 4001 (1967).
[132] *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/.
[133] Merensky, V. J., N. F. R. Snyder, S.R. Beissinger, D.A. Clendenen, J.W. Wiley. 2000. Demography of the California Condor: Implication for Reestablishment 14(4): 957-967.

captive condor breeding program and went on to state that "[t]he proposed oil leasing puts the future success of this effort in jeopardy."[134]

Currently, there are only 337 California condors left in the world, and only 92 in the wild in California.[135] Of these numbers, a substantial portion of remaining condors reside in relative proximity to the proposed leasing sites in Monterey County.

Condors are incredibly susceptible to many of the dangers presented by human disturbances and encroachment. While the RMP EIS briefly mentions some of the risks of oil and gas development on condors, it fails to conduct a complete analysis of the proposed leasing implications for the condors. Among other impacts, the EIS fails to provide detailed analysis of how micro-trash and human presence associated with oil and gas development will impact the condor.

A significant amount of condor habitat has been lost or severely decreased in value do to oil and gas projects. In one National Wildlife Refuge that allowed oil and gas development, the Fish and Wildlife Service estimated the 63% of critical condor habitat was lost.[136] Condors are known to 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.[137] Therefore, an accurate estimation of condor habitat loss must take into account the large amount of space they can cover in one day. This is something that the EIS for the RMP does not discuss, making it difficult to determine how BLM arrived at their conclusion that the condor will not be significantly impacted by oil and gas leasing in this area in general and provides no basis for BLM to conclude that condors will not be adversely impacted by this lease sale in particular.

Not only will the actual production facilities themselves eliminate habitat acreage, but so will road and pipeline construction. The existence of such infrastructure will also cause problems by eliminating food sources.[138] Proposed infrastructure will also lead to the breaking up existing habitat connectivity. This lessens the quality of habitat, and can also lead to changes in hydrology such as erosion, greater sediment loads, and changes in water temperature, presenting risks of many aquatic species including the red-legged frog as well as to the condor. Habitat fragmentation from the proposed leasing will also lead to increases in disturbances to wildlife from human activity, provide greater pathways to predators and increase the spread of invasive species. Habitat fragmentation is of particular concern because all California condors

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[134] U.S. Department of Justice Comment Letter, Comments on Oil and Gas Leasing Proposal for the Los Padres National Forest. April 19, 2002. http://www.lpfw.org/docs/Oil/FEISdocs/FEIS_H_DOJComments.pdf

[135] Condor Population Status Summary, Population Size and Distribution as of April 30, 2009, available at http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/condor/index.html.

[136] 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 73, available at http://www.gao.gov/new.items/d03517.pdf.

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

[138] GAO-03-517

come from only a small number of captive condors and have a very limited amount of genetic variability.[139] To prevent the condors from become too inbred, it is important to retain as much habitat connectivity as possible. None of these issues were adequately addressed in the EIS RMP.

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. [140] Project-related noise, such as from detonations, gas compressors, diesel-powered electric generators, etc., 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.

Condor expert Dr. Allen Mee provided commentary in response to another BLM leasing project that did not go through. Dr. Mee stated that high levels of noise from a nearby oil pad at another leasing site caused a noticeable reaction in a pair of condor parents at their nesting site. Abnormal behavior included abandoning their care for their less than one month old chick, which is much earlier than any condors have been known to abandon their chick before or since.[141]

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.[142] Dr. Allen Mee, a condor expert, commented on another BLM leasing proposal that did not go through, noting that:

> [T]here is little or no evidence to suggest that adults are "avoiding" oil pads. Condors in southern California have tended to show a seasonal pattern of use of oil pads and the ingestion of trash continues to be the most serious nestling mortality factor. During my intensive observations of the population, especially in 2002, 2003, 2004 & 2005, the oil pads in the Hopper Mt. area were heavily used in late winter and spring with, on occasion, the whole population landing on oil pads. Oil pad use by many condors was constant during this period and required much intervention by USFWS staff to keep condor from spending periods of time at pads. Undoubtedly, condors have and continue to land at pads, especially early in the morning, when FWS staff are not present.[143]

Proximity to oil or gas facilities presents condors with serious risks of injury. In 2002, the Fish and Wildlife Service had to flush a condor from an oil pad, and remove oil from its face and wings. The FWS concluded that the condor became immersed in oiled while trying to tear an

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

[140] 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. February 23, 2005.

[141] Dr. Allen Mee, Comments on Environmental Assessment for two APDs near Sespe Condor Sanctuary and Hopper Mountain National Wildlife Refuge, June 5, 2007.

[142] GAO-03-517.

[143] Dr. Allen Mee, Comments on Environmental Assessment for two APDs near Sespe Condor Sanctuary and Hopper Mountain National Wildlife Refuge, June 5, 2007.

oily rag from a pipe. The FWS has found numerous other condors with oil on their heads, while photographs and reports demonstrate habituation of condors to oil drilling equipment. [144]

There has been at least one documented incident involving a condor coating itself with oil from exposed pools associated with oil development in the Hopper Mountain National Wildlife Refuge.[145] 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.[146]

b. Foreseeable Oil Spills Present Significant Risks to Condors and Other Species

The affects of oil and gas production on wildlife include harm caused by oil, gas, and brine spills.[147] 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 has lasted for decades in some areas, for instance, 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 subsequent effects needs 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.

Spills are not an infrequent occurrence in oil and gas production either. In one report, nearly 20% of oil and gas production facilities examined reported spills.[148] 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. One review of official spill reports indicates that there have been nearly a dozen oil spills in the Las Padres National Forest area in the last three years alone.[149]

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[144] (Los Padres Forest Watch, et al., Comments on Environmental Assessment for Two APDs Near Sespe Condor Sanctuary and Hopper Mountain National Wildlife Refuge, June 6, 2007).
[145] United States Forest Service, Effects of the Leasing Decision on the California Condor and other T&E Species, August 12, 2005.
[146] *Id.*
[147] GAO-03-517
[148] *Id.*
[149] Los Padres Forest Watch, et al., Comments on Environmental Assessment for Two APDs Near Sespe Condor Sanctuary and Hopper Mountain National Wildlife Refuge, June 6, 2007.

Before going forward with these lease sales, BLM should fully assess alternatives that will prevent such spills. Despite past efforts such as close monitoring of facilities for leaks and prompt clean up efforts, oil spills still occur. For example, recent events such as 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.[150]

While the Tar Creek release did not seem to directly affect any condors, other recent spills have. According to the U.S. Forest Service, an adult condor recently became coated with oil "due to a small spill of oil that occurred when the condor was present and flew down to the spill before workers could remove the oil." And while agencies may attempt to prevent such occurrences by posting crew-members at the spill cite, spill cleanups may take weeks to complete, and it is unlikely that crew members can be present during the entire cleanup time.

c. Foreseeable Contamination of Toxins Presents a Significant Risk to Condors and Other Wildlife

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 (PCB's).[151] Such substances are used in equipment such as compressors, transformers, and well production meters. Mercury has been linked to organ and reproductive damage in various species, and PCB's are a known carcinogen in animals. *Id.* At least one condor has died from an excess level of mercury in its body.[152] Mercury, along with a host of other chemicals, is often used in oil/gas operations.[153] There is also a risk of condors drinking contaminated water, which is not discussed in the RMP EIS.

d. Impacts to the San Joaquin Kit Fox Are Not Adequately Identified or Analyzed

The San Joaquin kit fox was listed as a Federally Endangered species in 1967 and as a threatened species in California in 1971. The RMP EIS's analysis of impacts to the San Joaquin kit fox is extremely general and inadequate for this project – the lease sale. Many of the parcels identified in the proposed lease are in identified kit fox habitat. This is particularly noteworthy given the delicate situation of the kit fox, whose historical habitat has been cut back significantly.

Much of the remaining kit fox habitat is fragmented and rifled with competition from livestock and oil drilling.[154] The kit fox population in Monterey County is also highly fragmented and in decline. Because of the sensitive nature of the remaining kit fox population throughout California due to extreme habitat fragmentation, it is becoming increasingly

[150] U.S. Dept. of Fish and Game, Environmental Incident Report: Vintage Production California LLC Tar Creek Crude Oil and Produced Water Spills, January 30, 2007 and February 6, 2007.
[151] GAO-03-517.
[152] Wiemeyer 1988.
[153] GAO-03-517.
[154] Cypher et al. 2000. Population Dynamics of San Joaquin Kit Foxes at the Naval Petroleum Reserves in California. The Wildlife Society, Wildlife Monographs 145: 1-43.

important to preserve what little connected habitat the kit fox has left. The BLM has a special responsibility to delve further into the impacts on the kit fox populations in this area and rangewide. [155]

In order to comply with NEPA, BLM must provide detailed site specific identification and analysis of the likely impacts to the kit fox from the foreseeable oil and gas activities that will result from this lease sale, before they move forward with the sale.

B. BLM Has Failed to Ensure Against Jeopardy As Required by the Endangered Species Act (ESA).

In issuing this lease sale, the BLM is relying on an outdated biological opinion for Oil and Gas leasing from 1994, and a subsequent Amendment to that opinion from 1995, that provides only standard mitigation and protection measures for the kit fox and other listed species with out any site-specific information or analysis.[156] These biological opinions do not even mention the impacts to the condor or provide any protective measures for the condor.

BLM also attempts to rely on the biological opinion for the RMP which provides no take authority for any listed species[157] and only the most general analysis of impacts from oil and gas drilling.[158]

In addition to the fact that these biological opinions do not themselves address site-specific impacts of these lease sales, these biological opinions also fail to adequately address cumulative impacts to the listed species and critical habitats in this area over time such that they cannot be relied on to show that the BLM has ensured against jeopardy through consultation in violation of the Endangered Species Act. 16 U.S.C. § 1536(a)(2). A recent General Accounting Office Report found that the U.S. Fish and Wildlife Service has consistently failed to track the amount of take authorized in biological opinions through monitoring reports or otherwise and that the Service also lacks a systematic method for tracking cumulative take of most listed species.[159] For the San Joaquin kit fox the lack of cumulative analysis is particularly problematic given the large expanse of its range, the extreme habitat fragmentation, and the many differing types of threats it faces and recent studies that show that current management will not provide for recovery of the species as the ESA intends but rather is likely to lead to its extinction.[160]

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[155] *Id.*

[156] *See* Formal Section 7 Consultation Concerning Oil and Gas Leasing Identified in the Hollister Resource Management Plan Amendment (October 24, 1994) and Amendment of Biological Opinion (February 24, 1995).

[157] *See* Formal Consultation on the Hollister Resources Management Plan and Final EIS for the Southern Diablo Mountain Range and Central Coast of California (June 8, 2007) at 180-181.

[158] *Id.* at 153 -155,

[159] Endangered Species Act: The U.S. Fish and Wildlife Service Has Incomplete Information about Effects on Listed Species from Section 7 Consultations. (GAO-09-550), May 21 2009 http://www.gao.gov/cgi-bin/getrpt?GAO-09-550.

[160] McDonald-Madden, E., Baxter, P. & Possingham, H. 2008. Subpopulation Triage: How to Allocate Conservation Effort among Populations. Conservation Biolofy 22(3): 656-665.

The BLM must initiate consultation on this agency action—the lease sale—because it represents the point of commitment for eventual development on these parcels. *See Connor v. Burford*, 848 F.2d 1441, 1451 (9th Cir. 1988) ("the sale of a non-NSO oil or gas lease constitutes the 'point of commitment;' after the lease is sold the government no longer has the ability to prohibit potentially significant inroads on the environment.") Accordingly, BLM must fulfill its duties under Section 7 and ensure at the beginning of the process that the lease sales and production will not conflict with the protections listed species require to ensure against jeopardy, not after the decision has been made. *See id*. at 1453 ("agency action in this case entails not only leasing but leasing and all post-leasing activities through production and abandonment. Thus, section 7 of the ESA on its face requires the FWS in this case to consider all phases of the agency action, which includes post-leasing activities, in its biological opinion.")

Concurrently with filing this protest, the Center is providing the BLM with a notice of intent to sue for violations of the ESA.

C. The Federal Land Policy Management Act (FLPMA) Also Requires that BLM Consider and Analyze Potential Climate Change Impacts.

Requirements under NEPA and Secretarial Order 3226 are complemented by those of the Federal Land Policy and Management Act ("FLPMA"). FLPMA provides BLM with the authority and responsibility to address global warming and climate change. The 2006 RMP did not address climate change at all, and certainly did not conduct inventories of GHG emissions or climate change impacts, as mandated by FLPMA, which requires the BLM to "prepare and maintain on a continuing basis an inventory of all public lands and their resource and other values …."[161] These inventories are used in the development and implementation of RMPs.[162] Pursuant to these mandates, BLM must prepare an inventory of past, present, and reasonably foreseeable GHG pollution from oil and gas development and use that inventory to inform RMP-level planning and decision-making designed to account for greenhouse gas pollution through, e.g., the establishment of GHG pollution limits or GHG pollution reduction objectives, and to account, generally, for climate change impacts to public lands and the broader environment.

The RMP planning process is intended to set a stage for BLM compliance with FLPMA's affirmative environmental protection responsibilities. FLPMA requires that:

> [T]he public lands be managed in a manner that will protect the quality of the scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use.

43 U.S.C. § 1701(a)(8). Generally managed for multiple use and sustained yield (43 U.S.C. § 1701(a)(7)), BLM is duty bound to manage the public lands for the broad public interest:

[161] 43 U.S.C. § 1711(a) (stating that "the national interest will be best realized if the public lands and their resources are periodically and systematically inventoried…").
[162] 43 U.S.C. § 1712.

> The term "multiple use" means the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resources uses that takes into account the long-term needs of future generations for renewable and non-renewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources *without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.*

43 U.S.C. § 1702(c) (emphasis added). These provisions are reinforced by affirmative mandates requiring that BLM: (1) "take any action necessary to prevent unnecessary or undue degradation of the lands" (43 U.S.C. § 1732(b)); and (2) "minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved" (43 U.S.C. § 1732(d)(2)(A)). Individually and in total, these broad, strong mandates obligate BLM to account for and reduce GHG pollution from oil and gas management activities and ensure that public lands and the broader environment are managed to protect against climate change impacts.

Furthermore, FLMPA mandates that the BLM protect the environment, prevent "permanent impairment," prevent "unnecessary or undue degradation," and "minimize adverse impacts."[163] Oil and gas leasing without prior completion of a proper and sufficient environmental review pursuant to NEPA including consideration of climate change and global warming clearly violates these standards. As such, the BLM must incorporate consideration of GHG emissions and other environmental impacts of oil and gas development activities before holding the proposed lease sale in Monterey County.

D. BLM Failed to Provide Notice to Landowners and Failed to Consider Consistency With Local, State, and Regional Planning Laws

All of the leases in the June 23, 2009 lease sale are so-called "split estates." BLM's position appear to be that it has no legal duty to notify the private surface owners and/or the County before issuing a lease sale for split estate parcels. However, even if this were true (which we do not concede), BLM certainly has a duty to provide such notice as a matter of basic fairness, due process, and inter-governmental comity.

Further, because the sale of leases to third parties who intend to develop oil and gas reserves fundamentally alters the legal rights of the surface land owners and the likelihood that

[163] 43 U.S.C. §§ 1701(a)(8), 1702(c), 1732(b), 1732(d)(2)(A).

the underlying rights will be asserted within the next 10 years, BLM should be particularly concerned with ensuring that these land owners have fair notice of a lease sale of subsurface rights below their surface property. These leases may allow the purchasers of the leases access to the surface property for surveying, staking, baseline monitoring, and other data collection necessary to meet the various stipulations on these leases[164] long before any drilling approvals require a new round of NEPA review. Therefore, this is the stage at which the surface land owners should be given sufficient notice and information about the potential effects of the sale of the leases and the foreseeable future oil and gas development -- at the lease sale stage. BLM should not wait until after the leases have already been sold, rights have already been transferred to the purchasers, and bureaucratic momentum towards approving full scale drilling has already been set in motion.

Private surface owners, nearby residents, and other interested parties who may be affected by this lease sale have not been adequately notified of the June 23, 2009 lease sale and, thus, have not had an adequate opportunity to review the notice, analyze the potential impacts that the sale of these leases may have on their particular interests, and protest the lease sale. Similarly, the County of Monterey was not notified by the BLM although the development of these parcels may conflict with local planning and zoning in general and water conservation and water quality protection efforts in particular as well as with air quality goals. Notably, the DNA prepared by BLM does not even mention consistency with any state, regional, or local planning and zoning as a factor that BLM considered at all before deciding to include these parcels in the June 23, 2009 lease sale.

In addition to withdrawing this lease sale in order to fulfill its duties under NEPA, the ESA and other laws, the BLM should withdraw this lease sale for these parcels at least until surface land owners, the County, nearby residents, and other interested parties have been notified, had time to review the proposed lease sales, and to consider whether or not they object and may choose to protest these lease sales on various bases.

IV. Conclusion

For the reasons set forth above, the Center for Biological Diversity, Ventana Conservation and Land Trust, and Los Padres ForestWatch protest the June 23, 2009 lease sale and seek relief as requested above.

Sincerely,

Melissa Thailkill

[164] *See, e.g.*, June 23, 2009 lease sale notice at 21 (authorizations for surface disturbing activities may be delayed until completion of necessary surveys for special status species and presence or absence of habitat).

References Cited

American Petroleum Institute, Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry, February 2004, Available at http://www.api.org/ehs/climate/new/upload/2004_COMPENDIUM.pdf.

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/.

Christensen T.R. et al. 2004. Thawing Sub-Arctic Permafrost: Effects on Vegetation and Methane Emissions, *Geophys. Res. Letters* 31: L04501.

Cayan, et al. 2007. Our Changing Climate: Assessing the Risks to California. California Climate Change Center. *available at* http://www.climatechange.ca.gov/biennial_reports/2006report/index.html.

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

Condor Population Status Summary, Population Size and Distribution as of April 30, 2009, *available at* http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/condor/index.html.

Cypher et al. 2000. Population Dynamics of San Joaquin Kit Foxes at the Naval Petroleum Reserves in California. The Wildlife Society, Wildlife Monographs 145: 1-43.

Draft Nacitone Watersheds Management Plan, *available at* http://www.mcwra.co.monterey.ca.us/Agency_data/Nacitone%20Study%20Group/Public%20comment%20period%20versions/FullDraftWMP2-2.pdf.

Endangered Species Act: The U.S. Fish and Wildlife Service Has Incomplete Information about Effects on Listed Species from Section 7 Consultations. (GAO-09-550), May 21, 2009, *available at* http://www.gao.gov/cgi-bin/getrpt?GAO-09-550.

EPA Enforcement Alert, Frequent, Routine Flaring May Cause Excessive, Uncontrolled Sulfur Dioxide Releases, 3 Office of Regulatory Support 9 (October 2000), *available at* http://www.epa.gov/compliance/resources/newsletters/civil/enfalert/flaring.pdf.

EPA, Technical Support Document, Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, at ES-2 (April 17, 2009), *available at* http://epa.gov/climatechange/endangerment.html.

Hansen J. et al. 2008. Target Atmospheric CO_2: Where Should Humanity Aim? *The Open Atmospheric Science Journal* 2: 217-231.

Hayhoe, K., et al. 2004. Emissions pathways, climate change, and impacts on California. PNAS 101 no. 34.12422-12427, *available at* http://www.pnas.org/content/101/34/12422.full.

Los Padres Forest Watch, et al., Comments on Environmental Assessment for Two APDs Near Sespe Condor Sanctuary and Hopper Mountain National Wildlife Refuge, June 6, 2007.

McDonald-Madden, E., Baxter, P. & Possingham, H. 2008. Subpopulation Triage: How to Allocate Conservation Effort among Populations. Conservation Biolofy 22(3): 656-665.

Meehl M.L. et al. 2007. Global Climate Projections in *Climate Change 2007: The Physical Science Basis: Contribution of Working Group I to the Fourth Assessment Report of the IPCC*. (S. Solomon et al., eds., Cambridge Press).

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

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

Moser, et al. 2009. The Future is Now: An Update on Climate Change Science Impacts and Response Options for California, at 16, *available at* http://www.energy.ca.gov/2008publications/CEC-500-2008-071/CEC-500-2008-071.PDF.

Overpeck J. et al. 2006. Paleoclimatic Evidence for Future Ice-Sheet Instability and Rapid Sea-Level Rise. *Science* 311: 1747.

Rachel Henderson & Robert Fickes, Final Technical Report - Oilfield Flare Gas Electricity Systems (OFFGASES) Project at 7 (April 28, 2008), *available at* http://www.osti.gov/bridge/servlets/purl/936728-3CQq5u/936728.pdf.

Rohling E.J. et al. 2008. High Rates of Sea-level Rise during the Last Interglacial Period, *Nature Geoscience* 1:38.

U.S. Dept. of Fish and Game, Environmental Incident Report: Vintage Production California LLC Tar Creek Crude Oil and Produced Water Spills, January 30, 2007 and February 6, 2007.

U.S. Department of Justice Comment Letter, Comments on Oil and Gas Leasing Proposal for the Los Padres National Forest, April 19, 2002, *available at* http://www.lpfw.org/docs/Oil/FEISdocs/FEIS_H_DOJComments.pdf.

US EPA, 2009 U.S. Greenhouse Gas Inventory Report – Chapter 3, Energy (2009), *available at* http://www.epa.gov/climatechange/emissions/usinventoryreport.html.

US EPA Global Change Research Program, Assessment of the Impacts of Global Change of Regional U.S. Air Quality: A Synthesis of Climate Change Impacts on Ground-Level Ozone (April 2009), *available at* http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=203459.

United States Forest Service, Effects of the Leasing Decision on the California Condor and other T&E Species, August 12, 2005.

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 73, *available at* http://www.gao.gov/new.items/d03517.pdf.

United States Fish and Wildlife Service, Recovery Plan for the California Condor (1996).

Vespa, M., 2009. Why 350? Climate Policy Must Aim to Stabilize Greenhouse Gases at the Level Necessary to Minimize the Risk of Catastrophic Outcomes. 36 *Ecology L. C.* 185.

Wiemeyer 1988.