Organizations

18,949 acres. Which is correct? Has applicant gotten permission from Southwest Gas to build a road on/adjacent to the high pressure gas pipelines? DEIS at 3-48. As stated earlier, building roads and transporting heavy construction equipment over a shallow buried high-pressure gas pipeline will present a major safety hazard, as will excavation for underground collection lines.

The DEIS presents inaccurate information about the effects on private property of the development project, stating that "the 5.5% of the project area that includes privately owned parcels would not be affected by the construction, O&M, or decommissioning of the Proposed Project, as it has been sited to specifically avoid privately owned parcels." DEIS 4-56. This ignores not only the effect on property values within the project site, but also the effect on private property values in the surrounding area that is affected by the visual and noise impacts from the project, which can extend for miles from the industrial wind facility. Studies elsewhere have shown that property values near wind turbines drop up to 30% to 40%. Exhibits 31 and 32. How the DEIS can state that these parcels would not be affected defies believability. Applicant should be required to purchase all private property, both residential and open land, within two miles of the project area at current market value (that is, pre-wind turbine value). Regarding future roadway improvements, the DEIS states again that the project will increase access for motorized traffic. DEIS at 4-58. By whom and to where? Whose destination would be a lovely day having a picnic at a site 886 feet from an operating wind turbine?

P. The DEIS fails to give adequate consideration to cumulative effects.

The consideration of cumulative effects in the DEIS is inadequate. In its EIS, an agency must also consider the proposed action along with other actions, "which when viewed with other proposed actions have cumulatively significant impacts." 40 C.F.R. § 1508.25(a)(2). A cumulative impact is defined as "the impact on the environment which results from the incremental impact of the actions when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions." 40 C.F.R. § 1508.7. Under NEPA, cumulative impacts include direct as well as indirect effects, "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(a).

In analyzing the cumulative effects of a proposed action, an agency must do more than just catalogue "relevant past projects in the area." *City of Carmel-by-the-Sea*, 123 F.3d at 1160. The EIS "must also include a 'useful analysis of the cumulative impacts of past, present and future projects.'" *Id.* This means a discussion and an analysis in sufficient detail to be "useful to a decisionmaker in deciding whether, or how, to alter the program to lessen cumulative impacts." *Id.* The cumulative impacts analysis for a proposed project must examine past, present, and proposed/reasonably foreseeable actions that have cumulatively significant impacts or are similar in timing or geography. 40 C.F.R. §§ 1508.7, 1508.25, 1508.27(b)(7); *Tomac v. Norton*, 433 F.3d 852, 864 (D.C. Cir. 2006). Agencies may not avoid NEPA compliance by excessively segmenting projects into smaller parts. Instead, they must consider "connected actions" and "cumulative actions" within the same analysis. 40 C.F.R. § 1508.25. Actions are "connected" if they cannot or will not proceed unless other actions are taken previously or simultaneously, or are interdependent parts of a large action and depend on the larger action for their justification.

Southwest Gas Corporation holds a ROW grant from BLM for an existing gas line within the project area. BLM ROW grants are non-exclusive. BLM Reserves the right to grant other actions within a ROW area. Searchlight Wind Energy LLC would be required to coordinate its construction and operational activities with existing adjacent ROW holders to facilitate their continued safe operations.

The updated Socio analysis presented in Section 4.12-Socioeconomic Impacts, indicates there would be no effect on property values. Refer to Appendix F: Literature Review of Socioeconomic Effects of Wind Project and Transmission Lines for a more information.

Section 4.17.5-Potential Cumulative Impacts describes the consideration of indirect and direct cumulative effects in situations where relevant information is either incomplete or unavailable.

The EIS identifies two potential wind energy projects (e.g. Castle Mountain Searchlight Project and Piute-Eldordo Valley Energy), one solar project (Searchlight Solar Project),and the Mead-Searchlight 230-kV Transmission Line as projects with potential cumulative impacts to the Project. Table 4.20-1-Cummulative Effects Summary, contains a summary of the potential cumulative effects of the 87 WTG Alternative and the 96 WTG Alternative when considered with other reasonably foreseeable projects The EIS contains a "useful analysis of an analysis of the cumulative impacts of past, present and future projects." City of Carmel-by-the-Sea v. U.S. DOT, 123 F.2d 1142, 1160 (9th Cir. 1997).

The analysis of the cumulative impacts of the four other potential projects is an analysis of all past, present, and reasonably foreseeable actions. Tomac v. Norton, 433 F.3d 852, 864 (D.C. Cir. 2006). The cumulative impacts analysis in the EIS has been updated and identifies: (1) the area in which the effects of the proposed project will be felt; (2) the impacts that are expected in the from the proposed project; (3) other actions - past, present, and proposed, and reasonably foreseeable - that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate". Id. The Project is not segmented, but rather, is analyzed in its entirety in the DEIS.

40 C.F.R. § 1508.25(a)(1). Cumulative actions are those "which when viewed with other proposed actions have cumulatively significant impacts." 40 C.F.R. § 1508.25(a)(2).

Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. § 1508.7. "To consider cumulative effects, some quantified or detailed information is required. Without such information, neither the courts nor the public, in reviewing [an action agency's] decisions, can be assured that the [agency] provided the hard look that it is required to provide." *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1379 (9th Cir. 1998). The cumulative effects of the proposed action, combined with the cumulative effects of other proposed actions, must be described in detail. *Muckleshoot Indian Tribe*, 177 F.3d at 810. Broad and general statements "devoid of specific, reasoned conclusions" are not sufficient; neither are one-sided cumulative impact statements. *Id.* at 811. NEPA requires informed decisionmaking—and BLM has not undertaken any meaningful analysis of the cumulative effects to desert tortoise populations, other avian species, other wildlife, scenic resouces and other resources in conjunction with existing, pending, or planned projects and actions that also may impact these resources—for example, other energy projects currently under development or planned in desert tortoise habitat or the industrialization of the unspoiled landscapes of the southwestern deserts.

The DEIS's discussion of cumulative effects is inadequate in a variety of ways. It improperly restricts the spatial scale for the consideration of its effects. DEIS at 4-129. The chosen "project area and an immediately adjacent buffer sized 25% larger than the project area" ignores that the project has impacts on a desert tortoise species which is in decline and under pressure from energy development throughout its range. At an absolute minimum, given the serious impacts to this species, the DEIS should evaluate the Eastern Mojave Recovery Unit as the relevant cumulative impacts area. The rationale provided for selecting a smaller area is arbitrary and designed to avoid BLM's duty under NEPA.

Consequently, the DEIS fails to evaluate adequately the cumulative effects of the project site and transmission lines on the surrounding ACEC, and particularly on the desert tortoise for which the ACEC has been designated as critical habitat. The DEIS fails to provide any concrete analysis of cumulative impacts, instead providing largely generic descriptions devoid of any cumulative impact analysis specific to the proposed project. For example, the DEIS fails, for example, to study cumulative impacts to desert tortoise and their habitat with respect to impacts from energy development, habitat fragmentation, irretrievable loss of finite availability of land with unindustrialized viewsheds, and so forth, on a landscape level. As described above, the DEIS includes no adequate discussion about direct and indirect impacts to desert tortoise, bighorn sheep, and bald and golden eagles and other avian and sensitive species and their habitat—let alone an analysis of cumulative impact. Thus, there is no discussion of the direct impacts of the project on tortoise and other species and nor of how tortoise populations are doing in the immediate surrounding areas. There is no discussion of how other agency actions within BLM's jurisdiction, including permitting of utility-scale energy generation and transmission projects, cumulatively impact the resources affected by this generation and transmission project.

Furthermore, the DEIS cannot rely on mere cursory descriptions of past actions to satisfy

Table 4.17-1. Cumulative Effects Summary contains quantified and detailed information on the potential cumulative impacts of the four identified reasonably foreseeable future projects. The analysis contains details regarding air quality and climate, noise, geology and minerals, soils, water resources, biological resources, cultural resources, paleontological resources, land use, recreation, visual resources, transportation, hazardous materials, social and economic conditions and environmental justice. Table 4.17-1. Cumulative Effects Summary contains specific, detailed information and conclusions regarding each of these resources. It also contains a discussion of the cumulative impact on the tortoise population and bird and bat populations and visual resources.

The geographical boundaries should not be extended to the point that the analysis becomes unwieldy and useless for decision-making. In many cases, the analysis should use an ecological region boundary that focuses on the natural units that constitute the resources of concern.

The USFWS has evaluated the project effect on desert tortoise population in the Biological Opinion (Appendix B-2: USFWS Biological Opinion).

The proposed project area is not currently designated as an ACEC. Areas immediately surrounding the project area plus a 25% buffer were evaluated in Section 4.17-Cumulative Impacts Analysis. The ACEC is discussed in Section 1.4.1-Public Scoping Process, Section 4.8-Land Use Impacts, and Section 4.10-Noise Impacts.

its responsibilities under NEPA. DEIS at 4-130 to 4-132. This represents a lack of an honest cumulative impact analysis in this DEIS. Combined with the other deficiencies identified in these comments, including the inadequate set of "alternatives" identified, suggests that the DEIS's cumulative impacts analysis, may be a *pro-forma* exercise designed to justify a previously-made decision. This is impermissible under NEPA. *See, e.g., IlioUlaokalani Coalition v. Rumsfeld*, 464 F.3d 1083, 1101–02 (9th Cir. 2006). Courts have made clear that the presentation of information on present effects of past actions must be "quantified and detailed." *Or. Natural Res. Council v. BLM*, 470 F.3d 818, 822 (9th Cir. 2006). Failure to quantify or detail the degree to which each factor is currently being impacted by past actions violates NEPA. *Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995 (9th Cir. 2004). Similarly, providing only "general statements about possible effects and some risk" is insufficient to constitute the "hard look" required by NEPA. *Id.*

The cumulative impacts regulation unambiguously provides that the agency must consider all "other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions," including actions that are "individually minor." 40 C.F.R. § 1508.7. In many instances, particularly with respect to impacts to desert tortoise and golden eagles and other avian species, the DEIS states that information simply is not available or that quantification of impacts is impossible. The courts clearly have required that an agency provide a justification in its environmental analysis for why more definitive information cannot be provided. *See Neighbors of Cuddy Mountain*, 137 F.3d at 1379-80. It is BLM's obligation to collect this information, evaluate it, and present it for public review and comment.

In addition to presenting insufficient evidence of cumulative effects, the DEIS makes false statements about the unavoidable adverse impacts and irreversible and irretrievable commitments of resources. For example, BLM states, with respect to impacts to visual resources, that, because the project is expected to be decommissioned, "visual impacts would disappear." DEIS at 4-125. This is false, because the DEIS recognized on the previous page that there will remain longer-term effects of removal of vegetation which will may not grow back, leaving residual visual effects. But it is also false because, if the life of the project is at least 30 years (DEIS at 4-41), but could be extended to 50 years or more (DEIS at 4-104), the visual resources are essentially gone for 30 to 50 years … that is a lifetime for many people. To say that there is not anticipated to be any irretrievable commitments of recreational resources is false. The resource is lost for at least two generations. This cannot be considered a short-term impact.

BLM's statement is analogous to saying that there is no irreversible and irretrievable commitment of resources from logging because trees will, eventually, grow back. Courts have repeatedly rejected such interpretations the concept of "irreversible and irretrievable commitments of resources." *See, e.g., Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1054 (9th Cir. 1994) ("timber sales constitute *per se* irreversible and irretrievable commitments of resources under § 7(d)").

The BLM is not required to list or analyze the effects of individual past actions unless such information is necessary to describe the cumulative effect of all past actions combined. Under NEPA, agencies retain substantial discretion as to the extent of such inquiry and the appropriate level of explanation. Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 376-77 (1989). "Generally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." CEQ Guidance on the Consideration of Past Actions in Cumulative Effects Analysis, June 24, 2005.

Section 4.17.5-Potential Cumulative Impacts evaluates the cumulative impacts of both the current setting, which includes past projects as well as all reasonably foreseeable future actions. In addition, past projects with a potentially cumulative impact to the proposed project are encompassed in the entire document, in particular, Chapter 3-Affected Environment, which discusses in detail the "Affected Environment."

NEPA regulations require that cumulative impacts be "considered" (Neighbors of Cuddy Mountain vs. USFS, 137 F.3d 1372, 1379 (9th Cir. 1998)). Section 4.17.5-Potential Cumulative Impacts evaluates the cumulative impacts of both the current setting, which includes past projects as well as all reasonably foreseeable future actions, and the impacts to the present setting by past actions are carried through the entire EIS, in particular, Chapter 3-Affected Environment. The cumulative impacts analysis need not consider the impacts of past or reasonably foreseeable development that is unrelated to the impacts of the proposed action (Don't Ruin Our Park v. Stone, 802 F. Supp. 1239 (M.D. Pa. 1992))).

NEPA Section 101 2(c)(iv) requires a detailed statement on any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented. The "commitment of resources" refers primarily to the use of nonrenewable resources such as fossil fuels, water, labor, and electricity. A commitment of resources is "irreversible" when its impacts limit the future option for a resource and an "irretrievable" commitment refers to the use or consumption of resources that is neither renewable nor recoverable for later use by future generations. The long term impacts to resources resulting from the proposed project will be both renewable and recoverable for use by future generations at the termination of the proposed project.

Irreversible and irretrievable resource commitments are related to the use of non-renewable resources and the effects that the use of those resources have on future generations. The long term impacts to resources resulting from the proposed project will be both renewable and recoverable for use by future generations at the termination of the proposed project.

1. The DEIS does not disclose the cumulative effects of the project on desert tortoise.

The DEIS does not disclose the existence of the May 2011 Recovery Plan for the tortoise and provides no information about what effect the take of (at least) the 122 tortoises discovered during the limited site inventory will have on the species' survival and recovery, either in the Eastern Mojave Recovery Unit or throughout its range. BLM ignores the most recent scientific evidence that demonstrate the existential threat to tortoises from unbridled energy development throughout its range, and ignores the question of whether the extirpation of tortoises from the construction and operation of the Searchlight Wind Project, including from critical habitat surrounding the project site, will —cumulatively with other impacts to tortoise—hasten the extinction of the species. There is no quantification of how many tortoises are likely to be affected, or how that total compares to the local population in the ACEC, or on the population of tortoises in the Eastern Mojave Recovery Unit and elsewhere through their remaining range. There is no explanation of how the amount of adversely-affected habitat compares to the tortoise's remaining habitat. The DEIS offers no justification of why this information cannot be provided in this environmental analysis. *See Neighbors of Cuddy Mountain*, 137 F.3d at 1379-80.

Nowhere in the DEIS is there any information quantifying the impacts of other current and proposed energy development projects on desert tortoise. DEIS at 4-131. The DEIS improperly limits even the narrative, qualitative discussion it provides to a few actions taking place in the immediate vicinity of the project site. This is an improperly narrow definition of the cumulative effects analysis necessary to satisfy NEPA. What are the cumulative effects of habitat loss for tortoises from energy projects and other disruptions to and fragmentations of its habitat? How many tortoises are being displaced in Nevada and surrounding states by other energy projects? How would reasonably foreseeable developments of solar and wind energy on public lands within tortoise habitat affect the regional and local populations? If other past, present and future actions are already having an unacceptable impact on tortoise, what is the incremental effect that displacing a population with higher density that almost any other surveyed population have on the potential of desert tortoises to avoid extinction? BLM must answer all of these questions in a supplemental DEIS because they should have been answered in this DEIS.

Without any quantification or detail of the likely cumulative effects, there is no way for the public to understand the magnitude of the effects predicted—just a laundry-list of effects that might occur. NEPA requires BLM to do more than this. A recurring deficiency in the DEIS is BLM's generic statements about possible effects, of unknown extent, followed by a statement that information is not available. Nowhere in the cumulative effects section does the DEIS explain why more definitive information cannot be provided. This violates NEPA and must be addressed by BLM by gathering the requisite information to make *informed* decisions about the tortoise that would be affected by the project.

BLM's "lack of knowledge does not excuse the preparation of an EIS; rather it requires the [agency] to do the necessary work to obtain it." *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 733 (9th Cir. 2001); *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213 (9th Cir. 1998) ("'general statements about "possible" effects and "some risk" do not

The BLM's responsibility to address potential cumulative impacts is established in 40 CFR 1502.22(b), which states that "If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include with the environmental impact statement: (1) A statement that such information is incomplete or unavailable. . . " Section 4.17.4-Reasonable Foreseeble Actions has been updated to include the statement that such information is incomplete or unavailable. Accordingly, the discussion of the impacts of those projects is, therefore, adequate.

The geographical boundaries should not be extended to the point that the analysis becomes unwieldy and useless for decision-making. In many cases, the analysis should use an ecological region boundary that focuses on the natural units that constitute the resources of concern.

The USFWS has evaluated the project effect on desert tortoise population in the Biological Opinion (Appendix B-2: USFWS Biological Opinion).

constitute a "hard look" absent a justification regarding why more definitive information could not be provided'") (citing *Neighbors of Cuddy Mountain*, 137 F.3d at 1380). BLM must identify all places where the DEIS refers to unavailable information or insufficient information and "do the necessary work to obtain" this information to form a basis of reasoned decisionmaking on any ROW grants.

This area of southern Nevada has experienced below-normal rainfall levels in the last two years. Please provide information about the current climatic conditions in the project area and evaluate how this will affect the tortoises when combined with the effects of construction and operation of the project.

2. The DEIS fails to quantify the likely cumulative impact of the project on other wildlife, including birds, bats and desert bighorn sheep.

Nowhere in the DEIS is there data quantifying the likely cumulative effect of past, present and future actions involving transmission lines on wildlife. It is well known that wind energy turbines and transmission lines kill birds. For example, in addition to the deadly Altamont site, the USFWS has documented 54 golden eagle kills by industrial-scale wind energy facilities. Exhibit 12 at 1. Yet the DEIS makes no quantitative estimate of the likely adverse impacts to golden eagles, bald eagles, burrowing owls, and other avian species from the construction of the project, when combined with all past, present and reasonably foreseeable future projects affecting golden eagles and other bird species which use the project site, nearby Lake Mohave , or which pass through the Piute Valley along the Pacific Flyway. DEIS at 4-131.Without a quantitative estimate of likely impacts, the cumulative effects analysis violates NEPA.

The DEIS's cumulative impacts analysis of avian species is similarly deficient. DEIS at 4-131. A total of seven species of raptor and 57 species of other birds were recorded on the project site in 2007–2009. DEIS at 3-31. BLM should prepare an independent analysis (in conjunction with the federal expert wildlife agency, USFWS) regarding the baseline populations of birds present or migrating through the project site and disclose this information in a supplement to the DEIS along with information about the impacts of various alternatives on these other bird species. Even if only a few red-tailed hawks or turkey vultures are killed or displaced it is significant from a conservation perspective. The Migratory Bird Treaty Act does not allow for incidental take, and *any* bird kill by wind turbines is a violation of the Act. As windpower projects expand, it is reasonable to expect that the overall number of mortalities will increase significantly—especially if the expansion is done in a manner that fails to consider impacts to wildlife.

Similarly, BLM has an obligation to ensure that activities affecting BLM sensitive species be consistent with management of those species *at the appropriate spatial scale*. BLM Manual 6840.2.C. For bighorn sheep, this means an evaluation of the cumulative impacts on the sheep that range through the Newberry and Eldorado mountains and for whom the project site is an important movement corridor and winter habitat. BLM has failed to provide any cumulative analysis of effects on bighorn sheep at the proper spatial scale. DEIS at 4-131. Nor has BLM provided any cumulative effects analysis on other BLM sensitive species, including bats. Gila

Effects of rainfall were taken into consideration relative to desert tortoise in preparation of the Biological Assessment and the findings were presented in the EIS in Section 3.4.4.2-Existing Environment. The USFWS desert tortoise survey protocol provides survey methodology to determine presence/absence and abundance of desert tortoises for projects. Their model is based on the probability that a desert tortoise is above ground and includes required input relative to the previous winter's rainfall (October through March). The source of weather information was specifically provided by USFWS, namely; http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?nv7369.

For a variety of reasons Altamont fatality numbers may be an outlier with regard to golden eagle fatalities at wind energy facilities. In addition to the dense configuration of older-generation turbines, high prey densities and lack of breeding eagles possibly attract sub-adults and floaters to the Altamont, contributing to the high activity and high fatality rates. In addition, the limited amount of repowering that has occurred at Altamont suggests that eagle (and raptor) fatality rates will decline as the older turbines are replaced by fewer, taller, and higher power-rated turbines. Initial results of the repowering suggest that golden eagle fatality rates could decline by more than 80% with complete turbine replacement and comparable power output (Insignia 2009; Smallwood and Karas 2009; ICF 2011).

A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy). The intention is not to predict the number of fatalities due to turbine collision as pre-construction data poorly predicts fatalities for birds (Ferrer et al. 2012), but to determine if any species is at high risk to inform post-construction fatality monitoring.

At the time baseline surveys were completed for the project, Nevada had no official policy or protocols for avian pre-project surveys so protocols were developed between BLM and NDOW. In summary, two years of point count surveys, two seasons of raptor nest surveys, two years of bald eagle winter use surveys, and an aerial survey to assess the use of raptor nests were conducted.

No permitting framework exists that allows a company to protect itself from liability resulting from take at wind facilities; however, the USFWS does not usually take action under the MBTA if good faith efforts have been made to minimize impacts. A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and

Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy).

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3. The DEIS fails to discuss the cumulative effects of other energy projects and transmission lines.

The DEIS also fails to consider the cumulative effects of other energy projects currently being developed in desert tortoise habitat and which would affect other resources, such as golden eagles, impacted by the turbines at the Searchlight Wind Project site and the associated transmission line. The Searchlight Wind Project is not an isolated development projects, but rather part of a concerted BLM effort to reach the goal of producing 10,000 MW of energy from renewable sources on public lands by 2015. This goal is defined explicitly as a "need" for this project. BLM must provide an evaluation of the cumulative effects of this project when combined with all other past, current, and reasonably forseeable future projects that are being developed to meet the 10,000 MW goal, so that the public and the Secretary in deciding whether to approve the ROWs for this project can understand the context of the project in the overall impact of the push to industrialize federal public lands, and whether in that context this project should, or should not be, approved.

In southern Nevada alone, BLM currently has approved or pending 31 renewable energy generation and transmission projects, with a total of 5,585 MW of generation capacity project. *See* SNDO Renewable Energy Map, on enclosed CD-ROM and available at http://www.blm.gov/nv/st/en/fo/lvfo/blm_programs/energy/southern_nevada_renewable.html. These projects will have extensive cumulative effects on the residents and tourists in this region, on the wildlife species that live and migrate through there, and on the scenic and spiritual resources there. BLM must evaluate the impacts of these projects together as part of the cumulative effects analysis because the affect the same resources that the Searchlight project would affect.

The DEIS's designation of the project site plus a 25% "buffer" as the cumulative impacts evaluation area ("project vicinity") is arbitrary. DEIS at 4-129. Several resources that would be impacted directly by the Searchlight project are also under threat from other energy development projects. For example, the Piute-Eldorado Valley ACEC will be affected visually and by the sound from Searchlight on the south, but also is being affected by development of solar energy near Boulder City on the north edge. The Techren Solar Project, intended to generate 300 MW of power, recently submitted an application to the Public Utilities Commission that would allow construction on 2,200 acres within the Boulder City limits. Exhibit 35 (April 4, 2012 Legal Notice). The Boulder City limit adjoins the ACEC its north side, and the resource for which the ACEC was established—the desert tortoise—will suffer from loss of habitat and habitat connectivity within this critical habitat. BLM must evaluate the foreseeable impact of the Techren Solar Project along with other nearby energy projects that, cumulatively with the Searchlight project, will affect the ACEC and the imperiled tortoise.

Furthermore, BLM has not evaluated at least one renewable energy development project that is reasonably foreseeable to be developed within the 25% "buffer" around the project site. American Capital Energy is planning to construct a 20 MW solar array on a site in close

Refer to Section 4.17-Cumulative Impacts analysis for a discussion of cumulative impacts.

The projects identified within the area of cumulative effect were evaluated in Section 4.17.5-Potential Cumulative Impacts.

The geographic boundaries of the cumulative impacts analysis identified in the comment are described in the EIS in Section 4.17.5-Potential Cumulative Impacts. The geographical boundaries should not be extended to the point that the analysis becomes unwieldy and useless for decision-making. In many cases, the analysis should use an ecological region boundary that focuses on the natural units that constitute the resources of concern.

Section 4.17.4-Reasonable Foreseeble Actions has been updated to include the Searchlight Solar Project (e.g. American Capital Energy).

proximity to the northwestern border of the Searchlight project site. Exhibit 36. In 2009, American Capital Energy entered into a long-term Power Purchase Agreement with Nevada Energy for the power to be generated from the Searchlight Solar Project, which is scheduled for completion in 2012. *See id.* Yet the DEIS does not mention or evaluate this reasonably foreseeable project almost adjacent to the Searchlight Wind project site, and which will have similar impacts to visual and aesthetic resources and desert tortoises. Similarly, the DEIS claims that three wind projects slated for development in the vicinity of the Searchlight project "were considered," but the DEIS cumulative effects analysis table provides no details about what impacts those projects would have on resources—tortoises, golden eagles, visual and scenic resources, cultural and spiritual resources, tourism, and the local communities—that Searchlight Wind also would adversely affect. DEIS at 4-128 to 4-132.

In addition, USFWS's The May 2011 desert tortoise Revised Recovery Plan discloses that over 6,350 MW of renewable power has been permitted or is pending permission on the public lands in desert tortoise habitat. Recovery Plan at 16. According to the Recovery Plan, USFWS has not evaluated the long-term effects of large-scale energy development fragmenting or isolating desert tortoise conservation areas and cutting off gene flow between areas of critical habitat and in high-quality tortoise habitat that is not designated as critical habitat. *Id.* BLM must coordinate with USFWS and produce that information for public review as part of an overall evaluation of the cumulative impact of this project and other renewable energy development projects on the tortoise. There are several nearby solar and wind energy development projects approved and proposed that will impact tortoises, and impacts may be far greater than anticipated at the approval stage. *See, e.g.* Exhibit 9 (describing that 166 tortoises have been removed from the BrightSource project in Ivanpah Valley, despite a pre-construction survey that found only 16 tortoises); *id.* at 5 (map showing solar projects affecting tortoises in the area surrounding the Searchlight project site.

The USFWS has evaluated the project effect on desert tortoise population in the Biological Opinion (Appendix B-2: USFWS Biological Opinion).

In particular, BLM should disclose the ongoing efforts of the agency in cooperation with the State of California to develop and bring federal land use planning into conformance with the Desert Renewable Energy Conservation Program ("DRECP"). On April 4, 2012, BLM announced its intention to prepare an environmental impact statement for amendments to BLM land use plans in California to accommodate the DRECP. 77 Fed. Reg. 20,409 (Apr. 4, 2012). These amendments will be intended to advance state and federal conservation goals in the California desert adjacent to southern Nevada—including protection of the threatened desert tortoise—while identifying "the most appropriate locations" for utility-scale renewable energy resource projects. BLM must evaluate whether it should "call a time out" on approval and development of projects in Nevada while there is a comprehensive planning process currently going on that will more sensibly protect the same resources in the same desert where Searchlight Wind would be built.

Comment noted.

The impacts of this transmission development have dramatically changed landscapes throughout thousands of acres of rural Nevada and adjoining states along with countless scenic vistas. This development is also killing or displacing an unknown number of birds and ongoing damage to cultural resources is occurring from the excessive ground disturbance and road building. The rapid expansion in industrial-scale solar and wind energy has occurred without any

programmatic review of the impacts of the generating sources, the existing transmission system, or the demands for new transmission lines. This has also occurred without an adequate understanding of how much renewable energy development the grid can accommodate and how projects could be prioritized for grid access based on environmental impacts. These significant changes warrant preparation of a comprehensive cumulative impacts analysis. The DEIS must be substantially revised to reflect the project's contributions to the impacts of wind and solar energy development in the Mojave Desert southern California and Nevada as part of a proper cumulative effects analysis.

CONCLUSION

The DEIS barely scratches the surface of the analysis which BLM is legally obligated to perform under NEPA, and provides no information whatsoever about options that BLM is considering for complying with its substantive obligations under FLPMA, the Endangered Species Act, the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and other statutory, regulatory and policy obligations. It is inadequate to understand, much less evaluate, the likely impacts of the project on desert tortoise, golden eagles, and the residents and tourists who depend on the current character of the surrounding lands which would be changed to their detriment for the foreseeable future.

As a result, the DEIS has failed to take a "hard look" at the issue before BLM, and cannot support any decisions by BLM other than to adopt the "no action" alternative and deny the ROWs requested on public lands the agency administers. The inadequacy of the DEIS, at a minimum, requires the preparation and issuance for public review of a supplemental DEIS addressing the deficiencies in the current document. However, the unacceptable impacts of the project on desert tortoises, golden eagles and other wildlife, the obliteration of scenic and spiritually-significant viewsheds, and the destruction of the current character and economy of the area are evident even from the limited information currently disclosed. As a result, we urge the BLM to adopt the "No Action" alternative (Alternative A) and deny ROWs for this project.

Sincerely,

s/ Judy Bundorf
Friends of Searchlight Desert and Mountains
Henderson, Nevada &
Grandpa's Road, Searchlight, Nevada

s/ Kevin Emmerich
s/ Laura Cunningham
Basin and Range Watch
P.O. Box 70, Beatty, Nevada 89003
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Enclosures

Comment noted. For compliance details for these issues refer to Section 5.0-Consultation and Coordination, Appendix B-2: USFWS Biological Opinion, and Appendix B-4: Bird and Bat Conservation Strategy.

The provisions for preparation of a Supplemental EIS are described in 40 CFR 1502.9, (c) (1) (i), "The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."
Preparation of a Supplemental EIS is not warranted because neither of these conditions apply, the proposed action has not been substantively changed since publication of the DEIS and no significant new information was provided or developed during the public comment period.

Organizations

By email to BLM_NV_SNDO_SearchlightWindEnergyEIS@blm.gov
and by Express Mail, including a CD-ROM containing referenced materials

April 13, 2012

Bureau of Land Management
BLM Las Vegas Field Office,
Attn: Gregory Helseth
4701 North Torrey Pines Drive
Las Vegas, NV 89130-2301

Dear Mr. Helseth:

Please accept these comments from Judy Bundorf, the Friends of Searchlight Desert and Mountains, and Basin and Range Watch on the draft Environmental Impact Statement ("DEIS") Searchlight Wind Energy Project (NVN-084626) (the "project"). The comments are being sent to you by email, with a separate submission by courier including a CD-ROM containing supporting and referenced materials.

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INTRODUCTION

The proposed Searchlight Wind Energy Project would squeeze at least 87 industrial-scale wind turbines and over eight miles of transmission lines into the heart of a protected area that shelters the highest density desert tortoise habitat in Nevada. The project would install turbines within one-quarter mile of residential areas in and near the town of Searchlight, and line the mountains and fragile desert landscape along the only local access to the Lake Mead National Recreation Area ("NRA") with structures as tall as Las Vegas's 435-foot tall Caesars Palace topped by spinning blades as broad as a 747 jumbo jet. This industrial energy development project would cause significant and unacceptable impacts to the natural and human environment of southern Nevada. The transmission line and the effects of the project would intrude into the Piute-Eldorado Valley Area of Critical Environmental Concern ("ACEC") and dominate the viewshed along the road to Cottonwood Cove on Lake Mohave and for hikers seeking opportunities for quiet recreation in the surrounding Searchlight Mountains.

The Bureau of Land Management ("BLM") manages the public lands surrounding the town of Searchlight under a "multiple use" mandate. However, the proposed industrial-scale energy project would effectively transform the lands within several miles in every direction from the project site (and the site itself) into a "single-use" zone, in which the effects of the enormous turbines and land disturbance would crowd out other uses. Nationally-significant scenic resources, protected species such as the desert tortoise (*Gopherus agassizii*) and desert bighorn sheep (*Ovis canadensis Nelsoni*), and the people who live in close proximity to the project site and flock to the area to recreate would have their landscape irreparably changed by the installation of a turbine array stretching over 30 square miles (18,949 acres) of largely pristine desert.

The DEIS describes that the proposed action and BLM-preferred alternative would allow construction of 96 or 87 turbines, each over 400 feet tall, within a "keyhole" surrounded by the ACEC and the critical habitat for desert tortoise it contains. Both of these virtually identical "action" alternatives would involve constructing 8.7 miles of overhead transmission line, including nearly a mile of transmission line and an interconnection facility within the ACEC itself. Duke Energy, through its wholly-owned subsidiary Searchlight Wind Energy LLC ("Duke" or the "applicant") seeks a right-of-way ("ROW") for construction, operation and maintenance of the turbines and the transmission line. The Western Area Power Administration ("Western") has applied for a ROW to construct, operate and maintain a switching station to interconnect the project with Western's Davis-Mead 230-kV transmission line.

BLM repeatedly insists in the DEIS that impacts from the two alternative are "similar," and it is apparent from Duke's Plan of Development ("POD") that the 96-turbine configuration is an artificial proposal, designed to allow BLM to go through the motions of the NEPA analysis. This is discussed further below in the Section II.C. Because the 96-turbine proposal is a straw man, our comments focus on BLM's preferred alternative to authorize construction of 87 turbines. DEIS at 2-6. The impacts from an 87-turbine configuration are unacceptable, and BLM and the public must presume that the impacts of any larger configuration would only be more so.

This section is an introduction to the comments in this letter. BLM responses to comments are addressed as appropriate in the subsequent comment sections. Additionally, these commenters provided supplemental information, which can be found on the BLM's Searchlight Wind Energy Project website at http://www.blm.gov/nv/st/en/fo/lvfo/blm_programs/energy/searchlight_wind_energy.html.

In the fragile desert landscape between Searchlight and the Lake Mead NRA, an industrial-scale energy facility with turbines up to 428 feet tall would dominate the skyline and industrialize a landscape hitherto largely preserved for native wildlife and traditional land uses. Access roads, turbine pads and transmission lines would fragment largely intact habitat for a variety of wildlife, destroying the scenic beauty of the Searchlight Mountains and surrounding protected areas. Turbines would intrude on residents and visitors, a constant presence disrupting the clear viewsheds and threatening potential harm to the health and safety of the surrounding human communities.

The project site and the surrounding ACEC are home to several imperiled and protected species, including the desert tortoise, desert sheep, golden eagles (*Aquila chrysaetos*), bald eagles (*Haliaeetus leucocephalus*), as well as a variety of migratory birds. The project would significantly harm desert tortoise, a species listed as "threatened" under the Endangered Species Act ("ESA") and under tremendous pressure throughout its range from proposed energy development and fragmentation of its habitat. The U.S. Fish & Wildlife Service ("USFWS"), the federal agency responsible for protecting the tortoise, issued a Revised Recovery Plan for the Mojave Population of the Desert Tortoise ("Recovery Plan") in May 2011, describes there is a developing and serious "threat of large-scale energy development and the potential impacts to desert tortoises and their habitat." Recovery Plan at ii, 16, 138–39.

Because of the unique factors present surrounding the Searchlight project site, BLM must take a close and exhaustive look at the likely impacts of the proposed construction and operation of turbines and a transmission line. Instead, the DEIS is inadequate to inform the public about the actions that BLM is considering, in violation of the National Environmental Policy Act ("NEPA") and their substantive legal obligations. The DEIS improperly narrows the scope of impacts evaluated, ignores essential information regarding tortoise, raptors, and other impacts, presents biased, misleading or incorrect information regarding potential impacts, and was largely drafted at the instigation of the applicant without any evidence that the BLM supplied substantive input or expertise.

The DEIS draws conclusions about the impacts of the project without adequate collecting and disclosing information and acknowledges that further study will be required to resolve some of these issues. Description and evaluation of the efficacy of mitigation measures is almost non-existent, and what little is disclosed is inadequate, indicating that mitigation will be postponed to some indeterminate future process. No information is presented regarding potential conditions which BLM is considering imposing on the generation/transmission and interconnection ROWs to protect the environment and the resources on private and public lands affected by the project. Yet the DEIS repeatedly posits that the environmental impacts of the project are insignificant or can be mitigated, despite the lack of complete mitigation plans for issues such as visual impacts, health and safety impacts, desert tortoise, golden eagles, other raptors, cultural resource impacts, and other impacts to protected areas of public land.

The absence of detailed and precise information about likely impacts and mitigation measures renders BLM's conclusions regarding the project's impacts invalid. Merely including this information in a final Environmental Impact Statement ("EIS") does not satisfy NEPA

unless a supplement is prepared and the public is given a full and fair opportunity to comment on the missing information. *See* 40 CFR § 1500.1(b) ("NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken."). Under NEPA, an agency cannot withhold information from public review until just before (or after) it makes a decision.

Because of the deficiencies in the DEIS, BLM must issue a Supplemental DEIS that adequately discloses and completely evaluates the likely environmental impacts that will flow from a decision authorizing a ROW over public lands to generate and transmit power in the proximity of Searchlight and through and adjacent to the Piute-Eldorado Valley ACEC. The Supplemental DEIS also must disclose what alternative conditions BLM is considering imposing on any ROW grant to allow the public to review and comment on whether they are adequate to mitigate the dramatic ecological and visual effects of the generation and transmission project on the human and natural environment.

Even without the additional disclosure required by NEPA, it is apparent from the preliminary information presented in the DEIS that the heart of an otherwise protected landscape adjacent to a local population center is the wrong place to develop an industrial-scale wind energy project. BLM's statutory obligations to manage federal lands on and near the project site precludes it from approving ROWs for a generation and transmission project that would render the area unlivable for the ESA-listed tortoise and the residents and visitors who depend on the public lands from which their use would effectively be excluded. BLM, or the Secretary of the Interior, ultimately should chose the "no action" alternative and deny the ROW applications to develop this project.

I. BLM Must Prepare and Distribute a Supplemental DEIS For Public Comment.

Congress enacted NEPA in 1969, directing all federal agencies to assess the environmental impact of proposed actions that significantly affect the quality of the environment. 42 U.S.C. § 4332(2)(C). NEPA's disclosure goals are two-fold: (1) to insure that the agency has carefully and fully contemplated the environmental effects of its action, and (2) to insure that the public has sufficient information to challenge the agency's action. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 322, 349 (1989); *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1151 (9th Cir. 1998). NEPA's "sweeping commitment [is] to prevent or eliminate damage to the environment and biosphere by focusing government and public attention on the environmental effects of proposed agency action." *Marsh v. Or. Natural Resources Council*, 490 U.S. 360, 371 (1989) (*quoting* 42 U.S.C. § 4321). The Council on Environmental Quality ("CEQ") promulgated uniform regulations to implement NEPA that are binding on all federal agencies. 42 U.S.C. § 4342; 40 C.F.R. §§ 1500 *et seq.*

NEPA requires agencies to prepare an EIS for any "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). An EIS must analyze the direct, indirect, and cumulative environmental impacts of the proposed action. Direct effects are caused by the action and occur at the same time and place as the proposed project. 40 C.F.R. § 1508.8(a). Indirect effects are caused by the action and are later in time or farther removed in

The provisions for preparation of a Supplemental EIS are described in 40 CFR 1502.9, (c) (1) (i), "The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."
Preparation of a Supplemental EIS is not warranted because neither of these conditions apply, the proposed action has not been substantively changed since publication of the DEIS and no significant new information was provided or developed during the public comment period.

distance, but are still reasonably foreseeable. *Id.* at § 1508.8(b). Both types of impacts include "effects on natural resources and on the components, structures, and functioning of affected ecosystems," as well as "aesthetic, historic, cultural, economic, social or health [effects]." *Id.* at § 1508. Cumulative impact results when the "incremental impact of the action [is] added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." *Id.* at § 1508.7.

A major purpose of NEPA is to ensure that federal agencies conduct fully informed environmental decision-making. NEPA promotes its sweeping commitment to "prevent or eliminate damage to the environment and biosphere" by focusing the attention of federal decision makers and the public on the environmental and other impacts of proposed agency action. 42 U.S.C. § 4321. By focusing agency attention on the environmental and socioeconomic impacts of a proposed action, NEPA ensures that the agency will not act on incomplete information, only to regret its decision once finalized. *See Methow Valley Citizens Council*, 490 U.S. at 349. To that end, "[t]he sweep of NEPA is extraordinarily broad, compelling consideration of any and all types of environmental impacts of federal action." *Calvert Cliffs' Coordinating Comm. v. U.S. Atomic Energy Comm'n*, 449 F.2d 1109, 1122 (D.C. Cir. 1971). An agency must "take the initiative of considering environmental values at every distinctive and comprehensive stage of the process." *Id.* at 1111. Federal agencies must consider all reasonably foreseeable environmental impacts at the earliest possible stage of a project's development and fully such impacts before making a decision to proceed with the project.

Under the NEPA regulations, a draft EIS "must fulfill and satisfy to the fullest extent possible the requirements established for final statements." 40 C.F.R. § 1502.9(a). When a draft EIS "is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion." *Id.* Substantial changes in the proposed action, or significant new circumstances or information relevant to environmental concerns, trigger a mandatory obligation to prepare a supplemental draft EIS. *Id.* § 1502.9(c)(1).

"NEPA's public comment procedures are at the heart of the NEPA review process" and reflect "the paramount Congressional desire to internalize opposing viewpoints into the decision making process to ensure that an agency is cognizant of all the environmental trade-offs that are implicit in a decision." *Cal. v. Block*, 690 F.2d 753, 770-71 (9th Cir. 1982). It is only at the stage when the draft EIS is circulated that the public and outside agencies have the opportunity to evaluate and comment on the proposal. *Id.* at 771. "No such right exists upon issuance of a final EIS." *Id.* Consequently, an agency's failure to disclose the impacts of a proposed action before the issuance of a final EIS defeats NEPA's goal of encouraging public participation in the development of information *during* the decision making process. *Half Moon Bay Fishermans' Marketing Ass'n v. Carlucci*, 857 F.2d 505, 508 (9th Cir. 1988).

BLM is required to "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 CFR § 1502.15. The establishment of the baseline conditions of the affected environment is a practical requirement of the NEPA process. In *Half Moon Bay*, the Ninth Circuit states that "without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and

Chapter 3.0-Affected Environment provides baseline data for the proposed project area. Additionally, BLM provided the following technical reports on the BLM Searchlight Wind Energy Project (NVN-084626) website: Raptor Nest Survey Report, Botanical Report, Monitoring Bat Populations April 2008-April 2009, Avian Survey Report, Desert Tortoise Inventory Report, and Terrestrail Wildlife Survey Report (http://www.blm.gov/nv/st/en/fo/lvfo/blm_programs/energy/searchlight_wind_energy.html).

consequently, no way to comply with NEPA." 857 F.3d at 510. Similarly, without a clear understanding of the current status of these public lands BLM cannot make a rational decision regarding proposed project. *See Ctr. for Biol. Diversity v. BLM*, 422 F. Supp. 2d 1115, 1166-68 (N.D. Cal. 2006) (holding that it was arbitrary and capricious for BLM to approve a project based on outdated and inaccurate information regarding biological resources found on public lands). As described throughout these comments, BLM has failed to provide accurate baseline information about a wide variety of resources at and surrounding the project site, including the status of the desert tortoise and other sensitive and rare plant and animal communities.

A draft Environmental Impact Statement must provide the public with sufficient information to permit meaningful consideration of the action under agency review. *Cal. v. Block*, 690 F.2d at 772. The DEIS here fails to provide sufficient information in several regards and requires supplementation and further opportunity for public review and comment.

A. BLM must issue a supplemental DEIS based on information regarding impacts to desert tortoises.

The DEIS fails to disclose significant information regarding the desert tortoise, including the USFWS's most recent recovery plan for the tortoise and recent studies by federal and state wildlife officials demonstrating that the handling and translocation of tortoises will cause unacceptably high rates of mortality. This new information triggers BLM's responsibility to produce a supplemental DEIS disclosing this data to the public and providing the BLM's evaluation of the data. 40 C.F.R. § 1508.25(a). The DEIS also discloses no information about what mitigation actually will be implemented to minimize impacts to tortoises, but rather all mitigation is still purely hypothetical. DEIS at 2-43 to 2-44.

BLM must evaluate and present information about mitigation in the supplemental DEIS. Prematurely publishing a DEIS that lacked critical information regarding environmental impacts violates NEPA. BLM also must engage its own expertise, and enlist that of USFWS, in surveying the areas on and adjacent to the project site for tortoises, and in describing the likely impacts of noise and habitat fragmentation not only on the site itself, but also in the surrounding ACEC that is designated tortoise critical habitat. BLM cannot rely only on information provided by Duke's consultants to protect this threatened species.

B. BLM must issue a supplemental DEIS which discusses adequate alternatives, including alternative conditions which BLM may consider imposing on any ROW grants.

As described in more detail in Section II.C, the DEIS fails to discuss adequate alternatives. The DEIS contains no discussion of alternative conditions BLM is considering to satisfy its obligation under the Federal Lands Policy and Management Act ("FLPMA"), the Endangered Species Act, the Bald and Golden Eagle Protection Act, and other statutory obligations. By failing to disclose potential conditions that could be applied to the ROW grants to mitigate environmental impacts and comply with BLM's substantive statutory obligations, BLM has failed to prepare an adequate DEIS, and must issue a supplemental DEIS which

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion). No tortoise translocation is proposed for this project. Potential effects of handling tortoises are discussed in Section 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives and in Appendix B-2: USFWS Biological Opinion.

BLM requires that mitigation measures be implemented as a stipulation of the ROW Grant. Development of mitigation plans often requires input, review, and approval by other regulating agencies such as USFWS, NDEP, DAQ, and NDOT and is not typically completed prior to a Final EIS. All the elements and basic requirements of the mitigation plans are discussed throughout the EIS.

Independent third party contractors that have no interest in the outcome of the project completed the biological surveys, species information, and impact assessment. USFWS-approved protocols for desert tortoise surveys were used. BLM resource specialists then reviewed impact assessments.

A discussion of habitat fragmentation was added to the EIS in 4.4.5.2 Desert Tortoise – Direct and Indirect Impacts by Alternatives and Appendix B-2: USFWS Biological Opinion. For an updated discussion of noise impacts to wildlife Section 4.4.4-Wildlife.

The two action alternatives satisfy the purpose and need in that they fulfill BLM's obligation to consider the ROW applications under FLPMA and NEPA, and are consistent with other applicable federal mandates and renewable energy policies and goals.
The BLM developed a purpose and need statement and considered a range of reasonable alternatives consistent with NEPA, applicable regulations, and BLM policies and procedures, including BLM Instruction Memorandum 2011-059. The purpose and need statement appropriately integrates Congress's goal that the Secretary of the Interior should seek to approve renewable energy projects on the public lands; direction from Secretarial Order 3285A1 (March 11, 2009, amended February 22, 2010), which establishes the development of environmentally responsible renewable energy as a priority for the Department of the Interior; and the BLM's responsibility under FLPMA to manage the public lands for multiple use, taking into account the long-term needs of future generations for renewable and non-renewable resources. The two action alternatives

adequately evaluates alternatives for complying with the statutory objectives which bind the agency. *Or. Natural Desert Ass'n v. BLM*, 625 F.3d 1092, 1109 (9th Cir. 2010) ("*ONDA v. BLM*") ("the considerations made relevant by the substantive statute driving the proposed action must be addressed in NEPA analysis"). The DEIS fails to consider a variety of factors that derive from the statutes which BLM is implementing and under which it has specific statutory obligations.

The supplemental DEIS will also be an opportunity to rectify BLM's failure to include reasonable alternatives. As discussed below, evaluating only the applicants' proposed action and an almost identical preferred alternative that is identical in every respect except with 9% fewer turbines does not satisfy NEPA's obligation that BLM rigorously explore and objectively evaluate *all* reasonable alternatives, including alternatives not within BLM's jurisdiction. In addition to disclosing and evaluating ROW conditions that BLM would apply to the proposed action and preferred alternative which will address the statutory obligations that bind BLM to protect the resources present on and around the project site, BLM must evaluate reasonable alternatives that will be minimize impacts from the project. These include alternatives that would allow Duke to attain its objective of generating 200 MW of electricity through distributed solar generation, or produce the electricity from private lands or brownfields sites, or on any site where the density of desert tortoise is not as great as on the Searchlight project site.

C. BLM must issue a supplemental DEIS which properly discloses the impacts to visual resources and discloses other impacts to the human environment not disclosed or evaluated in the DEIS.

BLM also must issue a supplemental DEIS to disclose and allow the public to comment on a series of factors and issues for which there is no analysis in the DEIS, or for which the analysis in the DEIS is woefully inadequate or misleading. These are discussed at length in the sections below, but include (1) woefully misleading visual resource impacts simulations, which do not correctly illustrate the likely actual impacts to scenic resources; (2) incomplete and inaccurate information about the economic and social costs associated with building an utility-scale wind-project in this location; (3) undisclosed and unevaluated potential harm to human health and safety from the construction and operation of the project; and (4) lack of disclosure of mitigation plans and conditions to limit the harmful effects of the project on the human and natural environment.

BLM must wait to prepare the supplemental DEIS until it or other agencies have completed the mitigation studies and plans described in the DEIS. As described in more detail below in Sections III.A.1.c and III.B, an EIS must have the mitigation measures "developed to a reasonable degree," not simply list them. *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 734 (9th Cir. 2001). In addition, the agency must analyze the *effectiveness* of the proposed mitigation. *S. Fork Band Council of W. Shoshone v. U.S. Dep't of Interior*, 588 F.3d 718, 727 (9th Cir. 2009). The DEIS describes that at least a dozen analyses or mitigation plans have not yet been completed and contain no information about what the plans actually will require. DEIS at 1-14 to 1-21; 2-24 to 2-50. Nor does the DEIS contain any information about the crucial "mitigation" through the terms and conditions of a biological opinion for the project's effects on

satisfy the purpose and need in that they fulfill BLM's obligation to consider the ROW applications under FLPMA and NEPA, and are consistent with other applicable federal mandates and renewable energy policies and goals.

The BLM does not need to analyze in detail an alternative for distributed generation because such an alternative would not respond to the purpose and need to consider an application for the authorized use of public lands for a specific renewable energy technology. Additionally, the Energy Policy Act of 2005 established a goal for the Secretary of the Interior to approve at least 10,000 MWs of electricity from non-hydropower renewable energy projects located on public lands. The Act reflects Congress's conclusion that installation of renewable energy technologies on the public lands capable of producing at least 10,000 MWs is appropriate. Moreover, as described in the EIS, the Department and the BLM have issued policies and guidance promoting the development of renewable energy development on BLM-administered public lands. Given the current state of the technology, only utility-scale renewable energy generation projects are reasonable alternatives to achieve this level of renewable energy generation on public lands. Furthermore, the BLM has no authority or influence over the installation of distributed generation systems, other than on its own lands. The BLM is evaluating the use of distributed generation at individual sites through other initiatives (Executive Order 13514 and DOI implementing actions).

The BLM will not typically analyze a non-Federal land alternative for a right-of-way application on public lands because such an alternative does not respond to the BLM's purpose and need to consider an application for the authorized use of public lands for renewable energy development.

Applicant Proposed Measures and Mitigation measures are disclosed in Table 2.6-4. Applicant Proposed Measures, and Table 2.6-2. Mitigation Measures, respectively. BLM requires that mitigation measures are identified in the ROW Grant. Development of mitigation plans often requires input, review, and approval by other regulating agencies such as USFWS, NDEP, DAQ, and NDOT. As such these plans are not typically completed prior to a Final EIS. However, all the elements and basic requirements of the mitigation plans are discussed throughout the EIS.
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ESA-listed threatened desert tortoise, nor any information about terms and conditions of a take permit under the Bald and Golden Eagle Protection Act to cover likely take of golden eagles by the project's turbines.

When a draft EIS "is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion." 40 C.F.R. § 1502.9(a). As described more fully below, the DEIS's discussion of the likely effects on biological, transportation, visual, socioeconomic, and other resources is inadequate as it currently stands to preclude meaningful public participation and to preclude meaningful analysis by the agency. The discussion of "mitigation" likewise refers to plans and other mitigation measures that are to be developed sometime in the future, and therefore it is impossible for the DEIS to provide any description, much less analysis, of the effectiveness of the proposed mitigation. Accordingly, BLM must prepare a supplement to the DEIS for public review and comment.

II. The DEIS Improperly Defines the Purpose and Need for the Project, Fails to Evaluate Compliance with BLM's Statutory Obligations, and Presents Inadequate Alternatives.

A. The Purpose and Need statement is improperly narrow and driven by Duke's economic needs and fails to consider whether there is a need for the project.

The DEIS impermissibly defines the "purpose and need" for the proposed action too narrowly, precluding development of reasonable alternatives. DEIS § 1.3. In the EIS, an agency must "'rigorously explore and objectively evaluate all reasonable alternatives' to a proposed plan of action that has significant environmental effects." *NRDC v. U.S. Forest Serv.*, 421 F.3d 797, 813 (9th Cir. 2005) (citing 40 C.F.R. § 1502.14(a)). In order to do so, the agency must first reasonably and objectively define the purpose and need of a proposed action. *See Simmons v. U.S. Army Corps of Eng'rs*, 120 F.3d 664, 666 (7th Cir. 1997) (citing *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195–96 (D.C. Cir. 1991)). The chosen statement of purpose and need effectively dictates the range of alternatives evaluate in an EIS. *Id.* "[A]n agency cannot define its objectives in unreasonably narrow terms." *City of Carmel-By-The-Sea v. U.S. Dep't of Transp.*, 123 F. 3d 1142, 1155 (9th Cir. 1997). "An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative . . . would accomplish the goals of the agency's action, and the EIS would become a foreordained formality. *Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt.*, 606 F.3d 1058, 1070 (9th Cir. 2010). Moreover, an agency may not allow the economic needs and goals of a private applicant to define the purpose and need, and hence the inevitable outcome, of an EIS. *Id.*

Federal agencies must "'exercise a degree of skepticism in dealing with self serving statements from a prime beneficiary of the project and to look at the general goal of the project rather than only those alternatives by which a particular applicant can reach its own specific goals." *Envtl. Law & Policy Ctr. v. U.S. Nuclear Reg. Comm.*, 470 F.3d 676, 683 (7th Cir. 2006) (quoting *Simmons*, 120 F.3d at 666). When the purpose and need of a project are overly narrow, the resulting range of alternatives is inadequate under NEPA. *See Envtl. Law & Policy Center*, 470 F.3d at 684 (citing *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 199 (D.C. Cir.

The BLM developed a purpose and need statement and considered a range of reasonable alternatives consistent with NEPA, applicable regulations, and BLM policies and procedures, including BLM Instruction Memorandum 2011-059. The two action alternatives satisfy the purpose and need because they fulfill BLM's obligation to consider the ROW applications under FLPMA and NEPA and because they are consistent with other applicable federal mandates and renewable energy policies and goals.

large-scale energy development fragmenting or isolating desert tortoise conservation areas and cutting off gene flow between these areas *have not been evaluated*." *Id.* How is it possible that BLM would even consider permitting new projects in prime desert tortoise habitat when the effects of energy development on tortoises has not been evaluated?

In addition, Secretarial Order 3285A1 establishes that development of *environmentally responsible* renewable energy is a priority for the Department of the Interior. This project, in the "preferred" 87-turbine configuration, in no way can be considered "environmentally responsible." Of the 20 "potentially affected resources" BLM evaluates, 16 will be impacted in a negative manner. DEIS at 1-9. The removal of vegetation and destruction of cryptobiotic soil crusts which "fix" carbon may actually accelerate climate change more than the supposedly "green" wind energy will reduce impacts.

The DEIS fails to even acknowledge that BLM has no obligation or responsibility whatsoever to meet the Duke's needs or desires. As a result, the applicant-identified needs are defining and driving the characteristics of this project and the alternatives thereto. This approach is inappropriate and unlawful. The DEIS must identify whether there truly is a need for energy transmission and generation facilities near Searchlight. BLM must evaluate whether wind energy generation and transmission is an appropriate use for the federally-protected lands and adjacent private lands that the project would affect.

In this DEIS, the "purpose and need" is defined as simply approving, conditionally approving, or denying the ROW applications. DEIS at xi, 1-6, 1-7. This is a breathtaking abrogation of BLM's obligation to consider "all reasonable alternatives" and whether there is truly a need for Duke's wind energy project. Any "need" for this federal action, beyond satisfying Duke's request, is not described at all. In particular, there is no evidence presented in the DEIS that it is necessary to generate wind energy in the Searchlight area, and consequently no evidence that this project is needed at all. No quantitative data on wind suitability is presented in the DEIS, and BLM has not evaluated alternative regional systems for generating and transmitting electrical power from renewable sources that would not involve crossing protected areas.

Duke has not demonstrated that there is a need to construct this generation project based on the availability of wind resources at those locations. In fact, the DEIS includes a map of wind resources in Nevada with the project area designated by a vague oval, showing that that the wind speed at the project site averages less than 5 to 6 meters per second, near the lower end of the scale. DEIS at 1-3. A more detailed map of wind energy potential, prepared by the U.S. Department of Energy's National Renewable Energy Laboratory, shows that the vast majority of the project area is within "marginal" (Class 2) wind power potential classification. Nevada Wind Resources NERL map, Exhibit 2, also included in high-resolution pdf on CD-ROM due to size.

BLM must disclose meteorological information from the project site and include this information for public review in any supplement to the DEIS. Four meteorological towers are located in the project site, DEIS at 2-16, but there is no information provided in the DEIS regarding the data that has been observed. This information is simple for the agency to obtain

The BLM continues to work on environmentally responsible development of utility-scale renewable energy projects on the public lands as part of the Administration's efforts to diversify the Nation's energy portfolio.

Comment noted. No current data exists to support that the loss of such a small amount of soil crust relative to available crust would create a measurable change in CO2 volumes in the atmosphere.

The BLM decisions to be made are presented in *Section 1.3.2-BLM Decisions to be Made*, of the EIS. One of the options is to deny the ROW applications. Another option is to grant the ROW application with modifications, so that the BLM's authorization would differ from the applicant's ROW proposal. Though the BLM has considered Searchlight Wind Energy's objective for the project, which is presented in *Section 1.3-Background*, Searchlight Wind Energy's objective is not the BLM's purpose and need for the project. BLM's purpose and need is described at Section xxx of the FEIS.

The EIS's purpose and need statement and consideration of alternatives comply with NEPA, applicable regulations, and BLM policies and procedures, including BLM Instructional Memorandum 2011-059. The purpose and need statement appropriately integrates Congress's goal that the Secretary of the Interior should seek to approve renewable energy projects on the public lands; direction from Secretarial Order 3285A1 (March 11, 2009, amended February 22, 2010), which establishes the development of environmentally responsible renewable energy as a priority for the Department of the Interior; and the BLM's responsibility under FLPMA to manage the public lands for multiple use, taking into account the long-term needs of future generations for renewable and non-renewable resources. Consistent with NEPA, the EIS analyzes the direct, indirect, and cumulative effects of the proposed action and alternatives.

Searchlight Wind Energy, LLC has conducted site specific testing (using Meteorological Data collected for 5 years) and determined that sufficient wind exists to support the project. Data collected from MET towers at the application site is proprietary information and is not available.

Organizations

BLM Las Vegas Field Office.
Attn: Gregory Helseth
4701 North Torrey Pines Drive
Las Vegas, NV 89130-2301

April 18, 2012

Via E-mail: BLM_NV_SNDO_SearchlightWindEnergyEIS@blm.gov

Subject: Comments on the DEIS for the Searchlight Wind Energy Project

Dear Mr. Helseth:

On behalf of The Center for Biological Diversity ("Center"), please accept the following comments on the DEIS for the Searchlight Wind Energy Project. We appreciate the notification of this opportunity to comment.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 350,000 members and on-line activists throughout Nevada and the United States.

We submit these comments on behalf of our members, activists, staff, and members of the general public who are interested in protecting native species and their habitats, quiet recreation activities, and wilderness experiences on BLM public lands, particularly those lands impacted by this project.

The development of renewable energy is a critical component of efforts to reduce carbon pollution and climate-warming gases, avoid the worst consequences of global warming, and to assist in meeting needed emission reductions. The Center strongly supports the development of renewable energy production. However, like any project, proposed wind power projects should be thoughtfully planned to minimize impacts to the environment. In particular, renewable energy projects should avoid impacts to sensitive species and habitat, and should be sited in proximity to the areas of electricity end-use in order to reduce the need for extensive new transmission corridors and the efficiency loss associated with extended energy transmission. Only by maintaining the highest environmental standards with regard to local impacts, and effects on species and habitat, can renewable energy production be truly sustainable.

The Center offers the following scoping comments for your consideration:

1. The DEIS fails to adequately disclose and evaluate the likely impacts of the project on natural resources.

The DEIS's discussion of likely impacts to wildlife, both birds and mammals, is cursory, omits discussion of significant scientific information, and fails to evaluate adequately the significant

Potential impacts to wildlife species are addressed throughout Sections 4.4-Biological Resources Impacts. Pursuant to Section 7 of the Endangered Species Act, BLM has complete consultation with the USFWS resulting in a Biological Opinion. Appendix B-2: USFWS Biological Opinion contains the required desert tortoise mitigation measures and a discussion of how such mitigation would be effective. A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy). The BBCS provides a qualitative risk assessment for the effect of a factor (e.g., collision, electrocution) on birds.

harm which the generation and transmission project is likely to cause to wildlife. The DEIS's discussion of impacts to desert tortoise that will result if BLM grants the requested ROWs is inadequate because it provides no information about mitigation. The DEIS similarly understates likely impacts to golden eagles, other avian species and bats.

BLM must collect, evaluate, and disclose to the public accurate and complete information about the likely impacts to wildlife from the project. The DEIS in its current form does not meet the level of adequacy and completeness required by law.

Of particular concern are the potential impacts to the desert tortoise, a threatened species protected by the Endangered Species Act ("ESA"), Golden and Bald Eagles, protected under the Bald and Golden Eagle Protection Act ("BGEPA"), as well as other raptors and birds protected under the Migratory Bird Treaty Act ("MBTA"), and bats, several of which are BLM and/or state sensitive species.

Desert tortoise

The DEIS discloses that during surveys conducted on the project site, 122 tortoises were located on the project site within the narrow survey belts, indicating a population of 8.2 tortoises per square kilometer. This is a very high density considering the average density of tortoises found by the U.S. Fish and Wildlife Service in its 2010 population monitoring for the Piute-Eldorado Area of Critical Environmental Concern, which encircles the project site was 3.2 tortoises per kilometer.[1] The entire East Mojave Recovery Unit had only an average density of 3.6 tortoises per kilometer.[2]

While technically the project area lies in "donut-hole" of undesignated tortoise habitat, it provides excellent tortoise habitat and is none-the-less critically important for the effort of recovering the Eastern Mojave population. In addition, the proposed project would fragment tortoise habitat and serve as a barrier to migration and gene-flow between the Eastern and Northeastern Mojave Recovery Units.

The DEIS is inadequate in that the public literally has no information on which to base comments regarding the specific impacts of this specific project on the tortoise or how BLM proposes to avoid or mitigate those impacts. There is no information about what mitigation is proposed, only a listing of possible measures that "may" be included. This failure to disclose is a serious flaw and the BLM should prepare a supplemental EIS to fill in the informational gaps for reviewers.

The ESA was enacted, in part, to provide a "means whereby the ecosystems upon which endangered species and threatened species depend may be conserved...[and] a program for the conservation of such endangered species and threatened species..." 16 U.S.C. § 1531(b). The

[1] U.S. Fish and Wildlife Service. 2010. Range-wide Monitoring of the Mojave Population of the Desert Tortoise – 2010 Annual Report. Table 6. Available at. http://www.fws.gov/nevada/desert_tortoise/documents/reports/2010/2010_DRAFT_Rangewide_Desert_Tortoise_Population_Monitoring.pdf

[2] Ibid.

Effects to desert tortoise are discussed in Section 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives. Pursuant to Section 7 of the Endangered Species Act, BLM has complete consultation with the USFWS resulting in a Biological Opinion, which includes the required mitigation (Appendix B-2: USFWS Biological Opinion).

ESA "is the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 180 (1978). The Supreme Court's review of the ESA's "language, history, and structure" convinced the Court "beyond a doubt" that "Congress intended endangered species to be afforded the highest of priorities." *Id.* at 174. As the Court found, "the plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost." *Id.* at 184.

Section 2(c) of the ESA establishes that it is "…the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act." 16 U.S.C. § 1531(c)(1). The ESA defines "conservation" to mean "…the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary." 16 U.S.C. § 1532(3). Similarly, Section 7(a)(1) of the ESA directs that federal agencies to "utilize their authorities in furtherance of the purposes" of the ESA. 16 U.S.C. § 1536(a)(1)..

In order to fulfill the substantive purposes of the ESA, Federal agencies, such as BLM in this instance, are required to engage in consultation with the Fish and Wildlife Service to "insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species... determined...to be critical..." 16 U.S.C. § 1536(a)(2) (Section 7 consultation). Section 7 consultation is required for "any action [that] may affect listed species or critical habitat." 50 C.F.R. § 402.14. As part of the consultation, the action agency must first prepare a biological assessment. 16 U.S.C. § 1536(c)(1). Although procedural, consultation is the backbone of the ESA. As the Ninth Circuit recognized, "[o]nly by requiring substantial compliance with the act's procedures can we effectuate" Congressional intent to protect species. *Sierra Club v. Marsh*, 816 F.2d at 1384 (9th Cir. 1987).

As part of the proposed project BLM has initiated consultation with the Fish &Wildlife Service ("Service") regarding impacts to the threatened desert tortoise and its habitat in order to ensure against jeopardy and provide for the conservation of the species. *See Nat'l Wildlife Fed'n v. NMFS*, 524 F.3d 917, 933 (9th Cir. 2008) (holding that the ESA requires consideration of impacts to species' prospects for recovery in jeopardy analysis). In order to engage in meaningful consultation the agencies must have adequate information regarding the baseline status of the species in the area of the proposed project as well as adequate identification and analysis of the likely impacts of the project on the species and its habitat and the long-term conservation of the species including direct, indirect and cumulative impacts. In this instance, the Service must be provided with sufficient information to determine the impacts of the proposed project on the tortoise including the degree to which the proposed project could undermine the species' ability to recover in light of direct, indirect and cumulative impacts of the proposed project as well as other threats (including climate change and the need to preserve healthy tortoise populations that will well suited and positioned to adapt to rapid changes.).

Protocol level surveys for desert tortoise on the proposed project site, as previously noted, estimate the number of tortoises to be affected by this project at 122 animals. The actual number of desert tortoises on site is likely much higher, based on the effectiveness of protocol level

surveys on finding all onsite tortoises[3], especially given the vast number of acres of the proposed project site, and the undercounting of juvenile animals. The survey data confirms that this area is at least moderate to high quality desert tortoise habitat with a population that is at least as robust as those within the neighboring Piute-Eldorado ACEC and should be protected as such.

Nowhere in the DEIS was protection from predators, particularly ravens, discussed. As ravens are a primary predator of juvenile tortoises and as they seek perches such as transmission poles from which to spot their prey, the BLM must address this threat to the tortoise. Additionally, the creation of new service roads poses an increased threat to tortoise from dirt bikes and off-highway vehicles. In a supplemental DEIS, the BLM must analyze this threat and disclose its impacts on tortoises and other creatures as well as how the impacts will be avoided, minimized and mitigated.

A primary concern is the possibility of any plan to relocate or translocate desert tortoises from the site.[4] No information is provided about the need for translocation or about possible recipient sites, most importantly, their location, ability to absorb more animals and the permanency of the protection.

To date, translocation of desert tortoise always results in "take" of tortoises and certainly does not aide in the recovery of the threatened species. Even "successful" translocation has been documented to have a15-21% mortality[5]. Significant losses of tortoises through a recent translocation effort in 2008 - the Fort Irwin translocation - resulted in over 20% mortality within the first year. Further monitoring has documented as of August 2009, over 250 desert tortoise (38%) have died in the translocation areas of Fort Irwin[6]. This translocation has resulted in further declines in the west Mojave recovery unit to the detriment of recovery of the species as a whole.

The Scientific Advisory Committee of the U.S. Fish and Wildlife Service's Desert Tortoise Recovery Office has recently concluded that "translocation is fraught with long-term uncertainties, notwithstanding recent research showing short-term successes, and should not be considered lightly as a management option. When considered, translocation should be part of a strategic population augmentation program, targeted toward depleted populations in areas containing "good" habitat. The SAC recognizes that quantitative measures of habitat quality relative to desert tortoise demographics or population status currently do not exist, and a specific measure of "depleted" (e.g., ratio of dead to live tortoises in surveys of the potential translocation

[3] Anderson, D.R., K.P. Burnham, B.C. Lubow, L. Thomas, P.S. Corn, P.A. Medica and R.W. Marlow 2001. Field Trials of Line Transect Methods Applied to Estimation of Desert Tortoise Abundance. Journal of Wildlife Management 65(3): 583-597.
[4] There is no currently agreed upon definition of relocation or how it differs from translocation, other than a sense it involves a shorter distance of movement of the animal. For these comments the two terms will be combined into the term, "translocation".
[5] Field, K.J., C. R. Tracy, P.A. Medica, R.W. Marlow, P.S. Corn 2007. Return to the Wild: Translocation as a Tool in Conservation of the Desert Tortoise (Gopherus agassizi). Biological Conservation 136: 232-245; and, Nussear, K.E. 2004. Mechanistic investigation of the distributional limits of the desert tortoise *Gopherus agassizii*. PhD dissertation. University of Nevada, Reno. Pgs. 213.
[6] USFWS. 2009. Draft Biological Opinion for the Proposed Addition of Maneuver Training Lands at Fort Irwin, California (8-8-09-F-43R). Page 48.

Refer to Section 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives, which discusses increased perching opportunities for ravens and impacts from the introduction of new roads and associated increased traffic.

Mitigation measures proposed in the DEIS and issued in the Biological Opinion did not include translocation of tortoise, rather it was proposed that tortoises would be moved out of harm's way during construction activities (Appendix B-2: USFWS Biological Opinion).

area) was not identified.[7] The proposed project can hardly be considered a "strategic augmentation program".

These data and conclusions by desert tortoise experts negate any logical basis for presenting translocation as aiding in recovering the species. The risks associated with translocation in general are now well established and quite high[8]. Because of this, the agencies need to take seriously a full and honest evaluation of the need, if any, to site projects within essential, occupied desert tortoise habitat. Siting projects in areas that lack desert tortoise would preclude the need for translocation and the inevitable mortality that translocation causes.

If translocation must occur as part of the project implementation, the translocation plan needs to be thoroughly developed and vetted by knowledgeable tortoise science and management experts and provided for public review.

Any plan must thoroughly address a number of essential desert tortoise issues:

Disease issues

The health of the desert tortoises that are on the site and proposed for translocation as well as the "host" tortoises in areas into which the translocated tortoises will be moved must be evaluated and addressed. Regardless of the proximity of the translocated and host tortoises, data still needs to be collected on the state of the population at a minimum to help inform the results of the translocation. If disease is present in either the translocated tortoises or "host" tortoises, concentrating tortoises into off-site areas may exacerbate disease transmission and outbreaks especially coupled with the stresses of translocation, competition for scarce resources, defense of existing territories (host population), establishment of new territories (relocated population), etc.

Carrying Capacity

The carrying capacity of the translocation sites, and their ability to support greater tortoise densities over the long-term must be assessed. While a die-off of tortoises is known from the Ivanpah Valley in the 1990's, there is no evidence presented in any of the documents that the habitat has the capacity to provide resources to sustain over the long-term a higher density population. In light of global climate change and its effects currently occurring on the desert[9], the habitat may simply not be able to support a more concentrated population now or into the future.

[7] USFWS. 2009. Scientific Advisory Committee (SAC), Desert Tortoise Recovery Office. Meeting Summary, March 13, 2009, San Diego Wild Animal Park, Escondido, CA. pgs 4.
http://www.fws.gov/Nevada/desert_tortoise/documents/sac/20090313_SAC_meeting_summary.pdf

[8] Dodd, C.K. and R.A. Seigel 1991. Relocation, repatriation and translocation of amphibians and reptiles: are they conservation strategies that work? Herpetologica 47(3): 336-350.

[9] Kelly, A. E. and M.L. Goulden 2008. Rapid shifts in plant distribution with recent climate change. *Proc Natl Acad Sci USA* 105:11823–11826.

Monitoring

Not only should the translocated tortoises be monitored but it is essential that the "host" tortoises also be monitored, to truly evaluate the status of the translocation. Rigorous monitoring needs to be included in the plan.

Objectives and Analyses

Criteria of success must identified in the translocation plan. Monitoring must be tied to triggers for action, adaptive management, or success criteria. Benchmarks for success need to be identified and additional requirements put in place to mitigate failures of this experimental proposal.

Timing

Translocation of desert tortoise should be done in spring when possible. Translocation in the fall is not optimal especially if summer/fall rains do not occur. If translocation must occur, flexibility in timing is essential to help to assure successful translocation to help meet the minimization standard.

Long-term assurances

Measures must be put in place to assure the long-term protection of the desert tortoises that are moved and the habitat into which they are moved. As the BLM is well aware, multiple projects are proposed for this same area, and other areas in the Mojave Desert. Assurances must be included so that the desert tortoise affected by this project are not impacted again by a subsequent project. We remain concerned however, that lacking a comprehensive strategy for tortoise conservation. Tortoises could be translocated multiple times, which clearly will be detrimental to the species and its recovery.

Golden and bald eagles

These two species are among the species considered by the BLM to being sensitive species in Nevada.

Management of special status species (and indeed all rare species) on BLM lands should focus on ensuring long term survival and recovery in order to prevent the need for future listings. Little in the DEIS shows that the BLM took into consideration these critical management concerns. *See* BLM Manual 6840.2.C (Implementation) ("BLM shall manage Bureau sensitive species and their habitats to minimize or eliminate threats affecting the status of the species or to improve the condition of the species habitat, by . . . [e]nsuring that BLM activities affecting Bureau sensitive species are carried out in a way that is consistent with its objectives for managing those species and their habitats at the appropriate spatial scale . . . [and] [c]onsidering ecosystem management and the conservation of native biodiversity to reduce the likelihood that any native species will

require Bureau sensitive species status").

The DEIS notes that golden eagles are potentially nesting in the nearby mountain regions encircling the project and through surveys identified at least three eagle nests within 4-miles of the project. The DEIS fails to present exactly how it will mitigate the loss of a substantial amount of foraging habitat for the golden eagle, either as a result of this project, or cumulatively as a result of projects within the Piute-Eldorado Valleys. The fact still remains that significant amounts of foraging habitat will decrease carrying capacity of the landscape and could result in a potential loss of habitat needed to support a nesting pair, which would impact reproductive capacity.

The DEIS fails to disclose the number of pairs of golden eagles that could be affected by the proposed project. Scientific literature on this subject is clear - the presence of humans detected by a raptor in its nesting or hunting habitat can be a significant habitat-altering disturbance even if the human is far from an active nest[10]. Regardless of distance, a straight line view of disturbance affects raptors, and an effective approach to mitigate impacts of disturbance for golden eagles involves calculation of view sheds using a three-dimensional GIS tool and development of buffers based on the modeling[11]. Also, since golden eagles use only a small subset of their home territories during nesting for foraging, these essential areas may include the proposed project site, however the DEIS does not analyze this important factor of nesting success.

While bald eagles are unlikely to utilize the project area for long-term habitat, they do utilize nearby Lakes Mead and Mojave during the winter. Nowhere does the BLM examine the likely or possible impacts on migrating or over-wintering bald eagles in this DEIS.

Because environmental review does not adequately identify or analyze impacts to eagles from the proposed project it is impossible for the BLM to ensure that the project is consistent with the Migratory Bird Treaty Act (16 U.S.C. § 701 *et seq.*) or the Bald and Golden Eagle Protection Act (16 U.S.C. § 668 et seq.), both of which prohibit take.

To address this data and analysis disclosure deficiency, the BLM must prepare a supplemental EIS containing said analysis. Further, the BLM should require that the proponent pursue an incidental take permit under the BGEPA as part of the terms and conditions of receiving a ROW Permit.

Other BLM sensitive species and migratory birds

While surveys were conducted for birds and bats, there was little to no disclosure of how the BLM intended to avoid, minimize or mitigate the potential impacts. Instead, it was inferred that the details would be worked out later in an avian and bat protection plan. This approach affords

[10] Richardson and Miller. 1997. Recommendations for protecting raptors from human disturbance: a review. Wildlife Society Bulletin 25(3): 634-638.
[11] Camp, R.J., D.T. Sinton and R.L. Knight 1997. Viewsheds: a Complementary Management Approach to Buffer Zones. Wildlife Society Bulletin 25(3): 612-615; and Richardson and Miller. 1997.
Richardson and Miller 1997

As discussed in the EIS, the Proposed Project would result in the loss of some foraging habitat for the golden eagle; however, the proportion of foraging habitat that would be lost due to the Proposed Project is small compared to the total amount of available foraging habitat within the Piute and Eldorado Valleys.

A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy). The BBCS provides a qualitative risk assessment for the effect of a factor (e.g., collision, electrocution) on birds. The intention is not to predict the number of fatalities due to turbine collision as pre-construction data poorly predicts fatalities for birds (Ferrer et al. 2012), but to determine if any species is at high risk to inform post-construction fatality monitoring.

the stakeholders little to no opportunity to review, analyze and comment on the effectiveness of the proposed measures and how they will affect the environmental impacts.

It must also be noted that the project area borders and engulfs an Audubon Important Bird Area ("IBA"), the Catclaw Washes IBA, which has formally recognized status at the state level.[12]

The unique vegetation of the washes supports a suite of bird species that is distinct from the surrounding desert. The washes were nominated and recognized for the critical resources they offer to Phainopepla, a species of concern in Nevada. Phainopepla rely heavily on the mistletoe seed crop produced in these areas, the mistletoe in turn is dependent on the catclaw acacia and mesquite as hosts. The Phainopepla also nest in the acacia and mesquite. The densities of Phainopeplas at this site are consistently among the highest in the state (only two other sites have comparable densities), and in some years, breeding success in Piute Valley is higher than anywhere else known. Moreover, the milder temperatures at this complex of sites may help Phainopeplas persist when they cannot occupy other sites in the state (sub-freezing temperatures cause mistletoe berries to freeze, leaving the birds nothing to eat). Many other species of concern in Southern Nevada utilize the tall shrubs and trees found in these washes. Many species of birds utilize these washes as stopover sites for migration gain opportunities for foraging, resting, and accessing surface water where it is available.[13]

Comment noted.

Comment noted.

2. The DEIS fails to Adequately Identify Appropriate Mitigation

Because the DEIS largely fails to provide adequate identification and analysis of impacts, inevitably, it also fails to identify adequate mitigation measures for the project's environmental impacts. "Implicit in NEPA's demand that an agency prepare a detailed statement on 'any adverse environmental effects which cannot be avoided should the proposal be implemented,' 42 U.S.C. § 4332(C)(ii), is an understanding that an EIS will discuss the extent to which adverse effects can be avoided." *Methow Valley*, 490 U.S. at 351-52. Because the DEIS does not adequately assess the project's direct, indirect, and cumulative impacts, its analysis of mitigation measures for those impacts is necessarily flawed. The DEIS must discuss mitigation in sufficient detail to ensure that environmental consequences have been fairly evaluated." *Methow Valley*, 490 U.S. at 352; *see also Idaho Sporting Congress*, 137 F.3d at 1151 ("[w]ithout analytical detail to support the proposed mitigation measures, we are not persuaded that they amount to anything more than a 'mere listing' of good management practices"). As the Supreme Court clarified in *Robertson*, 490 U.S. at 352, the "requirement that an EIS contain a detailed discussion of possible mitigation measures flows both from the language of [NEPA] and, more expressly, from CEQ's implementing regulations" and the "omission of a reasonably complete discussion of possible mitigation measures would undermine the 'action forcing' function of NEPA."

BLM requires that mitigation measures are identified as a stipulation of the ROW Grant. Development of mitigation plans often requires input, review, and approval by other regulating agencies such as USFWS, NDEP, DAQ, and NDOT and are not typically completed prior to a Final EIS. However, all the elements and basic requirements of the mitigation plans are discussed throughout the EIS.

Although NEPA does not require that the harms identified actually be mitigated, NEPA does require that an EIS discuss mitigation measures, with "sufficient detail to ensure that

[12] For more information on IBA status and other terms, refer to: http://web4.audubon.org/bird/iba/IBA_Status_Terms.html
[13] See: http://iba.audubon.org/iba/profileReport.do?siteId=981

environmental consequences have been fairly evaluated" and the purpose of the mitigation discussion is to evaluate whether anticipated environmental impacts *can be avoided*. *Methow Valley*, 490 U.S. at 351-52. As the Ninth Circuit recently noted: "[a] mitigation discussion without at least *some* evaluation of effectiveness is useless in making that determination." *South Fork Band Council of Western Shoshone v. DOI* , 588 F.3d 718 , 727 (9th Cir. 2009) (emphasis in original).

Here, the DEIS mostly relies on the preparation of future plans, with no specificity provided as to what the plans will do, and does not provide a full analysis of possible mitigation measures to avoid or lessen the impacts of the proposed project and therefore the BLM cannot properly assess the likelihood that such measures would actually avoid the impacts of the proposed project.

A supplemental DEIS must be prepared to provide the lacking specificity and details so that a meaningful evaluation of the proposal and its impacts can be achieved.

3. Selection of Alternative and Adequacy of the DEIS

NEPA's disclosure goals are two-fold: (1) to insure that the agency has carefully and fully contemplated the environmental effects of its action, and (2) to insure that the public has sufficient information to challenge the agency's action. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 322, 349 (1989); *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1151 (9th Cir. 1998). NEPA's "sweeping commitment [is] to prevent or eliminate damage to the environment and biosphere by focusing government and public attention on the environmental effects of proposed agency action." *Marsh v. Or. Natural Resources Council*, 490 U.S. 360, 371 (1989) (*quoting* 42 U.S.C. § 4321). The Council on Environmental Quality ("CEQ") promulgated uniform regulations to implement NEPA that are binding on all federal agencies. 42 U.S.C. § 4342; 40 C.F.R. §§ 1500 *et seq*.

NEPA requires agencies to prepare an EIS for any "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). An EIS must analyze the direct, indirect, and cumulative environmental impacts of the proposed action. Direct effects are caused by the action and occur at the same time and place as the proposed project. 40 C.F.R. § 1508.8(a). Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. *Id.* at § 1508.8(b). Both types of impacts include "effects on natural resources and on the components, structures, and functioning of affected ecosystems," as well as "aesthetic, historic, cultural, economic, social or health [effects]." *Id.* at § 1508. Cumulative impact results when the "incremental impact of the action [is] added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." *Id.* at § 1508.7.

A major purpose of NEPA is to ensure that federal agencies conduct fully informed environmental decision-making. NEPA promotes its sweeping commitment to "prevent or eliminate damage to the environment and biosphere" by focusing the attention of federal decision makers and the public on the environmental and other impacts of proposed agency action. 42 U.S.C. § 4321. By focusing agency attention on the environmental and socioeconomic

All mitigation plans will be disclosed in the FEIS or as a stipulation of the ROW grant with the exception of the Site Rehabilitation and Facility Decommissioning Plan, which will be completed 6 months prior to project closure.

impacts of a proposed action, NEPA ensures that the agency will not act on incomplete information, only to regret its decision once finalized. *See Methow Valley Citizens Council*, 490 U.S. at 349. To that end, "[t]he sweep of NEPA is extraordinarily broad, compelling consideration of any and all types of environmental impacts of federal action." *Calvert Cliffs' Coordinating Comm. v. U.S. Atomic Energy Comm'n*, 449 F.2d 1109, 1122 (D.C. Cir. 1971). An agency must "take the initiative of considering environmental values at every distinctive and comprehensive stage of the process." *Id.* at 1111. Federal agencies must consider all reasonably foreseeable environmental impacts at the earliest possible stage of a project's development and fully such impacts before making a decision to proceed with the project.

Under the NEPA regulations, a draft EIS "must fulfill and satisfy to the fullest extent possible the requirements established for final statements." 40 C.F.R. § 1502.9(a). When a draft EIS "is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion." *Id.* Substantial changes in the proposed action, or significant new circumstances or information relevant to environmental concerns, trigger a mandatory obligation to prepare a supplemental draft EIS. *Id.* § 1502.9(c)(1).

"NEPA's public comment procedures are at the heart of the NEPA review process" and reflect "the paramount Congressional desire to internalize opposing viewpoints into the decision making process to ensure that an agency is cognizant of all the environmental trade-offs that are implicit in a decision." *Cal. v. Block*, 690 F.2d 753, 770-71 (9th Cir. 1982). It is only at the stage when the draft EIS is circulated that the public and outside agencies have the opportunity to evaluate and comment on the proposal. *Id.* at 771. "No such right exists upon issuance of a final EIS." *Id.* Consequently, an agency's failure to disclose the impacts of a proposed action before the issuance of a final EIS defeats NEPA's goal of encouraging public participation in the development of information *during* the decision making process. *Half Moon Bay Fishermans' Marketing Ass'n v. Carlucci*, 857 F.2d 505, 508 (9th Cir. 1988).

BLM is required to "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 CFR § 1502.15. The establishment of the baseline conditions of the affected environment is a practical requirement of the NEPA process. In *Half Moon Bay*, the Ninth Circuit states that "without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA." 857 F.3d at 510. Similarly, without a clear understanding of the current status of these public lands BLM cannot make a rational decision regarding proposed project. *See Ctr. for Biol. Diversity v. BLM*, 422 F. Supp. 2d 1115, 1166-68 (N.D. Cal. 2006) (holding that it was arbitrary and capricious for BLM to approve a project based on outdated and inaccurate information regarding biological resources found on public lands). As described throughout these comments, BLM has failed to provide accurate baseline information about a wide variety of resources at and surrounding the project site, including the status of the desert tortoise and other sensitive and rare plant and animal communities.

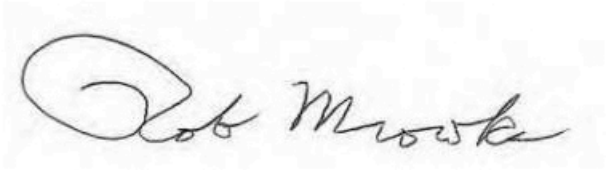
A draft Environmental Impact Statement must provide the public with sufficient information to permit meaningful consideration of the action under agency review. *Cal. v. Block*, 690 F.2d at 772. The DEIS here fails to provide sufficient information in several regards and requires supplementation and further opportunity for public review and comment.

Refer to Chapter 3-Affected Environment, which discusses in detail the baseline of the proposed project area.

Contributing to the deficiencies in the DEIS, the BLM fails to adequately disclose its reasoning for their preference of the 87 wind turbine alternative, other to state that because it disturbs marginally less land it results in the least environmental impacts. Only with respect to air quality and meeting state implementation plans is any specific rationale offered. The BLM must prepare a supplemental DEIS to disclose not only its rationale for the 87 turbine alternative, but also it should evaluate other configurations and designs that minimize the adverse impacts, particularly on birds and bats.

The Center appreciates the opportunity to comment on this project and hopes to be able to review the much needed supplemental DEIS prepared to address these and other comments.

Sincerely yours in conservation,



Rob Mrowka
Ecologist/Conservation Advocate

The provisions for preparation of a Supplemental EIS are described in 40 CFR 1502.9, (c) (1) (i), "The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
(ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."
Preparation of a Supplemental EIS is not warranted because neither of these conditions apply, the proposed action has not been substantively changed since publication of the DEIS and no significant new information was provided or developed during the public comment period.

Basin and Range Watch

April 18, 2012

BLM, Las Vegas Field Office
Attn: Greg Helseth, Renewable Energy Project Manager
4701 N. Torrey Pines Drive
Las Vegas, NV 89130

ghelseth@blm.gov
BLM_NV_SNDO_SearchlightWindEnergyEIS@blm.gov

Dear Greg,

We would like to submit this supplement letter to the comment letter we signed on to for the Draft Environmental Impact Statement (DEIS) for the Searchlight Wind Energy Project (NVN-084626)

Basin and Range Watch signed on to the letter with Judy Bundorf and Friends of Searchlight Deserts and Mountains. While most of our ideas were represented in that letter, we would like to add this additional comment on Cultural Resources that was not covered in the original letter.

On Wednesday, April 10th, we traveled to Needles, California to interview Phillip Smith who is a Chemehuevi Elder. We wanted to ask him his opinion of how cultural artifacts and values would be impacted by the development of the proposed Searchlight Wind Energy Facility. Mr. Smith told us he does not represent the Chemehuevi Tribal Council, but is a concerned elder.

In order to keep this as accurate as possible, we have included the original notes from the conversation. Due to the sensitive nature of cultural resources, we would also like to request that this letter not be placed in the public comment viewing section of the Final Environmental Impact Statement.

Mr. Smith informed us that the Bureau of Land Management did meet with members of the local tribes, but very little specific information about what is actually out there was discussed.

In general, many of us are concerned that the BLM and Duke Energy failed to do a complete survey and inventory of the cultural resources located on the Searchlight Wind Energy site. Many of the prioritized renewable energy projects (formerly referred to as Fast Track Projects) have been approved with unsatisfactory biological or cultural surveys. The Genesis Solar Power Project just west of Blythe, California was approved by the Interior Department before adequate

The overall Project area has previously been disturbed from a century of mining activities. Tailings piles, adits, dirt roads, and prospects dot the landscape. The Class III cultural resources survey was conducted within the Project's linear Area of Potential Effect (APE), currently defined as any area to be disturbed plus a 200-ft. buffer around all project roads and facilities. The proponent would be required to stay within the Project's linear corridor and would not disturb non-inventoried lands if the Right-of-Way is granted.

cultural resource surveys could be conducted. As a result, federal and state agency officials caught off guard when large Earth movers-uncovered evidence of a human settlement that was possibly an ancient cremation site. http://articles.latimes.com/2012/feb/11/local/la-me-solar-foxes-20120211

The same deferred mitigation tactics are being used to review the Searchlight Wind Project. In order to prevent a repeat of the Genesis problem, we believe that BLM and Duke Energy will need to conduct more complete cultural resource surveys on the project site before a decision can be made about impacts to cultural resources.

Thank you,

Submitted by:

Basin and Range Watch

Kevin Emmerich

Laura Cunningham

P.O. Box 70

Beatty, Nevada, 89003

Interview with Phil Smith, Chemehuevi Elder, Needles, California. April 10, 2012.

Mr. Smith gave us his verbal permission to write down his statements and submit them on his behalf as comments to the Draft Environmental Impact Statement for the Searchlight Wind Energy Project in Clark County, Nevada. Notes taken by Laura Cunningham.

Phil Smith: Cottonwood Island is where Chemehuevi and Mojaves lived together on the island and intermarried, and they also came up through the Searchlight Hills. There is a woman who lives in Searchlight, she is a historian. She is in her nineties. She says there are some burial sites south of Cottonwood Road in the project site.

I looked around there, I found an old heavily used trail in the hills of the southern part of the project site. Maybe it goes through to Spirit Mountain or the River, and to Ivanpah. I just looked, I want to go back.

The bones at Searchlight, they would be Chemehuevi. If it was a cremation would be Mojave.

NHPA Law 106 means consultation. We had one visit with BLM (to the Searchlight Wind project site). Also Shoshone, Hualapai. One visit to look at tower sites. This is unfinished, we need more study, we need to come back on more visits, but we have not heard back from BLM. On our visit with BLM it was getting too hot so we stopped. But this is unfinished. They think they can get us

out there one time and that's it. For the coal burning plant in Ivanpah Valley SCE met with all the Tribes, in their tribal offices. But the solar companies, BLM, don't do this now.

There are many turtles there. Wildlife is returning there, we need to protect them.

The turbine view from Spirit Mountain is a concern.

This project needs to have a Cultural Monitor.

There were stories there before there were projects.

DESERT TORTOISE COUNCIL
P.O. Box 1568
Ridgecrest, California 93556
www.deserttortoise.org

April 13, 2012

Via Email and U.S. Mail

Mr. Gregory Helseth
Bureau of Land Management
Las Vegas Field Office
4701 North Torrey Pines Drive
Las Vegas, NV 89130-2301
BLM_NV_SNDO_SearchlightWindEnergyEIS@blm.gov

Re: Draft Environmental Impact Statement for the Searchlight Wind Energy Project (NVN – 084626)

Dear Mr. Helseth:

The Desert Tortoise Council welcomes the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the proposed Searchlight Wind Energy Project (Searchlight WEP).

The Council is a private, non-profit organization comprised of hundreds of professionals and laypersons who share a common concern for wild desert tortoises and a commitment to advancing the public's understanding of this species. Established in 1976 to promote conservation of tortoises in the deserts of the southwestern United States and Mexico, the Council regularly provides information to individuals, organizations and regulatory agencies on matters potentially affecting the desert tortoise within its historical range. Accordingly, our comments will focus on the potential impacts of the Searchlight Wind Energy Project to the Mojave desert tortoise and the tortoise populations on the proposed site.

The Council believes the potential impacts of Searchlight WEP on biological resources cannot be reduced to less than significant levels because the acreage provides especially valuable habitat for the conservation and recovery of the Federal listed Mojave desert tortoise. While the proposed site is not within a Desert Wildlife Management Area (DWMA), the *Desert Tortoise Recovery Plan* states: "Habitat outside DWMAs may

Comment noted.

provide corridors for genetic exchange and dispersal of desert tortoises among DWMAs" (1994, 60). The Mojave desert tortoise was listed as a "threatened species" under the Federal Endangered Species Act in 1990 because of the precipitous decline in desert tortoise numbers due to human-caused mortality and the destruction and fragmentation of desert tortoise habitat. Siting Searchlight WEP on occupied desert tortoise habitat would contribute directly to the continued decline of the Mojave desert tortoise. Given that desert tortoise populations have been extirpated or almost extirpated from large portions of their geographical range in Nevada, it is reasonable that this valuable habitat be protected for desert tortoise conservation rather than for energy generation.

Tortoise populations within the project area appear to be greater than populations within the adjacent DWMA. According to the *Range-Wide Monitoring of the Mojave Population of the Desert Tortoise: 2010 Annual Report* (USFWS 2010, Table 6) and *Range-Wide Monitoring of the Mojave Population of the Desert Tortoise: 2008 and 2009 Annual Report* (USFWS 2010, Table 11 & 12) populations in the Piute-Eldorado DWMA have ranged from 3.1 -3.7 tortoises per square kilometer. According to the Desert Tortoise Survey of the proposed Duke Wind Searchlight Wind Energy Farm (SNEI 2011) the tortoise density within the project area was approximately 8.2 tortoise per square kilometer. This density is more than two times higher than in the DWMA. The importance of the desert tortoise population at the proposed site and the necessity of protecting it is further supported by scientific evidence that the population density there is comparatively higher than other areas in Nevada. Protecting this tortoise population - part of the Eastern Desert Tortoise Recovery Unit - will contribute to ensuring the genetic diversity of the Mojave desert tortoise.

Of particular concern is the area north of Highway 164 where it appears from Figure 1 SNEI Desert Tortoise Survey the density could be around 16 tortoises per square kilometer. If the project is approved, wind turbine generators (WTG) 1-28 need to be removed from the project to protect this high population of tortoises.

According to the DEIS, the 96 WTG Alternative will permanently impact 160 acres and temporarily impact 249 acres of desert tortoise habitat. Because habitat recovers very slowly in the desert, all impacts should be considered permanent. Robert Webb explains that - depending on the assumptions of the model -"the extrapolated amount of time for complete or 90% recovery of compacted [desert] soils ranges from 80 to 120 years for course-grained soils…." He adds that severely disturbed sites "may require as little as a century or as long as several thousand years for full recovery of species composition" (2009). By way of illustration, Wilshire, Nielson and Hazlett report that "severely compacted soils at 29 of 31 abandoned military bases and mining town sites have not recovered even after 91 years without human occupation" and recovery of plants and animal species "is likely to take much longer, on the order of a millennium" (2008, 305).

The Cumulative Effects section in Chapter 4 only addresses known BLM projects that could be developed in the area. Are there other large-scale projects proposed for the area not on BLM land? If so, these also need to be addressed here.

Comment noted. BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

Comment noted.

Section 4.17.4-Reasonable Foreseeble Actions has been updated to include methodology on how non-federal projects and federal project near the Searchlight Wind Energy Project were identified for the cumulative analysis.

Direct and indirect impacts from the project will be long lasting. It will mean not only maintenance vehicles within the area, but, as mentioned in the document, increased traffic from OHV recreationalists which will further increase the potential of tortoise being struck by vehicles. Not only because of the increased roads in the areas, but because of the width and smoothness of the roads which will enable vehicles to travel at a higher rate of speed. It could also mean additional habitat disturbance within the area as vehicles travel off the main roads. Since there is likely to be more use in the area, there is also likely to be additional trash, bringing more ravens, which feed on juvenile tortoises.

Comment is consistent with information already presented throughout Section 4.4-Biological Resources Impacts.

Mitigation provided in the DEIS does nothing to mitigate for the residual impacts to desert tortoises or other species on site.

Residual impacts are defined as impacts that remain after mitigation measures have been implemented.

The current rate of $786/acre for loss of habitat seems low in light of the current market for land to use for alternative energy development and mitigation for other projects. In addition, due to the density of tortoise on the site, the mitigation ratio should be at least 3:1 for habitat compensation.

The rate is determined by USFWS and adjusted annually for inflation. At the time the DEIS was published $786/acre was the rate; however, the rate is currently $810/acres and this is reflected in the Biological Opinion.

In sum, based on our assessment of the proposed project's location, configuration, minimal mitigation, residual and other potential impacts to desert tortoise, the Desert Tortoise Council believes there will be significant impacts to tortoises and recommends the No Project/No Action Alternative with respect to Searchlight Wind Energy Project.

Comment noted.

Thank you for the opportunity to comment on the DEIS. Please contact me by telephone at (909) 946-5027, by e-mail at gssilliman@csupomona.edu, or by U.S. mail at the address below if you wish clarification of these comments.

Sincerely,

G. Sidney Silliman

Sidney Silliman, Ph.D.
Desert Tortoise Council
1225 Adriana Way
Upland, CA 91784

References

Desert Tortoise Recovery Team, U.S. Fish and Wildlife Service. *Desert Tortoise (Mojave Population) Recovery Plan*. Portland: U.S. Fish and Wildlife Service, 1994.

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U. S. Fish and Wildlife Service. *Range-Wide Monitoring of the Mojave Population of the Desert Tortoise: 2010*. Reno, Nevada: Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service. 2010.

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Email: BLM_NV_SNDO_SearchlightWindEnergyEIS@blm.gov

April 18, 2012

RE: Comments on the Searchlight Wind Energy Draft EIS (NVN-084626 & NVN-086777)

Dear Mr. Helseth:

Please accept the following comments on behalf of our organization, the Nevada Wilderness Project (NWP). The NWP is a membership-based organization involving over 2,000 people. We serve as a catalyst for wildlife habitat conservation, wilderness preservation, and smart development of renewable energy. We have work on conservation issues affecting public lands and since our inception in 1999, we have successfully led statewide campaigns to protect more than 3 million acres as Wilderness and National Conservation Areas and have proffered advice, influence and commentary toward carefully-crafted land use policies and decisions. We acknowledge this nation's objective to reduce its emissions of greenhouse gases into the atmosphere and support the wise development of renewable energy pursuant to the Energy Policy Act of 2005 as one effort to achieve that objective.

We thank the Bureau of Land Management (BLM) for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) and Notice of Segregation addressing Duke Energy's (Applicant) request for a public lands right-of-way (ROW) grant for its proposed Searchlight Wind Energy Project (Project) near the town of Searchlight, Nevada. The DEIS also addresses the Western Area Power Administration's (Western) proposal (ROW application NVN-086777) to construct and operate its new switching station to interconnect electricity produced by the Project into its electrical grid. We also address this element of the development within our comments.

We support the Applicant's Project Alternative involving the placing of 87 wind turbine generators (WTGs), also identified as BLM's Preferred Alternative. As a conservation-minded organization NWP is not inclined to investigate the Applicant's business considerations, so we must assume that the preferred alternative represents the lowest footprint allowed while maintaining the Applicant's commitment to meet their power purchase agreement with Western. Given the choices, our support is principally founded on the fact that preferred alternative results in a reduced sum of disturbed acreage. We acknowledge the "fast-track" designation applied to the Project and the resultant determination that a No-Action Alternative is not considered within the DEIS.

A no action alternative is considered in the DEIS (Refer to Section 2.1.2.1-No Action Alternative).

Off Highway Vehicle (OHV) Traffic – The NWP recognizes that presently there are unimproved roads and trails within the Project area that now support limited vehicular use. Most of these roads were created many years ago to access mine sites. Others were used to access locations where artificial water developments, commonly called "guzzlers", were built for the benefit of area wildlife, specifically Gamble's quail. Transmission line maintenance roads were also established in the area. Accordingly, there has been and continues to be significant vehicular

access to the landscape of the Project area and beyond. However, given the nature of the habitat and the fact that these were and are not operationally maintained routes, many of the roads and trails have fallen into disrepair either because of natural effects or because of indiscriminate use by vehicle operators, most recently by OHVs classified as all-terrain vehicles – ATVs, or quads.

Because of the rough condition of these roads and trails, vehicles had to negotiate them at comparatively low rates of speed. We are concerned vehicle speeds will increase with the improvement of existing routes and the construction of new roads for the Project. The Applicant has addressed this for the construction phase of the Project by invoking a 15MPH speed limit by construction vehicles during period of high tortoise activity (see Applicant's Proposed Measures [APM] *MM BIO-3: Biological Opinion*). We can only speculate how much additional traffic will be encouraged by the improved roads and the speeds at which these vehicles will travel. Any increase in either traffic volume or rate of speed should be considered a hazard to ground-dwelling animals, particularly the slow-moving desert tortoise, Gila monster and a number of other reptiles.

The Applicant has offered the APM of a Traffic Management Plan (*MM TRAN-1*) for the Project's construction phase. We advise that a post-development traffic plan is necessary to monitor these concerns and to act on them if the monitoring data indicates that actions to ameliorate impacts are necessary. This plan would extend beyond the APM for mitigation described within *MM BIO-1: Interim Reclamation.* Actions described within the plan could involve fencing and gating to deny access just within the Project area and construction of an access road for recreationists that circumvents the Project area. At a minimum we believe that signage should be erected that cautions vehicle operators to be mindful of animals on these roads and trails during critical time periods, these being agreed upon by biological experts.

Post-construction traffic would be limited to maintenance vehicles and is not expected to affect the current level of service of the existing recreational and local traffic; therefore an additional Traffic Management Plan would not be warranted.

Desert Tortoise – The Project area exists within habitat designated as "moderate" for tortoise population occurrence. This is habitat that tends to have a greater slope and is often characterized by rocky terrain. We are concerned that the criteria used for this designation may overlook tortoise observation biases within the landscape in this zone; the ability for an observer to see a tortoise relative to the clutter (rocks, scree, plants) within the view area. Simply, tortoises are easier to see in washes than they are amidst ground littered with rocks, vegetation and other physical masses.

Comment noted.

We assume that the Applicant, having received considerable comment regarding the impacts to this threatened species, exercised diligence in the final configurations of the 96 and 87 WTG layout alternatives. One would assume that the clustering of the towers could mitigate land disturbance, particularly in avoidance of tortoise impacts. However, it is also apparent that the disciplined search protocols employed by the Applicant's biological contractors resulted in the location of a surprising number of tortoises within the Project area and that the locations were well-distributed therein. We believe that construction of WTG cluster 53-86 will be particularly problematic in creating direct tortoise mortality.

Organizations

from Duke and produce in a format that would allow the public and the decision maker to evaluate whether this proposed industrial-scale energy site should be approved. *See, e.g.* Exhibit 3 (three maps depicting wind speeds at all turbine locations at the Whistling Ridge Wind Energy project in southwestern Washington state). Without this information, there is no basis for the public to evaluate the claim that there is a "need" for the proposed wind project in this area that has only marginal potential for wind power production.

Furthermore, the map of wind resources in the DEIS at 1-3 is difficult to read and so small that it cannot be interpreted. In its supplemental DEIS along with information about the *monitored* wind speeds at the site, BLM must include appropriately-scaled maps that show the project area accurately in conjunction with wind speed data. *See, e.g.*, Exhibit 3. BLM also should include more detailed maps of the site, such as the one prepared by Duke's consultant and included on the attached CD-ROM as "'Figure 1 – Duke SWEP Project Area – LARGE MAP," to make it easier for the public to evaluate the proposed layout and its impacts. It is also unclear why the proximity to Las Vegas and Henderson and the meteorological station in the latter city are relevant to the disclosure of information in the DEIS, when the power from this project is not destined for Las Vegas and Duke has had meteorological towers in place at the project site itself for more than three years. DEIS at 1-2, 3-37. Why is this data not disclosed, rather than data from a weather station nearly 50 miles away?

The DEIS also fails to evaluate whether relying on or expanding other renewable energy alternatives would be a practicable alternative and adequately or accurately analyze the full range of reasonable project alternatives. *See* 40 C.F.R. § 1502.14(a); *NRDC v. USFS*, 421 F.3d 797 (9th Cir. 2005); *Simmons*, 120 F.3d 664; *Envtl. Law & Policy Ctr.* 470 F.3d 676; *Davis v. Mineta*, 302 F.3d 1104 (10th Cir. 2002). BLM has not considered whether there exist potential alternative sites for generating wind energy that would involve less ecologically sensitive areas than an area surrounded on all sides by an Area of Critical Environmental Concern and adjacent to a concentrated human population, including generation sites that are closer to existing transmission lines or distributed generation alternatives that would involve little or no additional new transmission line construction.

The DEIS has also failed to consider whether the lower efficiency and higher maintenance cost of wind energy generation and long-distance electricity transmission, compared to other renewable generation alternatives (solar, geothermal, hydropower, distributed generation) would obviate any need for this project. The DEIS also does not evaluate whether there really is a need for long-distance transmission, when other wind energy generation sites with suitable wind (and other renewable energy generating sites) are located closer to existing transmission lines. The DEIS also has not evaluated whether the relatively limited estimated life-span of a wind energy generation project (30 years, *see* DEIS at 4-41) justifies the construction of a generation and transmission project on federal lands surrounded by a protected ACEC.

The DEIS also provides no information that would allow the public or the decisionmaker to evaluate whether it should approve a project that is economically infeasible for reasons besides the weak wind resources at the project site. For example, the DEIS does not disclose and evaluate that the Production Tax Credit and the Section 1603 Grant program has not been

The purpose of this document is to evaluate environmental impacts of the proposed project and alternatives for which the Applicants have submitted ROW applications as stated in Section 1.3.1-BLM's Purpose and Need for the Proposed Project. Searchlight Wind Energy, LLC has conducted site specific testing (using Meteorological Data collected for 5 years) and determined that sufficient wind exists to support the project. Data collected from MET towers at the application site is proprietary information and is not available.

The purpose of this document is to evaluate environmental impacts of the proposed project and alternatives for which the Applicants have submitted ROW applications as stated in Section 1.3.1-BLM's Purpose and Need for the Proposed Project, of the EIS

renewed by Congress. BLM must disclose and evaluate whether this project will be economically feasible if the tax credits are not renewed, and present that information to the public and the decision maker *before* a decision is made to grant the ROWs.

The DEIS also improperly and incorrectly suggests that there is a need for wind energy from Searchlight to satisfy the Nevada Renewable Portfolio Standard ("NRPS"). DEIS at 1-6. However, there presently is no demand for additional renewable energy in Nevada to meet the NRPS. Nevada's economy was one of the hardest hit in the nation by the 2008 recession, and demand for energy of all types has been lower in recent years due to poor economic conditions. The DEIS discloses no information to describe and analyze the "prevailing market demand for renewable energy." DEIS at 1-6. The BLM must disclose accurate information about purported need for the electricity that would be generated by the project, and provide high-quality data showing what the current market for renewable energy in Nevada actually is.

In Section 1.3-Background, the DEIS states, "The Nevada Renewable Portfolio Standard (NRPS) *provides the Applicant with the opportunity* to propose this project because the NRPS mandates that state utilities provide for renewable energy offerings and consumption goals that meet prevailing market demand for renewable energy."

In addition, Duke represented to the Public Utilities Commission of Nevada in September 2009 that the project is designed "to meet the growing demand for [renewable] power in Nevada and the Western United States." Searchlight Wind-Duke Permit App. to PUC 9-2009, at 2 (on attached CD-ROM). However, there is no evidence that there currently is any "growing demand" for this power, either in Nevada or in the closest neighboring states. Indeed, the state of California, which consumes more energy than any other state, described in August 2011 that it no longer has a demand for importation of electricity generated from renewable energy. Exhibit 4. In the past two years, California has permitted 5,000 MW of renewable power in eleven large solar and wind projects, bringing the total permitted over the past two years to more than 10,000 MW. *Id.* at 1. California has 513 projects seeking permits to construct and operate renewable energy facilities that would produce 49,775 MW of generation capacity. *Id.*

Comment noted.

California now forecasts that it will exceed its goal of producing 33% of its electricity with renewables by 2020, and instead now expects it may be an *exporter* of renewable energy by that time. *Id.* at 2. Because California no longer has a demand for importation of renewable energy, the Governor's Office expressed that "[w]e are also particularly concerned when we see proposals for large renewable energy resource development outside of California interconnecting across long distances into California." *Id.* The DEIS does not disclose information about the "rapidly changing dynamics in California." *Id.* at 4. BLM must disclose and analyze information about the market for the energy that would be generated at this particular site, and whether there is, in fact, a "need" for the power that would be generated by the Searchlight Wind Project, before it can make a rational decision whether to approve the ROWs for this project.

The BLM is a land management agency and is responding to applications filed by Searchlight Wind Energy, LLC, and Western for use of the public lands. The BLM has processed those applications consistent with NEPA, applicable regulations, and BLM policies and procedures, including BLM Instructional Memoranda 2011-059, 2011-061, and 2009-043. The BLM has appropriately considered Congress's goal that the Secretary of the Interior should seek to approve renewable energy projects on the public lands; direction from Secretarial Order 3285A1 (March 11, 2009, amended February 22, 2010), which establishes the development of environmentally responsible renewable energy as a priority for the Department of the Interior; and the BLM's responsibility under FLPMA to manage the public lands for multiple use, taking into account the long-term needs of future generations for renewable and non-renewable resources.

The DEIS also repeatedly asserts that the project will produce 200 MW of power, while in fact wind energy facilities typically produce about 30% of the rated capacity, meaning that the project will in fact produce only about 66 MW of electricity. Thus any evaluation of the "need" for this project must take into account this lower figure and clarify and correct the generation capacity cited in the DEIS.

B. The DEIS does not demonstrate compliance with substantive legal obligations which bind BLM.

The DEIS does not disclose how BLM intends to exercise its authority and satisfy its obligations under the substantive statutes which apply to the lands they manage on and near Searchlight and in the Piute-El Dorado ACEC. When determining what kind of EIS must be prepared, an agency must first describe accurately the federal action to be taken. *ONDA v. BLM*, 625 F.3d at 1109. "Where an action is taken pursuant to a specific statute, the statutory objectives of the project serve as a guide by which to determine the reasonableness of objectives outlined in an EIS, so too do the statutory objectives underlying the agency's action work significantly to define its analytic obligations." *Id.* (internal quotations and citation omitted). Because NEPA places an obligation on BLM to evaluate every significant aspect of the impact of the proposed action, "the considerations made relevant by the substantive statute driving the proposed action must be addressed in NEPA analysis" and "the factors to be considered are derived from the statute the major federal action is implementing, as well as from the nature of the action itself." *Id.* & *id.* n.11.

The DEIS does not consider significant factors related to BLM's compliance with its obligations under the substantive statutes which govern the proposed ROW grants and which cover the agency's management obligations in southern Nevada.

1. The DEIS does not demonstrate that a ROW grant by BLM would comply with FLPMA.

The DEIS describes that BLM will decide whether to grant ROWs for Duke's generation/transmission project and Western's interconnection, and use the EIS process to approve, modify or deny the ROW grants. DEIS at 1-7. The DEIS also recognizes that BLM may place conditions on any ROW grants, which could restrict, even dramatically, the activities on the project site, in order to comply with BLM's legal mandates for managing federal lands.

BLM's management obligations derive from FLPMA. Regarding ROW grants, FLPMA states that

> Each right-of-way shall contain…
>
> (a) terms and conditions which will (i) carry out the purposes of this Act and rules and regulations issued thereunder; (ii) minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment; (iii) require compliance with applicable air and water quality standards established by or pursuant to applicable Federal or State law; and (iv) require compliance with State standards for public health and safety, environmental protection, and siting, construction, operation, and maintenance of or for rights-of-way for similar purposes if those standards are more stringent than applicable Federal standards; and

Comment noted. The Piute-Eldorado ACEC was considered in the DEIS in Section 1.4- Summary of Public Scoping and Issue Identification, Section 3.8.2.4 -under Special Designations, Section 4.8.2.2-under Special Designations, and Section 4.11.2.2-under Recreation. No activities would occur in the ACEC except as allowable under the BLM Las Vegas RMP. The ACEC would remain a ROW avoidance area. No activities would occur in the ACEC except as allowable under the Las Vegas RMP. The ACEC would remain a ROW avoidance area.

Refer to Section 1.5-Land Use Plan Conformance Determination and describes the project's conformance with the RMP.

> (b) such terms and conditions as the Secretary concerned deems necessary to (i) protect Federal property and economic interests; (ii) manage efficiently the lands which are subject to the right-of-way or adjacent thereto and protect the other lawful users of the lands adjacent to or traversed by such right-of-way; (iii) protect lives and property; (iv) protect the interests of individuals living in the general area traversed by the right-of-way who rely on the fish, wildlife, and other biotic resources of the area for subsistence purposes; (v) require location of the right-of-way along a route that will cause least damage to the environment, taking into consideration feasibility and other relevant factors; and (vi) otherwise protect the public interest in the lands traversed by the right-of-way or adjacent thereto.

43 U.S.C. § 1765. Of note, a ROW must contain terms and conditions that will "carry out the purposes of FLPMA" and "minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment. *Id.* § 1765(a). FLPMA also requires that a ROW contain terms and conditions necessary to "protect Federal property and economic interests," efficiently manage the lands that are subject to the ROW "or are adjacent thereto, and "otherwise protect the public interest" in the ROW lands or lands "adjacent thereto." *Id.* § 1765(b) The DEIS nowhere describes how any ROW grant would comply with these obligations under FLPMA.

The DEIS explains that the "project area is to the northeast, east and southeast of Searchlight and encompasses approximately 29 total square miles (18,949 acres) of both private and BLM-administered lands in the Eldorado Mountains and Piute Valley." DEIS at xii. BLM The DEIs does not describe effects from the project on lands outside the project area, which is surrounded by the Piute-El Dorado ACEC, except for evaluating some visual impacts that would occur outside the project area. BLM suggests that it has no responsibility to consider impacts to the ACEC. DEIS at 1-10. However, although the lands in the project area are not managed as an exclusion area, all of the lands surrounding the project area within the ACEC remain an exclusion area for wind energy development.

> The DEIS fails to consider that the RMP designated the Piute-El Dorado ACEC to
>
> Establish areas of critical environmental concern specifically for management of desert tortoise within the Northeastern Mojave and Eastern Mojave recovery units identified in the *Tortoise Recovery Plan* …. Manage a sufficient quality and quantity of desert tortoise habitat, which in combination with tortoise habitat on other Federal, State and private land, will meet recovery plan criteria. Maintain functional corridors of habitat between areas of critical environmental concern to increase the chance of long-term persistence of desert tortoise populations within the recovery unit.

Las Vegas RMP Record of Decision ("ROD") at 3. The Piute-El Dorado ACEC is designated as a ROW avoidance area, except in designated corridors. *Id.* at 4, 19. There are no designated corridors within this ACEC. *Id.* at 19. The transmission line for the project would cross approximately a mile of the ACEC, with towers spaced every 500 feet. DEIS at 2-15, 3-53

The Piute-Eldorado ACEC was considered in the DEIS in Sections 1.4-Summary of Public Scoping and Issue Identification, 3.8-Land Use, and 4.8-Land Use Impacts. No activities would occur in the ACEC except as allowable under the BLM Las Vegas RMP. The ACEC would remain a ROW avoidance area. Refer to Chapter 3 for a description of the Region of Influence (ROI) for each resource.

(Figure 3.8-3). The DEIS therefore is incorrect that "the project area does not include lands managed as exclusion or avoidance areas." DEIS at 1-10. The 2005 amendment to the Las Vegas Resource Management Plan ("RMP") did not change the status of the ACEC as a ROW avoidance area.

Even the 2005 amendment maintains the policy excluding ACEC's from wind development:

> The BLM will not issue ROW authorizations for wind energy development on lands on which wind energy development is incompatible with specific resource values. Lands that will be excluded from wind energy site monitoring and testing and development include designated areas that are part of the National Landscape Conservation System (NLCS) (e.g., Wilderness Areas, Wilderness Study Areas, National Monuments, NCAs, Wild and Scenic Rivers, and National Historic and Scenic Trails) and Areas of Critical Environmental Concern (ACECs). Additional areas of land may be excluded from wind energy development on the basis of findings of resource impacts that cannot be mitigated and/or conflict with existing and planned multiple-use activities or land use plans.

DEIS Appendix C, at A-2.

Based on the fact that the project will be constructed in the "keyhole" within the ACEC, the BLM apparently contends that it need not assess how project will affect the surrounding federal land. For example, the few times that the ACEC is mentioned, it is primarily to assert obliquely (and incorrectly) that the project area does not include lands managed as ROW exclusion or avoidance areas. *See, e.g.*, DEIS at 1-10; 3-50; 4-58. Similarly, the DEIS states that "[c]onstruction activities, laydown areas, or facilities would not affect recreational activities within the ACEC. Temporary decreases in camping, wildlife viewing, rock climbing and hiking opportunities within the project area due to construction activities and vehicle traffic would be minimal and short-term and limited to active construction sites and roads." DEIS at 4.11. However, the DEIS provides no support for these statements or conclusions, but again BLM is suggesting that the construction and operation of 87 wind turbines, each 428 feet high, whose noise can be heard up to several miles, will have "minimal" effect outside the immediate footprint of the project.

Simply because the project is not located on the public lands within the ACEC does not relieve the BLM from the obligation to assess the direct, indirect, and cumulative effects of the proposed action (i.e., construction and operation of the turbine sites and associated transmission lines and interconnection facility) on the surrounding lands. 40 C.F.R. § 1508.7. By applying for a ROW that crosses that ACEC, and places at least a dozen turbines within about 750 feet of the ACEC, and several dozen turbines within about 2,500 feet of the ACEC, and, Duke has put BLM in the position of having to assess the environmental consequences of the project on the federal public land surrounding the project site, and not only the project site itself. *Nat'l Forest Preservation Group v. Butz*, 485 F.2d 408, 411–12 (9th Cir. 1973). This requirement is consistent with FLPMA, which states that the ROW contain terms and conditions necessary to

(Figure 3.8-3). The DEIS therefore is incorrect that "the project area does not include lands managed as exclusion or avoidance areas." DEIS at 1-10. The 2005 amendment to the Las Vegas Resource Management Plan ("RMP") did not change the status of the ACEC as a ROW avoidance area.

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No activities would occur in ACEC except as allowable under the BLM Las Vegas RMP. The ACEC will not be affected except as allowable under the BLM Las Vegas RMP.

"protect Federal property and economic interests," efficiently manage the lands that are subject to the ROW "or are adjacent thereto, and "otherwise protect the public interest" in the ROW lands or lands "adjacent thereto." 43 U.S.C. § 1765(b). But the DEIS does not disclose or evaluate the effects of the wind generation inside the project area on lands outside it, particularly not on critical habitat of desert tortoise located less than half a mile from dozens of turbines.

The DEIS, however, fails to include such terms and conditions that are protective of federal property and the associated public interest, or evaluate any alternatives that consider potential conditions. The DEIS contains none of the mandatory terms and conditions to "minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment." *Id.* § 1765(a). The DEIS does not even hint at what conditions BLM might consider, which should be evaluated as separate alternatives. The DEIS recognizes that there will be significant adverse effects from project on scenic values, recreational values, and wildlife on federal lands. But the DEIS does not disclose and evaluate what terms and conditions will "minimize" such damage. And, the DEIS does not address the direct impacts to the ACEC of the construction and operation of the transmission line in a "ROW avoidance" area.

The DEIS fails to disclose how BLM has complied with its statutory obligations under Sections 504 and 504 of FLPMA. 43 U.S.C. §§ 1764–65. Nor has the DEIS demonstrated that any ROW would "prevent unnecessary or undue degradation" of the lands BLM manages, within the project site or in the surrounding ACEC. *Id.*. § 1732(b). Instead, the DEIS mentions only that the ROW fits into BLM's multiple-use mandate under FLPMA. DEIS at xi.

The DEIS does not describe how the project, and particularly the approximately one mile of transmission line that would cross the ACEC and the interconnection facility within the ACEC, would be in accordance with the Las Vegas RMP. Once an RMP is in place, FLPMA mandates that the BLM act "in accordance" with them. 43 U.S.C. § 1732(a).

The Record of Decision for the Las Vegas RMP designates all ACECs, exclusive of designated corridors and with certain exceptions, as "right of way avoidance areas." Las Vegas RMP ROD at 19. The DEIS indicates that the interconnection facility comes within the exception for site type right-of-way exclusions within 0.50 miles of a Federal Aid Highway. DEIS at 3-50. However, the DEIS does not explain why Highway 164 (Cottonwood Cover Road) qualifies as a "Federal Aid Highway." Furthermore, the DEIS does not explain how it could approve the portion of the transmission line that runs for approximately a mile across the ACEC to the interconnection facility, with towers every 500 feet, when the RMP designates that ACEC as a "right of way avoidance area." Las Vegas RMP ROD at 19 (Management Direction RW-1-e). Because of the prohibition against right of way grants within ACECs, BLM cannot grant the ROW for the project consistent with the RMP. 43 U.S.C. § 1732(a).

2. The DEIS does not demonstrate that ROW grants by BLM would comply with the Endangered Species Act.

Pursuant to FLPMA, BLM may only grant a ROW if it is "consistent with the provisions of [FLPMA] or any other applicable law." 43 U.S.C. § 1764(c). A ROW also must "do no

Protective measures are included in Section 2.6-Mitigation Measures, throughout Chapter 4.0-Environmental Consequences, Appendix C-BLM Wind Energy Development Program Policies and BMPs and Appendix D-Western Area Power Administration Construction Standards.

The EIS discloses the impacts to all the resources on BLM-managed land throughout Chapter 4.0-Environmental Consequences. This includes consideration of the Piute-Eldorado ACEC in the EIS in Sections 1.4-Summary of Public Scoping and Issue Identification, 3.8-Land Use, and 4.8-Land Use Impacts, and 4.10-Noise Impacts.

The Piute-Eldorado ACEC was considered in the DEIS in Section 1.4- Summary of Public Scoping and Issue Identification, Section 3.8.2.4 under Special Designations, Section 4.8.2.2-under Special Designations, and Section 4.11.2.2-under Recreation. No activities would occur in ACEC except as allowable under the BLM Las Vegas RMP. The ACEC would remain a ROW avoidance area.

For a map of Federal Aid Highways that included SR 164 see the following link:
http://www.nevadadot.com/uploadedFiles/NDOT/About_NDOT/NDOT_Divisions/Planning/Roadway_Systems/FCM_Clark.pdf

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

unnecessary damage to the environment." *Id.* § 1764(a). Under NEPA, BLM "*shall* prepare *draft* environmental impact statements *concurrently with and integrated with* environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), and other environmental review laws and executive orders." 40 C.F.R. § 1502.25(a) (emphases added). Accordingly, BLM's NEPA analysis in the DEIS must evaluate whether granting a ROW is consistent with other applicable law. BLM has an obligation under the Endangered Species Act to ensure that its actions will not jeopardize the continued existence of a listed species—the threatened desert tortoise—or result in the destruction or adverse modification to desert tortoise critical habitat. 16 U.S.C. § 1536(a)(2); *Sierra Club v. Marsh*, 816 F.2d 1376, 1385–86 (9th Cir. 1987).

Furthermore, Section 9 of the ESA prohibits any person from "taking" a threatened or endangered species. 16 U.S.C. § 1538(a)(1); *see also* 50 C.F.R. § 17.31. "Take" is defined broadly under the ESA and its regulations to include harassing, harming, wounding, killing, trapping, capturing, or collecting a protected species either directly or by degrading its habitat sufficiently to impair essential behavior patterns, or to attempt to engage in any such conduct. 16 U.S.C. § 1532(19). In USFWS's regulatory definition of take, the term "harass" is defined to mean "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering." 50 C.F.R. § 17.3. In addition, "harm" is defined as "an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." *Id.*

The DEIS does not address whether the project—with or without conditions—could comply with the ESA. BLM must disclose and evaluate whether the grant of ROWs for the generation, transmission, and interconnection of this project on public lands would result in construction of a project that violates the Endangered Species Act. The only reference to compliance is that the project would implement terms and conditions of the USFWS's biological opinion, which "may include" several measures such as pre-construction surveys, desert tortoise fencing, and relocation of tortoises. DEIS at 2-43 to 2-44; 4-31 to 4-32. However, this does constitute an adequate disclosure of whether or not the project *will be* consistent with the ESA, as FLPMA requires prior to a grant of a ROW.

As described in more detail below, the project will result in take of desert tortoise and in the adverse modification of desert tortoise critical habitat from the off-project-area noise and habitat fragmentation effects caused by the construction and operation of the turbines. BLM has not disclosed these impacts, and therefore has not complied with its obligation—under FLPMA—to evaluate whether a ROW grant will be consistent with other "applicable law," namely the ESA. BLM must supplement its EIS to disclose and evaluate these effects in order to determine whether or not it can validly grant the ROWs.

SHPO will make a determination as to cultural resources classification and protection before the issuance of the Record of Decision.

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion). Section 4.4.5.3-Mitigation has been updated to include USFWS required mitigation The Biological Opinion includes a determination regarding the effects to the species as a result of the proposed project and a take limit.

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For example, BLM must answer: how many tortoises will be killed, captured, harmed, harassed or otherwise "taken" by the construction and operation of the project? How many of these takes will occur on the generation site and transmission/interconnection ROWs? How much take of tortoises by impacts from noise and avoidance effects will take place on the public lands of the ACEC that surrounds the project site? How many tortoises will be killed, harmed, harassed, or otherwise taken in the vicinity of the project site due to increased vehicle traffic both during the construction and operation phases of the project? How does BLM plan to use its authority and obligations under FLPMA Sections 504 and 505 to ensure compliance with the ESA? The DEIS does not tell us. This represents a dramatic failure by the agency to disclose relevant factors to the public and obligates BLM to issue a supplemental DEIS that addresses these issues.

In addition, BLM must disclose and evaluate whether any proposed mitigation will be effective. The DEIS merely refers to mitigation that "may" occur, DEIS 2-43, 4-31, but does not describe what mitigation *will* occur or whether that mitigation will or will not be effective. This is inadequate to comply with NEPA's requirement of disclosures regarding mitigation. Because the effects of the project on ESA-listed wildlife, BLM's duties under the ESA obligate the agency to consider those effects in the DEIS and prevent or minimize those effects by denying a ROW or imposing restrictive conditions consistent with Congress's purpose in the ESA to afford listed species the highest of priorities in agencies' land use decisions.

3. The DEIS does not demonstrate compliance with other management obligations under various federal statutes, regulations and guidance.

As discussed further below, the project will have significant impacts to avian species, killing potentially hundreds of raptors, golden eagles, and other migratory birds protected by federal statute. The DEIS does not demonstrate that BLM can issue ROWs that are consistent with these statutory obligations. The DEIS does not show, for example, that BLM has complied with, or could authorize any ROW consistent with, the Migratory Bird Treaty Act ("MBTA"), the Bald & Golden Eagle Protection Act ("BGEPA"), or the Endangered Species Act ("ESA").

In particular, the DEIS does not demonstrate that BLM would comply with the special status species policy (BLM Manual 6840) if it approves a ROW for a generation and transmission project within desert tortoise habitat. Management of special status species (and indeed all rare species) on BLM lands should focus on ensuring long term survival and recovery in order to prevent the need for future listings. Nothing in the DEIS shows that the BLM took into consideration these critical management concerns. *See* BLM Manual 6840.2.C (Implementation) ("BLM shall manage Bureau sensitive species and their habitats to minimize or eliminate threats affecting the status of the species or to improve the condition of the species habitat, by . . . [e]nsuring that BLM activities affecting Bureau sensitive species are carried out in a way that is consistent with its objectives for managing those species and their habitats at the appropriate spatial scale . . . [and] [c]onsidering ecosystem management and the conservation of native biodiversity to reduce the likelihood that any native species will require Bureau sensitive species status").

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act. USFWS has determined the appropriate "take" limit for the proposed project (Appendix B-2: USFWS Biological Opinion). If the take limit was exceeded, project activites would cease and the BLM would reconsult with the USFWS.

The Biological Opinion includes the required mitigation for the proposed project (Refer to Appendix B-2: USFWS Biological Opinion). Section 4.4.5.3-Mitigation has been updated to reflect these requirements.

Impacts to species that are state or federally protected are addressed in Section 4.4-Biological Resources Impacts.

No permitting framework exists that allows a company to protect itself from liability resulting from take at wind facilities; however, the USFWS does not usually take action under the MBTA if good faith efforts have been made to minimize impacts. Searchlight Wind Energy has developed a BBCS (formerly referred as the ABPP) to minimize impacts to birds (Appendix B-4: Bird and Bat Conservation Strategy).

The decision if a take permit is being requested is between the FWS and Searchlight Wind LLC.

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

BLM has also not demonstrated in the DEIS that it has complied with BLM Instruction Memorandum 2010-077, LR 2000 Data Standards for Renewable Energy Cases (Mar. 16, 2010). Under IM 2010-077, BLM must collect detailed data on resource conflicts for "[e]lectric transmission rights-of-way cases that facilitate, support, or have capacity to distribute power from renewable energy projects." IM 2010-077, Appendix, *Revised Data Standards for Renewable Energy Cases*. BLM does not appear to have collected the required data for the transmission line and associated generation which the requested ROW will facilitate and support. Acknowledging this obligation and disclosing resource conflicts data in the DEIS is particularly important because it provides BLM with better information to evaluate potential alternatives, as discussed in the following section.

The DEIS also does not reflect that BLM and USFWS have fulfilled their obligations under the October 2009 Memorandum of Understanding ("MOU") regarding federal agency review of electric transmission facilities on federal lands. Under the MOU, "[c]onsistent with its principal trust responsibility to protect and conserve migratory birds, threatened and endangered species, certain marine mammals, and interjurisdictional fish, the USFWS will consult with applicants for transmission projects potentially affecting any of these resources." There is no evidence in the DEIS that the USFWS has fulfilled these obligations, or that BLM has sought this information. The Searchlight project includes over eight miles of transmission line, including transmission lines on a protected ACEC. BLM should obtain information from the federal wildlife expert agency and include the information in a supplemental DEIS disclosing to the public its preliminary determination regarding the effects of the transmission line and generation project on desert tortoise, golden eagles, migratory birds and other sensitive species.

The DEIS has not demonstrated that the project would comply with the Las Vegas RMP. The 2005 Wind Energy Development Programmatic EIS ("PEIS") the Las Vegas RMP, but did not alter any of the land use designations and did not consider site-specific projects, such as the Searchlight Wind Project. Because the PEIS (and the resulting 2005 amendment to the RMP) do not consider site-specific impacts, it cannot satisfy BLM's obligations under NEPA or under FLPMA to take actions that are in accordance with the RMP.

BLM also must consider whether the project is consistent with the most recent available science and guidance regarding wind energy development effects on wildlife and related to two of the species most likely to be adversely affected by the project, desert tortoise and golden eagles. BLM has not demonstrated that the project would contribute to the recovery of the desert tortoise as discussed in USFWS's May 2011 Revised Recovery Plan for the Mojave Population of the Desert Tortoise. Indeed, the DEIS does not even reference this document. DEIS at 6-10. A copy is enclosed on the attached CD-ROM for BLM to consider in further environmental review of this project.

BLM also has not evaluated whether this project is consistent with the most recent USFWS guidance regarding golden eagles in the January 2011 Draft Eagle Conservation Plan Guidance. A copy is enclosed on the attached CD-ROM for BLM to consider in developing protection for eagles that will be affected by this project or in determining that the project cannot proceed. Based on the USFWS's analysis of populations across the nation, there is no safe

Extensive coordination was conducted between the BLM, USFWS, and NDOW regarding wildlife in the proposed project area. See Section 5.0-Consultation and Coordination and for an updated coordination/consultation history.

Refer to Section 1.5-Land Use Plan Conformance Determintation for a discussion of the Programmatic EIS. This EIS considers site-specific impacts for the Searchlight Wind Energy Project.

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as the Avian and Bat Protection Plan [ABPP]) has been developed for the proposed project utilizing the recommendations within the USFWS's March 2012 Land Based Wind Energy Guidelines (Refer to Appendix B-4: Bird and Bat Conservation Strategy). The decision if a take permit is being requested is between the USFWS and Searchlight Wind.

allowable take level for golden eagles. Therefore, USFWS currently authorizes take permits only under the philosophy that "no net loss" may be attributable to such take. However, take is unavoidable on the project site. Given the growing concern for these majestic birds, especially related to mortalities associated with wind turbines and expanding transmission infrastructure, any development decisions that will impact golden eagles must be placed within a regional population context much larger than the area immediately surrounding any proposed generation and transmission project.

Similarly, BLM has not demonstrated that the project would be consistent and has complied with BLM Instruction Memorandum 2010-156, Golden Eagle National Environmental Policy Act and Avian Protection Plan Guidance for Renewable Energy (Sept. 30, 2011). IM 2010-156 requires BLM to coordinate with USFWS early and throughout the planning process, and conduct a cumulative effects analysis of impacts to golden eagles based on the detected presence of golden eagles at the project site and consequent potential direct effects to the birds. The DEIS does not comply with the guidance in IM 2010-156 and provides no explanation for why it does not.

BLM-IM-2010-**1**56 is expired.

In addition, in the course of preparing a supplemental DEIS, BLM must consider whether development of this project will comply with the USFWS's March 2012 Land-Based Wind Energy Guidelines. A copy of this document is provided on the attached CD-ROM. These guidelines contain the most recent guidance from USFWS to minimize impacts to wildlife from wind energy facilities, and must be evaluated to comply with BLM's obligation to minimize impacts from ROW grants on public lands as well as comply with BLM's obligations under NEPA and other statutes. For example, the guidelines sensibly provide that "the lead federal action agency should make its decision based in part on a developer's commitment to mitigate adverse environmental impacts" and provide information to the public about mitigation. Wind Guidelines at 53. The DEIS does not do this because all of the mitigation plans have not yet been developed and therefore cannot be meaningfully addressed.

A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as the Avian and Bat Protection Plan [ABPP]) has been developed for the proposed project utilizing the recommendations within the USFWS's March 2012 Land Based Wind Energy Guidelines (Refer to Appendix B-4: Bird and Bat Conservation Strategy).

C. The DEIS fails to consider reasonable alternatives.

"The purpose of NEPA is to require disclosure of relevant environmental considerations that were given a 'hard look' by the agency, and thereby to permit informed public comment on proposed action and any choices or alternatives that might be pursued with less environmental harm." *Te-Moak Tribe of W. Shoshone of Nev. v. U.S. Dep't of Interior*, 608 F.3d 592, 601 (9th Cir. 2010) (quoting *Lands Council v. Powell*, 395 F.3d 1019, 1027 (9th Cir. 2005)); *see also* 42 U.S.C. § 4332(E) (requiring agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources"). Agencies are required to consider alternatives in an EIS and must give full and meaningful consideration to all reasonable alternatives. *Te-Moak Tribe*, 608 F.3d at 601; *see also* 40 C.F.R. §§ 1502.14. "The existence of a viable but unexamined alternative renders an environmental impact statement inadequate." *Te-Moak Tribe*, 608 F.3d at 601 (citing *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1519 (9th Cir. 1992) (quoting *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985)).

The BLM developed a purpose and need statement and considered a range of reasonable alternatives consistent with NEPA, applicable regulations, and BLM policies and procedures, including BLM Instruction Memorandum 2011-059. The two action alternatives satisfy the purpose and need because they fulfill BLM's obligation to consider the ROW applications under FLPMA and NEPA and because they are consistent with other applicable federal mandates and renewable energy policies and goals.

Organizations

SIERRA CLUB
FOUNDED 1892

April 18, 2012

Subject: Comments on Searchlight Wind

BLM Las Vegas Field Office,

Attn: Gregory Helseth

4701 North Torrey Pines Drive

Las Vegas, NV 89130-2301

Submitted via E-mail: BLM_NV_SNDO_SearchlightWindEnergyEIS@blm.gov

Subject: Comments on the Draft Environmental Impact Statement ("DEIS") for the Searchlight Wind Energy Project (the "Project").

Dear Mr. Helseth

Please accept these comments, submitted on behalf of the Sierra Club on the Draft Environmental Impact Statement ("DEIS") for the Searchlight Wind Energy Project.

The Sierra Club is a national nonprofit organization of approximately 1.3 million members and supporters dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club's concerns encompass protecting our public lands, wildlife, air and water while at the same time rapidly increasing our use of renewable energy to reduce global warming.

We submit these comments on behalf of our members, activists, staff, and members of the general public who are interested in protecting native species and their habitats as well as supporting the development of clean, renewable sources of electrical energy.

The development of renewable energy is a critical component of efforts to reduce pollution and climate-warming gases, avoid the worst consequences of global warming, and to assist in meeting needed emission reductions. We strongly support the development of renewable energy. However, like any project, proposed renewable energy projects should be thoughtfully planned to minimize impacts to the environment, and in particular to avoid impacts to sensitive species and habitat.

1. **The DEIS does not adequately analyze impacts to wildlife and habitat.**

I. Desert Tortoise.

The DEIS discloses that during surveys conducted on the project site, 122 tortoises were located on the project site within the narrow survey belts, indicating a population of 8.2 tortoises per square kilometer. This is a very high density considering the average density of tortoises found by the U.S. Fish and Wildlife Service in its 2010 population monitoring for the Piute-Eldorado Area of Critical Environmental Concern, which encircles the project site was 3.2 tortoises per kilometer.[1] The entire East Mojave Recovery Unit had only an average density of 3.6 tortoises per kilometer.[2] While technically the project area lies in "donut-hole" of undesignated tortoise habitat, it provides excellent tortoise habitat and is none-the-less critically important for the effort of recovering the Eastern Mojave population. In addition, the proposed project would fragment tortoise habitat and serve as a barrier to migration and gene-flow between the Eastern and Northeastern Mojave Recovery Units. The DEIS is inadequate in that the public literally has no information on which to base comments regarding the specific impacts of this specific project on the tortoise or how BLM proposes to avoid or mitigate those impacts.. The BLM should prepare a supplemental EIS to fill in the informational gaps for reviewers.

We are concerns regarding plans to relocate or translocate desert tortoises from the site. No information is provided about possible recipient sites, their location, ability to absorb more animals and the permanency of the protection. To date, translocation of desert tortoise always results in "take" of tortoises and certainly does not aid in the recovery of the threatened species. Even "successful" translocation has been documented to have a 15-21% mortality[3]. Significant losses of tortoises

[1] U.S. Fish and Wildlife Service. 2010. Range-wide Monitoring of the Mojave Population of the Desert Tortoise – 2010 Annual Report. Table 6. Available at: http://www.fws.gov/nevada/desert_tortoise/documents/reports/2010/2010_DRAFT_Rangewide_Desert_Tortoise_Population_Monitoring.pdf.

[2] Ibid.

[3] Field, K.J., C. R. Tracy, P.A. Medica, R.W. Marlow, P.S. Corn 2007. Return to the Wild: Translocation as a Tool in Conservation of the Desert Tortoise (Gopherus agassizi). Biological Conservation 136: 232-245; and,

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion). Appendix B-2: USFWS Biological Opinion contains the required desert tortoise mitigation measures and a discussion of how such mitigation would be effective.

The DEIS included the mitigation measures that the BLM proposed in the Biological Assessment and submitted to the USFWS. BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion). Mitigation measures proposed in the DEIS and in Appendix B-2: USFWS Biological Opinion do not include translocation of tortoise, rather it was proposed that tortoises would be moved out of harm's way during construction activities.

through a recent translocation effort in 2008 - the Fort Irwin translocation - resulted in over 20% mortality within the first year. Further monitoring has documented as of August 2009, over 250 desert tortoise (38%) have died in the translocation areas of Fort Irwin[4]. This translocation has resulted in further declines in the west Mojave recovery unit to the detriment of recovery of the species as a whole. The Scientific Advisory Committee of the U.S. Fish and Wildlife Service's Desert Tortoise Recovery Office has recently concluded that "translocation is fraught with long-term uncertainties, notwithstanding recent research showing short-term successes, and should not be considered lightly as a management option. When considered, translocation should be part of a strategic population augmentation program, targeted toward depleted populations in areas containing "good" habitat". If translocation must occur, the translocation plan needs to be thoroughly developed and vetted by knowledgeable tortoise science and management experts and provided for public review. Any plan must thoroughly address a number of essential desert tortoise issues including, but not limited to: the threats of disease, the capacity of the translocation site to support greater tortoise densities over the long-term, and sufficient monitoring of host tortoises with adaptive management measures triggered by the effects of translocation. Translocation of desert tortoise should be done in spring when possible.

II. Avian species.

The DEIS notes that golden eagles are potentially nesting in the nearby mountain regions encircling the project and through surveys identified at least three eagle nests within 4-miles of the project. We have concerns regarding both mortality to golden eagles from collisions with wind turbines, which have been well-documented at other wind energy sites. The DEIS makes no attempt to quantify the likely mortality, or describe how this mortality should be minimized or avoided.

We have additional concerns regarding loss of foraging habitat. The DEIS fails to present exactly how it will mitigate the loss of a substantial amount of foraging habitat for the golden eagle, either as a result of this project, or cumulatively as a result of projects within the Piute-Eldorado Valleys. The DEIS also fails to disclose the number of pairs of golden eagles that could be affected by the proposed project. Regardless of distance, a straight line view of disturbance affects raptors, and an effective approach to mitigate impacts of disturbance for golden eagles involves calculation of view sheds using a three-dimensional GIS tool and development of buffers based on the modeling[5]. Also,

Nussear, K.E. 2004. Mechanistic investigation of the distributional limits of the desert tortoise *Gopherus agassizii*. PhD dissertation. University of Nevada, Reno. Pgs. 213.

[4] USFWS. 2009. Draft Biological Opinion for the Proposed Addition of Maneuver Training Lands at Fort Irwin, California (8-8-09-F-43R). Page 48.

[5] Camp, R.J., D.T. Sinton and R.L. Knight 1997. Viewsheds: a Complementary Management Approach to Buffer Zones. Wildlife Society Bulletin 25(3): 612-615; and Richardson and Miller. 1997.

Richardson and Miller 1997

Refer to Section -4.4.5.11Migratory Birds - Direct and Indirect Effects by Alternative for a discussion on the impacts to Eagles. Additionally, refer to Appendix B-4: Bird and Bat Conservation Strategy, which has been added to the EIS and includes a section on impacts to eagles.

As discussed in the DEIS, the Proposed Project would result in the loss of some foraging habitat for the golden eagle; however, the proportion of foraging habitat that would be lost due to the Proposed Project is small compared to the total amount of available foraging habitat within the Piute and Eldorado Valleys.

since golden eagles use only a small subset of their home territories during nesting for foraging, these essential areas may include the proposed project site, however the DEIS does not analyze this important factor of nesting success.

While bald eagles are unlikely to utilize the project area for long-term habitat, they utilize nearby Lakes Mead and Mojave during the winter. Nowhere does the BLM examine the likely or possible impacts on migrating or over-wintering bald eagles in this DEIS.

Because environmental review does not adequately identify or analyze impacts to eagles from the proposed project it is impossible for the BLM to ensure that the project is consistent with the Migratory Bird Treaty Act (16 U.S.C. § 701 *et seq.*) or the Bald and Golden Eagle Protection Act (16 U.S.C. § 668 et seq.), both of which prohibit take. To address this data and analysis disclosure deficiency, the BLM must prepare a supplemental EIS containing said analysis. Further, the BLM should require that the proponent pursue an incidental take permit under the BGEPA as part of the terms and conditions of receiving a ROW Permit.

Refer to Section -4.4.5.11Migratory Birds - Direct and Indirect Effects by Alternative for a discussion on the impacts to Eagles. Additionally, refer to Appendix B-4: Bird and Bat Conservation Strategy, which has been added to the EIS and includes a section on impacts to eagles.

The DEIS fails to adequately evaluate impacts to migratory birds, although the area sits within the Pacific Flyway, an important migratory route. Due to the magnitude of potential impacts on avian populations, additional avian studies are needed to identify more specifically migratory flyways for seasonal migrants that use the project area and could come into contact with the turbines.

The Avian and Bat Protection Plan should include requirements for shutting down turbines triggered by incidences of avian mortality and periods of high migration. This document should be included in the supplemental DEIS so that the public has an opportunity to provide comments.

III. Bighorn Sheep

The DEIS does not adequately address impacts to desert bighorn sheep. Bighorn sheep need large expanses of land to roam for seasonal migrations to and from important winter range. Impediments to movement of these animals will likely have negative impacts on big game populations that travel through the project area to reach other necessary areas of habitat. Additionally, it is well-documented that human disturbance in bighorn sheep habitat disrupts bighorn sheep and contributes to population decline. The DEIS does not adequately discuss impacts to bighorn sheep, stating that "project effects are anticipated to be minimal" because "the project would only occupy a small portion of the available migratory corridor between these mountain ranges leaving some connectivity." Nowhere does BLM provide information regarding its conclusions that the occupied portion of the corridor is "small," nor what "some connectivity" means. A supplemental DEIS should re-evaluate the impacts to habitat and the possible impacts to migration or movement corridors for this species, as well as the impacts of human disruption, and the Terrestrial Management Plan should address these issues.

Comment noted. Appendix B-3: Terrestrial Wildlife Plan has been added to the EIS and includes a risk assessment and mitigation measures for bighorn sheep.

IV. Bats

The DEIS did not adequately analyze potential impacts to bats from the Project. The DEIS provides only a general statement that the number of bats that could be injured or killed cannot be estimated, and that these impacts will be addressed through a not-yet-developed Avian and Bat Protection Plan. Bats are prone to many of the same threats as avian species and there are significant concerns regarding the impacts on wind development on bat populations, through barotrauma, lowered reproduction rates and collisions with wind turbines. The wind turbines proposed for the generation sites present an unusually high risk for bat mortality due to their height. We request that bat studies and surveys be completed, and these studies, along with a complete ABPP which includes operational stipulations such as shutting down wind turbines in response to incidents of bat mortality and during times of the year and on nights when conditions are most conducive to bat mortality, be included in a supplemental DEIS.

A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy).

2. **The DEIS contains inadequate mitigation measures.**

The discussion of mitigation measures throughout the DEIS is inadequate as none of the proposed mitigation plans have been completed. The Emergency Response Plan, Waste Management Plan, Weed Control Plan, Facility Decommissioning Plan, Wildlife Mitigation and Monitoring Plan, Avian and Bat Protection Plan, Terrestrial Wildlife Plan for Bighorn sheep, Traffic Management Plan, Hazardous Materials Handling Management Program, Cactus and Yucca Salvage Plan, Stormwater Pollution Prevention Plan, and the Spill Prevention, Control, and Countermeasures Plan should be completed, and released for public review, as part of a supplemental EIS to allow the public to participate meaningfully in the decision making process—not deferred until after project approval. The discussion of mitigation in the section on wildlife describes a future "Wildlife Mitigation and Monitoring Plan" and a "Terrestrial Wildlife Plan." DEIS at 2-44 to 2-45; 4-33; 4-37. However, this discussion includes only a wish-list of possible measures which "may" be included in a final plan and does not describe what mechanisms would be used or what the practical consequences would be for preventing or minimizing damage to wildlife and habitat. There is no explanation how or whether these "Plans" to be developed at some future point actually would be effective in mitigating adverse environmental effects. The entire suite of mitigation described at 2-43 to 2-45 related to wildlife requires additional description and scientific citation and justification. Any plans to "mitigate" the acknowledge adverse effects on wildlife must be fully outlined with dates, actions, and rationale that can justify the actions. There should be a full description of where off-site mitigation will occur and a full description of on-site mitigation measures that will be adopted for the project site. We request that BLM prepare a supplemental DEIS once the plans are completed to satisfy NEPA by allowing the public a chance to review and provide comments.

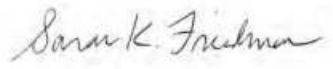
Some plans such as the Traffic Management Plan or SWPPP need to be developed during the engineering phase of the project and may need approvals from other agencies; however, all basic elements of these plans are included in the EIS.

Plans that have been completed to data are included in this EIS including Appendix B-1: Weed Management Plan, Appendix B-2: USFWS Biological Opinion, Appendix B-3: Terrestrial Wildlife Plan, and Appendix B-4: Bird and Bat Conservation Strategy. Other plans would be included as a stipulation of the ROW grant. The Facility Decommissioning Plan, which will be developed 6 months prior to project closure.

We appreciate the opportunity to provide comments on this renewable energy project and look forward to continuing in the successful development of the Project as an interested stakeholders.

Comment noted.

Sincerely Yours,



Sarah K. Friedman
Senior Campaign Representative
Beyond Coal Campaign
Sierra Club

Mr. Greg Helseth
Southern Nevada District
Bureau of Land Management
4701 N. Torrey Pines Drive
Las Vegas, NV 89130

April 18, 2012

RE: Searchlight Wind Energy Project (NVN-084626 and NVN-086777)

Dear Mr. Helseth,

Thank you for the opportunity to provide comments on the Draft Environmental Impact Statement for the Searchlight Wind Energy Project. While generally supportive of renewable energy projects we do have some concerns with this project and specifically with the draft EIS.

The area where the project is located, in the high elevation areas to the west of Lake Mohave, is relatively well vegetated and appears to an active migratory route for many species of birds, including raptors. The past several years have been rather dry in Southern Nevada and hence surveys for birds during the last two or three years, especially for raptors may not be indicative of the number of birds expected to use this area during normal or wet years. This is particularly true of Golden Eagles, which are highly mobile and move over wide areas depending on food supply, primarily rabbits. In our opinion there is not enough information presented in this DEIS to allow an informed decision to be made wit regard to the impact of this project on either avian or bat species. The statement on p 4-36 that an avian and bat protection plan will be developed is not reassuring. The decision on whether to proceed with this project will be based on this DEIS, hence firm mitigation measures either need to be included in this document or there needs to be a further public process to develop the avian and bat protection plan. The DEIS is asking the public to just trust that appropriate actions will be taken to minimize impacts to birds and bats. Based on past experience with other wind energy projects in this country there is much reason to trust the wind energy industry to be serious about developing and implementing measures to protect birds and bats from the danger of rotating turbine blades.

We think it only appropriate that a further public process be undertaken to monitor, evaluate and develop a protection and mitigation plan for birds and bats that will be impacted by this project, should it be built.

Sincerely,

John E. Hiatt

John E. Hiatt
Conservation Chair, Red Rock Audubon Society
8180 Placid Street
Las Vegas, NV 89123
702-361-1171

A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) has been developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy).

Organizations

Because "the EIS is intended to be used to guide decisionmaking, the alternatives analysis is naturally 'the heart of the environmental impact statement.'" *ONDA v. BLM*, 625 F.3d at 1100 (quoting 40 C.F.R. § 1502.14). In the alternatives section, the agency must "[r]igorously explore and objectively evaluate all reasonable alternatives." C.F.R. § 1502.14. When selecting alternatives, an agency may *consider* an applicant's desires, but is not by any means bound or limited by them. It is not appropriate for an agency to rely on the "self-serving statements of the project applicants." *S. Utah Wilderness Alliance v. Norton*, 237 F. Supp. 2d 48, 53 (D.D.C. 2002). Instead, the action agency must "to the fullest extent possible . . . study, develop and describe appropriate alternatives to recommended courses of action in any proposal which includes unresolved conflicts concerning alternative uses of available resources." *Id.* at 54 (citing 42 U.S.C. § 4332(2)(E)).

Moreover, "[o]ther factors [other than the applicant's desires] to be developed during the scoping process—comments received from the public, other government agencies and institutions, and development of the agency's own environmental data—should certainly be incorporated into the decision of which alternatives to seriously evaluate in the EIS." CEQ, Guidance Regarding NEPA Regulations, 48 Fed. Reg. 34,263, 34,267 (July 28, 1983). "In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant." CEQ, Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations at Question 2a (available at http://ceq.hss.doe.gov/nepa/regs/40/1-10.HTM#1).

The DEIS, which appears to be almost entirely prepared by the applicants' consultants, presents three alternatives—of which the two action alternatives are virtually identical and which include no disclosure of potential conditions BLM could impose. By failing to develop alternatives that would reduce the number of turbines to decrease impacts to the human and natural environment, other reasonable alternatives, or *any* alternatives which incorporate ROW conditions that would be protective of the environment and necessary to comply with BLM's statutory obligations, the DEIS violates NEPA.

1. BLM must consider alternatives that impose more protective conditions on the project.

The DEIS acknowledges that BLM has the authority and obligation to impose conditions on the ROWs that will satisfy BLM's obligations under substantive laws. However, there is no discussion in the DEIS of alternative conditions. Without a presentation of detailed information about potential conditions, the public is left entirely in the dark about the actual action BLM is proposing to take. Part of this failure in the DEIS to discuss alternative conditions is due to the paucity of the DEIS's analysis of the impacts to desert tortoises and the misrepresentation of impacts to other resources described in more detail below. Dozens of turbines on the project site would be placed within 2,500 feet of designated critical habitat for desert tortoise within the ACEC or within a similar distance from the only access road to Cottonwood Cove in the Lake

NewFields in an independent third party contractor supporting the BLM with preparation of this NEPA document.

Mead NRA, and as close as 1,345 feet from a residential home. BLM has not evaluated any alternative that, for example, would impose a condition on the ROW grant that prohibits construction of turbines within a mile of designated tortoise habitat or public roads or homes to actually "minimize" impacts to the human and natural environment.

The DEIS also fails to discuss any potential conditions that would flow from the USFWS's Wind Turbine Guidelines Advisory Committee Recommendations, issued in March 2010 (*available at* http://www.fws.gov/habitatconservation/windpower/Wind_Turbine_Guidelines_Advisory_Committee_Recommendations_Secretary.pdf and included on the enclosed CD-ROM). BLM has the authority to impose conditions on the ROW that would require any energy generation connected to the ROW to comply with the recommendations in these Guidelines. Please explain why the DEIS does not consider ROW conditions that would comply with these Guidelines. Please discuss whether the recommendations contained in these Guidelines should be included as binding conditions in the ROW grant.

Refer to Section 5.2.3-Coordination on the BBCS and Appendix B-4: Bird and Bat Conservation Strategy (formerly referred to as the Avian and Bat Protection Plan [ABPP]), which have been added to the EIS.

The DEIS contains no definition of the "Project Area," but rather only a map. DEIS at 1-2, 1-5 (Figure 1-3). The BLM needs to spell out clearly what it means by the "project area" *See Friends of Yosemite Valley v. Norton,* 348 F.3d 789, 800 (9th Cir. 2003) ("[A] reviewing court [must] focus upon a proposal's parameters as the agency defines them" (alteration in original omitted) (quoting *Block,* 690 F.2d at 761)). The DEIS fails to discuss effects on lands and resources that would be affected by noise and visual effects from the turbines, such as tortoises and bighorn sheep which inhabit the surrounding ACEC. The DEIS includes no discussion of reasonable alternatives to minimize harm from generation and transmission facilities to such resources, even though they are clearly affected by the project. Here, the agency has refused to even provide a definition of the scope of the action, but appears to have considered no impacts (besides a few visual impacts) that would spill over onto public lands outside of the boundary of the project site drawn in Figure 1-3. BLM must more clearly define the scope of the action, and consider *all* areas that are affected by operation of the turbines, include areas outside of the boundary of the project site.

The project area is described in Section 1.3-Background and delineated in Figure 1.3-Proposed Project Area Map.

Noise and visual effects on land resources are discussed in Section 4.10-Noise Impacts and Section 4.9-Visual Impacts, respectively. Impacts to bighorn sheep and desert tortoise are discussed in Chapter 4.4.5-Special Status Wildlife Species. Section 4.4.4 Wildlife has been updated to include potential noise impacts to wildlife. Chapter 3.0-Affected Environment discusses the conditions beyond the proposed project area to include analysis of off-site and cumulative impacts discussed throughout Chapter 4.0-Environmental Consequences.

Similarly, the DEIS fails to consider any alternative conditions on the ROWs that would require the project constructed without turbines which detrimentally affect the scenic character and environmental and human environment of the Searchlight desert and mountains surrounding the project site—by imposing conditions mandating the maximum number of turbines, the configuration of the turbines, requiring minimum setbacks, setting maximum turbine heights, or mandating different locations. In addition, although the idea of an eventual decommissioning of the turbines and transmission line is mentioned in passing (*see, e.g.* DEIS at xi), there is no evaluation of whether BLM should require a bond as a condition of a ROW grant to ensure that the project is, in fact, decommissioned, if it is ever approved and built.

Potential impacts resulting from the proposed project and alternatives including the No Action alternative are analyzed in Chapter 4- Environmental Consequences. The BLM will require a bond for decommissioning of the project and this will be a stipulation of the ROW grant.

Instead, the DEIS analyzes what boils down to only two alternatives: 1) construction of industrial-scale wind energy generation and transmission project with either 87 or 96 turbines within the project site or 2) no action. The two "action" alternatives are virtually identical with only a few megawatts of generation capacity separating them. Almost every discussion of effects

Comment noted.

concludes with the statement that "the type, intensity, and duration of the effects would be similar under either action alternative" or other acknowledgement that effects under both action alternatives would be "similar." *E.g.* DEIS at 4-31, 4-78. In addition, the DEIS discloses that, under the 87 turbine alternative, about "152 acres of native vegetation would be permanently removed, 8 acres *more* than under the 96 WTG Layout Alternative." DEIS at 4-33 (emphasis added). No alternative is included that would minimize impacts to the environment, *i.e.* there is no "environmentally preferred" alternative in this DEIS.

Furthermore, it is clear that the two supposedly "distinct" action alternatives are a fiction generated solely as pretense for conducting a genuine alternatives analysis. BLM released the DEIS for public comment on January 20, 2012. 77 Fed. Reg. 2,999 (Jan. 20, 2012). Yet, in March 2011—10 months earlier—Duke already had filed with BLM its "Plan of Development (POD)—Revision 4." BLM has this document, presumably, but a copy is enclosed on the CD-ROM. The Revised POD states that "[t]he *proposed* project consists of the construction of up to 87 2.3 megawatt (MW) wind turbine generators that will provide up to 200 MW of electricity." Revised POD at 1-1 (emphasis added). Nowhere in the March 2011 Revised POD is there any reference to a 96-turbine "proposed action." Nearly a year before BLM issued the DEIS, Duke already was proposing an 87-turbine project, with the same configuration that became the "preferred alternative" in the DEIS. *Compare* Revised POD at 1-5 *with* DEIS at 2-5. The 96-tubine "alternative" presented as the "proposed action" had ceased to be any such thing long before BLM issued the DEIS. This underscores that the alleged proposed action and the preferred alternative are indistinguishable.

Shockingly, BLM only lists two "other" alternatives, both generation alternatives, that purportedly were considered but not analyzed in detail—a 140-turbine layout, and a 161-turbine layout, on the same project site—and three alternative sites for the interconnection. DEIS at 2-7 to 2-12. This is despite receiving 41 comments regarding project alternatives during the public scoping process. DEIS at 5-2. BLM recognized that, during scoping, "[t]he topics receiving the most comments were biological resources, project alternatives, socioeconomics, and visual resources." DEIS at xiii. BLM even notes in the Public Scoping Summary Report that "Project alternative suggestions (11 percent of total comments) were also relatively high. Sixty-six percent of comments in this category included suggestions on alternative locations, while 29 percent of comments included questions about other forms of renewable energy." Scoping Summary Report at 3-4. Yet the scoping summary report includes only seven bullet points purporting to be representative of the 41 comments received on this issue. Scoping Summary Report at 3-6.

The options presented in the DEIS itself only advance the applicant's goals, rather than the public's interest, to the exclusion of other reasonable alternatives. The DEIS is fatally flawed in its failure to consider an adequate range of reasonable alternatives. *See Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 913 (9th Cir. 1999) (agency failed to consider an adequate range of alternatives when an EIS considered only a no action alternative along with two "virtually identical" action alternatives on the same lands).

The initial Plan of Development (POD) for the proposed project was submitted in January 2008 along with the right-of-way application. The POD is a living document that continues to be refined during BLM's evaluation of the application. Development of the POD is an iterative process. As new information on project design, project alternatives, and/or or project constraints becomes known, the POD is revised. The POD revisions to reduce the original number of 161 turbines reflect formal and informal comments, along with engineering constraints.

Comment noted.

The BLM developed its purpose and need statement and considered a range of reasonable alternatives consistent with NEPA, applicable regulations, and BLM policies and procedures, including BLM Instruction Memorandum 2011-059. The purpose and need statement appropriately integrates Congress's goal that the Secretary of the Interior should seek to approve renewable energy projects on the public lands; direction from Secretarial Order 3285A1 (March 11, 2009, amended February 22, 2010), which establishes the development of environmentally responsible renewable energy as a priority for the Department of the Interior; and the BLM's responsibility under FLPMA to manage the public lands for multiple use, taking into account the long-term needs of future generations for renewable and non-renewable resources. The two action alternatives satisfy the purpose and need in that they fulfill BLM's obligation to consider the ROW applications under FLPMA and NEPA, and are consistent with other applicable federal mandates and renewable energy policies and goals. Though the BLM has considered Searchlight Wind Energy's objective for the project, which is presented in Section 1.3-Background, Searchlight Wind Energy's objective is not the BLM's purpose and need for the project.

The DEIS does not consider imposing conditions that would require dramatically smaller, alternative configurations (with fewer wind turbines and/or in different locations) for the project sites. Rather, the DEIS seems to assume that the site must be built to at least a 200 MW capacity. *See, e.g.*, DEIS at xii, 1-6. There are no financial data or projections provided to support any claim that this threshold is anything but arbitrary, or that a minimum number of turbines must be built to be financially feasible. Please disclose and evaluate what the threshold number of turbines would be for this project to be financially feasible so that the public and the decisionmakers can understand and comment on whether such a project is justified when its major purpose appears to be generating revenues for a large utility rather than complying with BLM's management responsibilities for the public lands.

In addition, BLM must prepare and circulate for public comment a supplemental DEIS that considers the reasonable alternatives below, all of which were proposed to BLM in some form or other during the public scoping process and which BLM has heretofore ignored.

2. BLM must consider a distributed solar generation alternative.

BLM does not consider other potential renewable energy sources in the DEIS. A dismissal of renewable energy sources other than wind energy, such as solar power or distributed generation, does not comport with the agency's stated goal of acting consistently with their environmental and social responsibilities.

Duke Energy primarily produces electricity in the United States from coal-, natural gas-, oil-, and nuclear-fired power plants. It also has begun to diversify into renewable generation sources through investment in hydropower and the Davidson County Solar Farm in North Carolina; it also owns the largest solar energy "farm" in Texas. Over the past three years, Duke also has invested in one of the nation's first and largest distributed solar generation projects, investing over $40 million to generate approximately 10 MW of electricity from distributed generation at over 19 micro-generation sites atop commercial and residential buildings. Duke Energy to Build 'Mini' Solar Power Plants, Industry Week (May 8, 2009) (http://www.industryweek.com/articles/duke_energy_to_build_mini_solar_power_plants_19105.aspx?SectionID=25); *see also* Exhibit 5 (page from Duke Energy website describing distributed generation project).

Duke is not a wind energy company, but it has expertise in the installation and operation of distributed solar generation technology. Las Vegas, Henderson, and Searchlight, Nevada are among the sunniest places in the United States, with Las Vegas experiencing over 85% clear skies per year. The Mojave Desert (which Las Vegas sits at the heart of) has the highest density of solar radiation in all of North America. World's Sunniest Regions: Power Houses for Solar Technology, Renewable Power News (Feb. 11, 2012) (http://www.renewablepowernews.com/archives/2941), Exhibit 6. The City of Las Vegas—not counting surrounding areas and not including other population centers in Clark County where platforms for distributed generation exist—covers 135 square miles, nearly five times the size of the project area of the Searchlight Wind Project. Given the poor economic conditions in Nevada and in the Las Vegas particularly over the past several years, the prospect of leasing roof space

BLM considered a reasonable range of alternatives consistent with NEPA and BLM policies and procedures. The two action alternatives satisfy the purpose and need in that they fulfill BLM's obligation to consider the ROW application, meet federal renewable energy mandates, and respond to impacts identified in the NEPA analysis. The Applicant has provided BLM with an economic determination that any project generating less than 200 MWs/and or less than 87 turbines is uneconomic due primarily to transmission line costs.

The BLM will not typically analyze an alternative for a different technology when a right-of-way application is submitted for a specific technology (e.g., evaluate a photovoltaic alternative for a concentrated solar power application) because such an alternative does not respond to the BLM's purpose and need to consider an application for the authorized use of public lands for a specific renewable energy technology.

for installation of solar panels for a distributed generation project would be welcome to many commercial and residential property owners. Indeed, Las Vegas already has over 10,000 KW of installed commercial solar photovoltaic generation at distributed sites with no reported problems. John Farrell, The Political and Technical Advantages of Distributed Generation, Energy Self-Reliant States (July 6, 2011) at 3, attached as Exhibit 7.

Given Duke's expertise in distributed solar generation, the nearly-perfect weather conditions for generating reliable electricity from solar power, the proximity of an enormous metropolitan area with ample space for installation of distributed solar power technology, and given the marginal winds at the Searchlight project site, BLM must evaluate a distributed solar generation alternative that would achieve Duke's objective of generating 200 MW of renewable power—and leaving inviolate the desert and mountains east of Searchlight. Such a project is feasible in the very same county in which Duke proposes to build the marginal wind facility.

Distributed solar generation is a reasonable alternative to the construction of this wind facility. The circumstances here present a unique opportunity for the BLM and the Secretary of the Interior to promote the shift of production of electricity from industrial-scale generation facilities located dozens or even hundreds of miles from where the energy would be used to distributed generation located where there needs to be no loss of energy due to long-distance transmission. By evaluating a distributed solar generation alternative, BLM has an opportunity to evaluate the true potential trade

3. BLM must consider a private lands alternative and a brownfields alternative.

The supplemental DEIS also should consider alternative locations for industrial-scale renewable energy generation that would produce the desired 200 MW other than the sites leased or proposed to be leased by Duke. Under NEPA, the EIS may even have to look at alternatives over which the applicant has no control. *NRDC v. Morton*, 458 F.2d 827, 835 (D.C. Cir. 1972); *Nat'l Wildlife Fed'n v. NMFS*, 235 F. Supp. 2d 1143 (W.D. Wash. 2002). It is irrelevant whether an applicant already owns alternative sites for the purposes of NEPA review: "The fact that this applicant does not now own an alternative site is only marginally relevant (if it is relevant at all) to whether feasible alternatives exist to the applicant's proposal." *Van Abbema v. Fornell*, 807 F.2d 633, 638 (7th Cir. 1986). As stated in the *Van Abbema* case, other alternatives for a project cannot be eliminated as non-feasible simply because the applicant does not now own or lease the site where an alternative location may exist. And, as the NEPA regulations clearly provide, the agency must "[i]nclude reasonable alternatives not within the jurisdiction" of the BLM. 40 C.F.R. § 1502.14(c).

The DEIS fails to consider whether alternative locations could provide comparable energy output with less damage to the human and natural environment. Thousands of wind turbines have been built throughout the nation—on public and private lands—in recent years which pose far fewer resource impacts than the Searchlight site. In addition, there are millions of

Wind Energy facilities must be located where wind resources are available and cannot be limited to "brownfield" sites. The BLM will not typically analyze a non-Federal land alternative for a right-of-way application on public lands because such an alternative does not respond to the BLM's purpose and need to consider an application for the authorized use of public lands for renewable energy development.

acres of contaminated lands—"brownfields"—in the United States.[3] Serious potential exists for installing new renewable power generation and the associated transmission, such as that proposed in the Searchlight Wind Project, on such lands, either as large-scale projects or as distributed smaller-scale wind or solar generation installations.

The analysis of the alternatives to the project should assess the potential to relocate all or part of the project on already degraded or contaminated lands. Doing so will increase the net public benefits of the project, by reducing the amount of undeveloped public and private lands that are degraded. A supplemental DEIS should include an analysis of the relative benefits of siting the proposed energy generation on brownfields and other degraded lands, both public and private. The analysis should examine the net public benefits of siting on these lands relative to siting on undeveloped lands, especially undeveloped public lands which may be more important for the climate change mitigation properties, the provision of recreation opportunities, their role in local economies and their provision of passive use and other non-market values.

4. BLM must consider a lower tortoise density site alternative.

The DEIS improperly fails to address any alternative that would avoid or reduce impacts to the desert tortoise. It is increasingly difficult to find the sort of intact, high-quality desert tortoise habitat that can mitigate the effects of the over 6,350 MW of energy production projects already approved or pending in the species's habitat range. Therefore, avoiding impacts to high-quality, essential habitat and maintaining the largest possible areas of intact, high-quality habitat is critical to the survival and recovery of the desert tortoise. BLM's failure to provide baseline information about the tortoise and information about the cumulative effects on the tortoise from the current spate of energy development in its range has led the agency to not analyze any alternative that would avoid or reduce impacts to the tortoise. A valid EIS must address the impact of this project for the survival and recovery of desert tortoise in the Eastern Mojave Recovery Unit.

Due to the controversy associated with desert tortoise disturbance, BLM must consider an alternative away from the proposed project site and development on a site that would not have such an impact to the desert tortoise. Impacts to the (at least) 122 tortoise on the project site and in the surrounding critical habitat in the ACEC will be unacceptable for a species under so much other pressure in its range. Recent studies (detailed below) indicate that tortoise mortality from efforts to translocate tortoises off of a construction site can reach 50%. Studies of noise effects on wildlife also show that the project alternatives would harm tortoises in their critical habitat in the surrounding ACEC.

In addition, BLM must consider an alternative at the project site that complies with its obligations to minimize impacts to the desert tortoise. BLM should consider a turbine

[3] Powerpoint: Land-Based Initiatives and Climate Change. SRA International. EPA Land Revitalization Staff Office. June, 2007. http://www.authorstream.com/Presentation/Margherita-45877-NARUC-Pres-July-15-Land-Based-Initiatives-Climate-ChangeJune-2007-Opportunities-GHG-Education-ppt-powerpoint/

BLM considered a range of reasonable alternatives consistent with NEPA and BLM policies and procedures. The two action alternatives satisfy the purpose and need in that they fulfill BLM's obligation to consider the ROW application, meet federal renewable energy mandates, and respond to impacts identified in the NEPA analysis.

configuration that moves all turbines at least one mile back from designated tortoise critical habitat to prevent turbine noise from adversely modifying critical habitat and taking tortoises outside the project site. This alternative also should eliminate turbines (and associated construction effects) from the areas of the project site where tortoises are concentrated, based on identification of live tortoises or carcasses during the field survey: turbines 12–26, 27–32, 60–67, and 74–78 in the 87 turbine configuration (DEIS at 2-5, Desert Tortoise Inventory Survey at 6). This alternative should be combined with conditions to protect remaining tortoise on the site during all phases of the project's construction and operation. This would result in a turbine configuration capable of generating approximately 50–60 MW of power, a very viable project that could be combined with other means—such as distributed solar generation—to achieve Duke's overall power generation goal while minimizing harm to the tortoise and the surrounding environment.

5. BLM must consider a conservation alternative.

No conservation alternatives were considered to eliminate the stated "need" for the 200-220 MW of installed capacity that the project would represent. Conservation alternatives, such as demand response technologies, also should have been included in order to meet BLM's goals of promoting their environmental and social responsibilities. The DEIS fails to comply with this requirement, because it fails to consider the possibility of delaying the development of wind energy until a later date, perhaps at a time when the energy grid will be more equipped to handle the addition of new wind energy sources.

The above alternatives were not considered at all because the applicants' "objective" of developing a 200-MW industrial wind energy generation facility dictated the results of this DEIS. The DEIS violates BLM's duties to consider all reasonable alternatives.

6. Additional comments regarding proposed project features.

In the process of evaluating additional reasonable alternatives, please also update the existing discussion of the 87- and 96-turbine alternatives to disclose and analyze the following issues, and discuss them in context of any additional alternatives that involve a smaller project alternative on the same site:

DEIS at 2-2 and 2-3: The DEIS states that it is not actually providing accurate information for the public to review because "exact locations of depicted proposed [turbines], roads, power lines, and other facility-related construction elements would vary based on environmental, engineering, meteorological, and/or permit requirements." Thus the exact footprint of impacts for each turbine has not been determined yet. As a consequence of this imprecision, Duke and BLM have not yet conducted geotesting for each turbine, and it is not possible to assess how much blasting or grading will be needed for each turbine or how much concrete, water, or other materials will be needed for stabilizing the turbines.

This imprecision compromises the DEIS's discussion of alternatives, and the baseline assumptions of the NEPA analysis. Without accurate information about where turbines would be

BLM considered a range of reasonable alternatives consistent with NEPA and BLM policies and procedures. The two action alternatives satisfy the purpose and need in that they fulfill BLM's obligation to consider the ROW application, meet federal renewable energy mandates, and respond to impacts identified in the NEPA analysis.

Text in Section 2.1-Proposed Action and Alternatives has been revised to clarify that placement of project components could vary slightly; however, the acreage of disturbance and associated impacts have been disclosed to the best extent possible. Retaining some flexibility allows for a possible non-substantive shift in project facilities to avoid unanticipated engineering challenges or environmental considerations. For example, minor road alignment may occur in order to avoid a cultural resources site.

placed, the public is left having to guess and comment on a proposal that may not, in fact, reflect what is being proposed or what would be built. The description of locations is not sufficiently precise to allow the public to comment on what the developer is actually proposing, because the effects on the environment can be significantly different depending on whether the low or high range of turbines actually is developed, and which strings or turbine site locations may, or may not be, used.

DEIS at 2-14: Why do any of the roads have to be 36 feet wide? This is not explained. The existing paved Cottonwood Cove Road is only 24 feet wide. Please consider conditions that would limit the size of roads to the existing width of the principle road through the project site. Roads double that width would cause unnecessary destruction of even more land than necessary and do not satisfy BLM's obligation to minimize impacts and avoid unnecessary and undue degradation of the public lands.

DEIS at 2-15: Why are project features located so close to Cottonwood Cove Road? The substation and laydown area should be set back a greater distance from Cottonwood Cove Road. The road accesses a National Recreation Area and passes through an Area of Critical Environmental Concern: this is not an industrial park, and residents and tourists do not travel to Cottonwood Cove within the Lake Mead NRA to see industrial development.

DEIS at 2-17: The DEIS states that "[p]ortable water supplies" would be available at the building. Is this a typographical error, and should it be "potable water supplies"? If it is "portable," how large are the storage tanks? Where will the "portable" supply be replenished from?

Also, the laydown area immediately adjacent to Cottonwood Cove Road should not be permanent. Please clarify whether the project contemplates a permanent laydown area. If a permanent laydown area is contemplated, BLM should evaluate alternative locations. To minimize impacts, the laydown area should be southeast of Searchlight in the southern portion of the project site, near turbines 68 and 69 ("preferred alternative") and adjacent to the substation there described at DEIS 2-15. In addition, please explain why the laydown area needs to be so large?

DEIS at 2-18: BLM must provide a diagram or drawing that visually represents the sentence: "Equipment clearance would require a minimum inside radius of 148 feet at all turns …" Does this mean that all turns in the roads would have a width of 148 feet? If so, BLM must disclose how the upgrades to the roads will look when completed. Also, how many turnouts with dimensions of 16' x 210' will be built? Was this area calculated into the acreage to be permanently altered (destroyed) by the project construction? Where will the "licensed offsite private source" of fill or road base be? How many miles will it be transported? Has the carbon dioxide and other greenhouse gas emissions resulting from many trips hauling the aggregate been calculated and incorporated into project documents? If not, BLM should disclose this figure as part of its overall calculation of the effects of this project on climate change.

Refer to Section 2.3.1-General Features of the Proposed Project, under the subheading Roads. Cottonwood cove road would not be widened.

Comment noted.

Typographical error corrected. Refer to Section 4.3-Water Resources Impacts for a description of how water would be delivered to the site and stored. Section 4.3-Water Resources Impacts has been revised to clarify that the Applicant will coordinate with the Las Vegas Valley Water District to support the water needs for the project. If sufficient resources are not available, the Applicant will procure water from local willing sellers.

As stated in the EIS in Section 2.3.2-Construction, the laydown area near the north substation might be permanent and could be used for extra storage and spare parts during the life of the project. Laydown areas need to be large enough to store components, allow for delivery traffic, and pre-assembly of WTGs and other components. Additionally, this is where the mobile concrete batch plant would be located.

Figures 2-1-96 WTG Layout Alternative, and 2-2-87 WTG Layout Alternative, illustrate the areas where existing roads would be widened and upgraded. The road widths would range between 16 and 36 feet and as described in Section 2.3.1-General Features of the Proposed Project. This section has been updated to explain turning radius (Refer to Figure 2.3-2. Turning Radius Example).

The licensed offsite private source has not been identified. For purposes of the analysis, it was assumed that the materials would be located within a 48-mile radius. Construction emissions include 96 mile round trip for trucks to haul required construction materials to the site. See Table 4.6-1. Criteria Air Pollution Emissions (Tons/Year) Over the 8 to 12 Month Proposed Project Construction Duration of the 96 WTG Alternative and Table 4.6-2. Criteria Air Pollutant Emissions (Tons/Year) During the Proposed Project O&M Duration of the 96 WTG Alternatives.

How will the area be "re-vegetated"? The DEIS provides no details of this proposed mitigation, and whether or not it would be effective. When disturbed areas along nearby route US 95 were "re-vegetated" after construction activity, fully ninety percent (90%) of the transplanted plants died. Please describe in detail what the proposed re-vegetation will involve, and whether or not it will actually result in a vegetated condition after construction that is similar to what currently exists.

DEIS at 2-21: Have any geotechnical investigations been done thus far? The possibility exists that the granitic bedrock may be too difficult to excavate or blast, and adequate foundations would be too costly to construct. BLM should disclose this information to evaluate whether the DEIS's characterization of the impacts from construction is accurate.

DEIS at 2-25: What "existing private roads" would be used for transporting materials and equipment? Have the owners of the private roads been notified of Duke's intention to use the private roads? How will people who own and use these roads be compensated?

DEIS at 2-27: Are BLM and Duke aware that the existing Cottonwood Cove Road, from the intersection with US 95 to the east end of the project, is only 24 feet wide? That road also is not designed for the weight of the loads anticipated with this project. Will the applicant widen and improve the road BEFORE construction begins, so the road can accommodate the large, heavy loads? This is not disclosed in the DEIS, and must be for the public to understand the potential impacts from the project. And, if so, does Duke plan to return the road to pre-construction width and design? Experience with construction of industrial wind energy projects across the country discloses that the weight of the trucks bearing the turbines and construction equipment can cause serious damage to rural roads. Exhibit 8. The gross weight of trucks carrying turbines and tower sections can be up to 232,000 lbs. *Id.* This likely far exceeds the designed capacities for the roads that would be used to develop the project. BLM should disclose the designed load capacity of Cottonwood Cove Road, US 95, and other roads that would be used to access the project site, and evaluate the extent to which damage to roads in the area will result from the project and who will bear those costs.

DEIS at 2-28: Where will the 250-300 vehicles used by the workmen be parked while they work?

DEIS at 2-28: The area presently has dark night skies. The construction of the turbines with flashing lights would destroy the rural environment. According to the DEIS, each turbine would have two lights, which flash day and night. That would be a total of 174 to 192 flashing lights in the previously dark sky. While the document states it is "anticipated" that not every turbine would be lighted, there is no guarantee that this would be the case. BLM must disclose accurately what the actual scope of lighting for the turbines will be.

DEIS at 2-29: Where is the waste disposal site or landfill that the refuse would be hauled to? Searchlight has one small drop station, which is inadequate for existing use, and would certainly not accommodate waste from a commercial operation. This could be a significant impact to the local community that is not addressed in the DEIS.

MM-BIO-1 describes the interim rehabilitation (Table 2.6-2. Mitigation Measures). APM-10, Site Rehabilitation Plan and Site Decommissioning Plan would be developed 6 months prior to decommissioning.

No ground-disturbing geotechnical investigations have been completed to date. The EIS in Section 2.3.1- General Features of the Proposed Project, states that, "Prior to construction, geotechnical investigations would be conducted to determine the soil characteristics at each WTG location. These geotechnical data would assist the project proponent in the selection of the appropriate WTG foundation type."

No existing private roads would be utilized and the EIS has been updated to reflect this.

Cottonwood Cove Road would not be widened. Figures 2-1-96 WTG Layout Alternative and 2-2-87 WTG Layout Alternative, illustrate the areas where existing roads would be widened and upgraded. Road widths would range between 16 and 36 feet. BLM disclosed that streets could receive wear from equipment and deliveries and has required a mitigation measure to address the effect, refer to MM TRAN-2: Repair Damaged Streets.

All project related activities, including parking, would be limited to the ROW. This would be a requirement in the ROD and/or ROW grant. Generally parking would be limited to the laydown and staging areas.

While the BLM does not have a Dark Sky Management policy, the BLM does recognize the importance of considering the dark sky environment. MM-VIS-5 has been updated to reflect that a lighting plan would be submitted and approved by the BLM and the basic elements that would be contained in that plan. The EIS discloses the maximum impact. The FAA will determine the actual requirements below that maximum impact.

If Searchlight cannot accept the volume of waste generated by the facility, the waste would be hauled off-site to a licensed waste management facility. Please refer to APM-8 and Section 4.15.14-Human Health and Safety. A Waste Management Plan would be a stipulation of the ROW grant.

DEIS at 2-30: The DEIS lists "Re-grading and re-vegetation" as part of Decommissioning. Desert plants require watering for a year after transplant. If the project is decommissioned, who will be responsible for the care of the vegetation for that year? Has a decommission plan been prepared? Please disclose how the applicant plans to carry out and pay for the decommissioning. Even if the project is no longer in use, and a candidate for decommissioning, what guarantee is there that this will this really happen? There is an abandoned wind project in Hawaii, and many abandoned, non-working turbines littering the landscape throughout California. How will BLM guarantee that the same thing won't happen here? Who will pay for decommissioning?

A reclamation plan is a condition of the bonding process and will be approved by the BLM.

Also, bird and bat fatalities supposedly will be monitored … but what will happen if extreme numbers of both are killed? The bodies are counted, disposed of, and then what? Why not put in place avian radar to detect birds and bats and shut down the turbines? Better still, do more studies to determine if it is really feasible to build turbines where at a site where there large numbers of birds and bats present. It is also stated the mortalities will be monitored for three years. Then what? This is a project that has a 30 year life span. Monitoring for only three years will not do anything to address harm to birds and bats during 90% of the projected life of the project. Post-construction monitoring occurs too late to contribute to the decision whether to approve the project at all, and too late for the birds and bats harmed by the project.

Refer to Appendix B-4: Bird and Bat Conservation Strategy (BBCS) (formerly referred to as the Avian and Bat Protection Plan [ABPP]), which has been developed for the proposed project utilizing the recommendations within the USFWS's March 2012 Land Based Wind Energy Guidelines and includes monitoring requirements and provisions for adaptive management measures based on mortality rates.

The area of the proposed turbines is home to several dozen Turkey Vultures. Vultures are particularly vulnerable to "death by turbine" because of their flight patterns. The area is also home to both golden eagles and bald eagles. The USFWS requires "no net loss" of golden eagles, and wind projects in California and Oregon have been killing significant numbers of these protected birds. Knowing this, why would the applicant attempt to build an industrial wind energy generation facility in known vulture and eagle habitat? And why would BLM approve its application to do so?

Comment noted.

DEIS at 2-31: How far from the Lake Mead NRA entrance station is the switching station? The 30-foot tall buswork would be very visible and disruptive to the viewshed for those people traveling to recreate at the NRA.

Section 2.4.1-Western's Interconnection Switching Station has been updated to disclose the proximity of the switching station to the NRA fee station. Additionally, Section 4.9-Visual Resources Impacts has been updated to include a visual simulation of the switching station.

III. The Environmental Impacts Analysis in the DEIS is Seriously Deficient.

A. The DEIS fails to adequately disclose and evaluate the likely impacts of the project on natural resources.

The DEIS's discussion of likely impacts to wildlife, both birds and mammals, is cursory, omits discussion of significant scientific information, and fails to evaluate adequately the significant harm which the generation and transmission project is likely to cause to wildlife. The DEIS's discussion of impacts to desert tortoise that will result if BLM grants the requested ROWs is inadequate because it provides no information about mitigation. The DEIS similarly understates likely impacts to golden eagles and other avian species from project.

Potential impacts to wildlife species are addressed throughout Sections 4.4-Biological Resources Impacts. Pursuant to Section 7 of the Endangered Species Act, BLM has complete consultation with the USFWS resulting in a Biological Opinion. Appendix B-2: USFWS Biological Opinion contains the required desert tortoise mitigation measures and a discussion of how such mitigation would be effective. A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy). The BBCS provides a qualitative risk assessment for the effect of a factor (e.g., collision, electrocution) on birds and the adaptive mitigation measures.

BLM must collect, evaluate, and disclose to the public accurate and complete information about the likely impacts to wildlife from the project. The DEIS in its current form does not do this.

1. The DEIS does not adequately address impacts to desert tortoise.

The DEIS fails to adequately evaluate impacts to the ESA-listed, threatened desert tortoise. During surveys of the project site, 122 tortoises were located within the project site. DEIS at 3-26. However, the maps (Figures 1 and 2 to the Desert Tortoise Inventory Survey) show that only a small fraction of the site was surveyed, indicating that far more tortoises likely make their home in the project area. In addition, the surveys only extended for 800 feet on either side of turbines, roads, transmission lines, and other project infrastructure. DEIS at 3-26. However, known effects of noise on wildlife stretch far beyond the survey "belts," and noise and habitat fragmentation through avoidance of human structures, extend far beyond the survey belts and would affect tortoises within their designated critical habitat in the Piute-El Dorado ACEC which completely surrounds the project site.

The desert tortoise is listed as "threatened" under the federal Endangered Species Act (55 Fed. Reg. 12,178 (Apr. 2, 1990)), with critical habitat designated in 1994. 59 Fed. Reg. 5,820 (Feb. 8, 1994). The species is desperately in need of additional protections to stem population declines due to ongoing threats, particularly from the over-aggressive development of industrial-scale energy projects in its habitat. These issues should have been fully explored in the baseline discussion, but are not. The DEIS even ignores the current status of the species and does not explain the need for additional protective measures to ensure recovery.

a. The DEIS does not address the best available science and does not provide high-quality information about the tortoise.

The DEIS includes no information or analysis of the May 2011 Recovery Plan. The recovery plan discusses a variety of threats to the survival and recovery of the desert tortoise, including threats from the construction and energy generation activities proposed for the Searchlight Wind Project. The revised Recovery Plan describes that threats to the tortoise have increased since the original 1994 recovery plan, and that the tortoise has a low potential for recovery. Recovery Plan at vii. The vast majority of threats to the desert tortoise or its habitat are associated with human land uses. *Id.* Moderate downward fluctuations in adult survival rates can result in rapid population declines. *Id.* at viii. "Because desert tortoises occupy large home ranges, the long-term persistence of extensive, unfragmented habitats is essential for the survival of the species. The loss or degradation of these habitats to urbanization, habitat conversion from frequent wildfire, or other landscape-modifying activities place the desert tortoise at increased risk of extirpation." *Id.*

The Recovery Plan illustrates that the project site, although a "keyhole" within a broad area of designated critical habitat, contains a concentration of high potential habitat equal to or greater than many areas designated as critical habitat. Recovery Plan at 12. The fact that 122 tortoises were located on the project site within the narrow survey belts, indicating a population of 8.2 tortoises per square kilometer, underscore the importance of the lands within the project

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

Refer to Section 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives for an updated discussion on impacts to desert tortoise. BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

Comment noted. Data on the desert tortoise includes site-specific surveys in accordance with USFWS protocol.

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

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site as a stronghold for tortoises. DEIS at 3-26, Desert Tortoise Inventory Survey at 4, 6. The density of 8.2 tortoises per square kilometer is one and a half times the average density identified for the Eastern Mojave Recovery Unit during surveys in 2007, and higher than the average density of any survey in the last decade in all but two of the other recovery units. Recovery Plan at 9. Despite the high-quality tortoise habitat, BLM has to date failed to adequately protect the area. The on-the-ground habitat has not changed for the desert tortoise on the project site, even as threats throughout the species's range have exploded.

Although not designated as critical habitat for the desert tortoise, the Recovery Plan illustrates that the area within the "keyhole" inside the ACEC where the project would be built is entirely "high potential" habitat for the tortoise. Recovery Plan at 50. The USFWS recognizes that lands outside of designated critical habitat "play an important role in the tortoise's conservation. These lands are also important to providing nesting, foraging. sheltering, dispersal, and/or gene flow habitat for tortoises." 59 Fed. Reg. at 5,825. The project area also is an important area for connectivity of habitat between parts of the critical habitat in the ACEC on all sides of the project site. Construction of the Searchlight Wind Project would place a barrier that covers nearly half of the width of designated critical habitat along the eastern side of the Eastern Mojave Recovery Unit. Recovery Plan at 42. In this area, critical habitat (except for the Searchlight "keyhole" and one other small excluded area in eastern California) is co-extensive with the highest potential habitat. *Id.*

The project would also reduce connectivity between the Eastern Mojave Recovery Unit and the Northeastern Mojave Recovery Unit, which would fragment and isolate these desert tortoise conservation areas, cutting off gene flow, and causing potential long-term harm to the tortoise's potential for survival and recovery. *Id.* at 16, 42. The importance of this area to the tortoise's survival and recovery are substantiated by the relative density of the animals on the project site, and the DEIS misses the opportunity to re-evaluate the site for its importance and potential contributions to desert tortoise recovery efforts.

Instead, the DEIS minimizes the importance of this area for tortoise recovery, saying nothing about the project site's high quality tortoise habitat. It says nothing about how the tortoise density at the site compares with other areas in the tortoise's range. DEIS at 3-26. The DEIS does note that Western's interconnect facility would be located in tortoise critical habitat. DEIS at 3-50 to 3-51. But it does not mention that a portion of the transmission line also would be located in the ACEC in designated critical habitat. *See* DEIS at 3-53 (Figure 3.8-3). And the figure that the DEIS references for the proposition that the ACEC is managed to protect critical habitat, DEIS at 3-51, does not, in fact, show the location of tortoise critical habitat. DEIS at 3-52 (Figure 3.8-2). The DEIS contains no discussion of the potential for the project's facilities and off-site noise and visual effects to destroy or adversely modify desert tortoise critical habitat. DEIS at 4-30 to 4-32.

The DEIS also does not acknowledge the overwhelming impact that energy development is currently having on the tortoise's chance of survival and recovery. BLM must recognize and evaluate the full extent of current threats from energy development and place the project's

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mpacts to desert tortoise are discussed in 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives. BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

Very little of the proposed project site would be fenced; therefore, tortoise connectivity would remain relatively intact. Connectivity and other risks to desert tortoise are discussed in the EIS in 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives.

Figure 3.8-2 has been modified to illustrate the Paiute-Eldorado ACEC. Text in Section 3.8.2.4-Special Designations has been updated to reflect that a portion of the transmission line would be within the ACEC. Section 4.10.2-Direct and Indirect Effects by Alternative and Section 4.4.5.2 Desert Tortoise – Direct and Indirect Impacts by Alternatives have been updated to include potential noise impacts to tortoise and wildlife.

impacts on the tortoise (and the decision whether or not to grant the ROWs for the project) in the context of those threats. According to the May 2011 Recovery Plan,

> As of November 2010, six solar projects in California and one in Nevada were approved on public lands within the range of the desert tortoise, constituting 3,037.5 megawatts (MW) on 9,683 hectares (23,926 acres) and 430 MW on 3,173 hectares (7,840 acres), respectively. Three additional solar projects on private lands in California have been approved totaling 1,063 MW on 1,686 hectares (4,165 acres). Seven solar projects on public lands were still pending, totaling 1,450 MW on 4,314 hectares (10,659 acres) in California and 900 MW on 6,955 hectares (17,186 acres) in Nevada. Three wind projects within the range of the desert tortoise were also pending, totaling 536.5 MW on 11,775 hectares (29,096 acres) of public and private rights-ofway; one of the California projects is proposed within designated critical habitat. No applications have been submitted for solar or wind projects on public lands within the range of the Mojave population of the desert tortoise in Arizona or Utah. Dozens of project sites have been proposed, and the Bureau of Land Management has committed to excluding these projects from designated critical habitat for the desert tortoise and Desert Wildlife Management Areas. However, potential long-term effects of large-scale energy development fragmenting or isolating desert tortoise conservation areas and cutting off gene flow between these areas have not been evaluated.

Recovery Plan at 16. Over 6,350 MW of energy production has been approved or is pending on public lands in the desert tortoise's range. Should this project be added to that pressure? BLM and the Secretary can only make a rational decision on the question if they provide the appropriate baseline information and analysis of the current condition and threats to the species.

It also is likely that the site survey and previous studies of energy development impacts to tortoises are understating the actual number of tortoises that will be affected by this project and similar projects throughout tortoise habitat. For example, at the BrightSource Energy Solar project in the nearby Ivanpah Valley, more than *ten times as many* tortoises have been located on that project's site during construction compared with the number identified during site surveys. Exhibit 9. The first survey of the BrightSource Ivanpah site found only 16 tortoises, and the USFWS issued a take permit allowing relocation of 38 tortoises and the accidental killing of up to three tortoises during three years of construction. *Id.* However, a total of 166 adult and juvenile tortoises have been collected and moved from the Ivanpah site. *Id.* By contrast, 122 tortoises were identified at the Searchlight site during the field survey, indicating that far more tortoises likely are present. BLM must disclose the inadequacy of the pre-construction survey at the BrightSource project and independently evaluate whether the field survey at Searchlight similarly misstates the likely impact of the Searchlight project on tortoises.

In addition, BLM does not evaluate the potential effects of blasting that will be necessary during construction on tortoises, but rather only discusses "grading" impacts. DEIS at 4-30. Elsewhere, however, BLM acknowledges that blasting is likely to be necessary for constructing

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion). The Biological Opinion includes a "take" limit. If the take limit is exceeded, the BLM would need to reconsult with USFWS.

Section 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives has been updated to include a discussion of blasting effects on tortoise. Also refer to Section 4.4.5.3-Mitigation, which has been updated to include mitigation for tortoise during blasting activities.

access road, setting turbine foundations, and setting transmission towers. DEIS at 2-25, 4-82. As discussed below in the section on geology, it is certain that blasting *will* be required. How will the noise and shock effects of blasting affect this threatened species, both within the project area and in the adjacent designated critical habitat in the ACEC?

b. The DEIS does not address noise impacts to tortoise.

A more general deficiency of the DEIS is that it does not evaluate at all the potential of noise impacts to tortoises within the project site and in the adjacent critical habitat in the ACEC. This includes no discussion of construction noise or noise from operation of the turbines. There will certainly be noise spillover into the critical habitat, as shown by the noise contour maps in the document. DEIS at 4-86, 4-89. As described below in Section III.L, the geology of the site makes it certain that construction will involve considerable blasting, and not merely the "grading" which BLM refers to throughout the DEIS. However, these noise effects are not disclosed in the sections related to desert tortoise. BLM must evaluate the effects of blasting and the noise effects from operation of the turbines on the desert tortoise which remain on the project site as well as those in the critical habitat adjacent to the project site.

The original USFWS 1994 Recovery Plan cited noise and vibration as having potentially significant effects on the desert tortoise's behavior, communication, and hearing apparatus:

> *Anthropogenic noise has several potential impacts on desert tortoises, including disruption of communication and damage to the auditory system.* Background noise has been shown to mask vocal signals essential for individual survival and reproductive success in other animals (e.g., bushcrickets, Conocephalus brevipennis, Bailey and Morris 1986; green treefrogs, Hyla cinerea, Ehret and Gerhardt 1980). *Desert tortoises are known to have hierarchical social interactions* (Brattstrom 1974), *are capable of hearing* (Adrian et al. 1938; Patterson, 1971, 1976), *and communicate vocally* (Campbell and Evans 1967; Patterson, 1971, 1976). *Desert tortoises use eleven different classes of vocalizations in a variety of social encounters* (Patterson 1971, 1976). *The signals are relatively low in amplitude, have fundamental frequencies as low as 0.2 kHz or lower, and harmonics as high as 4.5 kHz* (Patterson 1976). Many human-induced sources of noises, such as automobiles, jets, and trains, cover a wide frequency bandwidth. *When such sounds propagate through the environment, the high frequencies rapidly attenuate, but the low frequencies may travel great distances* (Lyon, 1973). *The dominant frequencies that remain after propagation correspond closely to the frequency band width characteristic of desert tortoise vocalizations. The masking effect of these sounds may significantly alter an individual's ability to effectively communicate or respond in appropriate ways. The same holds true for incidental sounds made by approaching predators; masking of these sounds may reduce a desert tortoise's ability to avoid capture by a predator.* The degree to which masking affects desert tortoise survival and reproduction probably depends on the physical characteristics (i.e., frequency, amplitude, and short- and long-term timing) of the noise and the animal signal, the propagation characteristics of the sounds in the particular environment, the

Section 4.4.4-Wildlife and Section 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives have been updated to include potential noise impacts to wildlife and tortoise.

auditory acuities of desert tortoises, and importance of the signal in mediating social or predator interactions.

Loud noises (and associated vibrations) may damage the hearing apparatus of desert tortoises. Sources of noise and vibration include, but are not limited to: cars, trucks, and other vehicles on paved highways, dirt roads, and test tracks; trains; recreation vehicles traveling on or off road; terrestrial military vehicles; commercial and military aircraft; equipment associated with exploration for and development of hard-rock minerals and saleable and leasable minerals; explosions from military ordnance; air to ground bombing or release of missiles; mining; road construction; and nuclear tests. Little research has been performed on desert tortoise ears, but it is clear that they are able to hear, and the relatively complex vocal repertoires demonstrated by desert tortoises suggests that their hearing acuity is similarly complex. Brattstrom and Bondello (1983) experimentally demonstrated that ORV noise can reduce hearing thresholds of Mojave fringe-toed lizards (Uma scoparia). *Relatively short bursts (500 sec) of loud sounds (95 decibels at 5 meters) caused hearing damage to seven test lizards.* Comparable results were obtained when desert iguanas (Dipsosaurus dorsalis) were exposed to 1 to 10 hours of motorcycle noise (Brattstrom and Bondello 1983). *Repeated or continuous exposure to damaging noises is likely to cause an even greater reduction in auditory response of these lizards. It is not unreasonable to expect loud noises to similarly impact the auditory performance of desert tortoises.*

Ground vibrations can cause desert tortoises to emerge from their burrows; slapping the ground several times within a few feet of a desert tortoise burrow entrance will often cause a desert tortoise to emerge (C. Peterson, pers. comm., and others). Research is needed to determine what kinds of vibrations and noise cause a desert tortoise to emerge from its burrow.

1994 Tortoise Recovery Plan at D38–39 (emphasis added). The May 2011 Recovery Plan notes that little additional data has been collected on noise and vibration effects. Recovery Plan at 154.

The sorts of noises that can harm tortoises' ability to communicate, interact, avoid predators, and which are likely to damage tortoises' hearing are precisely the intense noises from blasting and construction and the low humming noise from whirring turbine blades that will be a perennial component of the environment if the project is approved.

Noise impacts to wildlife have been widely studied. The National Park Service's Natural Sounds Program has published a bibliography of noise impacts on wildlife that includes more than 150 publications. National Park Service Natural Sounds Program, *Annotated Bibliography, Noise Impacts on Wildlife* (Aug. 2011) (available at http://www.nature.nps.gov/naturalsounds/pdf_docs/wildlifebiblio_Aug2011.pdf and on the enclosed CD-ROM as "Wildlife Noise Bibliography Aug 2011"). BLM should review the literature and consult with the National Park Service and USFSW, and then disclose and evaluate the impacts of noise from construction and operation of the project on tortoises.

Noise from the construction and operation of industrial-scale wind energy projects is likely to significantly affect desert tortoises within the project site and in the surrounding critical habitat. USFWS has described that "[t]urbine blades at normal operating speeds can generate significant levels of noise" and that "it is possible that effects to sensitive species may be occurring at ≥ 1 mile from the center of a wind facility at periods of peak sound production." U.S. Fish & Wildlife Service, *The Effects of Noise on Wildlife*, at 1 (*available at* http://www.fws.gov/windenergy/docs/Noise.pdf and enclosed on the CD-ROM). Furthermore, "[n]oise does not have to be loud to have negative effects." *Id.* FWS expressly draws a connection between studies of traffic noise and the noise generated by wind turbines, noting that because "wind-generated noise including blade turbine noise produces a fairly persistent, low frequency sound similar to that generated by traffic noise . . . it is plausible that wildlife effects from these two sound sources could be similar." *Id.* at 2 (citation omitted).

The USFWS states that "noise impacts to wildlife should clearly be included as a factor in wind turbine siting, construction and operation." *Id.* at 1. Some of the key issues to be addressed are:

1) how wind facilities affect background noise levels;

2) how and what fragmentation, including acoustical fragmentation, occurs especially to species sensitive to habitat fragmentation;

3) comparison of turbine noise levels at lower valley sites – where it may be quieter – to turbines placed on ridge lines above rolling terrain where significant topographic sound shadowing can occur having the potential to significantly elevate sound levels above ambient conditions; and

4) correction and accounting of a 15 decibel (dB) underestimate from daytime wind turbine noise readings used to estimate nighttime turbine noise levels (e.g. van den Berg 2004, J. Barber Colorado State Univ. and National Park Service pers. comm., K. Fristrap National Park Service pers. comm.).

Id. USFWS's direction to thoroughly evaluate the potential noise impacts of proposed wind energy projects is unambiguous:

> Given the mounting evidence regarding the negative impacts of noise—specifically low frequency levels of noise such as those created by wind turbines on birds, bats and other wildlife, it is important to take precautionary measures to ensure that noise impacts at wind facilities are thoroughly investigated prior to development. Noise impacts to wildlife *must* be considered during the landscape site evaluation and construction processes.

Id. at 3 (emphasis added).

This USFWS information illustrates that the DEIS is deficient in failing to account for a variety of impacts of noise, including the likely greater effects of noise at nighttime that are not reflected in any discussion in the DEIS. As USFWS reports, studies have shown that "[t]urbine blades at normal operating speeds can generate significant levels of noise." *Id.* at 1. The USFWS's model determined peak sound production as "[a]t a distance 300 ft from the blades, 45-50 dBA were detected; at 2,000 ft, 40 dBA; and at 1 mi, 30-35 dBA (Kaliski 2009)." The USFWS's model used a larger spacing (1,000 feet) between turbines than the project would use (750 feet, DEIS 2-2), making it likely that the noise effects from the project would be even greater than the USFWS's figures. As the DEIS shows, turbines would be located close to the perimeter of the project site on the north, northeast, east, southeast, south, and southwest sides of the project such that constant noise of at least 35 dBA would spill about a mile into tortoise critical habitat on all sides of the project. DEIS at 4-86, 4-89. At least a dozen turbines would be located within 750 feet of desert tortoise critical habitat in the ACEC, and several dozen turbines would be located within 2,500 feet of the ACEC boundary. Tortoise in the ACEC would be adversely affected by noise from the Searchlight project.

USFWS points out that "[w]ind turbine noise results in a high infrasound component (Salt and Hullar 2010). Infrasound is inaudible to the human ear but this unheard sound can cause human annoyance, sensitivity, disturbance, and disorientation." *The Effects of Noise on Wildlife* at 1. These effects may be more profound on birds, bats, and other wildlife. This is because "[*n*]*oise from traffic, wind and operating turbine blades produce low frequency sounds* (< 1-2 kHz; Dooling 2002, Lohr et al. 2003). Bird vocalizations are generally within the 2-5 kHz frequency range (Dooling and Popper 2007) and birds hear best between 1-5 kHz (Dooling 2002)." *Id.* at 1 (emphasis added).

As noted in the 1994 tortoise Recovery Plan, desert tortoises (like birds) rely extensively on vocal communications, using eleven different classes of vocalization in social encounters. 1994 tortoise Recovery Plan at D38. Tortoise vocalizations are low in amplitude (from 0.2 kHz to 4.5 kHz)—in the same range as birds, and in the same low frequency range that is produced by wind turbine operation. These low frequency-range sounds travel longer distances than higher frequency sounds, and therefore are likely to adversely affect wildlife at a greater distance from the turbines. 1994 tortoise Recovery Plan at D38.

It is well-documented that industrial-scale energy projects affect avian species—which have communication and hearing ranges similar to tortoises—far beyond the immediate boundaries of development sites. "In addition to direct collision threats, concerns began to be raised in the late 1990s about wind plants disturbing and fragmenting habitats and disrupting birds." Manville, Albert, *Development and Application of USFWS Guidelines for Siting, Construction, Operation and Monitoring of Wind Turbines, Wind Energy & Bird/Bats Workshop Proceedings* at 86 (Sept. 2004) (on the enclosed CD-ROM). For example, in a pioneering 2004 study of the effects of industrial wind energy development on prairie grouse, FWS recommended that wind energy projects be sited *at least five miles* from prairie grouse leks, which are the central focus of grouse habitat. U.S. Fish & Wildlife Service, *Briefing Paper—Prairie Grouse Leks and Wind Turbines: U.S. Fish and Wildlife Service Justification for a 5-Mile Buffer from Leks; Additional Grassland Songbird Recommendations* (July 30, 2004) (available at

http://www.environment.ok.gov/documents/OKWindEnergy/PrairieGrouseLeksWindTurbines.pdf and enclosed on CD-ROM). The possibility of effects on wildlife up to five miles from turbine sites means that noise impacts extending into the ACEC on all sides could effectively cut-off the northern portion of the designated critical habitat in the Piute Valley from the southern portion, resulting in the destruction and modification of tortoise critical habitat.

USFWS's survey shows "that varying sources and levels noise can affect both the sending and receiving of important acoustic signaling and sounds. This also can cause behavioral modifications in certain species of birds and bats such as decreased foraging and mating success and overall avoidance of noisy areas. The inaudible frequencies of sound may also have negative impacts to wildlife." *The Effects of Noise on Wildlife* at 3. In addition, even small noise increases may have dramatic effects on the ability of tortoises to communicate: for example, "a noise increase of just 3 dB – a noise level identified as 'just perceptible to humans' – this increase corresponded to a 50% loss of listening area for wildlife." *Id.* at 2. "Other data suggest noise increases of 3 dB to 10 dB correspond to 30% to 90% reductions in alerting distances for wildlife, respectively." *Id.* at 2–3. Thus USFWS concludes that "[i]mpacts of noise could thus be putting species at risk by impairing signaling and listening capabilities necessary for successful communication and survival."

Despite the documented effects of noise on wildlife, and longstanding USFWS concerns about noise impacts to tortoises, the DEIS contains no information about likely impacts from the noise of turbines, blasting, and other construction and operation activities.

Sensitive species such as desert tortoises are vulnerable to regional extirpation as the effects of climate change degrade their habitat. Recovery Plan at 18–19. Drought in particular is a serious threat to tortoise survival. The DEIS fails to address how development of the project will exacerbate climate change-related impacts to desert tortoises by fragmenting habitat and adding additional stress. This area of southern Nevada has experienced below-normal rainfall levels in the last two years. Please provide information about the current climatic conditions in the project area and evaluate how this will affect the tortoises when combined with the effects of construction and operation of the project.

c. BLM must prepare a supplemental DEIS that adequately discloses the biological assessment and properly evaluates mitigation measures.

BLM must prepare a supplemental DEIS that properly discloses the likely environmental impacts to desert tortoises. According to the DEIS, Duke and Western already have prepared a biological assessment to assess the effects of the project on the ESA-listed tortoise. DEIS 1-15. First, this violates the BLM's duty to prepare a biological assessment for any proposed action that may adversely affect a listed species. 16 U.S.C. § 1536(c)(1); 50 C.F.R. § 402.12(a). BLM must independently prepare its biological assessment to comply with the ESA, not rely on a document produced by the project proponents, and disclose this information as part of its NEPA process for public comment. See 40 C.F.R. § 1506.5; see also Utahns for Better Transp. v. Department of Transp., 305 F.3d 1152, 1165 (10th Cir. 2002) (citing 40 C.F.R. § 1506.5(a)).

A third party independent contractor under direction of the BLM prepared the Biological Assessment. The BLM reviewed and approved the Biological Assessment prior to submission to the USFWS. BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

Second, BLM's failure to include the biological assessment in the DEIS violates NEPA. The discussion of effects on the threatened tortoise are cursory at best and omits any information about *how* the proposed mitigation (which amounts to little more than a promise to implement an as-yet-not-prepared biological opinion) will avoid the significant impacts from construction and operation of the project on the tortoise. DEIS 4-30 to 4-32. NEPA requires an agency to include the material in the biological assessment directly in the text of the DEIS. 40 C.F.R. § 1502.1; *Pac. Rivers Council v. U.S. Forest Serv.*, 668 F.3d 609, 628 (9th Cir. 2012). "This is not a mere formality. The purpose of an EIS is to inform decision makers and the general public of the environmental consequences of a proposed federal action. That purpose would be defeated if a critical part of the analysis could be omitted from an EIS and its appendices." *Pac. Rivers*, 668 F.3d at 628. The DEIS contains no analysis of the manner or degree to which any of the proposed alternatives may affect desert tortoises. *Id.*

The public literally has no information in the DEIS on which to base comments regarding the specific impacts of this specific project on the tortoise or how BLM proposes to avoid or mitigate those impacts. There is no information about what mitigation is proposed, only a listing of possible measures that "may" be included. DEIS at 2-43 to 2-44. What are the terms and conditions that BLM *will* apply to mitigate the harm from this project?

NEPA regulations require that BLM discuss possible mitigation measures as a means to "mitigate adverse environmental impacts." 40 C.F.R. § 1502.16(h). An adequate discussion of mitigation measures requires the agency to analyze the effectiveness of the proposed mitigation. *S. Fork Band Council of W. Shoshone v. U.S. Dep't of Interior*, 588 F.3d 718, 727 (9th Cir. 2009). This allows the court to determine "whether they constitute an adequate buffer against the negative impacts that may result from the authorized activity." *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 734 (9th Cir. 2001). To comply with NEPA, mitigation measures proposed in an EIS "must be developed to a reasonable degree. A perfunctory description, or 'mere listing' of mitigation measures, without supporting analytical data" is insufficient. *Id.* (quoting *Idaho Sporting Cong.*, 137 F.3d at 1151).

Part of the potential "mitigation" for harm from construction and operation of the project involves relocation (or translocation) of desert tortoises. However, recent studies of effects of handling and translocating tortoises show that such activities kill tortoises at a rate much higher than previously thought. At an August 25, 2011 hearing before the California Energy Commission considering the application for the Calico Solar Project, Dr. Kristin Berry, a leading desert tortoise biologist from the U.S. Geological Survey's Western Ecological Research Center, testified that in a recent study at the Fort Irwin solar project, 49% of tortoises transplanted had died over a 3-year period. Transcript, August 25, 2011 Evidentiary Hearing Before the California Energy Resources Conservation and Development Commission, at 80 (enclosed on CD-ROM). During 2011 alone, 11.6% of the relocated tortoises had died—compared to 2.5% and zero percent mortality at two control sites where no relocation had occurred. *Id.* Mortality among resident tortoises on the recipient site also may have a high mortality rate due to competition from translocated tortoises, and even the process of handling tortoises for blood testing will result in tortoise mortality. Without considering and disclosing the effects of its proposed mitigation, BLM cannot determine whether or not the mitigation will be effective.

Impacts to desert tortoise are discussed in 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives. BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

Appendix B-2: USFWS Biological Opinion contains the required desert tortoise mitigation measures. Section 4.4.5.3-Mitigation has been updated to reflect these requirements. This mitigation measures would be a stipulation of the ROW grant.

A discussion of all mitigation measures is included in the EIS. BLM requires that mitigation measures be implemented as a stipulation of the ROW Grant. Development of mitigation plans often requires input, review, and approval by other regulating agencies such as USFWS, NDEP, DAQ, and NDOT. As such these plans are not typically completed prior to a Final EIS. However, all the elements and basic requirements of the mitigation plans are discussed throughout the EIS. Additionally, a number of mitigation plans have been completed and are included as follows Appendix B-1: Weed Management Plan, Appendix B-2: USFWS Biological Opinion, Appendix B-3: Terrestrial Wildlife Plan, and Appendix B-4: Bird and Bat Conservation Strategy.

This impact is described in 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives. Pursuant to Section 7 of the Endangered Species Act, BLM has complete consultation with the USFWS resulting in a Biological Opinion. Appendix B-2: USFWS Biological Opinion contains the required desert tortoise mitigation measures and a discussion of how such mitigation would be effective. Section 4.4.5.3-Mitigation has been updated to reflect these requirements.

At an earlier hearing, Tracy Moore, a biologist for California Department of Fish and Game, described that her Department had asked the California Energy Commission to use Dr. Berry's 50% mortality figure from translocation in its evaluations of potential impacts from energy projects on tortoises. Transcript, August 18, 2011 Evidentiary Hearing Before the California Energy Resources Conservation and Development Commission, at 268 (enclosed on CD-ROM). BLM does not evaluate the likely mortality from handling and translocating tortoises in its discussion of "mitigation" to the project.

The proposed mitigation (DEIS at 2-43 to 2-44) would be inadequate to protect tortoises, even aside from the mortality that would result from relocation. For Desert tortoise protection, temporary exclusion fence should be placed around the perimeter of each work area as construction is underway, such as turbine pads and access roads. A Biological monitor should be present at all seasons in case tortoises are uncovered in the ground. After construction of each area is completed, the tortoise exclusion fence can be removed.

Thirty miles of new roads will be constructed. Some of the roads will be 36 feet wide to accommodate cranes and other heavy machinery. This will remove and fragment the habitat. As mitigation, BLM proposes a 15 MPH speed limit, but does not indicate how this will be enforced during the 30 year lifespan of the project. BLM is not clear if these new roads will be open to the public. Will all roads in the area have the same speed limit? Generally, the BLM law enforcement rangers cover a large number of square miles per person.

In addition, wind turbines are manufactured with rare Earth elements. Exhibit 10. Turbine failures are common, and may result in blades flying off and traveling over 4,200 feet. *Id.* at 3. This could expose tortoises in the ACEC to heavy metals or toxic chemicals, which have been linked to a shell disease (cutaneous dyskeratosis) that weakens turtle shells and is associated with high tortoise mortality. Jacobson *et al.*. Cutaneous Dyskeratosis in Free-Ranging Desert Tortoises, *Gopherus agassizii*, in the Colorado Desert of Southern California. Journal of Zoo and Wildlife Medicine, Vol. 25, No. 1, Reptile and Amphibian Issue (Mar., 1994): 68-81 (enclosed on CD-ROM). Please evaluate potential impacts of toxic chemicals and heavy metals from turbines and their potential health impact to tortoises on the project site and in the surrounding critical habitat.

BLM must disclose and evaluate the science contained in the May 2011 Recovery Plan, and explain how it applies to the desert tortoise at the project site and which depend on the surrounding critical habitat within the Piute-El Dorado Valley ACEC which the project would affect. Based on the scientific consensus regarding the perilous state of the tortoise, and the overwhelming threats from energy development throughout its habitat, BLM cannot authorize construction of an industrial-scale wind energy project in high potential habitat where there is documented evidence of a very high density of tortoises. The DEIS needs to fully explore the magnitude and extent of impacts on desert tortoise, including effects from noise, visual effects, fragmentation of habitat, and the dangers of translocation. As a species listed under the Endangered Species Act, BLM has a duty to protect this species and its habitat, and approve projects only if they will insure the survival and recovery of the affected species. As it stands, the DEIS's analysis of the effects of the project on tortoises is cursory and incomplete.

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion). Section 4.4.5.3-Mitigation and other relevant sections have been updated to reflect these requirements.

Comment noted.

Refer to section 4.14-Health and Human Safety Impacts, which states "any release would be cleaned up thereby, limiting or preventing any potential exposure to people or wildlife."

Impacts to desert tortoise are discussed in 4.4.5.2-Desert Tortoise – Direct and Indirect Impacts by Alternatives. BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

2. The DEIS does not adequately address impacts to avian populations including golden eagles, bald eagles, and other birds.

a. Impacts to golden eagles and bald eagles.

The DEIS makes no effort whatever to describe quantitatively the likely impact to golden eagles, bald eagles, other raptors, and other avian species. DEIS at 4-35 to 4-36. The DEIS does not explain why it is not possible to do so. This violates the BLM's obligation under NEPA to provide high-quality information and do more than provide a generalized description of possible effects. Without some idea of what the likely effects of the project are in terms of bird mortality, it is impossible to evaluate whether mitigation would be effective. But the DEIS also provides that the Avian and Bat Protection Plan ("ABPP") will be developed in the future to define thresholds of adverse effects and provide mitigation for thresholds that are exceeded. But, again, NEPA requires that this mitigation information be provided in the DEIS itself to allow for meaningful public review and democratic decision making. The ABPP must be developed *now*, and its terms disclosed to the public as part of a supplemental DEIS. What are the thresholds? What actions will be triggered by passing the thresholds? What mitigation measures will be available? Will those measures be effective?

It is certain that the operation of the Searchlight Wind Project will kill golden eagles, bald eagles, and other species protected by the Migratory Bird Treaty Act ("MBTA"). Avian surveys have documented golden eagles, six other species of raptor, and 57 species of non-raptor birds within the project site. DEIS at 3-29 to 3-31. However, the DEIS makes no attempt to quantify the likely mortality, or describe how that mortality could be minimized or avoided, rendering the document useless from a NEPA standpoint.

Avian mortality through collisions with the rotor blades on wind turbines is a chief impact that industrial-scale wind energy generation facilities have on the environment. Long-term studies on the effects of industrial scale wind projects are rare and there are a number of cases in the American West of large-scale wind projects causing harm to raptor populations and other migratory birds. The DEIS fails to adequately evaluate impacts to migratory birds, and impacts/impediments on migratory flyways, even though the DEIS recognizes that the area sits within the Pacific Flyway, an important migratory route. DEIS at 3-29. Due the magnitude of potential impacts on the avian populations, additional avian studies are needed to identify more specifically migratory flyways for seasonal migrants that use the project area and could come into contact with the turbine blades. Of all species in this area, the avian species have the largest range—spatially limited studies offer little assurance the impacts will be as isolated as they are described in the DEIS. The existing avian study is missing quantitative study of avian and bat migratory movements—much of the information and assessment of impacts is based on limited observation and conjecture, and on an unreasonably narrow point count methodology. These studies should be completed and added into a supplemental DEIS so that the public can review new information before it appears in a final EIS.

Impacts to raptors and non-raptors are discussed in Section 4.4.5.11-Migratory Birds - Direct and Indirect Effects by Alternative. A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy). The BBCS provides a qualitative risk assessment for the effect of a factor (e.g., collision, electrocution) on birds and the adaptive mitigation measures.

Avian fatalities (for non eagles) were not estimated because pre-construction data poorly predicts fatalities for birds (Ferrer et al. 2012). The purpose of the NEPA document is to disclose potential impacts so that the decision-makers can make an informed Record of Decision. Appendix B-4: Bird and Bat Conservation Strategy (BBCS) (formerly referred to as the Avian and Bat Protection Plan [ABPP]) has been developed for the proposed project utilizing the recommendations within the USFWS's March 2012 Land Based Wind Energy Guidelines, which includes a risk assessment and adaptive management measures. At the time baseline surveys were completed for the project, Nevada had no official policy or protocols for avian pre-project surveys so protocols were developed between BLM and NDOW. The BBCS provides a qualitative risk assessment for the effect of a factor (e.g., collision, electrocution) on birds. The intention is not to predict the number of fatalities due to turbine collision as pre-construction data poorly predicts fatalities for birds (Ferrer et al. 2012), but to determine if any species is at high risk to inform post-construction fatality monitoring.

Organizations

Renewable Energy (Sept. 30, 2011). BLM has not disclosed the result of the coordination process with UWFWS required by IM 2010-156 or that it has conducted the necessary cumulative effects analysis of impacts to golden eagles. Please disclose how BLM intends to comply with this guidance.

The DEIS improperly minimizes its discussion of the likely effects on golden eagles. For example, the DEIS does not provide any information or evidence to support its statement that "[when compared to raptor use data at other wind energy facilities, raptor use at the Proposed Project site was relatively low. Additionally, no golden eagle nests were located within 4 miles of the Proposed Project area. The level of raptor use in the Proposed Project area suggests that raptor mortality is anticipated to be low." DEIS at 4-36. But at the same time, the DEIS claims that "it is not possible to quantify effects on bats and birds based on pre-project surveys." *Id.* This is nonsense. BLM has routinely provided quantitative estimates of the likely number of golden eagles, other raptors, and bats that are likely to die as a result of the operation of a wind energy facility. *See, e.g.*, Exhibit 11 (pages from BLM's North Steens Transmission Final EIS with estimates of likely bird and bat mortality from the associated Echanis generation site). At the referenced Echanis generation site, a 104-MW production project on Steens Mountain in Oregon, BLM was evaluating a project half the size of the Searchlight Wind Project that—similar to Searchlight—had one eagle nest relatively close to the turbine site (2.5 miles at Steens, 4.3 miles at Searchlight) with other potential nests within the 10-mile USFWS survey perimeter. BLM in Oregon was able to perform a calculation predicting annual golden eagle mortality of 1.7 eagles per year, which BLM then translated into take of about 0 to 3 golden eagles per year from the generation facility. *Id.* at 10 (page 3.5-47).

BLM in this DEIS provides no high quality data about likely effects, provides no evidence to support its claims of "low" raptor use in the project area, provides no evidence supporting its claim that "raptor mortality is anticipated to be low" and provides no explanation for how it can reach the previous conclusion when it "is not possible to quantify effects on bats and birds." In short, BLM's explanation regarding the likely effect of the project on golden eagles contradicts itself, and is in clear violation of NEPA.

BLM also shamefully ignores the most recent information about the growing awareness that industrial-scale wind energy facilities are killing significant numbers of golden eagles. The DEIS does not mention this at all, and the 2007-2009 Avian Survey says "although golden eagles have been found during mortality searches at wind facilities, most notably at Altamont Pass in California, low mean use and encounter rates are suggestive of low risk of fatality" without providing any information about the prevalence of eagle kills, mortality rates, or the probability of kills at other facilities or explanation comparing this project to others. In fact, the USFWS has documented at least 54 golden eagles killed by wind energy generation projects *outside* of Altamont Pass. Exhibit 12 at 1 (February 2012 American Bird Conservancy ("ABC") comments on West Butte Wind BGEPA take permit). Please evaluate the information provided in the ABC's comments (Exhibit 12) regarding the first-ever programmatic golden eagle take permit in considering the potential lethal effects of the Searchlight Wind Project on golden eagles. ABC has also expressed concern about eight golden eagle kills at California's Pine Tree wind project over the past two years. Exhibit 13.

BLM included sufficient discussion in the DEIS to inform the public regarding potential impacts to avian species in Section 4.4.5.11- Migratory Birds - Direct and Indirect Effects by Alternative and the strategy that would be employed to mitigate those impacts**.**

Avian fatalities (for non eagle) were not estimated because pre-construction data poorly predicts fatalities for birds (Ferrer et al. 2012). Appendix B-4: Bird and Bat Conservation Strategy (BBCS) (formerly referred to as the Avian and Bat Protection Plan [ABPP]) has been developed for the proposed project utilizing the recommendations within the USFWS's March 2012 Land Based Wind Energy Guidelines, which includes a risk assessment and adaptive management measures.

BLM should pay particular attention to the situation at the Pine Tree wind project. BLM was the federal lead agency on the environmental assessment for the Pine Tree project; a copy of the Environmental Assessment/Final Environmental Impact Report for Pine Tree ("Pine Tree FEIR") is enclosed on the CD-ROM. This project was thought to be "low risk" for golden eagles. *See* Exhibit 13. The avian surveys at Pine Tree confirmed that golden eagles were observed on the site, but that no golden eagle nest was found on site. Pine Tree FEIR at 2-58. Like the DEIS here, the EA/FEIR downplayed potential harm to golden eagles, nonchalantly stating that the birds "are distributed throughout the Tehachapi Mountains and Southern California. Thus, there is no local population, which by definition would require that the birds be almost completely isolated (for breeding/genetic purposes) from other populations. The loss of a golden eagle would not jeopardize the species or extirpate them from the general or local area." Pine Tree FEIR at 2-77. The avian report for Pine Tree describes that "raptor and vulture use at Pine Tree was approximately 50% lower than the average use found at other active or proposed developments, approximately 40% lower than the average at Tehachapi WRA, and approximately 90% lower than that observed at Altamont Pass WRA." Pine Tree FEIR, Fall Avian Report, at 2.

Comment noted.

In all of these respects, including the supposedly lower usage by raptors compared with unspecified "other" projects, BLM's assessment of likely impacts to golden eagles at Pine Tree mirrors the DEIS's assessment at Searchlight. Yet eight eagles have died from turbine strikes at Pine Tree in the last two years. Can BLM explain how it got Pine Tree's assessment so very wrong, and why the same rate of eagle deaths—or at least more than "we don't know"—will occur at the Searchlight Wind Project?

Comment noted.

The DEIS fails to explain how it will mitigate the loss of a substantial amount of foraging habitat for the golden eagles that currently use the project site, either as a result of this project, or cumulatively as a result of the other energy projects in this region. The fact still remains that significant amounts of foraging habitat will decrease carrying capacity of the landscape and could result in a potential loss of habitat needed to support a nesting pair, which would impact reproductive capacity.

As discussed in the EIS, the Proposed Project would result in the loss of some foraging habitat for the golden eagle; however, the proportion of foraging habitat that would be lost due to the Proposed Project is small compared to the total amount of available foraging habitat within the Piute and Eldorado Valleys.

Contrary to the "impossible to calculate" number of eagles, raptor and other bird deaths forecast in the DEIS, large-scale wind projects have been documented to kill up to 900 birds per year, and up to 350 raptors per year. For example, a two-year survey of the Altamont Pass wind power site in California, which is being aggressively managed to reduce raptor kills, reported over 1,800 bird kills (705 raptors killed, along with 1,095 non-raptors). Exhibit 14 at 1, 15 (excerpts; full study enclosed on CD-ROM). Despite efforts to mitigate harm to birds by, for example, a two-month shutdown during low wind season,

> [t]he results of this study show an apparent continued trend of high bird fatalities, both raptors and non-raptors at APWRA. The number of annual fatalities does not appear to be decreasing despite implementation of specific conservations measures including the cross-over winter shutdown program, high risk turbine removal and blade-painting.

For a variety of reasons Altamont fatality numbers may be an outlier with regard to golden eagle fatalities at wind energy facilities. In addition to the dense configuration of older-generation turbines, high prey densities and lack of breeding eagles possibly attract sub-adults and floaters to the Altamont, contributing to the high activity and high fatality rates. In addition, the limited amount of repowering that has occurred at Altamont suggests that eagle (and raptor) fatality rates will decline as the older turbines are replaced by fewer, taller, and higher power-rated turbines. Initial results of the repowering suggest that golden eagle fatality rates could decline by more than 80% with complete turbine replacement and comparable power output (Insignia 2009; Smallwood and Karas 2009; ICF 2011).

Id. at 16; *see also* US Fish & Wildlife Service presentation on "Wind Power and Birds" (on enclosed CD-ROM) (noting that it is impossible to mitigate bird kills under the Migratory Bird Treaty Act).

The DEIS's evaluation of potential impacts to golden eagles in the cumulative effects section is inadequate. Besides not quantifying potential cumulative effects on golden eagles, the DEIS includes no information on potential cumulative impacts. DEIS at 4-131, even though an actually-acknowledged cumulative impact is a transmission line. *Id.* Transmission lines are known to cause to eagle mortality. There is no discussion of potential cumulative impacts from other wind projects proposed in the same region, despite evidence from Altamont Pass and other wind projects that these industrial facilities kill a significant number of eagles. BLM must disclose actual data showing the number of golden eagles which have been killed by wind generation and transmission projects throughout the West this year and in recent years. Again, this is an example of the cumulative effects analysis failing to quantify and detail likely impacts from cumulative and connected actions in violation of NEPA.

BLM's (actually Duke's consultant's) survey methodology was flawed. The consultant did one helicopter nest survey in April 2011. USFWS survey protocols to detect eagles are being updated, and the agencies are requesting more data to be able to evaluate mortality potential. April is too late in the season to detect eagle territories, USFWS is recommending March helicopter surveys (USFWS Joel Pagels January 7, 2012 workshop with California Energy Commission for Rio Mesa Solar Electric Generating Facility). Golden eagles will return to nest sites some years, then not use the nest in other years. The purpose of such surveys is to see if eagles are in their territories, they do not nest every year but will occupy a territory. A nest may look empty but eagles may still be using the area. Breeding is based on prey availability. A quick snapshot of nests during a brief helicopter flight will not provide enough data. At least two surveys are needed, and one would be lucky to get enough data even then. Surveyors need to be completely qualified.

In addition, non-breeding surveys should be carried out to look for resident adults, "floaters," and juveniles. How many eagles are present in the Searchlight area? Ground surveys are needed as well, to detect floater individuals waiting to take over a territory. These individuals may even kill an adult to take over its territory. Ground surveys can find the juvenile eagles which are often missed by helicopter surveys. USFWS recommends at least 2–3 years of surveys to detect non-breeding eagles. To detect presence of eagles, "Long Sit" surveys should be done, where observers remain in one spot for 1–4 hours (up to 8 hours) and scan with binoculars for eagles.

Neither the DEIS nor the applicant's consultant's avian survey describe the potential effects on bald eagles. However, Bald eagles have a stronghold wintering population and turbines would be constructed within seven miles of their winter habitat. While bald eagles are not recognized for being as nomadic as golden eagles, there is no mention in the DEIS as to what risks there would be to eagles arriving and departing the region for the winter. The last Lake Mead Bald Eagle count turned up more bald eagles than ever. Observers counted 177 and found

The geographic boundaries of the cumulative impacts analysis identified in the comment are described in the EIS in Section 4.17.5-Potential Cumulative Impacts. The geographical boundaries should not be extended to the point that the analysis becomes unwieldy and useless for decision-making. In many cases, the analysis should use an ecological region boundary that focuses on the natural units that constitute the resources of concern. For the purposes of eagle analyses no other projects were identified within the area of cumulative effect.

The decision as to whether an eagle take permit is requested is between the USFWS and Searchlight Wind Energy, LLC. If these parties determine that an eagle take permit for the project would be applied for; the USFWS would consider the cumulative effects of issuing such a permit.

At the time baseline surveys were completed for the project, Nevada had no official policy or protocols for avian pre-project surveys so protocols were developed between BLM and NDOW. In summary, two years of point count surveys were conducted, two spring seasons of raptor nest surveys, one season of bald eagle winter use surveys, and two aerial surveys of raptor nests.

The data collected in the project area does not reflect the high eagle used that has been recorded at Lake Mead. This is understandable as Lake Mead would be considered an attractant, providing a food source (i.e. fish) for eagle consumption. The proposed project area does not contain such an attractant as reflected by the lower observations of eagles.

a first-ever produced offspring. Bald Eagle Monitoring Final Report 2010-2011 at 1 (available at http://basinandrangewatch.org/Bald_Eagle_Monitoring_Final_Report_2010_2011-1.pdf and enclosed on the CD-ROM). The concentration of bald eagles spotted at the north end of Lake Mohave during the January 11, 2010 eagle count is within approximately six or seven miles of the project site. Bald Eagle Monitoring Final Report 2010-2011 at 7. BLM must disclose and evaluate the potential impact of the project site on bald eagles.

b. Impacts to other avian species.

BLM should confer with USFWS and must independently evaluate the statements regarding the impossibility of predicting bird kills by the project and disclose information regarding avian deaths from wind turbines at *all* wind projects that have reported data, and evaluate which sites are more like, or less like, the Searchlight site. Simply dismissing contrary scientific data without analysis violates NEPA. The agencies must also obtain and disclose data and analysis of likely raptor and other bird deaths from collisions with the proposed turbines at the project site.

BLM and USFWS should evaluate the attached comments of Dr. Shawn Smallwood related to the Whistling Ridge Wind project in Skamania County, Washington, a 75 MW project. Exhibit 15. As these comments demonstrate, preconstruction predictions of bird fatalities are often far lower than the actual estimated kills after a wind project begins operations. Exhibit 15 at 1–2. Dr. Smallwood extrapolated from avian kill monitoring at 23 wind sites in Oregon, California and Washington that the average annual fatalities for a project with 75 MW rated capacity would be 33 raptor fatalities, 422 total bird fatalities, and 86 bat fatalities. Exhibit 15 at 16. Again extrapolating this to the 200 MW rated capacity of the project, granting the ROW would result in 88 raptor deaths per year, 1,125 total bird deaths per year, and 229 bat deaths per year.

Dr. Smallwood's studies demonstrate that the potential for raptor, other bird, and bat deaths *can* be quantified and estimated—it *is* "possible," contrary to the assertion in the DEIS. DEIS at 4-35. In fact, BLM has done so at other proposed industrial wind energy development sites. *See, e.g.*, Exhibit 11 (estimating bird deaths at proposed 104 MW wind power generation site in Oregon). And the fact that 57 species EIS at exceeds the estimates provided in the DEIS.

Particularly given the finding that 72.7% of raptors *sighted on the project site itself* flew within the area that would be swept by the turbines' enormous rotor blades, significant kill of birds and bats is likely to occur at the Searchlight project. Even granting that fewer birds might use this site than other wind sites, the DEIS's disclosure and analysis of these effects is inadequate.

BLM should also consider that many of the methodological deficiencies in the Whistling Ridge surveys which Dr. Smallwood describes are present in the avian studies for the Searchlight project. Exhibit 15 at 3-9. BLM must fully disclose the methodology used to estimate likely bird kills in the supplemental DEIS and explain whether it conforms to best science as described in Dr. Smallwood's comments.

A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy). The BBCS provides a qualitative risk assessment for the effect of a factor (e.g., collision, electrocution) on birds and the adaptive mitigation measures. The intention is not to predict the number of fatalities due to turbine collision as pre-construction data poorly predicts fatalities for birds (Ferrer et al. 2012), but to determine if any species is at high risk to inform post-construction fatality monitoring.

The DEIS also fails to ensure compliance with the Migratory Bird Treaty Act ("MBTA"). Many of the species that have been identified at the project site are protected under this Act, but the DEIS does not demonstrate that operation of the project will comply with the Act. The MBTA requires that the USFWS enforce the MBTA against "any person, association, partnership, or corporation" that "by any means or in any manner," pursues, hunts, takes, captures, kills or attempts to take, capture or kill a migratory bird or any part, nest or eggs of any migratory bird. 16 U.S.C. §§ 703, 707. Under the MBTA, a person may take or kill migratory birds only as permitted under USFWS regulations and based on the USFWS's determination that the take or kill is compatible with the migratory bird treaties. *Id.* §§ 703, 704. The USFWS's determination must take into account scientific factors such as species abundance and distribution, migratory patterns, and breeding habits, as well as the economic value of birds. Id. § 704. The killing of a single migratory bird is sufficient to create criminal liability. *United States v. Corbin Farm Serv.*, 444 F. Supp. 510 (E.D. Cal), *aff'd*, 578 F.2d 259 (9th Cir. 1978). The killing of a migratory bird does not need to be intentional and the killing can occur "by any means or in any manner." *United States v. Moon Lake Electric Ass'n, Inc.*, 45 F. Supp. 2d 1070, 1075–79 (D. Col. 1999) (upholding the prosecution of a utility for unintentionally electrocuting and killing seventeen birds).

No permitting framework exists that allows a company to protect itself from liability resulting from take at wind facilities; however, the USFWS does not usually take action under the MBTA if good faith efforts have been made to minimize impacts. Appendix B-4: Bird and Bat Conservation Strategy (BBCS) (formerly referred to as the Avian and Bat Protection Plan [ABPP]) has been developed for the proposed project utilizing the recommendations within the USFWS's March 2012 Land Based Wind Energy Guidelines including a risk assessment and adaptive management measures.

Burrowing owls, a sensitive species, are present at the project site. DEIS at 3-31. The DEIS provides no information quantifying likely impacts (except reiterating how impossible it is to make any predictions), but says that any impacts will be mitigated through a mitigation plan that has not yet been developed. This violates NEPA. The DEIS presents essentially no information whatever about the baseline conditions of burrowing owls in the area or their status as a species. BLM should independently evaluate the site for burrowing owls, using the latest scientific protocol, which is in the California Department of Fish and Game's March 2012 staff report on burrowing owl mitigation, enclosed on the CD-ROM and available at www.dfg.ca.gov/wildlife/nongame/docs/BUOWStaffReport.pdf.

MM-BIO-6 specifies that Burrowing Owl Mitigation would follow USFWS Guidelines Protecting Burrowing Owls at Construction Sites in Nevada's Mojave Desert Region, which has been specifically developed for Nevada projects.

In addition, BLM must independently evaluate the potential that pelicans and other waterfowl using the Pacific Flyway and nearby Lake Mohave will be killed by the project's turbines. Pelicans and other waterfowl have been spotted over the project site by local residents. While this may not be recognized migratory water fowl route, neither the DEIS nor the Tetra Tech biology reports even mention it.

During bird surveys, no pelicans or other waterfowl were detected in the project area.

Finally, the avian survey supporting the DEIS is methodologically flawed and are inappropriate and ineffectual for answering the core questions of how many birds use the Searchlight site and what potential impacts to these species will be. For example, the survey efforts appear to only disclose a general presence/absence survey of birds. *See, e.g.*, DEIS at 3-29 to 3-32. It is not clear how this survey's results will contribute towards critical decision making since the protocols are not designed to convincingly deduce species' "absence" and therefore remove them from concern. Avian surveys were conducted during the day, or shortly after sunset, when in fact a large portion of avian mortality from industrial wind facilities is inflicted

At the time baseline surveys were completed for the project, Nevada had no official policy or protocols for avian pre-project surveys so protocols were developed between BLM and NDOW. Little evidence exists to suggest that the southwest and the area near the Searchlight wind project in the Mojave Desert are areas of high use migrant songbirds. However, migrant songbirds breed in the vicinity and likely travel through the area to reach the breeding grounds. Little data exists that correlate migrant passage rate with mortality at wind farms, but results to date indicate mortality is low (Erickson 2007).

on nocturnally migrating species (NRC 2007).[4] Quantification of the use of the site by nocturnally migrating species requires specialized equipment and surveys not described in the CEP's reports, such as multi-year radar studies. 60% of all flying animal mortality at wind turbine sites are bats, not birds (Baerwald *et al.* 2008).[5] The detection rate of bats also is likely to be underreported because of the lack of nighttime surveys.

3. The DEIS does not adequately address impacts to desert bighorn sheep.

Bighorn sheep need large expanses of land to roam for seasonal migrations to and from important winter range. Impediments to movement of these animals, such as an industrial-scale wind energy facility, will likely have negative impacts on big game populations that travel through the project area to reach other necessary areas of habitat. Desert bighorn sheep are present on the project site, and the site contains over 6,000 acres of bighorn sheep habitat of which 416 acres have slopes greater than 60% suitable for escape terrain. DEIS at 3-33. Bighorn sheep numbers in the nearby Newberry and Eldorado mountains have increased in recent years. *Id.* The DEIS recognizes that a Nevada Department of Wildlife management unit overlaps with the project area, and that the project area is part of the movement corridor linking the Newberry and Eldorado mountains. *Id.* The DEIS even recognizes that new structures, roads and human presence are barriers to bighorn sheep movement. *Id.* at 4-37. Then the DEIS dismisses potential impacts in less than half a page, stating without any support that "project effects are anticipated to be minimal" because "the project would only occupy a small portion of the available migratory corridor between these mountain ranges leaving some connectivity." *Id.* Significantly, the DEIS contains no map or other information that would allow the public and the decision maker to evaluate or comment meaningfully on the extent of the impact that the project will have on bighorn movement in the area.

Nowhere does BLM provide information regarding its conclusions that the occupied portion of the corridor is "small," nor what "some connectivity" means, nor how it arrived at the conclusion that blocking connectivity between two groups of sheep and fragmenting their habitat with noisy wind turbines will have "minimal" effect. The DEIS does not satisfy BLM's obligations to disclose and evaluate impacts under NEPA nor BLM's obligations to minimize harm to sensitive species in its own Manual. A supplemental DEIS should re-evaluate the impacts to habitat and the possible impacts to season migration or movement corridors for these species. Significant impacts from energy projects to bighorn sheep movement among occupied areas and to opportunities to recolonize vacant habitat have been recognized at other energy development sites, including in California's Cady Mountains at the Calico Solar Project. *See* Transcript of August 5, 2010 Evidentiary Hearing Before the Cal. Energy Resources

[4] National Research Council, Committee on Environmental Impacts of Wind Energy Projects. 2007. The Environmental Impacts of Wind Energy Projects. National Academies Press, Washington D.C. This is included on the enclosed CD-ROM.

[5] Baerwald, E. F., G. H. D'Amours, B. J. Klugand, R. M. R. Barclay. 2008. Barotrauma is a significant cause of bat fatalities at wind turbines. Current Biology, 16:695-696. This document is included on the enclosed CD-ROM.

EIS includes the available information provided by Nevada Department of Wildlife. Additionally, a map of potential habitat based on vegetation and topography was included in the EIS. Appendix B-3: Terrestrial Wildlife Plan has been prepared for the project and includes a risk assessment and mitigation measures for bighorn sheep.

Conservation & Development Comm. at 300–16 (Testimony of Dr. Vernon Bleitch), enclosed on CD-ROM as "2010-08-05_Transcript – CEC"). The bighorn sheep in the Cady Mountains, like those in the area of the Searchlight project, move among different habitat areas in surrounding mountain ranges in search of forage and water resources. *Id.* at 302, 305. A project site that impedes such movement disrupts the metapopulation in the area and results in fragmentation of bighorn sheep habitat, and will result in serious impacts to bighorn sheep. *Id.* at 307–14. Please evaluate Dr. Bleitch's testimony and assess how the impacts describe are, or are not, present for the Searchlight site.

The DEIS states that *if* Bighorn sheep are impacted by the operation of the facility, mitigation measures *may* be needed. DEIS at 4-37. But the DEIS already has established that mitigation *is* needed. The Terrestrial Wildlife Plan has not been created yet—this situation should be studied now and the bighorn herd movements researched with a telemetry study before construction blocks or disturbs movement corridors through the area. This information should be disclosed in a supplemental DEIS. What mitigation measures would be enacted in the future? Would the operating turbine facility be moved, or shut down? Again BLM has failed to comply with NEPA by disclosing no information about mitigation or its potential efficacy.

Appendix B-3: Terrestrial Wildlife Plan has been prepared for the project and includes a risk assessment and mitigation measures for bighorn sheep.

Construction of the Searchlight Wind Project would fragment crucial lower elevation foraging areas for bighorn sheep, as well as fragmenting and blocking the migration routes from the Newberry to the Eldorado mountains. BLM and the applicant have not evaluated how noise from blasting, other construction, and operation of the turbines (described in the section on desert tortoise, above) will affect bighorn sheep movement, nor delineated the area of potential impact. BLM has not identified whether particular areas on or surrounding the project site are of particular importance to bighorn sheep as lambing areas, and therefore has no baseline from which to evaluate the impacts of the project on bighorn sheep movement in this area. Because these data and subsequent analysis are lacking for this sensitive species, the DEIS fails to comply with NEPA.

The EIS includes the available information provided by Nevada Department of Wildlife. Additionally, a map of potential habitat based on vegetation and topography was included in the EIS.

It is well-documented that human disturbance in bighorn sheep habitat disrupts bighorn sheep and contributes to population decline. *See, e.g.*, Kathryn A. Schoenecker and Paul R. Krausman, Human Disturbance in Bighorn Sheep Habitat (enclosed on CD-ROM); Papouchis *et al.* 2001, Responses of Desert Bighorn Sheep to Increased Human Recreation, The Journal of Wildlife Management 65(3): 573-582 (enclosed on CD-ROM). The DEIS does not consider these effects, or the likelihood that installation of an industrial-scale wind energy project with more than eight miles of transmission line will have even greater impacts than a few hikers with dogs. Wildlife impacts from noise, including from wind power projects, are well documented. In addition, several other energy projects are being developed in the region in bighorn sheep habitat; BLM must disclose and evaluate the cumulative impact of these projects on this species.

Potential impacts to bighorn sheep are addressed in Section 4.4.5.14-Game - Direct and Indirect Effects by Alternative. Potential noise impacts to wildlife are addressed in Section 4.4.4-Wildlife. Appendix B-3: Terrestrial Wildlife Plan has been prepared for the project and includes a risk assessment and mitigation measures for bighorn sheep.

Migratory big game species like bighorn sheep serve an important stabilizing function in ecosystems, acting as keystone species (Kie & Lehmkuhl, 2001) (on the enclosed CD-ROM). The halting or change in movements can have a destabilizing effect on vegetative communities and species interactions, even on otherwise intact ecological systems such as largely unroaded areas (Kie & Lehmkuhl, 2001). Maintaining secure winter range is necessary for migrating and

The proposed project would permanently remove only 152 acres of wildlife habitat, which is less than 1% of the habitat in the project ROW area (18, 949 acres of BLM-managed land).

resident populations of big game species to thrive in the area. Here, the project would obliterate 503 acres of bighorn sheep winter range.

A big game monitoring study completed by Western Ecosystems Technology Inc. (WEST) at Horizon's Elkhorn Valley Wind Project in northeastern Oregon (a 100.65 MW project) evaluated the impacts of wind energy on big game (Jeffery et al., *Elkhorn Valley Wind Project, Union County, Oregon, Big Game Monitoring Study Report*, January 2010 (on the enclosed CD-ROM)). In a letter to the project manager for the proposed Antelope Ridge Wind Project (300 MW) near the Elkhorn project, the Oregon Department of Fish & Wildlife said that the statistics in the WEST study indicated that, "elk and deer were located further from wind turbines and associated activities in winter 2008 and 2009 compared to the baseline of 2004 and 2005 prior to initiation of construction." *See* Exhibit 16, ODFW letter to Valerie Franklin, Project Manager, Antelope Ridge Wind Farm, May 31, 2010. Please use this information regarding effects of industrial-scale wind energy on big game species to assess the potential impacts to bighorn sheep from the Searchlight Wind Project. This should include more study into the use of big game in the area by conducting flight surveys.

The DEIS provides no support or evidence for any of its conclusory statements about the likelihood of effects of the project on bighorn sheep. For example, the DEIS states that impacts would be "minimal." DEIS at 4-37. This statement is unsupported by any study, and contrasts with evidence (such as the study at the Elkhorn Valley Wind Project, above) that big game do avoid transmission lines and turbines and therefore will be driven and impeded from their current habitat in the Searchlight Hills and surrounding mountains by the proposed project.

4. The DEIS does not adequately address impacts to bats and other sensitive species.

Bats

The DEIS did not adequately describe the treats to bats from the project. Once again, without any scientific or evidentiary basis, BLM provides only a general statement of possible effects, a note that mitigation (in the form of the ABPP) will be developed at some future point, and states that the number of bats that could be injured or killed "cannot be estimated." DEIS at 4-34. But BLM *has* estimated likely bat fatalities at the Echanis wind energy generation site in Oregon, estimating that "the 40 to 69 turbines at the Echanis Project site would cause from 28 to 235 bat deaths per year." Exhibit 11 at 1–2 (pages 3.5-22 to 3.5-23). The same number of species of bats (14) was identified in the Echanis project area as are present at Searchlight. DEIS at 3-28. A similar number of these species are BLM sensitive species. What is so deficient about the BLM in Nevada that it cannot provide an estimate for bat deaths at a 200 MW wind project when its counterpart in Oregon has no difficulty doing so for a 104 MW generation site? What is so deficient in the operation of BLM's Southern Nevada District that it cannot provide an estimate for bat deaths from the Searchlight Wind Project when BLM's Ely District had no difficulty estimating that 192 bats per year would be killed by the Spring Valley Wind Project? Exhibit 17. Please explain whether there any reason that the Southern Nevada District is not capable of conducting and disclosing high quality information about likely effects to bats?

In accordance with 40 CFR 1502.2 Environmental Impact Statements shall be analytic rather than encyclopedic. Potential impacts to bighorn sheep are addressed in Section 4.4.5.14-Game - Direct and Indirect Effects by Alternative., and identify that the proposed project may cause bighorn sheep to avoid the area. Appendix B-3: Terrestrial Wildlife Plan has been prepared for the project and includes a risk assessment and mitigation measures for bighorn sheep.

A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy). The BBCS provides a qualitative risk assessment for the effect of a factor (e.g., collision, electrocution, barotrauma) on bats.

The wide estimation range presented in the citation (28-235 bat deaths per year) exemplifies the difficultly in predicting mortality and providing meaningful information to decision-makers.

The DEIS does not comply with NEPA or BLM's obligations to minimize harm to sensitive species. The DEIS dramatically understates the potential harm to bats, including sensitive species bats, from the project. Bats are prone to many of the same threats as avian species. There are significant and growing concerns about impacts of wind turbines on bats. Bats have low reproduction rates and high mortality rates from collisions with turbines or transmission lines could result population declines.[6]

Studies have documented that some wind facilities kill thousands of bats each year.[7] However, research on bat mortality is limited and concerns about bats grew as researchers began to discover high numbers of bats during avian mortality surveys for birds by wind energy facilities. The level of bat mortality now occurring at existing wind installations around the country raises questions about the long-term population viability of those bat species most vulnerable to wind turbines, to the point that some bat scientists and advocates are considering whether they warrant listing under the federal Endangered Species Act. The prospect of significant population declines, even extirpation, for several or most species of bats, is possible. These long-lived animals, with low reproductive rates, are notoriously vulnerable to mortality setbacks. Bat populations are already under stress from a variety of threats, including habitat loss, pollution, and possibly climate change.

The bat species at highest risk from wind energy development are long-distance latitudinal migrants, which may be present during the fall migration season when bat kills at wind facilities typically peak.[8] The studies done for these sites fall short and more research is needed to understand the amount of migrants going through the area around the Echanis, East Ridge, and West Ridge sites. With the increasing number of wind facilities, wind turbine heights have also increased. Recent research indicates that taller turbines pose a greater threat to bats than shorter turbines.[9] The wind turbines preliminarily planned for the generation sites are over 400 feet high, from base to rotor tip, presenting an unusually high risk for bat mortality. Recent research has revealed that at least some bats killed at wind facilities are dying not because of collisions with turbine towers or blades, but because of sudden drops in barometric pressure. In other words, as bats approach moving turbine blades, they experience something like a sudden and severe case of the "bends."[10] This causes their lungs to essentially explode.

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[6] http://www.batsandwind.org/pdf/Wind%20Energy%20Development%20and%20Wildlife%20Conservation.pdf (Kuvlesky et al. 2007) (on enclosed CD-ROM).

[7] http://www.fort.usgs.gov/BatsWindmills (USGS, 2010) (on enclosed CD-ROM).

[8] http://www.fort.usgs.gov/Products/Publications/22170/22170.pdf (Cryan, 2008) (on enclosed CD-ROM).

[9] *See id.*

[10] http://www.newscientist.com/article/dn14593-wind-turbines-make-bat-lungs-explode.html?feedId=online-news_rss20 (Brahic, 2008) (on enclosed CD-ROM).

Potential impacts to bats are discussed in Section 4.4.5.8-Bats - Direct and Indirect Effects by Alternative. A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy). The BBCS provides a qualitative risk assessment for the effect of a factor (e.g., collision, electrocution) on bats and the adaptive mitigation measures.

Comment noted.

Although the DEIS mentions barotrauma, it makes no effort to analyze the scope of this problem at the Searchlight site. DEIS at 4-34. Obviously, these concerns regarding drops in barometric pressure near turbines extend to other avian species that might come near the turbines. Stipulations for operation of the turbines need to take into account the latest science on how bats are being killed, and adjust operations accordingly. Turbines may need to be shutdown during times of the year and on nights when conditions are most conducive to bat mortality. Stipulations of this nature can be a condition of the generation project ROW and the DEIS should evaluate certain conditions in a DEIS supplement.

Bat scientists now hypothesize that the bat species dying at the highest rates at wind energy facilities are, in fact, attracted to the turbines. *See* Exhibit 18. Pre-siting studies are necessary to evaluate where bats are present on the site, and a proper evaluation of the impacts would disclose potential mitigation measures. It would be desirable for a permitting agency to set a limit on bat deaths, and require swift adaptive actions, including shutdown of the facility—temporary or permanent—if fatality thresholds are exceeded. Similar provisions should be included for other wildlife species. Seasonal shut down of wind turbines, particularly during the late summer/fall migratory period, is currently being examined as one way of reducing bat mortalities at other locations.[11] Obviously, while these techniques may enable a wind facility to operate with minimal threat to bats throughout the rest of the year, wind developers will be concerned about the economic impact of temporary shutdown, and may resist this strategy to reduce bat deaths. However, evaluation of these mitigation techniques, after adequate information has been obtained regarding bats at these sites and site-specific impacts, should be undertaken as part of a supplemental DEIS.

A Bird and Bat Conservation Strategy (BBCS) (formerly referred to as an Avian and Bat Protection Plan [ABPP]) was developed for the project, which follows the guidelines of the recently published USFWS Land-Based Wind Guidelines (Appendix B-4: Bird and Bat Conservation Strategy). The BBCS provides a qualitative risk assessment for the effect of a factor (e.g., collision, electrocution, barotrauma) on bats.

Gila Monster and Chuckwalla

Both Gila monsters and chuckwallas are BLM Sensitive Species in Nevada and the management direction from BLM Manual 6840.2 applies as previously described. The Gila monster is also protected under Nevada law. The limited survey of the site, which covered only only a fraction of the project area, detected no Gila monster, but it is clear that "the preferred habitat of the banded Gila monster exists within the survey corridor and the exterior belt transects." Terrestrial Wildlife Survey Spring 2011 at 6; *see* DEIS at 3-27. Recognizing the presence of Gila monster habitat, the survey noted that "[t]he Gila monster is rarely observed relative to other species, and given the difficulty of detection (NDOW 2007), though likely rare, absence cannot be concluded." Terrestrial Wildlife Survey Spring 2006 at 6.

Handling and relocation measures for Gila monsters would be in compliance with NDOW guidance as stated in MM-BIO-4. More specific mitigation measures have been developed in the Terrestrial Mitigation and Monitoring Plan (Appendix B-3: Terrestrial Wildlife Plan).

Mitigation measure "Bio-04" for Gila monsters and chuckwallas proposes capture and relocation as the mitigation strategy if the lizard is encountered. DEIS at 2-44. Relocation of banded Gila monster has been shown to be an ineffective strategy.[12] Similar to desert tortoises, the Gila monsters try to return to their original sites despite relocation distances. Effective

[11] http://www.batsandwind.org/main.asp?page=research&sub=operational (BWEC, 2008) (on enclosed CD-ROM).
[12] Sullivan, B.K., M.A. Kwiatkowski, G.W. Schuett 2004. Translocation of Urban Gila Monsters: a Problematic Conservation Tool. Biological Conservation 117L 235-242.

mitigation for these species needs to include strategies that will minimize mortality. In addition, BLM does not evaluate the potential effects of blasting that will be necessary during construction, but rather only discusses "grading" impacts. DEIS at 4-33. How will the noise and shock effects of blasting affect these sensitive species?

The DEIS admits that Gila monsters are difficult to survey for and provides very little other information about mitigation and avoidance of the species. DEIS at 3-27. This is not adequate to satisfy NEPA. The BLM's statements regarding potential that Gila monster and chuckwalla "could be crushed, injured or killed during construction" and that "increased traffic during operation and maintenance could increase the potential for reptile/vehicle collisions to cause Gila monster and chuckwalla injury or death" (DEIS at xv, *see also id.* at 4-33) are precisely the type of "[g]eneral statements about possible effects and some risk" that the Ninth Circuit has rejected as legally insufficient in the absence of an explanation as to why more definitive information was unavailable. *Klamath–Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 993 (9th Cir.2004) (internal quotation marks omitted); *see id.* at 994 (rejecting as insufficient statements that a particular environmental factor was "unchanged," "improved," or "degraded" and whether the change was "major" or "minor").

Because of the lack of comprehensive surveys, the DEIS failed to adequately analyze the impacts that the proposed project would have on Gila monsters and chuckwallas including direct, indirect and cumulative impacts to these species and failed to adequately identify and evaluate potential alternatives that would avoid or minimize the impacts of the project on these species.

B. The discussion of mitigation measures throughout the DEIS is inadequate.

An EIS must do more than provide a perfunctory description of possible mitigation measures. *Okanogan Highlands Alliance v. Williams*, 236 F.3d 468, 473 (9th Cir. 2000). An EIS is not complete unless it contains "a reasonably complete discussion of possible mitigation measures." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352, 109 S.Ct. 1835, 104 L.Ed.2d 351 (1989). That requirement is implicit in NEPA's demand that an EIS must discuss "'any adverse environmental effects which cannot be avoided should the proposal be implemented.'" *Id.* at 351-52, 109 S.Ct. 1835 (quoting NEPA, 42 U.S.C. § 4332(C)(ii)); *see also* 40 C.F.R. § 1502.16(h) (stating that an EIS must contain "[m]eans to mitigate adverse environmental impacts"). An agency must take a "hard look" at potential mitigating measures; a perfunctory description, or a mere listing, of mitigating measures, without supporting analytical data, violates NEPA. *Okanogan Highlands Alliance*, 236 F.3d at 473.

NEPA regulations require that the BLM discuss possible mitigation measures as a means to "mitigate adverse environmental impacts." 40 C.F.R. § 1502.16(h). An adequate discussion of mitigation measures requires the agency to analyze the effectiveness of the proposed mitigation. *S. Fork Band*, 588 F.3d at 727. This allows the public, the decisionmaker, and any reviewing court to determine "whether they constitute an adequate buffer against the negative impacts that may result from the authorized activity." *Nat'l Parks & Conservation Ass'n*, 241 F.3d at 734. To comply with NEPA, mitigation measures proposed in an EIS "must be developed to a reasonable

Although Gila monsters are difficult to detect, during pre-project tortoise and chuckwalla surveys, biologists looked specifically for Gila monster and sign. Although no animals or sign were detected, the DEIS states that Gila monster habitat is present; therefore, the animals may reside in the project area. Preconstruction surveys as described under APM-13 Environmental Clearance would help to locate Gila monsters immediately prior to construction activities and animals would be removed per NDOW protocol as stated in MM-BIO-4.

Currently, no official protocols for Gila monster surveys exist. However, during pre-project tortoise and chuckwalla surveys, biologists looked specifically for Gila monster and sign. Although no animals or sign were detected, the DEIS states that Gila monster habitat is present; therefore, the animals may reside in the project area.

A discussion of all mitigation measures is included in the EIS. BLM requires that mitigation measures are implemented as a stipulation of the ROD and/or ROW Grant. Development of mitigation plans often requires input, review, and approval by other regulating agencies such as USFWS, NDEP, DAQ, and NDOT. As such these plans are not typically completed prior to a Final EIS. However, all the elements and basic requirements of the mitigation plans are discussed throughout the EIS. Additionally, a number of mitigation plans have been completed and are included as follows Appendix B-1: Weed Management Plan, Appendix B-2: USFWS Biological Opinion, Appendix B-3: Terrestrial Wildlife Plan, and Appendix B-4: Bird and Bat Conservation Strategy.

degree. A perfunctory description, or 'mere listing' of mitigation measures, without supporting analytical data" is insufficient. *Id.* (quoting *Idaho Sporting Cong.*, 137 F.3d at 1151).

The DEIS does not comply with the basic requirement under NEPA that include supporting analytical data that explains how mitigation might actually prevent harmful effects. Rather, it simply lists possible mitigation measures, but provides no details or analysis of how, or whether, the measures would actually mitigate the likely adverse impacts described. Part of this stems from the failures documented above to disclose accurate, quantified and detailed information about likely impacts. But mostly this is a failure to make the analytical connection required under NEPA.

Sections of the EIS have been updated to explain how mitigation measures would reduce impacts.

The principle deficiency in the DEIS's discussion of mitigation is that none of the proposed "mitigation" plans have been completed. BLM must prepare a supplemental DEIS once the plans are completed. For example, the Emergency Response Plan, Waste Management Plan, Weed Control Plan, Facility Decommissioning Plan, Wildlife Mitigation and Monitoring Plan, such as for Gila Monster, Terrestrial Wildlife Plan for Bighorn sheep, Traffic Management Plan, Hazardous Materials Handling Management Program, Cactus and Yucca Salvage Plan, Stormwater Pollution Prevention Plan, and the Spill Prevention, Control, and Countermeasures Plan should be completed, and released for public review, as part of the supplemental EIS to allow the public to participate meaningfully in the decision making process—not deferred until after project approval. There also is no meaningful way for the Secretary or BLM to make a non-arbitrary decision about whether to approve the ROW applications unless the agency's decisionmakers have the accurate information in hand about what mitigation is actually being proposed, and also have (consistent with NEPA) the public's views on the subject.

BLM requires that mitigation measures would be implemented as a stipulation the ROW Grant. Development of mitigation plans often requires input, review, and approval by other regulating agencies such as USFWS, NDEP, DAQ, and NDOT. As such these plans are not typically completed prior to a Final EIS. However, all the elements and basic requirements of the mitigation plans are discussed throughout the EIS.

For example, the discussion of mitigation in the section on wildlife describes a future "Wildlife Mitigation and Monitoring Plan" and a "Terrestrial Wildlife Plan." DEIS at 2-44 to 2-45; 4-33; 4-37. These "Plans" do not describe what mechanisms would be used or what the practical consequences would be for preventing or minimizing damage to habitat. There is no explanation how or whether these "Plans" to be developed at some future point actually would be effective in mitigating adverse environmental effects. The entire suite of mitigation described at 2-43 to 2-45 related to wildlife requires additional description and scientific citation and justification. Any plans to "mitigate" the acknowledge adverse effects on wildlife must be fully outlined with dates, actions, and rationale that can justify the actions. There should be a full description of where off-site mitigation will occur and a full description of on-site mitigation measures that will be adopted for the project site. What exists is not a reasonable discussion of "mitigation" as required by NEPA.

The Weed Management Plan was included in the DEIS (Appendix B-1: Weed Management Plan). The EIS has been updated to include the following completed mitigation: Appendix B-2: USFWS Biological Opinion, Appendix B-3: Terrestrial Wildlife Plan and Appendix B-4: Bird and Bat Conservation Strategy

Similar deficiencies in descriptions of mitigation occur in the sections involving other impacts (*e.g.* DEIS at 2-34, referencing best management practices ("BMPs") and design features) but—largely because most of the plans are not yet developed—not explaining how they would mitigate the negative effects described in the DEIS. *See* DEIS at 2-35 to 2-50 and all discussion of "mitigation" at 4-10 to 4-122. None of these descriptions of the plans, nor the later sections in the DEIS that discuss mitigation, provide any detail nor explain how the mitigation measures will work or whether they will be effective. None of the mitigation measures described

in the DEIS involve a "hard look" that includes analysis of their likely effectiveness, but rather are impermissible listings and perfunctory descriptions of possible mitigation measures.

Please evaluate the following specific comments related to mitigation measures as you develop a more detailed disclosure and evaluation of the mitigation measures and their likely effectiveness:

DEIS at 2-37: How wide is the area to be graded prior to trenching? Will yucca, cholla, and Joshua trees be removed and placed in a nursery for transplanting, or is it true that, as stated, "Organic matter will be mulched"? These plants are hundreds of years old. How can the BLM issue a ROD condoning this amount of destruction of pristine desert.

Under MM-BIO-2 a Cactus and Yucca Salvage Plan would be developed. Text in Section 4.4-Biological Resources Impacts in the EIS has been updated to reflect the elements of this plan.

DEIS at 2-39: What is the status project approval by the FAA? Safety at this air field should not be compromised by the turbines. In addition, plans exist to build homes and businesses around the airport. The necessary infrastructure has been installed. If and when the economy turns around, this project would be viable. However, if the wind turbines are built, the airport project will never be built.

Status of FAA approval is pending. Input from Searchlight Airport Facilities Manager was received during scoping and was taken into consideration in developing the proposed project.

DEIS at 2-40: This states the O&M Building and associated septic system would require a wellhead protection plan. Will there be a well at the O&M Building in the future? Are there private wells nearby that could be compromised by the septic system?

A wellhead protection plan is a State of Nevada standard for all septic systems. A well is not part of the proposed project. No private wells are anticipated to be effected.

DEIS at 2-43: The DEIS states "Desert tortoise fencing would be installed around Western's proposed switching station." Will the roads and turbine pads also have tortoise fencing? The high number of tortoises counted in the area would indicate that ALL areas of construction should be fenced.

The fencing proposed around the switching station would be permanent. Permanent fencing around roads and turbine pads has not been proposed because this would fragment tortoise habitat and result in unnecessary disturbance.

DEIS at 2-44: Sixteen varieties of bats frequent and live in the area. How will their roosts in mine shafts and natural caves be monitored during blasting and construction to ensure that no disturbance is taking place?

Monitoring of bat roosts would occur in compliance with the Bird and Bat Conservation Strategy (Appendix B-4: Bird and Bat Conservation Strategy).

DEIS at 2-46: The DEIS states "To further reduce effects to the US-95/ Cottonwood Cove Road intersection, the Plan will identify an alternate access route to the Proposed Project site during peak construction if possible." We suggest the "planners" look at a map of the town of Searchlight. The only "alternate routes" would be through residential areas with roads even narrower than the 24-foot wide Cottonwood Cove Road. These narrow side streets also have 90 degree turns that would not accommodate construction traffic.

Text regarding alternate route has been removed from the document.

Utility poles are also immediately adjacent to the Cottonwood Cove Road. Will the developer move these poles to ensure no disruption of service to the people who live there? There are narrow walking paths immediately adjacent to Cottonwood Cove Road in Searchlight, which locals use to walk to the library and park, and children use to walk to the elementary school. Construction and traffic of the magnitude planned has the potential to create daily life-threatening situations for the people who live in Searchlight and are simply trying to go about their lives.

There are no plans to move any existing utility poles. Refer to MM-TRAN-1 for a description of elements that would include in the Traffic Management Plan that would be prepared to address effects on local traffic (Table 2.6-2. Mitigation Measures and Section 4.7-Transportation Impacts). A Traffic Management Plan would be a stipulation of the ROW Grant.

"Providing alternate transportation routes should temporary road closures be required." Again, it is theoretically possible that people attempting to tow their boats to Cottonwood Cove could be routed through the residential areas, but once you get to the area at the Community Center, THERE IS BUT ONE ROAD THAT GOES 14 MILES EAST TO COTTONWOOD COVE. There is simply no other way to get there. Do BLM and Duke propose to build new roads to route traffic through the existing ACEC and/or nearby wilderness areas? How will they deal with the boaters arriving to gridlock, having towed their boats for hundreds of miles to recreate on Lake Mohave?

Text regarding alternate routes has been removed from the document.

DEIS at 2-46: The DEIS does not disclose that Cottonwood Cove Road is in poor condition already. If it is repaired to "preconstruction condition", nothing is gained. What guarantee is there that Searchlight, Clark County and the State of Nevada won't be left holding the bag for massive road repair costs? The weight of vehicles necessary to transport turbines and tower components and the cranes to erect the turbines are likely to cause serious damage to this rural road. Exhibit 8.

In Section 4.7-Transportation Impacts, the BLM disclosed that streets could receive wear from equipment and deliveries and has required a mitigation measure to address the effect. Refer to MM TRAN-2: Repair Damaged Streets for a description of the mitigation mearure (Table 2.6-2. Mitigation Measures and Section 4.7-Transportation Impacts).

DEIS at 2-46: The proposed mitigation of visual impacts is not clearly defined. There simply is no way for the public to know whether BLM actually will "select BLM approved Flat Tone Colors for All Structures" and actually paint the turbines a "BLM-approved Standard Environmental Color intended to blend with the surrounding environment." The DEIS presents conflicting information that "[a]ny color other than white will need to be approved by the FAA. If a color is not easily distinguishable for pilots, daytime strobe lights will be needed, thus negating the mitigation." So, in fact, there will be *no* mitigation for visual impacts: either the color will be white (negating BLM's claim that the color will "blend" with the environment) *or* the turbines will carry daytime strobe lights. BLM has an obligation to provide the information to the public *now* about what the turbines actually will look like, and what FAA will, or will not, approve.

Visual Mitigation measures are discussed in Section 4.9-Visual Resources Impacts. Visual simulations depict the turbines as white, which would be the "worst-cast scenario," if the FAA would not allow an alternate color.

More obviously and fundamentally, there is no way to disguise 87 428-foot tall structures in pristine desert.

DEIS at 2-47: According to the DEIS, construction noise can be mitigated, with the exception of the blasting that will be necessary in the granitic bedrock, for which there is no discussion of mitigation. Yet blasting is certain to occur: how do BLM and Duke propose to mitigate the noise and effects from blasting? How does applicant propose to "mitigate" the noise of the operating turbines?

Refer to MM-NOI-1, which updated to include that blasting will be limited to 8am to 5pm weekdays only (Table 2.6-2. Mitigation Measures and Section 4.10-Noise Impacts). Areas will be quarantined prior to blast activity. MM-NOI—3 has been updated to include that an audible warning system will be used notifying public of pending blasting activities.

DEIS at 2-48. The DEIS makes a patently false and uninformed statement that "[n]o adverse effects on socioeconomics condition are anticipated; therefore, no mitigation measures are proposed." It is difficult to believe that BLM would make such a false statement. Property values will plummet even further than they already have; residents will move away; tourism will dwindle; local businesses dependent on tourism will fail; and the small town of Searchlight will never be able to expand beyond its present size. No one will develop anything other than more wind turbines, or possibly a hazardous waste dump, close to wind turbines that stand 430 feet tall, create 24-hour per day noise, despoil the viewshed, and have flashing lights day and night.

Commenter's assertion is speculative and not supported by literature. Section 4.12-Socioeconomic Impacts has been updated to include potential effects on recreation and tourism. For further information see the newly added Appendix F: Literature Review of Socioeconomic Effects of Wind Projects and Transmission Lines..

In addition, the project map prepared by VTN dated 11-10-2009 neglects to show a number of private holdings located at the northwest part of the project. A copy of this high-resolution map is included on the CD-ROM ("Figure 1 Duke SWEP Project Area - LARGE MAP"), and should be incorporated into the DEIS to show the topography and more accurate information about the project site and surrounding areas. There are approximately six different landowners there, and at least six occupied residences. Why are these not shown on the project drawings?

The VTN map dated 11-10-09 is not part of the EIS. The Figures in the EIS include the private parcels in the northwestern portion of the project area and effects to those parcels have been analyzed in appropriate sections of the EIS figures and analysis. Figure 2.1-1. 96 WTG Layout Alternative and Figure 2.1-2. 87 WTG Layout Alternative have been revised to reflect area topography.

C. The DEIS fails to disclose and evaluate adequately the likely impacts of the project on visual and scenic resources.

The DEIS's disclosure of the project's impacts to visual resources is misleading, deceptive, and incomplete. The scenic resources of Southern Nevada that would be affected by the proposed industrial-scale generation site and transmission lines are of national significance. This project would be built adjacent to outstanding conservation areas and the impact to visual resources will degrade the visitor experience. The project would be placed next to the Lake Mead NRA, the Piute-El Dorado Valley ACEC, the Wee Thump Wilderness Area, the McCullough Mountains Wilderness Area. The project will be highly visible from Spirit Mountain, sacred to many Colorado River Tribes. The project will also be highly visible from several regions in the Mojave National Preserve, California. Areas that will be impacted are the Castle Mountains, the Castle Peaks, the New York Mountains and the Piute Range. The DEIS hardly mentions the breadth of these visual impacts.

Key observation points were identified during project scoping and provide a range of representative views in the project area.

This warrants the utmost care in consulting with expert agencies to ensure that the decision-making agencies have impartial and objective analysis of the likely impacts to the environment. BLM in the DEIS has provided no independent input regarding the affected visual resources, relying instead on a study apparently prepared entirely by the applicant's consultant, NewFields Environmental Planning and Compliance. *See* DEIS at 5-5 (listing Anne DuBarton, who prepared the visual simulations in Appendix E, as part of the "NewFields team.").

NewFields is an independent third party contractor supporting the BLM with preparation of this NEPA document, as is Truescape, the firm that developed the visual simulations. These firms have no financial interest in the outcome of the project. The contrast ratings and visual simulations were reviewed and approved by BLM visual resources specialists in accordance with VRI BLM Manual Handbook H-8431-1.

Also, the DEIS contains no evaluation of whether the visual impacts of the project are compatible with BLM's minimization obligations under FLPMA and the Wilderness Act. The Wilderness Act requires that wilderness areas "shall be administered … in such a manner as to leave them unimpaired for future use and enjoyment as wilderness … [and] the preservation of their wilderness character." 16 U.S.C. § 1311(a). The Act also requires that "each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area…." *Id.* § 1133(b). BLM, as the administering agency of the six Wilderness Areas from which the Searchlight Wind Project will be visible, has the obligation to prevent visual impacts to these areas. *See, e.g., Sierra Club Northstar Chapter v. Kimbell*, 2008 WL 4287424 (D. Minn. 2008) ("actions occurring on adjacent non-wilderness lands that have an impact on designated wilderness are regulated by the Wilderness Act"); DEIS at 3-51. BLM cannot allow projects on public lands adjoining a Wilderness to become so intense, incompatible, or intrusive that a designated Wilderness Area is degraded or is no longer a wilderness. An agency action that degrades the wilderness character of a designated Wilderness Area—

The visual impacts are in compliance with the VRM III Class designation for the area. The Wilderness area was not identified as a public area of concern during project scoping. However, 17 other KOPs were selected during project scoping and these areas provide an adequate representation of visual impacts throughout the viewshed.

regardless of the source of the allegedly degrading activity—violates the Wilderness Act's requirement that the agency preserve wilderness character. *Izaak Walton League of America, Inc. v. Kimbell*, 516 F. Supp. 2d 982, 988–89 (D. Minn. 2007). Here, BLM has provided no simulations of visual impacts to the wilderness character of designated Wilderness within visual range of the proposed project. *See* DEIS Sections 3.9, 4.9 (Visual Resources, Visual Impacts sections containing no discussion of impacts to designated Wilderness Areas).

BLM must collect and evaluate its own visual impacts analysis, rather than rely on one prepared by the developer's consultant, and disclose it to the public for review. This is particularly true because of serious deficiencies in the visual impacts analysis presented in the DEIS. NEPA case law and guidance are clear that an applicant and its consultants should not be allowed to influence the analytical content of an EIS. *See, e.g., Sierra Club v. Sigler*, 695 F.2d 957, 962 n.3 (5th Cir. 1983) (expressing serious concern over role of private firm in preparation of EIS). An EIS must be an entirely objective analysis intended to aid the decision makers and the public in understanding the consequences of an agency decision. Thus, it is standard practice for action agencies to ensure that applicants for federal action are insulated from all aspects of EIS preparation other than providing information. It is ultimately BLM's responsibility, and not that of any consultants, to independently verify the DEIS's content. The agencies are "responsible for the independent verification and use of the data, evaluation of the environmental issues, and . . . the scope and content of the environmental assessment." *Save Our Wetlands v. Sands*, 711 F.2d 634, 642 (5th Cir. 1983).

Given the extremely biased nature of the DEIS, and the visual impacts section in particular, and the apparent lack of meaningful involvement by agency personnel, it is doubtful that BLM is meeting this responsibility. There is no evidence of independent analysis on the part of BLM in the DEIS. Although NEPA regulations allow an applicant to prepare a NEPA document, the agency must independently evaluate the information and is responsible for its accuracy and make its own evaluation of the environmental issues and take responsibility for the scope and content of the document. 40 C.F.R. § 1506.5.

1. The DEIS presents deceptive and contradictory information about turbine color.

As noted above, the DEIS does not actually disclose what color the turbines will be. DEIS 2-46. The DEIS frankly acknowledges that "[d]ue to the height of the [turbines] and the oscillating motion of the blades, it is difficult to make the towers blend into the landscape" and that a flat gray paint color "will tone down the usual white design." *Id.* However, any color *other* than white has to be approved by the Federal Aviation Administration. *Id.* and any color "not easily distinguishable for pilots" will result in daytime strobe lights on the turbines. *Id.* and *id.* at 4-77. Therefore BLM has failed to disclose what the *actual* visual impacts of the project will be. Either the turbines will be painted white, or the turbines will carry daytime strobe lights.

But BLM does not reflect this in the visual simulations it provides. The Appendix E Key Observation Point ("KOP") Visual Contrast Worksheet Forms (Appendix E) state for all of the KOPs under "proposed activity description" that the color of the structures will be "white." However, the "simulations"—most clearly visible in the Appendix E simulations for KOPs 14

NewFields is an independent third party contractor supporting the BLM with preparation of this NEPA document, as is Truescape, the firm that developed the visual simulations. These firms have no financial interest in the outcome of the project. The contrast ratings and visual simulations were reviewed and approved by BLM visual resources specialists in accordance with VRM BLM Manual Handbook H-8431-1.

FAA will determine if the turbines will be white or equipped with strobes. Visual simulations in the EIS depict the WTGs in white, which would have the highest degree of contrast and is; therefore, the worst-case scenario.

Truescape confirms that the turbines depicted in the visual simulations were white. The simulations accurately depict what the perceived color of the turbines would be under the lighting conditions of when the site photo was taken. Time of day, angle and direction of sunlight, cloud cover and other light conditions were factored into illustrating their appearance as off-white or gray in some situations.

Organizations

and 15—show gray-painted turbines *without* daytime strobe lights. By the terms of the DEIS itself, there is no way that the turbines depicted in the simulations actually will be built: either they will be white (which BLM acknowledges makes it difficult to blend into the landscape), or they will carry visually disturbing strobe lights. In either instance, the simulations in Appendix E do not reflect the reality of either of the potential visual impacts.

The simulations are therefore not accurate and "high-quality" information which NEPA requires be supplied to the public for comment and to the decisionmaker to make a non-arbitrary decision on the ROW applications. Because the FAA has to approve the design, BLM should get that approval *first* and then present to the public simulations that depict what the actual appearance of the turbines—white, or grey with flashing strobe lights—will be. It is not acceptable to try to present visual "simulations" that do not reflect either of the possible visual impact scenarios the FAA might approve.

2. The photo simulations in the DEIS are misleading and present an inaccurate representation of the likely visual and scenic effects.

There are several elements of the DEIS's analysis of impacts to visual and scenic resources that are flawed and make the evaluation of impacts incomplete. The photo simulations of turbine impacts illustrated in the DEIS are highly misleading. There are several reasons for this. First, the photographs appear to have been taken with a wide angle lens in panoramic mode, causing objects in the distance to appear smaller than they would to the naked eye. Secondly, the photos were taken when the atmosphere was hazy. It is during the crystal-clear days that the views are most dramatic and would therefore be the most affected by the presence of turbines. The analysis should take into account those days when the visual impacts will be most severe, and also which represent the most common atmospheric conditions in the arid lands of Southern Nevada; the photos appear to be trying to downplay the impacts. Readily available photographs of other industrial-scale wind energy development projects, with the same approximate scale and distance, show that actual industrial-scale wind energy installations are far more prominent in reality than the simulations in the DEIS. Exhibit 19 (photograph of Elkhorn Valley wind project in Union County, Oregon (100.65 MW), taken from at least 3 miles away—turbines are highly visible even though photograph is smaller and lower-resolution than those in the DEIS).

The flaws in the visual impacts analysis are evaluated and described in additional detail in the comments on KOPs 2, 8, 14, and 15 by R.T. Bundorf, attached as Exhibit 20. We conclude that, to accurately depict what the human eye would see at these locations, a view covering only about 1/6 of the wide-angle photographs actually presented should have been displayed. In properly-scaled photographs, as depicted in Exhibit 20, the visual impact from the turbines is dramatically greater than the DEIS discloses. In addition, as described above, the grey color of the turbines in the simulation (*see* Exhibit 20 at 5–9) is misleading because that will either not be the color the turbines actually are painted, or they will carry flashing daytime strobe lights. Also, at least one of the simulation photographs (from KOP 2) does not appear to contain any turbines at all, although from the location of the KOP (approximately 3.5 miles from the project site), turbines should be visible. This may be an error that BLM must independently evaluate and correct in a supplemental DEIS.

Visual simulations were evaluated at the recommended size and hazy conditions were taken into account; therefore, the contrast ratings were correctly evaluated. BLM visual resources specialists reviewed these evaluations. As full size visual simulations (approximately 20x60 inches) cannot be included in the EIS due to size constraints, the visual simulations in the EIS (including KOP 2) have been updated and scaled to appropriately compensate for the use of the wide-angled panoramic view.

The deficiencies documented by R.T. Bundorf in Exhibit 20 also are echoed when compared with the principles of proper visual effects analysis outlined in Appendix D to the National Research Council's seminal 2007 report on "The Environmental Impacts of Wind Energy Projects," enclosed on the attached CD-ROM. Appendix D describes basic standards such as line-of-sight analysis and proper viewing distance which demonstrate the inadequacy of the visual effects analysis presented in the DEIS. Appendix D also describes how use of wide angle lens photographs—as the DEIS does—"result in inaccurate perspectives," Environmental Impacts of Wind Energy Projects at 350–51, and—as the DEIS has—produce images that "minimize the visual impacts of the proposed project." *Id.* at 351. Also discussed are issues regarding how color, scale, and size and shape of nearby objects or visual clutter (present in several of the DEIS simulated photographs) can affect perceived impacts.

BLM must evaluate, independently, the National Research Council's objective scientific "best practices" guidance for visual resource impacts analysis and must produce a set of photographs for public review that accurately illustrate the impacts to the scenic quality of the Searchlight area, reflecting conditions on clear days, with sharp resolution and angle of view that more accurately approximates normal human vision.

The DEIS discussion of mitigation is wholly inadequate. Rather than include discussion of mitigation for visual impacts, the DEIS references no mitigation that actually will reduce visual impacts from the turbines' operation, instead stating the false proposition that the turbines will be painted a color that will blend with the environment. DEIS at 4-77. As a result, the DEIS contains no description of mitigation and no actual analysis of how, or whether, the proposed design and management practices could be effective to mitigation the dramatic visual and aesthetic degradation of the unique viewsheds of the Piute Valley and surrounding mountains. This is impermissible under NEPA. An agency must take a "hard look" at potential mitigating measures; a perfunctory description, or a mere listing, of mitigating measures, without supporting analytical data, violates NEPA. *Okanogan Highlands Alliance*, 236 F.3d at 473. Examples of mitigation could include ROW conditions requiring setbacks of turbines from affected scenic overlooks or areas frequented by recreationists; conditions limiting the height of turbines, or conditioning approval of ROWs on specific configurations that eliminate visual and noise impacts to areas where visitors and recreationists congregate; installation of proximity-warning devices that would limit the impact of nighttime red light blinking on the unspoiled skyscape; or conditions requiring burying the transmission line throughout its entire route.

In addition, other publicly-available simulations of potential visual impacts show far more dramatic effects on the spectacular desert viewsheds than BLM's biased simulations. For example, two simulations posted at http://www.basinandrangewatch.org/SearchlightUpdates.html, and attached as Exhibit 21, illustrate potential views of turbines on clear, cloudless days from the vantage point of a quiet recreationist in the Searchlight Mountains, depicting the turbines with the white color that the BLM simulations state will be the color of the structures to be built. DEIS at Appendix E. The supplemental DEIS must include visual simulations that *accurately* depict the likely impacts, not the set of skewed and deceptive simulations that currently are included in the environmental

The contrast ratings and visual simulations were reviewed and approved by BLM visual resources specialists in accordance with VRM BLM Manual Handbook H-8431-1.

Visual simulations were evaluated at the recommended size and hazy conditions were taken into account; therefore, the contrast ratings were correctly evaluated. BLM visual resources specialists reviewed these evaluations. As full size visual simulations (approximately 20x60 inches) cannot be included in the EIS due to size constraints, the visual simulations in the EIS have been updated and scaled to appropriately and accurately compensate for the use of the wide-angled panoramic view. The turbines in the simulations are white.

BLM had considered scenic quality when determining the VRM Class for district as disclosed in the BLM RMP (see discussion in Section 3.9.3-Visual Resources Management Classes). Section 3.9.4.8-Selection of KOPs illustrates views in and around the project area.

Comment noted.

assessment. BLM has failed to provide high-quality and accurate information about visual impacts for the public's review, in violation of NEPA.

3. BLM must prepare and disclose video simulations that depict arrays of spinning turbines and video simulations that depict turbine array operations at night.

BLM uses a "one size fits all" approach to its visual and viewshed analyses. In its analyses, The DEIS does not make a clear distinction between the various types of visual stimuli and how each category will affect the environment. Object visibility during the daytime will be affected by a multitude of factors including color, pattern, size, shape, ridgeline, and motion. For example, a stationary, irregular-shaped object with variegated pattern of earth-tone colors located below a ridgeline will be much less dominant on the landscape as a solid white vertical linear object looming above hilltops and roads with moving turbine blades. Wind turbines, by their very nature, are at the very top of visually noticeable unnatural objects. The DEIS tacitly acknowledges this in a statement buried in a table, stating that "[d]ue to the height of the WTGs and the oscillating motion of the blades, it is difficult to make the towers blend into the landscape." DEIS at 2-46. The DEIS's disclosure and analysis do not adequately explain the differences in visual impacts with the various visual stimuli involved (i.e. immobile vs. mobile objects and constant vs. blinking lights).

The spinning blades on 428 ft.-tall turbines looming above the hilltops will undeniably dominate the otherwise dramatic natural beauty of the location and would not be overlooked by the average observer. Video simulations are necessary to disclose accurately the flicker from 200-ft. diameter blades on 87 turbines in the Searchlight mountains. Because the blades rotate, sometimes at high speeds, their flicker will be more eye-catching and disruptive to the visual character of the desert landscape than stationary objects. Without simulations that disclose the movement of the turbines, the DEIS is deficient and violates NEPA.

On the enclosed CD-ROM, we have included five video clips (IMG 2931, IMG 2932, IMG 2937, IMG 2938, and IMG 2938 in the folder marked "turbine video") that show how turbines and turbine fields look in motion and the actual visual impact of moving turbines, which BLM has excluded from its DEIS analysis. For example, the video numbered "IMG 2931" shows a spinning turbine from approximately the same vantage point as the DEIS's simulation at KOP 15 (Appendix E). As this video illustrates, the simulation included in the DEIS dramatically understates the visual impact of a spinning turbine and presents the public with inaccurate information. The Appendix E worksheet describes that the structures (the turbines) being simulated will be "white" in color—as are the turbines in the video IMG 2931—but the simulation incorrectly shows static turbines that are painted grey.

BLM must prepare and distribute a supplemental DEIS disclosing simulations that show accurate information about the likely visual impacts from the motion of the turbines and their likely white color—impacts which BLM has acknowledged exist. DEIS at 2-46, 4-62, 4-77 Given readily available technology in the year 2012, there is no excuse for the BLM to not prepare and disclose to the public video simulations of the proposed project's true visual impacts.

The contrast ratings and visual simulations were reviewed and approved by BLM visual resources specialists in accordance with VRMBLM Manual Handbook H-8431-1.

The DEIS failed to evaluate adequately the impacts the turbines will have at night. DEIS at 4-77. The DEIS did not prepare simulations of blinking lights on wind turbines, wind turbine movement, and nighttime views. The lack of such concrete visual information in the DEIS thwarts the ability of the public and the decisionmakers to evaluate the true impacts of the project on the dark skies and scenic values which the Department of the Interior must protect on lands it manages, including the protected ACEC and nearby Lake Mead NRA. The failure to include information on nighttime view is particularly troubling. Nighttime views and moving simulations of the turbine strings and transmission lines, which would bear several red strobe lights, flashing at frequencies of at least 20 times per minute, are essential to understanding the dramatic change that the project would wreak on the nighttime sky in the Searchlight area. DEIS at 4-77. And no still image can simulate the experience of viewing a group of flashing lights on an otherwise dark landscape and over a lightless mountain ridge. Flashing lights are a very different experience than steady lights. A proper disclosure of visual impacts requires a realistic, moving-picture representation of the nighttime views of the proposed development, so that the public may have a better understanding of the aesthetic trade-offs that come with it.

Object (illumination) visibility during the nighttime is also affected by a variety of factors including brightness, color, pattern, and constancy. For example, a single, constant, white light that is about as bright as a planet or star from a particular distance will be much less noticeable than a line of bright flashing red lights from the same distance. Again, BLM fails to make this distinction. BLM also fails to point out that a group of flashing lights on a dark night will be noticeable from a much longer distance than the turbines during the daytime.

BLM has failed to evaluate the amount of light from FAA-required and discretionary lighting that will be present on the turbines, transmission line, tensioning towers, and associated facilities at night. One of the most important scenic resources of the Southern Nevada area is the nighttime darkness. A field of 87 wind turbines would have significant nighttime visual impacts. The DEIS inappropriately dismisses this concern by stating that "lights are not expected to contribute to sky glow or glare because of the intermittent nature and color of these lights." DEIS at 4-77. But this ignores the *actual* visual impacts from the flashing lights: they may not contribute to "glow or glare," but they interrupt the darkness. It would be easy to and disclose information showing these effects: already in Nevada and southern California there are areas where there are large arrays of wind turbines whose FAA-required lighting blink 15 or 20 times per minute. A simple video of these locations would afford the public (and agency decisionmakers) the opportunity to evaluate whether these effects are unreasonable and therefore whether the ROWs should be denied.

Aside from declaring, without analysis, "minimal" impacts to glow or glare, there is no other discussion in the DEIS of the impacts of the FAA-required lighting in the DEIS. As a result, the statement that there would be "minimal effect" on nighttime light pollution has no support. BLM and USFWS must independently confirm this false statement by visiting and documenting nearby areas, such as the Tehachapi, California region, that have been highly impacted by industrial wind energy. On overcast nights, local people who are not even in direct

BLM does not have a dark sky management policy. The BLM does recognize the importance of protecting the integrity of the Dark Sky environment and will require mitigation to dark sky impacts that fall under BLM authority. The aviation safety warning systems are under the authority of the Federal Aviation Administration (FAA). The FAA is currently assessing the suitability of utilizing Audio Visual Warning Systems that enable on-demand functionality of the WTG warning lights. The BLM is unable to require this form of night sky impact mitigation until such time that the FAA has finalized their assessment and issues new visibility marking policy guidance.

The contrast ratings and visual simulations were reviewed and approved by BLM visual resources specialists in accordance with VRM BLM Manual Handbook H-8431-1.

The BLM has included mitigation consistent with dark skies objectives as suggested by Nevada Division of State Lands and the National Park Service.

view of the actual wind turbines report that all of the red aviation lights reflect off of the clouds and create visual impacts at even great distances from the turbines.

Also, BLM should impose mandatory mitigation of nighttime light pollution by requiring installation of an Obstacle Collision Avoidance System ("OCAS") that is activated by radar and only blinks when aircraft are in close proximity, minimizing or eliminating the nighttime impacts from the Project. *See, e.g.*, Exhibit 22 (describing OCAS), available at http://www.darksky.org/mc/page.do?sitePageId=84895. Turbine maker Vestas has acquired the OCAS technology, making it readily available to a facility such as Searchlight. Exhibit 23.

BLM must obtain nighttime photographs and video of turbine arrays and extrapolate those to the 87 that may occupy the Searchlight hills. BLM also has an obligation to present truthful evidence about what it means for the strobes to be "intermittent": in the other areas where wind projects have been built, they flash every three or four seconds. Hundreds of turbines hundreds of feet tall with red or white strobes flashing certainly do contribute to light pollution. The DEIS is simply wrong to suggest that they do not.

Finding a location near any major city with dark skies is very difficult. At present, the area around Searchlight has skies dark enough to permit star gazing. Boaters on Lake Mohave are also able to enjoy the beauty of starlit skies without the intrusion of heavy industry. If the project is built the lighting on the turbines will destroy the dark skies in the area. Many Searchlight residents, as well as visitors to the area, treasure the dark night skies and the dark mountain landscapes that often accompany them. The appearance of such a stark sign of our industrial society, and of newly-industrialized land completely surrounded by protected lands, will surely be off-putting to many, and clearly convey to others that Nevada and Clark County have irretrievably lost some of their naturalness, wild beauty, and traditional character. BLM has failed to carefully evaluate this potential change in the visual and scenic character of the lands it manages in the DEIS.

4. BLM must redo its simulations to depict all reasonable visual impacts scenarios and revise its visual effects analysis to incorporate necessary revisions.

The BLM should require more KOP simulations that depict all of the visual impact scenarios. All of the most potentially visible angles of light and time of day should be considered to depict the worst case scenario.

The DEIS KOP simulations undermine the full visual impacts. They should be thrown out and re-designed, and BLM must conduct its own independent analysis of the visual impacts of the project because the simulations provided by the applicant's consultant are so misleading. BLM should disclose and evaluate the following factors in its revised visual resources analysis:

(1) Angle of Observation. The apparent size of a project is directly related to the angle between the viewer's line-of-sight and the slope upon which the project is to take place. As this angle nears 90 degrees (vertical and horizontal), the maximum area is viewable.

The BLM does recognize the importance of protecting the integrity of the Dark Sky environment and will require mitigation to dark sky impacts that fall under BLM authority. The aviation safety warning systems are under the authority of the Federal Aviation Administration (FAA). The FAA is currently assessing the suitability of utilizing Audio Visual Warning Systems that enable on-demand functionality of the WTG warning lights. The BLM is unable to require this form of night sky impact mitigation until such time that the FAA has finalized their assessment and issues new visibility marking policy guidance.

The only exterior lighting on the WTGs will be the aviation warning lighting required by the FAA. The warning lighting will be the minimum required intensity to meet the current FAA standards. Outdoor night lighting at the O&M facility will be the minimum necessary for safety and for security and will adhere to the minimization measures dicussed in under MM-VIS-5.

While the BLM does not have a Dark Sky Management policy, the BLM does recognize the importance of protecting the integrity of the Dark Sky environment, MM-VIS-5 has been updated to reflect that a lighting plan would be submitted and approved by the BLM and the basic elements that would be contained in that plan including proper dark sky protection from unnecessary light pollution scatter.

BLM has revised the scale of the visual simulations in the EIS to address this comment. However, the BLM determined the contrast ratings at the proper scale and as such the contrast ratings remained consistent with VRM Class III standards and objectives.

Visual impacts were assessed using BLM methodology. Seventeen KOPs were selected to address public concerns expressed during project scoping. Although every possible scenario is not addressed, the BLM believes that adequate KOPs were evaluated to illustrate representative views from sensitive viewpoints throughout the project area.

NewFields is an independent third party contractor for the BLM as is Truescape, the firm that supplied the visual simulations. These firms have no financial interest in the outcome of the project. The impact assessment and visual simulations were reviewed and approved by BLM visual resources specialist in accordance with VRM BLM Manual Handbook H-8431-1.

(2) Length of Time the Project Is In View. If the viewer has only a brief glimpse of the project, the contrast may not be of great concern. If, however, the project is subject to view for along period, as from an overlook, the contrast may be very significant.

(3) Relative Size or Scale. The contrast created by the project is directly related to its size and scale as compared to the surroundings in which it is place.

The immense size of the project is large and will have the potential to impact different VRM zones of different classes. Much of the public lands in the region are held to Class 1 VRM standards or the National Park Service equivalent BLM defines the objective of this class "to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention."

Wind turbines that tower above 428 feet tall have a three-dimensional impact. It is impossible to mitigate these impacts. Protecting visual resources also means protecting unbroken landscapes from very major industrial impacts. It is pointless for BLM to try to define visual impacts based on Class 3 BLM VRM standards.

To accurately depict the likely visual effects of the project, BLM should create additional simulations from relevant viewpoints, including residential areas within Searchlight that presently have views of Spirit Mountain, and from residences northeast of Searchlight that have views of Lake Mohave. The following Key Observation Point simulations should be included in a supplemental DEIS:

1. Five KOPs from local residences that recognize and define the worst case scenario visual impacts.
2. Four KOPs from the Mojave National Preserve, California. Two from the Castle Peaks and Castle Mountains area and two from the Piute Range.
3. Four better KOP observation points from the Lake Mead National Recreation Area. Please design these so they are visible.
4. Three KOPs depicting the flashing red lights at night.
5. Four KOP observations looking down on the massive ground disturbance that will accompany the visual disturbances from vantage points in the surrounding hills and a vantage point that approximates the view from Spirit Mountain.
6. Three KOPs depicting the visual impacts from construction activity (dust clouds, enormous trucks, cranes, etc).

In addition, spurious KOPs should be eliminated from the analysis. It is very difficult to understand why the first KOP, Railroad Pass, was chosen. DEIS at 3-60. It is 36 miles and two mountain ranges from the project, so obviously no turbines would be visible. Similarly, KOP 3 and 4 (28 and 35 miles distant) are also questionable.

The BLM manages visual resources for the VRM class in which the proposed project is located, not for the VRM Class Rating of adjacent BLM administered lands, nor does the BLM have the authority to regulate land use on public lands administered by other federal land management agencies.

Comment noted.

Comment noted. The KOPs included in the EIS were selected as representative and/or included in response to public comments and concerns raised during the scoping period.

Also, the DEIS should disclose and evaluate in its revised analysis that one of the project features, the planned 100-foot high microwave tower, is also very visible and would detract from tourists' views of Lake Mohave. DEIS at 2-32.

How much "weight" is given to visual resources in making the decision whether to approve the ROWs? DEIS at 3-55. The viewshed in virtually every direction around the project will be affected. People who presently have beautiful views of Lake Mohave or Spirit Mountain will no longer be able to enjoy them. People driving east on Cottonwood Cove will drive through a heavy industrial area. Many of the visitors to the lake come from California, where their views have already been destroyed by wind turbines. Those people will likely no longer choose to recreate at Lake Mohave. People driving on US 95, just passing through the area, will be the least affected. People who live in and around Searchlight and who recreate at Cottonwood Cove will be the most affected. As noted, the turbines will be visible from three states, and from a number of wilderness areas. DEIS at 3-56.

How were the VRM categories arrived at? DEIS at 3-58. This is not explained in the DEIS. Beauty is in the eye of the beholder, and the views of Spirit Mountain and Lake Mohave are unparalleled. Likewise, expansive views of Joshua tree woodlands and forests of Teddy Bear Cholla are equally beautiful. However, if the people creating the VRM categories are from the East or West Coast, their bias toward viewsheds of deciduous trees may result in a lower rating for all desert views.

A quote from Section 3.9.4.2 on page 3-60 reads, "The landscape is panoramic, and expansive vistas of distant mountains are common." This sums up the beauty of the desert. However, a panorama intruded upon by 428 foot tall wind turbines is virtually destroyed for all who live in and travel through the region.

Park visitation at Cottonwood Cove is stated at over 300,000 annually. DEIS at 3-60. All 300,000 visitors arrive at Cottonwood Cove via Cottonwood Cove Road. An 8 to 12 month construction period would financially destroy the concessionaire at Cottonwood Cove, and much of the tourism that comes through Searchlight. Applicant should perform an economic analysis to quantify the revenue lost by the concessionaire, the National Park Service, and all Searchlight businesses that are dependent on tourism. The lost business would also result in a loss of sales tax revenue for the county and state.

Line 3 on page 4-65 should read "west" rather than "east" toward the proposed project. If you are looking east, you are looking into Arizona.

D. The DEIS does not disclose and evaluate adequately the likely impacts of the project on recreation resources.

The DEIS' analysis of potential impacts to recreational resources is inadequate. Although Section 3.11 appears to provide certain baseline data, its analysis of potential environmental impact is highly flawed and ignores the national significance of scenic vistas afforded at key observation points and recreational destinations throughout the area surrounding Searchlight,

An additional simulation for the proposed western switching station has been included in the EIS. Refer to KOP 17 in Section 4.10-Visual Resources Impacts.

Impacts to visual resources have to be in conformance with the Visual Resources Management Classification for the area, in this case the project area is designated VRM Class III, which allows for moderate levels of visual change.

Visual Resource Management classes are designated through the land use planning process and declared in the Resource Management Plans (RMPs). Designation of visual management classes is ultimately based on the management decisions made in the RMPs. RMP VRM Class decisions consider inventoried visual values along with other land use allocations and resource protections.

All actions proposed during implementation of the RMP that would result in surface disturbance must be analyzed for conformance to the VRM Class objectives and impacts to the visual values.

Five steps are involved in the visual resource management (VRM) classification process. These are: 1) outlining and numerical evaluation of scenic quality; 2) outlining of visual sensitivity levels; 3) delineating distance zones; 4) overlaying the scenic quality, sensitivity levels and distance zones using a matrix to develop visual resource inventory classes (VRI) I-IV; and 5) designate VRM Classes I-IV to provide protection to visual resource while meeting the multiple use goals of the RMP through the planning process.

Typographical area has been corrected.

including the Piute-El Dorado ACEC and Lake Mead NRA. Essentially, the DEIS sweeps potentially significant adverse effects under the rug by providing only the most cursory discussion of potential impacts to scenic resources and the unique recreational experience afforded on public lands in southern Nevada that are present in the Searchlight desert and mountains and surround the site.

The National Park Service ("NPS"), which administers the Lake Mead NRA, previously expressed significant concern about the impacts from the project in 2009. Exhibit 24. For example, the NPS described that siting the "interconnect facility or any attendant facilities in section 26 [in close proximity to the NRA entrance station] could bring significant impacts to the Cottonwood Cove entrance into Lake Mead NRA during peak traffic periods." *Id.* The NPS constructed the entrance station approximately 1.5 miles west of the NRA boundary, along Western's transmission line where the interconnection facility will be placed, and "On a busy summer weekend there are thousands of visitors using this road to access the Lake Mohave shoreline." *Id.* The DEIS does not disclose these concerns, nor indicate whether (or how) they have been addressed. However, the turbine construction along Cottonwood Cove Road and the interconnection facilities planned adjacent to the road have not varied from the initial proposal about which the NPS expressed concern. The interconnect facility is still located too close to the entrance station to a NRA. DEIS at 2-11. This facility should not be permitted that close to the road and entrance station. The DEIS also does not clearly indicate whether the land exchange described in the NPS letter in 2009 has taken place, and, if so, just how close to land administered by the Park Service the wind turbines and transmission will be. Please clarify this in the maps developed for the final EIS.

The next-to-last paragraph in the DEIS on page 3-88 presents a very accurate description of the existing use of the area, and the reason people choose to live and recreate here. Why, then, would BLM even consider granting a ROW allowing heavy industrial development in an area described as attracting "recreation visitors seeking a primitive recreation experience of natural beauty, solitude, and freedom from the regulations of structured urban environments." DEIS at 3-88. However, the DEIS's discussion of the impacts to recreation opportunities in Section 4.11 only lists general effects and does not discuss the specific ways in which the presence of an 87-turbine utility-scale wind project and associated transmission lines will deny recreationists the opportunities for beauty and solitude that BLM identified as characteristic of the area.

The DEIS's discussion of recreational impacts does not disclose that noise from the operation of the project will be easily audible (up to 25 decibels) throughout large portions of the ACEC surrounding the project site, up to the border of the Lake Mead NRA. DEIS at 4-86, 4-89. In these areas, any quiet recreation seeking the "experience of natural beauty [and] solitude" will be eliminated. The DEIS does not acknowledge that the current, relatively pristine condition of the project site and surrounding protected areas is, in itself, an important recreational resource that will be destroyed in its current form by the project. None of the KOPs are located in areas where quiet recreationists would be seeking to escape from roads into the surrounding natural areas. DEIS at 3-56. Instead, only four KOPs are presented within five miles of the project site, all along roads. *Id.* This fails to accurately present information about visual impacts to a significant class of recreationists who use the area.

Section 4.10-Noise Impacts, discusses the noise impacts of the project. Updated Figure 4.10-1. Noise Contours for the 96 WTG Layout Alternative and Figure 4.10-1. Noise Contours for the 96 WTG Layout Alternative illustrates the noise contours for areas both within and outside the project area.

The proposed action and preferred alternative would represent significant adverse impacts to the otherwise natural setting and, therefore, to the hiking experience in the Searchlight desert and mountains and in the ACEC and NRA where the project would be visible. The DEIS must evaluate what hiking areas and camping areas this would affect. In particular, BLM must evaluate how people camping at dispersed campsites would be affected by the flashing red lights on the turbines flashing every 15 seconds throughout the night. This development would forever change, for the worse, the character of the recreation experience on hundreds of acres of protected land in the vicinity of the project site. The DEIS avoids any discussion of noise and visual effects on dispersed campsites, omitting any noise receptors or visual analysis points of view outside of areas of human congregation and an established campground *35 miles from the project site*. DEIS at 3-6. Nor does the DEIS describe any potential conditions that BLM might place on the ROWs to ensure protection of recreational resources. As a result of these shortcomings, the DEIS fails to adequately describe, and propose mitigation for, what invariably would be a significant and irreversible impact to the outstanding and nationally-significant scenic and recreational resources on and surrounding the project site.

Noise receptors and visual analysis points were determined during Public Scoping when people living in the valley came forth with the properties and other locations they felt would be the most important to analyze. These included property lines, the NRA boundary, and the campground and other facilities at Cottonwood Cove. Dispersed camping areas were not identified as important locations during this process. The EIS proposes mitigation measures in Section 4.11.3-Mitigation. Refer to Section 4.10-Visual Resources for a discussion of impacts to dark skies.

Construction of an industrial-scale energy project in the area east of Searchlight also would obliterate the opportunities for use of the "Searchlight Trails" system that Clark County has been developing in the Searchlight area. The Searchlight Trails Study is enclosed on the CD-ROM (available at http://www.clarkcountynv.gov/Depts/comprehensive_planning/advanced_planning/Documents/SearchlightTrailsStudy.pdf). BLM does not mention the Study in the DEIS as a recreational resource. The Study outlined plans for a number of hiking, Off-Road Vehicle ("ORV") and horseback trails in the area northeast of Searchlight, and even linking to trails to other areas around Searchlight. The Study shows trails that, if the project is developed, would be overlain by turbines and roads to the turbines. So far only a portion of the trail system has been fully developed (a walking path just east of the community center). If the turbines are erected, there will not be hiking, ORV, or horseback trails through the turbines.

The BLM manages its lands for a variety of uses. Right-of-ways may include several uses such as transmission lines and trails. Section 4.11.2-Direct and Indirect Effects by Alternative under Recreation has been updated to reflect the findings of the Searchlight Trails Study.

The Study provides an excellent description and photos of Cottonwood Cove Road within the town of Searchlight. They correctly depict the road as very narrow, and as the Study indicates, would be difficult to widen because some of the fences and improvements around residences were built on the easement. This is quite common in old Nevada mining towns.

The discussion of impacts in the DEIS presents impacts as speculative when they are certain. DEIS at 4-92. All four items listed will occur if the project is built. Conflict already exists between the master plan for Searchlight Trails, and the planned WTGs. Also, noise levels will be in conflict with NPS levels for noise at night. Access to existing recreation will be altered by the presence of wind turbines along Cottonwood Cove Road, and ORV riding areas will be impacted by the presence of turbines in previously accessible areas. The levels of use at Cottonwood Cove will change. Many people will no longer find it desirable to travel to a site with the higher noise levels that will result from the turbines. There is also potential for overcrowding when a good share of the 300,000 Cottonwood Cove visitors go to Lake Mead, or to Katherine's Landing.

BLM right-of-ways are managed for multiple uses. Section 4.10.2.2-Proposed Action – 96 WTG Layout Alternative, indicates that sound levels for the NPS would be under 35 decibels which is in conformance with the NPS requested level. No wind turbines are directly adjacent to Cottonwood Cove Road. Five WTGs would be visible from the road. Access roads would be improved, providing access for OHV riding. Section 4.11.2-Direct and Indirect Effects by Alternative under Recreation has been updated to reflect the findings of the Searchlight Trails Study.

The DEIS states that there would be no change to the status of the ERMA or existing ROS classification, which includes "recreation in a natural setting, generally away from other human activities." DEIS at 4-93. How anyone could state that 87 428-foot tall wind turbines will have no effect on recreational opportunities or classification status is puzzling. What would it take to constitute a change?

The third paragraph on page 4-93 does not comply with BLM's obligation under NEPA that an EIS "shall be written in plain language … so that decisionmakers and the public can readily understand them." 40 C.F.R. § 1502.8. Could this paragraph be translated into plain English? When 12 months of construction, 37 miles of new road, and 87 428-foot tall turbines in a natural area is considered fine for recreation areas on public lands, there needs to be some interpretation done to convert this into "plain language." Also, the altered environment and noise from turbines will eliminate the area for hunters. The change in the viewshed and noise level will not be palatable for hikers looking for a natural experience.

What does it mean when the DEIS states that "Construction activities would have minimal but permanent impacts on the trail"? DEIS at 4-94. Does this mean the trail will be obliterated? Is there an alternate route that could avoid this historic trail? The history of Nevada is not expendable. The same page mentions that "Access to the project area during O&M would not be restricted and 29 miles of new and improved road would allow for greater access to the area." If the applicant requires an 886-foot safety set-back from turbines, how can the roads be used for recreation?

It is an understatement to say the project "could" have long-term impacts on the recreation setting and experience. DEIS at 4-94. Basically, the project will change the project area from pristine desert to a heavy industrial zone. The document states the project would "degrade the quality of the recreation setting." This area is an important area for bighorn sheep, and the document states the project could have a negative effect on big game and upland game and wildlife habitat. Given the admitted degradation of the natural area, and negative effect on every aspect of the area, why would BLM consider any alternative other than the "No action" alternative?

The DEIS states that the project ". . . would not substantially impact the area's potential for recreation opportunities . . ." DEIS at 4-95. This statement is not believable. Even though the so-called "footprint" (where turbines, transmission towers, and access roads touch the ground) is small, the fact that the turbines and infrastructure are dispersed over thirty square miles—with noise and visual impacts that extend far beyond the "footprint" and indeed beyond the project site itself—belies that statement. How can a 30-square mile project be deemed having "moderate residual impacts on the recreation setting and experience resulting from the long-term presence of WTG's transmission lines, and access roads." How can the presence of 430 foot tall turbines, generating loud noises, and destroying the viewshed, be considered "moderate"? If this is considered "moderate," what does BLM consider "extreme"?

Section 4.11.2-Direct and Indirect Effects by Alternative discloses the proposed project effects on recreation. Construction of the proposed project would not close the area to hunters. Refer to Section 4.10-Noise Impacts for a discussion of noise effects.

Section 4.11.2-Direct and Indirect Effects by Alternative has been updated to reflect that the precise location of the Old Spanish Trail within the project area is unknown and no physical evidence of the trail exists on the ground. Therefore, no impacts to the trail would occur. The 886-foot safely set back is a standard design safety precaution to protect established structures and major thoroughfares. Access roads would be available for public use, although they could not approach too closely to the WTGs.

Comment noted.

The project only would permanently disturb 152 acres. The natural habitat surrounding the WTGs will be maintained to the extent possible and laydown and other construction areas will be returned as closely as possible to the pre-project condition.

E. The DEIS does not disclose and evaluate adequately the likely impacts to vegetation, special status plants, and noxious weeds.

The DEIS is also deficient because it provides inadequate and misleading information about rare plants. The botanical surveys for sensitive species plants were performed during a six-week period between March and May 2010. DEIS at 3-23. The botanical survey freely acknowledges that the "survey report can only represent the site as it was observed during the survey period(s)." 2010 Searchlight Botanical Survey at 6. However, this disclaimer is not mentioned in the DEIS itself. These springtime surveys detected no sensitive plant species. However, this is insufficient information from which to conclude that no rare plant species occur in the area that the project will affect. Varying and sporadic rainfall in this arid place means that certain species do not bloom during the few days of surveys, and some species only flower after summer rains. The DEIS is inadequate because it lacks late summer/early fall-flowering plant surveys on the proposed project site.

Approximately 40% of the plant taxa in the area of the project flower in late summer/early fall due to the location and bimodal precipitation regime. The spring surveys conducted would fail to detect and document most of these summer/early fall-flowering rare plants on site. Because of the vagaries of precipitation in the Mojave Desert, surveys should be performed over a number of years during both the spring and summer/fall flowering seasons in order to maximize the probability of identifying all special status species that occur on the project site. Projects of this size and potential impact should include more than two years of surveys. Without an accurate inventory of plant taxa that occur on site, it is not possible to fully assess project impacts to special status plants and therefore meaningful mitigation cannot be developed.

At least one of the figures provides incorrect identification of the species photographed. Figure 10 does not show Sahara Mustard and Phacelia, but rather Sisymbrium irio (another invasive mustard) and Erodium cicutarium (a major invasive). Given that Penstemon bicolor is known to occur just west and north of this site, it is likely to occur on the site but was not observable due to dry conditions or limited surveys. The surveys—featuring few botanists, meandering surveys, and pseudo-systematic sampling, and omitting fall sampling—likely undercounted species on the site. In light of the relative lack of botanical inventories of the southern Nevada region and the location near California and Arizona, influenced by the Colorado River and with expected affinities from the Sonoran Desert to the south, it is surprising that no new taxa for Nevada were identified. A new record in Nevada for plants from neighboring states would automatically fall on Nevada's watch list and be a species of concern.

The DEIS must disclose the amount and cycle of rainfall at the project site, which most years will be less than six inches, and also disclose the relationship between the amount of rainfall and the times of the surveys. BLM should conduct surveys during the fall as well as spring to identify the potential presence of sensitive plant species, and develop and disclose mitigation for the effects of construction and operation of the project on such plants. The DEIS states that no rare plant mitigation will be required because no rare plants were found on the surveys. Had rare plant surveys been conducted at the proper times, more rare plants may have turned up in the surveys.

Alphabiota Environmental Consulting conducted the botanical survey for this project according to BLM guidelines.

Comment noted. No change is required in the EIS.

The Eastern Mojave Desert is a botanical frontier where in the past few years alone, a number of very significant botanical finds have occurred and more are to be expected. For example, at least five species previously undocumented within the California Desert Conservation Area boundaries have been documented in the last few years near the project site in Nevada. Additionally, these species that are found on the "edges" of their range are incredibly important for species persistence[13] especially in light of global climate change.[14]

Because of the lack of comprehensive surveys, the DEIS failed to adequately analyze the impacts that the proposed project would have on rare and special status plant species including direct, indirect and cumulative impacts to these plants and failed to adequately identify and evaluate potential alternatives that would avoid or minimize the impacts of the project on these species. In order to comply with NEPA, the BLM should revise or supplement the DEIS with this critical information and circulate it for public review and comment.

Alphabiota Environmental Consulting conducted the botanical survey for this project according to BLM guidelines.

The DEIS includes only the most general description of the tremendous problem of invasive weeds. DEIS at 3-22, 4-25 to 4-26. For example, there is only an acknowledgement that the project's construction and operation has the "potential for the introduction or proliferation of noxious weeds into the project area." *E.g.* DEIS at 4-26. But there is no detail provided about what weeds or to what extent the project will be a cause of exacerbating the problem of weeds in the project area and surrounding lands. Weeds are one of the greatest threats to the natural environment, yet almost no data or analysis of weeds appears in the DEIS. Please evaluate the Declaration of ecologist Dr. Jonathan Gelbard, on the enclosed CD-ROM (including attachments),[15] who describes that the spread of weeds is "recognized, virtually by scientific consensus, as one of the greatest threats to desert ecosystems." Gelbard Decl. ¶ 5. The impacts of weeds on these ecosystems range from reductions in biodiversity and wildlife habitat, to changes in ecosystem processes such as fire frequency and hydrology, to increases in erosion and soil loss. *Id.* at ¶ 8–10. Roads serve as "major conduits" for the spread of invasive species because they are the "entry points for virtually all human impacts to terrestrial ecosystems." *Id.* ¶¶ 11–12. The integral link between the presence of roads and the spread of weeds is well-accepted in the scientific literature. *Id.* ¶ 13 (and Table 1).

Impacts as a result of invasive weed species are discussed in Section 4.4.1.2 Direct and Indirect Effects by Alternative and Appendix B-1: Weed Management Plan.

The DEIS does not evaluate the extent to which the roads created for construction and later maintenance of the project will lead to invasion of weeds into currently weed-free or low-weed areas, or cause the adjacent ACEC and other nearby lands to be more seriously impacted by invasive weeds. BLM must explain what the baseline conditions for weeds are in the area where

These effects are described as a potential impact of the proposed project, which includes roads in Section 4.4- Biological Resources Impacts and Appendix B-1: Weed Management Plan.

[13] Leppig, G. and J.W. White. 2006. Conservation of peripheral plant populations in California. Madrono 53(3):64-274.

[14] Kelly, A. E. and M.L. Goulden 2008. Rapid shifts in plant distribution with recent climate change. *Proc Natl Acad Sci USA* 105:11823–11826.

[15] This Declaration was filed in federal court in *Oregon Natural Desert Association v. McDaniel*, No. 09-369-PK, on July 23, 2010, a case in which BLM is a defendant.

the generation turbines, access roads, and transmission lines will be located. Without the baseline information about existing weed conditions, BLM cannot make a non-arbitrary decision about the effects of weeds from the project's construction and operation. The DEIS's discussion of mitigation, indicating there will be a weed management plan in place—which, of course, has not yet been developed, and therefore we cannot comment on—is inadequate because it does not analyze whether or not that plan will actually be effective in controlling weeds.

Finally, Table 2-7, MM-BIO-2 (DEIS at 2-47) says that yuccas and cacti salvaged from the project may be tagged for commercial purposes. All Joshua trees, Mojave Yuccas, and cacti should be kept on site, and *not* mulched, and not sold, and a special nursery area should be set up so that the plants can be transplanted on site or in the surrounding ACEC. The yuccas and cacti should be watered to keep them alive and used to revegetate the project site after decommissioning.

Refer to Section 4.4.1-Vegetation and Table 2.6-2. Mitigation Measures. Specifically MM-BIO-2 has been updated to include current BLM Cactus and Yucca Salvage Plan standards.

F. The DEIS does not disclose and evaluate adequately the likely impacts to wilderness values, wilderness areas, and other protected areas.

The DEIS does not discuss whether visual impacts from the construction and operations of the turbines (and noise impacts for the turbines closest to the Wilderness borders) violate BLM's non-impairment mandates under the Wilderness Act and FLPMA. Sound levels even up to a half a mile (approximately 600 meters) from wind turbines can be up to 50 to 70 dBA—approximately the loudness of a vacuum machine. Exhibit 25. Please quantify and evaluate the likely loudness of turbines areas with wilderness character, including the surrounding ACEC, to allow an accurate determination of whether conditions should be imposed on the ROWs requiring turbine setbacks from these areas to protect their character as wilderness and areas with opportunities for solitude and quiet recreation. Granting a ROW that allows construction of turbines that mar the viewshed and soundscape within areas containing wilderness values violates both the Wilderness Act and FLPMA. The proximity of a large, heavy–industrial project adjacent to ACECs, Special Management Areas, wilderness areas, and the Lake Mead NRA is not acceptable and not justified by the DEIS's paucity of disclosure of effects on these areas.

Section 603(c) of the FLPMA states, "...the Secretary [of the Interior/BLM] shall continue to manage such lands according to his authority under the Act and other applicable law in a manner so as not to impair the suitability of such areas for preservation as wilderness ...". The effects of noise and visual effects were not determined to affect any of the nearest six Wilderness areas, located 5-12 miles from the proposed action, therefore the project would be in compliance with this FLPMA-mandated non-impairment standard

The DEIS notes (at 3-40) that there are six designated Wilderness Areas near the proposed project site. If BLM deemed these nearby areas worthy of preserving, as well as the ACEC that surrounds the site, why would the agency be considering destroying this area immediately adjacent to Searchlight? The turbines will be visible from several of the six wilderness areas, as well from as the Mojave Desert Preserve in California. How can these still areas still be considered wilderness if they are in proximity to heavy industrial development? Has BLM evaluated the visual impacts from this project in those areas, and what the noise impacts are? The DEIS contains no information about this. BLM should evaluate how the appearance during the daytime and at night of a large array of tall, spinning turbines will affect the visual resources and opportunities for solitude and primitive recreation in nearby areas that are designated as Wilderness or contain wilderness values.

Additionally, studies have shown that under certain atmospheric conditions, noise from wind turbines can be heard for 15 kilometers (approximately nine miles). This range would

include the Sprit Mountain Wilderness Area. Please explain why these effects are not evaluated in the DEIS and please disclose and analyze these effects.

G. The DEIS does not disclose and evaluate adequately the likely impacts to social and economic values.

The socioeconomic impacts of wind turbines and transmission lines in potential renewable energy development go far beyond the value of the electricity produced by such projects or the construction, operation and maintenance jobs which may be created. While certainly beneficial in advancing our national quest for renewable energy and our important goal of reducing global warming pollutants, industrial-scale generation and long-distance transmission of renewable energy (as is the case with all industrial developments) will leave permanent impacts on the landscape which is an important economic driver in this region. The public lands that may be impacted by this proposed transmission project are important and valuable to all Americans. Development of these lands for energy transmission should be considered carefully and should account for all their potential values – both market and non-market.

Notably, the DEIS does not account for the costs associated with the project (including reduced or degraded recreation visitation and effects on property values from loss of open space), nor does the DEIS address the economic benefits associated with undeveloped public lands, does not assess an alternative which avoids undeveloped public lands in favor of private lands, does not explore the benefits of siting this project on previously developed, contaminated or degraded lands (brownfields), the DEIS fails to consider the non-market values affected by the project. The DEIS examines only potential jobs and income using IMPLAN (DEIS at 4-97) and does not assess the impacts of the proposed project on other sectors of the economy. Accordingly, the DEIS's conclusion that "the two action alternatives would result in favorable short-term and long-term effects for the local and regional economies," DEIS at 4-126, is unsupported by the evidence and analysis provided and is an arbitrary and capricious conclusion.

IMPLAN is the accepted standard for NEPA analysis.

1. The DEIS fails to estimate net economic benefits.

The DEIS describes several purported socioeconomic benefits from the project, and then goes on to state that "[n]o adverse impacts to socioeconomic conditions are anticipated." DEIS at 4-110. However, NEPA requires a disclosure of *all* socioeconomic impacts—not only beneficial ones, and therefore the DEIS must include the costs associated with any activity. The *net* benefit of a project is not comprised solely of income and employment. It is absolutely impossible to estimate the *net benefits* of a project without including *all* costs, and to make such an assertion calls into question the credibility of the entire economic analysis. The DEIS does not allow a meaningful evaluation of the net benefits of the proposed project because it does not include any socioeconomic costs.

Assessment and identification of impacts based on data, analysis, and documented impacts from past projects. This comment indicates confusion between very different economic concepts of <u>impacts</u> versus <u>benefits</u>. Comment contains speculation and cannot be documented.

To address this error, BLM must reevaluate the proposed alternatives using transparent methodology which includes all the costs associated with the development. Any negative impact will inflict costs on at least some stakeholders. The DEIS ignores the long-term impacts that this

project would have on real estate, property values and Searchlight's potential to grow as a tourism and retirement community. The DEIS needs to examine the boom and bust effect that this project will have. Just about all the construction jobs will go to workers from outside the local community. No local residents would get jobs. People will not visit Cottonwood Cove in the Lake Mead NRA as often, if at all. This industrial-scale energy project will only create five to ten full-time jobs. There is no information provided on the negative impacts the project will have on the local economy. The impacts to the existing economy must be disclosed, and analyzed, in the discussion of both socioeconomic impacts and environmental justice impacts.

Section 4.12-Socioeconomic Impacts discloses impacts to socioeconomic conditions and has been updated to include potential effects on recreation and tourism. No negative impacts are anticipated. For further information see the newly added ppendi x F: Literature Review of Socioeconomic Effects of Wind Project and Transmission Lines.

In developing the socioeconomic analysis for development such as an industrial-scale energy generation and transmission project on or impacting public lands, BLM should favor those projects which provide the greatest *net* benefits to the American public. The analyses conducted in the DEIS for the Searchlight Wind Project are inadequate to assess net benefits because it does not account for the costs of the project. This is unacceptable.

Refer to Section 1.3.1-BLM's Purpose and Need for the Proposed Project and 1.3.3-Western's Purpose and Need. Maximizing net social benefit is not a requirement of NEPA.

Renewable energy development, like any industrial development sited on public lands, will have negative impacts on the lands on which the project is built and on surrounding public lands into which the effects of the project extend, and these impacts may be as great as those associated with other energy development. We do recognize that the production and use of renewable energy, if it replaces that of fossil fuel energy, will also have benefits. These include the lessening of greenhouse gas emissions from electricity production which, in turn, will be beneficial to undeveloped public lands by reducing the already measureable impacts of climate change.

At the same time, in light of climate change, undeveloped public lands are also increasingly important as a source of habitat for species impacted by climate change, as a source of forest and other vegetation which acts as a "carbon sink" and is thus important for mitigation of climate change. Undeveloped lands are also a source of increasingly scarce clean water and other ecosystem services. Any energy transmission projects (even those targeting renewable energy) sited on undeveloped lands (both public and private) will reduce these benefits. These costs should be included in a revised economic assessment of the project in order to do a complete analysis of net public benefits.

Please specifically describe and quantify the costs of the carbon dioxide offset that will be lost by the removal of cryptobiotic soil crusts and vegetation that would result from construction of the project.

NEPA does not include a provision for monetary evaluation of these resources.

BLM must make a quantitative assessment of all the costs associated with the proposed project. Because BLM must circulate a supplemental DEIS to address other deficiencies in the DEIS, this assessment should be included in the supplemental DEIS.

These costs include:

- Costs associated with impacts to wildlife, including desert tortoise, bighorn sheep, golden eagles, other raptors and other migratory birds, bats, and other wildlife;

- Costs associated with scenic and visual impacts;
- Costs associated with noise impacts;
- Costs associated with impacts to water;
- Costs associated with impacts to recreation, including the costs associated with potential damage from enhanced ORV access *if* access would truly be available along project roads, and the damage such access may cause to non-motorized recreation;
- Costs associated with invasive weeds and other impacts to vegetation, including the negative impacts of herbicide use;
- Costs associated with damage to cryptobiotic soil crusts and
- Costs associated with impacts to cultural resources.

Finally these costs should be assessed in a cumulative fashion, as they are often interrelated. BLM must assess the economic costs associated with these impacts and include the costs in a true analysis of net economic benefits.

2. The DEIS fails to consider the effects of the project on the town of Searchlight including effects on tourism and low-income and elderly populations.

The DEIS is replete with inaccurate or misleading data regarding socioeconomic effects. BLM must present accurate baseline information for its NEPA analysis to be valid. Please correct the following deficiencies in the Final EIS and in any supplemental DEIS.

The number of truck trips (9,025) for the Preferred Alternative will have a profound effect on tourism on Cottonwood Cove Road. DEIS at 2-33. Assuming even one-half of the truck trips are on that stretch of narrow (24-foot wide) paved road, this will have a direct conflict with tourists and particularly recreationalists towing their boats down this already dangerous stretch of road. According to the National Park Service, Cottonwood Cove has 300,000 visitors annually. The conflict between tourist traffic and construction traffic has the potential to be very deadly, and also to discourage visitors from visiting the Lake Mead NRA and the Searchlight area generally. How many people are likely to be killed from such encounters? There are traffic statistics and probability analyses readily available, and these are used elsewhere in the DEIS. Why has BLM not done more than refer to generalized potential for effects on tourism? BLM should analyze, and quantify, the likely impacts of construction and operation of the project on the presence and safety of tourists who would use Cottonwood Cove Road and the surrounding area.

Refer to impacts and mitigation measures discussed in Section 4.7-Transportation Impacts.

Section 4.12 – Socioeconomic Impacts has been updated to include a discussion on impacts to recreation and tourism.

Rather than using Mohave County, Arizona data, why wasn't data from portions of San Bernardino County, CA, used? DEIS at 3-92. The Colorado River presents an enormous physical and geographic divide between Nevada and Arizona. No roads cross the river between Hoover Dam and Laughlin, Nevada, a distance of more than sixty miles. Influence on and access to the project is more likely to occur from California than from Arizona.

Comment noted.

Are these comparisons (in the DEIS) used because the same studies were done for the proposed White Hills Wind Farm in Mohave County, Arizona?

The DEIS states the "physical energy infrastructure serving Clark County and would potentially provide electrical power to the region." DEIS at 3-92. As of January, 2012, applicant did not have a power purchase agreement (PPA). The state of California is providing its own renewable energy. Arizona is on track to meet its RPS. If applicant does secure a power purchase agreement with a utility in another state, I fail to see how that will benefit the residents of Southern Nevada. Any tax benefits to the county and state would be offset by loss of wildlife habitat, loss of recreation opportunities, and the loss of rural lifestyle, no matter where the expensive wind power is sold.

The DEIS should be updated to reflect 2010 Census data rather than the obsolete 2000 Census data. DEIS at 3-92.

Section 3.10-Socioeconomics has been updated to 2010 Census and 2016 projections.

This DEIS provides an accurate description of the area. DEIS at 3-94. Particularly important is the recognition of Searchlight as ". . . the gateway to popular Lake Mohave in the Lake Mead NRA." This further enforces the obvious conclusion that this area is not an acceptable site for an industrial scale wind energy generation facility. BLM should not grant the ROWs for this project.

Comment noted.

For the discussion at DEIS page 3-94, once more, why is 2010 Census data not incorporated? If the projections for 2013 are based on data from 1990 through 2008, they are way off the mark. Population peaked in Clark County in approximately 2007-2008, and has since declined. DEIS should be revised to reflect actual Census data for 2010, and projections recalculated through 2015. BLM has ready access to this information and should disclose current information, particularly when making a decision for a project that would be a permanent fixture of the local environment for at least 30 to 50 years.

Once more, DEIS presents four-year old data. DEIS at 3-97. Re-do tables with 2010 Census statistics.

Use of data for housing prices from 2008 is totally erroneous. DEIS at 3-98. Furthermore, 2008 was a volatile year for the housing market, and the DEIS provides inadequate baseline information by failing to identify what month the price data relates to (or whether, instead, it is the median price for the year). This data is stale. Data on real estate pricing is readily available from many sources. For example, the median asking price for an existing home in Las Vegas in April 2012 is $120,000. Exhibit 26. This is far closer to reality than the 2008 median value of $284,094 listed for Nevada. In fact, Exhibit 26 shows that housing prices dropped nearly 50% from a median of $238,858 in June 2008 to $120,000 in February 2011 (one year before the DEIS was published), and have stayed almost the same since February 2011. Land prices in the Las Vegas area in mid-2011 had declined 83% from their peak at the end of 2007. Exhibit 27. The installation of an industrial-scale energy project would further depress an already-depressed housing market in the area, or at a minimum prohibit any recovery from the current lows. There is no explanation for why data that is more than three years old appears in the DEIS, and BLM must update this with current data accurately depicting the dire current conditions of the local housing market.

Why is no mention made of the tourists (non-gaming) who recreate at Lake Mohave? DEIS at 3-100. This includes boaters, fishermen, campers, hikers and also the eco-tourists who come to enjoy the quiet of the Joshua tree woodlands? These tourists eat in the restaurants, buy gas, and buy food at the convenience stores. This source of economic input will largely be lost forever if the turbine project is built. Searchlight is more than just casinos and a way to travel between Nevada, Arizona, and California.

Section 4.12 – Socioeconomic Impacts has been updated to include a discussion on impacts to recreation and tourism.

Again, data should be specific to Searchlight, and be at least as current as the 2010 Census. DEIS at 3-101. A quick drive around the region will verify that actual Searchlight income is more like that of Bullhead City, Arizona. Many residents are totally dependent on Social Security for their income. The report does note that the SIA has more people with incomes below $50,000 than the two-county region. Very possibly the incomes in 2012 are even lower than those reported for 2008, due to the decline of the economy in the entire nation, and particularly in the Southwest.

Section 3-12-Socioeconomic Impacts has been updated to 2010 Census.

The graph on page 3-102 only extends to 2000. The report states that "Overall during this period (1970 to 2000) the relative level of prosperity in the region was improving." That may have been true then, but between 2007 and 2012 the economic bubble burst, and the economics of the region today is far different. Many local economists feel the bottom still has not been reached. Nevada has the highest unemployment in the nation. In December 2010, unemployment in the Las Vegas-Paradise metropolitan statistical area had risen to 14.9%, a new all-time high for the region. Exhibit 28. Until tourism rebounds this will not change. The DEIS presents a false picture of the baseline economic conditions and does not comply with NEPA's obligation to present high quality information, and BLM demonstrates no reason why it could not have used current data.

SIC codes end in 2000, causing end to that data series. Data updated to 2010 Census and current conditions wherever possible.

The DEIS notes that nearly 30% of all jobs in the Searchlight Project Impact Area ("SIA")[16] are in the tourism sector, compared to less than 8% in the United States as a whole. DEIS at 3-102. In Searchlight proper, a whopping 56% of jobs depend on tourism services. If this project were built, it would create a few short-term jobs for out-of-town specialists, but in the long term would destroy the tourism in the immediate area. Therefore, the ROW should not be granted.

Comment noted.

The temporary increase in construction workers is guaranteed to result in increased crime and auto accidents. DEIS at 4-96. Clark County and Searchlight infrastructure, including police, firemen and paramedics, are not prepared to handle these issues in a remote area. BLM must define "Result in a tax burden to local residents not offset by the Proposed Action's generation of new public revenue." Searchlight is not incorporated, and taxes are set by the state and county.

Refer to Section 4.12-Socioeconomic Impacts under the Fiscal Impacts.

[16] Defined on page 3-92 as an area of about 2,052 miles of land encompassing 18 census tracts that will most likely be affected by the project.

Using the methodology for calculating "benefits" from the project, we gather the following: Clark County may benefit, but the people of Searchlight will suffer. Searchlight's economy for years has been dependent on tourism. This project will effectively destroy tourism at Cottonwood Cove for one to two years. The increased revenues from feeding and housing the construction workers during that period is unlikely to replace the tourism dollars. The increased spending resulting from the project will occur in Las Vegas, Laughlin, Bullhead City, and even more distant sources of supply. Land Lease payments made to BLM go to the U.S. Treasury; sales tax goes to the state; property taxes go to the county and state. Searchlight will be left worse off economically and "social benefit-wise" than before the project.

Speculative. This comment indicates confusion between very different economic concepts of impacts versus benefits.

The one group that will directly benefit from the project is the shareholders of Duke Energy. CEO James Rogers has been quoted as saying, when asked why Duke invested in wind projects, that wind projects guarantee Duke Energy from 17 to 22 percent return on equity. This is particularly obscene, when one considers the damage to the people of Searchlight and the desert environment surrounding the town. The National Legal and Policy Center has documented Duke's investments and government aid it receives for renewable energy projects. Paul Chesser, Taxpayers Get Hosed on Duke's Energy Wind Farm Buying Spree, National Legal and Policy Center, Aug. 4, 2011, *available at* http://nlpc.org/stories/2011/08/03/duke-energys-lucrative-wind-farm-buying-spree and attached as Exhibit 29.

Comment noted.

Also, the location of the project surrounding the town on three sides will prevent future growth for Searchlight. The project is a "lose-lose" for the Searchlight and its residents.

Comment noted.

The DEIS states a 2008 economic model for Clark and Mohave counties was used. DEIS at 4-97. That was four years ago. What would a current economic model show? Also, the royalty lease payments to BLM will go to the U.S. Treasury, Washington, D.C., so that is not a benefit to Searchlight or to Nevada. *Id.*

The economic linkages contained in IMPLAN models are quite stable, i.e. the set of inputs required producing a good or service changes little over a four-year period. Prices are adjusted to 2011 dollars. Royalty lease payments are not included in direct impacts. Note total operations annual budget of $8.15 million and total local expenditures (or direct impacts) of $2.95 million in EIS Table 4.12-3. Summary of Project Annual Operations Expenditures for 96 WTG Layout Alternative.

The property tax and sales tax abatements provided by the state and county for renewable energy projects are not an argument in favor of the project. *Id.* A business not eligible for these lucrative tax abatements would result in more tax resources for the state and county. Renewable energy should be considered a tax drain, not a cash cow.

The EIS is merely disclosing the information on tax abatements, not defending it.

The statement "The land would retain its rural desert qualities, and the habitats supporting ecosystems and species would not be altered from project-related encroachments," is true, under the "No Action" alternative. DEIS 4-98. In addition, the people of Searchlight and the surrounding area could continue to enjoy their rural lifestyle; tourists could continue to find enjoyment in the natural environment surrounding Lake Mohave, Native Americans could continue to visit and worship at sacred Spirit Mountain without the beauty of the nearby desert having been destroyed; Searchlight residents could continue to enjoy the beautiful views of Spirit Mountain and Lake Mohave, and enjoy stargazing under the dark, quiet night skies. Eagles, bats, tortoises, desert bighorn and other wildlife could continue to survive in their natural habitat.

Comment noted.

The balance of the paragraph regarding the "No Action" alternative has statements that are unbelievable and supported by nothing but wishful thinking ". . . final end-use retail

This sentence has been removed from the EIS.

consumers would not experience any positive sense of social well-being because this alternative would not involve construction and operation of the wind energy facility and delivery of emission-free power." BLM must provide quantitative data that explains how the end-user will know which electrons are being used and how and where they were generated when he turns on his light switch? This would be an enlightening study.

It is further stated: "The socioeconomic well-being of project construction and O&M workers and suppliers to the renewable energy industry would not be favorably affected under this alternative since the Proposed Project would not be built and operated." Again, please quantify the socioeconomic impact of something that never happened—or provide the consumer surveys regarding the Searchlight Wind Project that were collected and used to make this statement.

Comment noted.

What would no doubt be measurable would be the improved attitude of the local people whose lives and environment are not damaged by this proposed project. Thus, the No Action alternative would have very positive socioeconomic impacts in the immediate areas of Searchlight, Cal-Nev-Ari and Cottonwood Cove. There would also be no need to count dead eagles and other dead birds, dead bats, and dead tortoises under the No Action alternatives.

The existing setting describes the current conditions. The impact analysis presented in Section 4.12-Socioeconomic Impacts, compares the build alternatives with a no build option; the No Action.

Why is so much emphasis placed on the "social well-being" of transient construction workers, and so little emphasis placed on the "social well-being" of the long-time residents of the area who love their rural life style? DEIS at 4-100. The construction workers would have 8–12 months of "social well-being," while the permanent residents would be sentenced to looking at and listening to 428-foot tall turbines for the rest of their lives.

Social well-being is addressed in Section 4.12.2.2-Proposed Action -— 96 WTG Layout Alternative under Local Private Land Owners/Residents/Large Lot Owners.

Has an agreement been struck with Duke Energy to confirm their agreement with the figures presented? DEIS at 4-110. Duke Energy has a history of challenging their tax bills. The states of Wyoming and Ohio have had difficulties collecting property taxes from Duke Energy. Dustin Bleizeffer, Duke Energy Disputes Taxes, Casper Star-Tribune (Sept. 5, 2010), *available at* http://billingsgazette.com/news/state-and-regional/wyoming/article_584efb76-b88e-11df-b372-001cc4c03286.html and attached as Exhibit 30. Please also refer to the video news report regarding the dispute in Ohio: http://www.clipsyndicate.com/video/play/1571412/duke_energy_reaches_temporary_agreement_on_tax_dispute

Comment noted.

Finally, the DEIS incorrectly asserts that there are no environmental justice issues involved in the development of this project. DEIS at xvii. However, given the high number of low income senior citizens who cannot afford to move, why is this group not considered a "minority population" whose status should be considered?

Only minority, tribal, and low-income populations are examined in environmental justice. Seniors cannot be documented as a group to be low-income. The EIS has been updated to utilize 2010 Census data.

Figures regarding low-income populations were calculated using 2000 Census Data. DEIS at 3-106. This data is entirely too dated to use for Nevada demographics. There has been a great deal of change in the economy and population of Searchlight since 2000. A letter approved at a recent meeting of the Searchlight Town Advisory Board ("STAB"), supporting funding of the "Silver Rider" public transportation system, noted that "[p]ublic transportation is vital to the

Table 3.13-1. Estimated 2010 Families with Incomes Below National Poverty Level has been updated to 2010 Census data. (Zero persons in Searchlight CDP were documented living under poverty in 2010.)

community of Searchlight, particularly in these difficult economic times. Searchlight has a high population of senior citizens, as well as low-income residents, who are public transit dependent." January 11, 2012 STAB Minutes at 3 (on enclosed CD-ROM). These facts are not reflected in the DEIS. BLM needs to redo calculations using 2010 Census data. The table on page 3-106 showing the estimated 2008 number of families with incomes below the national poverty level should be revised using, at a minimum, 2010 Census data. Searchlight and the State of Nevada have suffered significantly during the recession that began in 2008, so even the 2008 estimates are no longer representative of conditions in 2012. More current data may reflect an entirely different socioeconomic status. The many elderly, low income people could not afford to move away from an operating industrial wind energy project at Searchlight, even if it was impacting their health and well-being.

The DEIS notes that Cottonwood Cove Road passes by some of the newer homes in Searchlight. DEIS at 4-122. Please note that very few of these homes were ever sold. The developer went bankrupt, and the empty homes are now bank-owned, and priced at approximately one-third of the original asking price. The possibility of the homes being in the proximity of an industrial wind energy project has contributed to the low asking prices. Realtors are obligated to inform potential buyers of the plan for an industrial wind project nearby. The DEIS states that "no negative impacts on property values from construction and O&M of the 87 WTG Layout Alternative could be documented." DEIS at 4-112. This statement is incorrect. Studies in other states and in Canada have proven that values of private property land within sight of wind turbines are immediately devalued by at least 30 and up to 40 percent. *See* Exhibits 31 and 32.

Section 4.12-Socioeconomic Impacts has been updated to include potential effects on recreation and tourism. For further information see the newly added ppendi x F: Literature Review of Socioeconomic Effects of Wind Project and Transmission Lines.

Finally, the DEIS fails completely to disclose and discuss the impact of the project on the local community as evidenced by essentially unanimous local opposition to the project. The extent of this opposition, and the deleterious effect the project would have on the local community, are important factors that the decision maker should consider before approving this project. As one commenter put it, "[w]hile it was once rare that local citizens would organize opposition to utility-scale wind projects this early in the permitting cycle, it is now increasingly the norm throughout the country." Roopali Phadke, Resisting and Reconciling Big Wind: Middle Landscape Politics in the American West, at 755 (on enclosed CD-ROM). The Phadke article provides a thoughtful description of the impacts of industrial-scale energy projects on local communities that must be disclosed and evaluated before BLM issues ROWs for this project, with a particular focus on the impacts of the Searchlight project. *See also* Susan Lorde Martin, *Wind Farms and Nimbys: Generating Conflict, Reducing Litigation*, Fordham Envtl. L. Rev.ironmental Law Review, Vol. 20, Nos. 2 & 3 (Winter 2010): 427-68 (highlighting the Searchlight project and describing the unanimity of local opposition) (on the enclosed CD-ROM).

Comment is speculative. The EIS describes impacts judged likely after project construction, not impacts anticipated by some prior to construction.

3. The DEIS fails to estimate the benefits of protected lands for the local economy.

The mere presence of undeveloped public lands and the natural and recreational amenities that they provide produce measurable economic benefits for local communities. Development of the project will dramatically reduce these benefits, which should be assessed in

IMPLAN is the accepted standard for NEPA analysis. Tourism and Recreation businesses are included. The set of amenities available to potential amenity in-migrants is not judged to have changed substantially as a result of this project. Section 4.12-Socioeconomic Impacts has been updated to include potential effects on recreation and tourism. For further information see the newly added ppendi x F: Literature Review of Socioeconomic Effects of Wind Project and Transmission Lines.

the Final EIS and any supplemental DEIS. The impacts on undeveloped lands represent a significant class of costs that must be addressed.

The economic benefits of undeveloped lands for local economies is well documented and has grown in importance as the U.S. moves from a primary manufacturing and extractive economy to one more focused on service sector industries. This shift means that many businesses are free to locate wherever they choose. The "raw materials" upon which these businesses rely are people, and study after study has shown that natural amenities attract a high-quality, educated and talented workforce – the lifeblood of these businesses.

As the economy of the West evolves, public lands, especially areas protected from development, are increasingly important for their non-commodity resources – scenery, wildlife habitat, wilderness, recreation opportunities, clean water and air, and irreplaceable cultural sites. A vast and growing body of research indicates that the economic prosperity of rural Western communities depends more on the natural amenities found on public lands and less on the extraction of natural resource commodities.[17]

New residents in the rural West often bring new businesses, and these are rarely tied to resource extraction or other development on public lands. Some are dependent directly on the recreation opportunities on the surrounding public lands. Entrepreneurs are also attracted to areas with high levels of natural amenities. The Federal Reserve Bank of Kansas City has found that the level of entrepreneurship in rural communities is correlated with overall economic growth and prosperity (Low 2004). These businesses may be harmed or deterred if the quality of the scenic and natural amenities is degraded due to renewable energy developments. The Final EIS for the Searchlight Wind Project must assess the value of undeveloped public lands and include criteria which will ensure that the economic role of these lands is not deterred when these renewable energy developments and any associated transmission lines are constructed.

Retirees and others who earn non-labor income are also important to rural western communities. Investment and retirement income makes up 31.9% of total personal income in Clark County and 33.7% in Nevada.[18] If this income were considered an industry it would be nearly as important as tourism, and—like tourism—is likely to be negatively impacted by the proposed transmission project. Retirees are attracted by natural amenities that are available on undeveloped public lands. The potential impact that the development of the project will have on

[17] See Whitelaw and Niemi 1989, Rudzitis and Johansen 1989, Johnson and Rasker 1993 and 1995, Freudenburg and Gramling 1994, Snepenger et al. 1995, Deller 1995, Power 1995 and 1996, Bennett and McBeth 1998, Duffy-Deno 1998, McGranahan 1999, Nelson 1999, Rudzitis 1999, Morton 2000, Lorah 2000, Rudzitis and Johnson 2000, Deller et al. 2001, Johnson 2001, Shumway and Otterstrom 2001, Lorah and Southwick 2003, Rasker et al. 2004, Holmes and Hecox 2004 and Reeder and Brown 2005, Sonoran Institute 2006, and Barrens et al. 2006 and Haefele et al. 2007.

[18] Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System (http://www.bea.gov/). Figures are for 2009, the most recent year available with this detail.

IMPLAN is the accepted standard for NEPA analysis. The set of amenities available to potential amenity in-migrants is not judged to have changed substantially as a result of this project. Section 4.12-Socioeconomic Impacts has been updated to include potential effects on recreation and tourism. For further information see the newly added ppendi x F: Literature Review of Socioeconomic Effects of Wind Project and Transmission Lines

Organizations

this source of income and economic activity must be accounted for in the Final EIS and any supplemental DEIS.

Growth in the professional and service sector is also tied to the natural and other amenities in the area. Protected public lands in the region enhance the West's attractiveness for both skilled workers and employers. Protected public lands provide indirect support for local and regional economies, a fact that is increasingly being recognized by communities throughout the West. These lands provide a scenic backdrop, recreation opportunities and a desirable rural lifestyle, and many other tangible and intangible amenities that attract new residents, businesses and income to the rural West. Many businesses are able to conduct national or international commerce from any location they choose. Other entrepreneurs simply choose to live in a particular place and build businesses in response to local needs. Research conducted by The Center for the Study of Rural America, at the Federal Reserve Bank of Kansas City (the Rural Center) has found that entrepreneurship is a strong indicator of rural economic health (Low 2004, Low et al. 2005, Thompson et al. 2006). The Rural Center has included entrepreneurship along with several other indicators of rural economic potential into a set of Regional Asset Indicators (Center for the Study of Rural America 2006a). These indicators include the natural and human amenities of a region – many of which are closely tied with undeveloped public lands (Weiler 2004).

IMPLAN is the accepted standard for NEPA analysis. The set of amenities available to potential amenity in-migrants is not judged to have changed substantially as a result of this project. Section 4.12-Socioeconomic Impacts has been updated to include potential effects on recreation and tourism. For further information see the newly added ppendi x F: Literature Review of Socioeconomic Effects of Wind Project and Transmission Lines.

Nevada and Clark County both have levels of human and natural amenities which are higher than the national average due in part to protected and undeveloped public lands. This is even more true near Searchlight, where the vast majority of public lands in the vicinity of the town carry some sort of protected status. The role of these lands in these areas' economy and the potential impact of project and associated generation development must be addressed in the Final EIS and any supplemental DEIS.

Section 4.12-Socioeconomic Impacts has been updated to include potential effects on property values.

Research into what motivates entrepreneurs and businesses to choose particular locations consistently finds that amenities and quality of life top the list (Rasker and Hansen 2000, Snepenger et al. 1995, Rasker and Glick 1994, Whitelaw and Niemi 1989). Developing the proposed energy transmission project on undeveloped public lands may hinder the impacted communities' ability to attract more small businesses into the region to further enhance this sector.

These findings together point to the value of public lands to strong local economies. The impacts of development of the proposed project on these lands must be addressed in the Final EIS. To site generation and transmission, even for renewable energy development, in a way that impairs these natural amenities would be short-sighted at best. The Final EIS and any supplemental DEIS should address this issue and provide detailed criteria to protect the economic benefits associated with undeveloped public lands.

The socioeconomic analysis in the Final EIS must also adequately address the potential impacts on the quality of life for residents of communities that will be impacted by the transmission development. The quality of life in many communities with abundant protected public lands is often tied inextricably with those lands. Any negative impacts on these lands from

transmission development may deteriorate aspects of the western quality of life. As discussed above, such a decline will create more than simply emotional or psychological impacts. Areas with high quality of life are better able to attract the entrepreneurs, skilled and creative workers, retirees and others who are important economic drivers of many western communities.

This development will also likely have impacts on local private property values due to the loss of local open space. There is a large body of work which looks at the positive impacts of open space and protected public lands on property values.[19] These studies can be applied to infer the inverse decline in property values associated with the loss of protected public lands and open spaces that may occur when energy transmission facilities are sited on such lands. Numerous studies show that there is a positive correlation between property values and open spaces and protected public lands. McConnell and Walls (2005) provide a good overview of both property values and non-use values associated with open spaces. All of these studies provide empirical evidence of the potential losses to western citizens from the conversion of open space to industrial use. Given that the proposed energy transmission development will impact public land and open space throughout the area, it is likely to have negative impacts on the property values in the region. It is especially important to estimate this impact on landowners who are not being compensated for direct use of their property.

BLM must include a thorough examination of the full socioeconomic impacts likely to occur if the proposed energy transmission project impacts undeveloped lands. Suggested analyses and sources of data can be found in *"Socio-Economic Framework for Public Land Management Planning: indicators for the West's Economy"* on the enclosed CD-ROM

The Final EIS and any supplemental DEIS must also include an assessment of impacts on the local quality of life that are may result from the development of energy transmission on surrounding public lands. The potential resulting economic impacts of any decline in quality of life must also be assessed in order to fully evaluate the proposed development.

The Final EIS and any supplemental DEIS should include a quantitative analysis of the impacts on residential property values due to the loss of open space and undeveloped public lands from the development of the proposed energy transmission and associated generation.

4. The DEIS economic analysis failed to account for non-market costs and benefits.

One of the most important purposes of public lands, including those administered by the Bureau of Land Management, is the provision of public goods or non-market goods. Opportunities for solitude, outdoor recreation, clean air, clean water, the preservation of

[19] Several examples of studies of the impact of open space on property values include Earnhart (2006), Bengochea Moranco (2003), Espey and Owosu-Edusei (2001), Bolitzer and Netusil (2000), Lutzenhiser and Netusil (2001), Geoghegan et al. (2003), Geoghegan (2002), Acharya and Bennett (2001), Irwin (2002), Tajima (2003). Luttik (2000), Loomis et al. (2004) and Breffle et al. (1998).

Section 4.12-Socioeconomic Impacts has been updated to include Impacts on Property Values. A literature review on property value impacts has been added in ppendi x F: Literature Review of Socioeconomic Effects of Wind Project and Transmission Lines.

Although the BLM has reviewed the document provided, IMPLAN is the current accepted standard for NEPA analysis.

"Quality of life" is composed of many elements including noise, visual, recreation etc., all of which are discussed throughout Chapter 4.0-Environmental Consequences

wilderness and other undeveloped areas would be underprovided if left entirely to market forces. The proposed generation and transmission project will most certainly have an impact on the level of non-market benefits associated with the Piute-El Dorado ACEC, the Lake Mead NRA, and other protected and lands possessing opportunities for solitude and quiet recreation in the vicinity of Searchlight.

The assessment of the socioeconomic impacts in the FEIS and in any supplemental DEIS for the proposed project must account for the non-market values associated with undeveloped wild lands. The BLM has an inherent responsibility to see that these lands are not impaired in order to ensure that the public goods they produce continue to be provided and in quantities that meet the demand of all U.S. citizens.

Non-market values have been measured and quantified for decades. There is a well-established body of economic research on the measurement of non-market values, and the physical changes (which result in decreases in the source of these values) brought about by development are very easy to measure quantitatively.

This analysis is especially important when considering actions which would degrade or damage undeveloped lands since these lands produce benefits and values that are seldom captured in the existing market structure. The literature on the benefits of wilderness and other undeveloped lands is well-established and should be used by BLM to estimate the potential value of these lands where the project is proposed and the surrounding areas that will be affected by the project. Krutilla (1967) provides a seminal paper on the valuation of wilderness and has led the way for countless others who have done additional research all providing compelling evidence that these lands are worth much more in their protected state. Morton (1999), Bowker et al. (2005), Krieger (2001) and Loomis and Richardson (2000) provide overviews of the market and non-market, use and non-use values of wilderness and wildlands. See Walsh et al. (1984), Bishop and Welsh (1992), Gowdy (1997), Cordell et al. (1998), Loomis and Richardson (2001) and Payne et al. (1992) for several more examples.

Peer-reviewed methods for quantifying both the non-market and market costs of changing environmental quality have been developed by economists and are readily applicable to solar energy development. For a catalog of these methods see Freeman (2003). For a complete socioeconomic analysis, BLM should adapt these methods to conditions in the impacted areas to obtain a complete estimate of the economic consequences of the proposed transmission development.

BLM must measure and account for changes in non-market values associated with the proposed energy development. To do otherwise omits a very important socioeconomic impact that would directly result from this development. The analysis must assess the non-market economic impacts to all Americans, including the passive use values of undeveloped public lands.

5. The DEIS relies entirely on economic base models to predict economic impacts.

The use of economic base models such as IMPLAN in Section 4.12 (socioeconomic impacts) is insufficient to predict future economic impacts from the development of industrial-scale energy generation and transmission facilities. While these models can be useful as a tool to develop static analyses of the regional economy, the BLM and local communities potentially impacted must be aware of the shortcomings and poor track record of such models as predictive tools. Economic base models do not consider the impacts of many important variables that affect regional growth in many rural communities, especially in the West. Attributes such as natural amenities, high quality hunting, fishing and recreational opportunities, open space, scenic beauty, clean air and clean water, a sense of community, and overall high quality of life are not measured or accounted for in economic base models, however these amenities are associated with attracting new businesses and migrants as well as retaining long-time residents. For example, many residents of rural Nevada communities (both long-time and new) earn retirement and investment income, and while it is technically possible, most economic base models completely fail to consider the important economic role of retirement and investment income.

Many economists have offered constructive critiques of the such models. See for example: Krikelas (1991), Tiebout (1956), Haynes and Horne (1997), Hoekstra, et al. (1990), Richardson, 1985 and the Office of Technology Assessment (1992). The ease of data acquisition for estimating the impacts of manufacturing, construction and resource extractive sectors combined with the difficulty of estimating the impacts of recreation and tourism underscores the potential bias favoring development in economic base models. The concern over the accuracy of these models combined with concern over the use of such models for planning, suggests that it is not only inappropriate but a disservice to rural communities to rely on economic base analyses to estimate the economic impacts of public land management on rural communities.

The estimated effects of the one-time payment to landowners should not be included with the effects estimated for project employment. The Final EIS and any supplemental DEIS should show exactly what the multipliers being used are and should separate these two effects for all alternatives and the common impacts (the same transparency is necessary for the income effects). Furthermore, this analysis of employment and income does not consider the potential adverse impacts on other local businesses and industries (such as recreation and tourism) which will likely be impacted by the construction and operation of the project.

The analysis performed for the Final EIS must not rely solely on IMPLAN or on other models derived from economic base theory to predict the economic impacts of energy transmission development. When such analysis is used, the impacts on other economic sectors (recreation and tourism especially) must also be analyzed, and these changes should be presented to show net gains/losses due to the proposed development.

As we have discussed above, the relationship between public land management and local and regional economic prosperity and growth is far more complex than these models assume, and given the potentially significant impacts on many of the region's public lands, use of such

IMPLAN is the accepted standard for NEPA analysis.

The proposed project does not have a provision for a one-time payment to landowners. Tourism and recreation businesses are included in the IMPLAN model.

models in the DEIS has resulted in an incomplete and inadequate analysis of the socioeconomic impacts.

Furthermore, where IMPLAN is used to project income and employment effects all multipliers and all assumptions used to derive them must be provided for review.

H. The DEIS fails to adequately evaluate impacts to cultural and archeological resources, including impacts of development on sacred sites.

The DEIS states that the cultural report is "in progress." DEIS at 1-15. Accordingly, the DEIS fails to present relevant information about the utility-scale wind project's impacts to cultural resources. The DEIS makes clear that the area within which the project would be built has spiritual significance to several tribes, DEIS at 3-36, and in particular that Spirit Mountain, about 10 miles south of the project site, has special significance to the Yuman tribes. The project is in the viewshed of Spirit Mountain. The area also has spiritual significance for the Colorado River Indian Tribes (Mohave, Chemehuevi, Hopi and Navajo). Spirit Mountain was added to the National Register of Historic Places in 1999. The mountain, considered the beginning of creation, is so sacred to Indian tribes in Nevada, California, Arizona and Mexico that background from its application for the national listing is not available to the public, even through a Freedom of Information Act request.

However, the DEIS does not disclose how the project will affect these cultural resources. DEIS at 4-38 to 4-40. The DEIS has not demonstrated that BLM has complied with Section 106 of the National Historic Preservation Act ("NHPA"), 16 U.S.C. § 470(f), and related regulations, 36 C.F.R. §§ 800 *et seq*.

The purpose of the NHPA is to preserve the history and prehistory of this country and protect for future generations the historical and cultural resources that are part of the Nation's heritage. Section 106 requires federal agencies to consider the impact of their "undertakings" on historical properties:

> Section 106 of NHPA is a "stop, look, and listen" provision that requires each federal agency to consider the effects of its programs. . . . Under NHPA, a federal agency must make a reasonable and good faith effort to identify historic properties; determine whether identified properties are eligible for listing on the National Register based on criteria in 36 C.F.R. § 60.4; assess the effects of the undertaking on any eligible historic properties found; determine whether the effect will be adverse; and avoid or mitigate any adverse effects.

Muckleshoot Indian Tribe, 177 F.3d at 805.

The existing documentation provides no evidence that BLM complied with Section 106. There is no indication that BLM adequately consulted with members of the interested public, including potentially affected tribes or tribal members. *See* 36 C.F.R. § 800.4(a) (requiring BLM to "determine and document the area of potential effects, as defined in [36 C.F.R.] § 800.16(d),"

The cultural resources report has been completed and Native American consultation has been conducted. The results of the cultural inventory and tribal comments are summarized in the Final EIS. Views from Spirit Mountain and impacts are discussed in Section 3.9-Visual Resources 4.9-Visual Resource Impacts, and Section 5.2.5-Native American Consultation.

identify historic properties, and to affirmatively seek out information from the State Historic Preservation Officer, Native American tribes, consulting parties, and other individuals and organizations likely to have information or concerns about the project's potential effects on cultural properties). BLM should comply with the requirements of the NHPA and disclose information about effects on cultural resources to the public.

To adequately address impacts to cultural resources, and comply with the NHPA and NEPA, BLM must evaluate (in its NEPA document) how the project will impact significant cultural and traditional landscapes of the Chemehuevi and other tribes. Will the remaining five sites identified as NHPA-eligible be evaluated prior to any construction taking place? DEIS at 3-35. Elders from the Mohave and Chemehuevi Tribes have stated to us that they have not had the opportunity to walk the proposed project site to identify cultural resources. Both are in agreement that there are ancient trails transecting the site. Have these trails been identified? Further investigation and mapping of trails and prehistoric sites in the area should be performed. A regional assessment of trail systems, archaeological sites, sacred sites, viewsheds to sacred landmarks such as Spirit Mountain should be undertaken. Oral histories of local tribal members should be recorded to gain an understanding of the impacts of the industrial-scale wind project to an area which is significant to them. More outreach to the Colorado River Indian Tribes needs to be done, to insure that sacred, historical and unmapped archeological sites are not damaged or destroyed.

The DEIS states ". . . Five sites identified as NRHP eligible are located within proposed road routes or tower locations and may receive direct impacts from project related construction activities." DEIS at 3-26. Will the proposed roads or turbines be relocated to prevent destruction of these sites? If not, why not? Is the history of the region that unimportant to the applicant, which has no ties to the southern Nevada area?

I. The DEIS fails to give adequate consideration to likely impacts to water resources.

The DEIS provides little concrete information about the impacts to water resources. Why has BLM not provided an estimate of the *total* amount of water that would be used by this project? Some of the estimates that appear in the DEIS seem to be related to other similar projects, not estimates directly from Duke applicable to the needs of this project.

In describing the features common to both action alternatives, the DEIS states the water will come from the Searchlight Municipal Water System. DEIS at 2-27. Where are the fire hydrants that the contractor will use? These are not identified in the DEIS. How will traffic to the water hydrant(s) be controlled? Will this public water system be over-drawn by the contractor's use of water? What guarantee is there that using this amount of water won't result in the town being short of water? BLM must disclose whether the *actual* projected use of water for this project will cause water shortages for the citizens of Searchlight.

The project would take its water from the Searchlight Water System "or another existing water right in the Searchlight area." DEIS at 4-15. However, it appears that the water rights to

The sites are evaluated in more detail in the cultural resources report. The Class III cultural resources survey was conducted within the Area of Project Effect (APE), currently defined as the potential disturbance area plus a 200-ft. buffer around all new and existing access roads, transmission lines and project facilities. Most of the sites found in the project area relate to historic mining activities that took place in the early 20th Century. Only six sites were prehistoric with seven being primarily historic mining sites with one prehistoric artifact or feature. No physical trails were located during the cultural resources investigations or reported by the Tribes consulted. A Memorandum of Agreement (MOA) between the BLM and the Nevada State Historic Preservation Office will address mitigation measures. Consultations between the BLM and the tribes began in 2009 and have continued through the NEPA process. Comments received are summarized in the Final EIS. An ethnographic/ethnohistoric study is a mitigation measure (MM CR-2).

Section 4.3.2.2-Proposed Action – 96 WTG Layout Alternative and Section 4.3.2.3-87 WTG Layout Alternative have been updated to include water usage estimates for construction of the wind facility. Western will estimate the actual water demand during the ensuing phases of the NEPA process.

In the event that SWS will provide the water for this project, SWS staff will determine the actual source connection. SWS technical staff will determine the volume and rate of water that can be provided to this project. As with most other water rights holders, SWS cannot exceed its duty.

In addition to SWS resources, there are approximately 620 acre-feet of existing rights, of which 311 are quasi-Municipal. The Applicant will coordinate with the Las Vegas Valley Water District to support the water needs for the project. If sufficient resources are not available, the Applicant will procure water from local willing sellers

groundwater may not be readily available. DEIS at 3-16. BLM has not disclosed the total amount of water the project will need, or whether it will be possible to obtain the rights to such water. BLM should disclose information about Duke's proposed water rights purchases and transfer applications for public review. Without accurate information about the potential to obtain rights to the needed water (or accurate information about the amount of water needed), BLM cannot make a non-arbitrary decision to approve the ROWs for the project.

The DEIS notes that there are several private wells within the project area. DEIS at 3-15. What effect might the blasting have on these wells? People who have residences in this area and have installed private wells have spent a great deal of money to develop the wells on their property. Will Duke compensate residents whose wells are damaged or destroyed by the blasting? In addition, the DEIS notes that the springs listed are an important source of water and habitat for wildlife. *Id.* One laydown area and a substation are shown directly across Cottonwood Cove Road from Boat Tank Spring. What effect will the construction phase, and the long-term operation of the project, have on the wildlife that is dependent on this spring? Why are the aforementioned structures placed in such close proximity to a spring that is vital to survival of the areas wildlife? What mitigation will BLM require to protect the spring?

Assuming that the contractor will get water for the project from the Searchlight Water System/Las Vegas Valley Water District, how will this affect the quantity of water available for the residents of Searchlight over the long term? *See* DEIS 3-15. Water is at a premium throughout southern Nevada. What is the probability that the use of water required to build this project; i.e., dust control, concrete mixing, etc., would leave Searchlight Water System without enough water to provide for its residents?? Water levels in the community well at the nearby town of Cal-Nev-Ari have dropped dramatically in recent years. There has not been enough precipitation in the area to recharge the aquifer. As noted in Paragraph 3.3.2.5, the committed water resources in the region are many times greater than the rate of recharge.

In terms of the impacts to water resources, the DEIS provides no concrete information about the overall projected water usage or its actual likely impacts to local water users. Rather, it makes only improper, general statements about impacts. For example, the DEIS states "The Proposed Action *would* affect water resources *if* it . . . Decreases groundwater supply . . ." DEIS at 4-14 (emphasis added). This is not speculative: there is a high likelihood this would occur. Not only would there be heavy water usage for construction and dust mitigation, but continued water use as the many miles of road will require ongoing maintenance and dust control. BLM must quantify the amount of water that would be used, and then evaluate what that will do to other water users in the area. In addition, will water be used to control dust on the areas stripped of vegetation for fire breaks? Once the natural vegetation is stripped, the area will become a prime area for infestation of non-native plants and noxious weeds. The only logical conclusion that BLM can arrive at to preserve the existing ecology of the area, as well as preserve the rights of the people who live in the area to have access to an adequate supply of potable water, is to adopt the "no action" alternative. DEIS at 4-14.

At page 4-15, the DEIS states that approximately 30 acre feet of water would be used for dust control, concrete mixing, etc. Will this over-draw the Searchlight Water System? According

Refer to Section 3.3.2.4-Groundwater Resources for the proximity of wells to the project area. Considering the distance from the construction site to the wells, the engineered blasting should have no effect. Liability clauses will be in place for the unlikely event that there is damage to personal property. All construction methods must meet Clark County codes. The materials laydown yard location is proposed for the west-central portion of the site, along with east end of the access road. This is not near the Boat Tank Spring. The construction area footprint does not encroach on any of the 5 springs identified within the project area. There is, however, a mining operation in the vicinity of Boat Tank Spring.

Ultimately, it's the responsibility of the State Water Engineer when issuing the municipal rights to ensure that it won't deplete the aquifer. It's the responsibility of SWS and/or LVVWD to put their rights to beneficial use, which in the case of municipal supply is to sell it.

The firebreaks will need to be stabilized, either with water or some other approved method. Once stabilized, the firebreaks should no longer require watering, as no vehicle traffic is expected that would break the crust. Section 4.3.2.2-Proposed Action – 96 WTG Layout Alternative and Section 4.3.2.3-87 WTG Layout Alternative have been updated to include water usage estimates for construction of the wind facility.

The DWR estimates a perennial yield of 300 acre-feet for Piute Valley. Unfortunately, DWR does not have a current pump inventory for any of the three basins in which the project is located. Based on Mr. Bundorf's estimate, SWS pumped slightly over half of the perennial yield last year. The available amount of water in Piute Valley may depend on the volume of water utilized by other rights holders in the valley (private residences, mining and quasi-municipal users). As with most other water rights holders, SWS cannot exceed its duty.

to Jordan Bunker of the Las Vegas Valley Water District (LVVWD), the town of Searchlight pumped about 55,500,000 gallons of water—170 acre feet—in 2011 (J. Bundorf personal communication Apr. 9, 2012). What guarantees are there that the water needs for the project won't result in a shortage of water for the town? Where is the analysis to demonstrate that? In addition, controlling dust in arid environments is very difficult. Given the dry climate and dusty soils in this area, it is likely that the 30 acre feet estimate will be exceeded. The DEIS should provide more information on the source of the water and the reasons that it assumes this estimate is valid.

One acre foot equals about 325,851 gallons. Assuming that an average Searchlight household uses 5,000 gallons per month, an acre foot would supply a family for five and one-half years. The (at least) 30 acre feet for construction and dust control is an excessive draw on the local water supply, and a waste of water in this arid environment, for a project that essentially has no benefit to the people in the immediate area of the project.

The DEIS states that this usage would not impact groundwater recharge, but lacks a basis for doing so because the DEIS provides no baseline estimating total available water resources in the area, but rather only the amount of groundwater resources that have been committed or appropriated. In general, recharge is much slower than the rate of draw down occurring in the Searchlight wells. Have studies been done to carbon date the water in the SWS wells, thus providing an estimate of recharge rate? If not, BLM should require Duke such a study performed, and disclose it to the public, to ensure that the 30 acre feet for construction, and another 30 acre feet for decommissioning, would not deplete the Searchlight water supply, and that of the town of Cal-Nev-Ari.

J. The DEIS fails to adequately evaluate noise impacts.

DEIS sections 3.10 and 4.10, covering noise, do not fully disclose or evaluate the likely noise impacts from the project. Densely written in technical jargon, they also do not comply with BLM's obligation under NEPA that an EIS "shall be written in plain language … so that decision makers and the public can readily understand them." 40 C.F.R. § 1502.8. As described in detail above, they omit crucial baseline and effects information and analysis regarding noise impacts to desert tortoises, bighorn sheep, birds, and recreationists, and on nearby protected areas. In a supplemental DEIS, please disclose and evaluate the effects of noise to recreational users who would be hiking and camping in the Searchlight Mountains, as well as the noise impacts to desert tortoises, bighorn sheep, and other wildlife and birds that would use this area.

While the data presented appears to be impressive, *e.g.* DEIS at 3-80, other countries have been studying noise emitted by WTGs for longer than the U.S. It has been determined that the types of noise and vibration created by wind turbines is unique. It is not only annoying but actually has serious negative effects on the health of nearby residents, and cannot be measured with traditional methods of measurement.

BLM and Duke need to research and incorporate data from studies done within the past two years that apply specifically to industrial scale wind turbines. The mere fact that Duke

LVVWD has rights for 4358 acre-feet of water. Based on the commenter's assumptions, SWS could provide water for 23,666 families per year, which is significantly greater than the current population. As with most other water rights holders, SWS cannot exceed its duty.

Refer to Section 3.3.2.4-Groundwater Resources for a description of Piute Valley recharge. Recharge occurs either via vertical percolation or via lateral flow from upgradient sources. The legal baseline for estimating impacts to an aquifer is the recorded Perennial Yield, which for Piute Valley is 300 acre-feet. An estimated 160 acres will be finished with impermeable materials; cement, asphalt and/or buildings. The estimated reduction of permeable surfaces across the 18,949 acres development would be less than 1%. The relative "age" of groundwater cannot be determined via carbon dating. An aquifer's water quality is predominantly determined by the media type, temperature and contact time. The higher the concentrations, typically, the older the water. This method, however, cannot accurately quantify the "age". The relatively low concentration of ions in the Piute Valley alluvial aquifer, in which the SWS wells are screened, indicates that the residence time of the water is relatively brief.

Section 3.10-Noise and 4.10-Noise Impacts has been clarified to the extent possible. Section 4.4.4-Wildlife has been updated to include the impacts of noise on wildlife.

Comment noted. The modeling study conducted for this project is the accepted standard for NEPA analysis. Refer to Section 4.10.2-Direct and Indirect Effects by Alternative for the explanation of conservative assumptions that were used in the noise modeling analysis.

requested, and Clark County granted, a variance to increase the allowable noise level for the project area by sixteen percent (16%) indicates that applicant knows that wind turbines create noise that will affect the local environment.

Duke has been operating industrial wind energy facilities in Wyoming and Texas. Is data available from those locations on actual noise levels? Have complaints been lodged by people living near those wind projects? Applicant should provide this data to BLM and the citizens of Searchlight, and BLM should disclose these impacts as part of the NEPA process. Furthermore, articles and studies are available where residents living near wind energy facilities alternately describe the effect as "living next to a jet engine that revs up but never takes off"; or "sounds of thumping like tennis shoes in a clothes dryer"; and also described as a throbbing in head and chest from sounds and vibrations that are inaudible but felt throughout their body (infrasound). Please provide "plain language" disclosures of these impacts in the NEPA document.

Meanwhile, Duke's representative at the public information meetings, Mr. Robert Charlebois, characterized noise from wind turbines as "sounds like raindrops falling on leaves" or "sounds like your refrigerator running." Both comments are obviously meant to deceive those people whose communities will be forever altered by Duke Energy's plans, and whose quiet enjoyment of their rural lifestyle can never be recovered.

The "Region of Influence" studied was within two miles of private property. DEIS at 3-79. Some of the residences are only one-quarter mile from the turbines. These residences will, no doubt, not be fit for human habitation due to noise if this project is built. Additionally, studies have shown that under certain atmospheric conditions, noise from WTGs can be heard for 15 kilometers (approximately nine miles). This range would include Lake Mead National Recreation Area at Cottonwood Cove; the Spirit Mountain Wilderness Area; and all of the communities of Searchlight and Cal-Nev-Ari.

"[T]he Lake Mead NRA has proposed that noise levels from adjacent wind [projects] to not exceed L_{eq} level of 35 dBA during nighttime hours on park lands." DEIS at 3-81. Is this lower sound level guaranteed at night? Will applicant be required to shut down the turbines at night if this level cannot be achieved? In other communities, turbine operators have voluntarily done this to comply with noise statutes. As mentioned above, studies have shown that nighttime noise levels can be up to 15 decibels higher than daytime levels, yet the 35 dBA contours for both action alternatives already stretch up to or over the Lake Mead NRA border. It is likely that nighttime noise levels will exceed the threshold required by the National Park Service to maintain intact the current soundscape within the Lake Mead NRA—particularly given the prevailing winds from the south and southwest that will tend to propagate noise from the project site towards the NRA. Revised POD at 1-10.

The first paragraph on page 3-84 lists locations of nearby residents, but omits any mention of the homes off of Oregon Trail Road. Why? These are the people who live the closest and will be most impacted by the project. These are also the same properties that do not show up on the 2009 map indicating private property parcels as outlined and shaded areas. Several of

The modeling study conducted for this project is the accepted standard for NEPA analysis. Refer to Section 4.10.2-Direct and Indirect Effects by Alternative for an explanation of the conservative assumptions that were used in the noise modeling analysis. In summary, the noise modeling is considered "conservative" because it assumes that all receptors (i.e. residences) are downwind of the noise sources (i.e. WTGs) simultaneously, which is a physical impossibility but one that results in a conservative calculation of maximum expected sound levels.

Additionally, Figure 4.10-1. Noise Contours for the 96 WTG Layout Alternative and Figure 4.10-1. Noise Contours for the 96 WTG Layout Alternative represent the highest sound output from the turbines under maximum wind conditions. Sound levels from turbine operation will be lower under lower wind speeds, and non-existent during winds speeds below cut-in (typically 4 m/s) wind speeds.

No peer reviewed scientific studies indicate wind turbine sound being audible at a distance of 15 kilometers over land. See noise modeling presented in Section 4.10.2-Direct and Indirect Effect by Alternative for discussion on the conservative projected noise levels in the area. These models are considered conservative because the model assumes that all receptors are downwind of the noise sources simultaneously, which a physical impossibility but one that results in a conservative calculation of maximum expected sound levels.

Noise modeling presented in Section 4.10.2-Direct and Indirect Effects by Alternative indicates that at the park boundary noise levels would be less than 35 dBA (~25-27 dBA).

Section 3.10.2.3-Surrounding Land Uses and Potential Noise-Sensitive Receivers, has been updated to include residents on Oregon Trail Road.

these parcels were also omitted from Table 4.10-4 (Predicted Operation Noise – 87 WTG Layout Alternative). The table estimates expected noise levels at other nearby private property parcels.

The noise modeling analysis included residential properties that were nearest to any wind turbine locations. Parcel 24324000010, which was included in the analysis, is closer to a wind turbine than parcel 24324000011. Similarly, Parcel 2432400021, which was included in the analysis, is closer to a wind turbine than parcel 24324000012.

The paragraph also states that no residences are closer than 1000 feet from turbines. Many communities are placing setback for wind turbines from residences at two kilometers (1.2 miles). Just because Clark County does not have this restriction does not mean it should not apply to the residents of the community of Searchlight. Applicant should be required to redesign the project to meet the 2 kilometer setback from ALL private property.

The DEIS uses data from the 2000 Census. DEIS at 3-86. A census was conducted in 2010. Twelve year old data, given the changes in the country's economy and population in the past five years, is irrelevant. We request that BLM revise the DEIS to include 2010 census data, because failing to do so will mean that BLM has not complied with its obligation under NEPA to provide high-quality data for public review.

Section 4.12-Socioeconomics has been updated to reflect 2010 Census data, resulting in a change in the noise section from 576 to 555; however, this did not change the results of the analysis.

The DEIS spends untold pages discussing the methodology, etc. DEIS at 4-79. The fact is that most people who will be affected could tolerate the construction noise for the 8 to 12 month period. This is assuming the construction will not occur 24 hours per day for 365 days. What is totally unacceptable is having to live with the noise from wind turbines for 30 to 50 years. The turbine sound is never-ending, and is, in fact, 24 hours per day, 365 days per year.

The 1,400 feet setback from a wind turbine from private property is entirely inadequate. DEIS at 4-81. Clark County and BLM should develop standards for wind projects, similar to what is happening in other parts of the U.S., which would require a minimum setback of two kilometers (1.2 miles) from private property.

The DEIS states "Blasting might be necessary in order to construct access roads and set turbines." DEIS at 4-82. Change "might" to "will." The hardness of the granitic bedrock will make the use of blasting necessary in much of the project area.

It is not certain that blasting will be necessary because on the ground geotechnical studies have not yet been conducted.

The source of the Wind Table data is from Duke Energy. DEIS at 4-84. It would be far more believable if the data was from an independent source, or if BLM had exercised its independent obligation under NEPA to verify and evaluate the information in the NEPA document. As stated earlier in these comments, the Duke Energy representative's description of sounds from wind turbines is not credible.

The data in Table 4.10-2-Operation Noise Model Parameters, were provided by a wind turbine vendor, and represent the sound power level of the turbine as measured according to IEC 61400-11:2002. This standard was specifically developed to quantify noise output from wind turbines.

BLM must require the applicant to do more computer modeling with different inputs for temperature, humidity, and including other ambient noise. DEIS at 4-84. Certainly an industry with twenty years of experience with wind turbines has computer programs that can model a variety of conditions, and BLM—as an expert land management agency—possesses the expertise to evaluate such data. Additionally, are there not studies available that were performed in the field with actual operating wind turbines? The area around Palm Springs, California has similar terrain and atmospheric conditions. What studies on turbine generated noise are available?

Refer to noise modeling presented in Section 4.10.2-Direct and Indirect Effects by Alternative for discussion on the conservative projected noise levels in the area. The modeling study conducted for this project included very conservative assumptions that included all receptors being downwind from all turbines simultaneously (a physical impossibility), and the maximum sound output from the turbines under maximum wind conditions (25 m/s). Variations of temperature and humidity conditions would not be anticipated to result in significant changes to the already very conservative results.

The table on page 4-85 omits Parcel 24324000011? Why? This parcel has people living on it full time. They will be far more impacted than the undeveloped properties that are listed. Was this parcel left off intentionally? Also, Parcel 24324000012 was omitted. It, too, lies very close to the nearest turbines, but at present is undeveloped. This table should be redone, and sound data for these two parcels included, as well as other nearby parcels which were not omitted.

Clark Country approved the Special Use Permit in 2010, not 2011. DEIS at 4-87. Obviously, Duke is aware turbines create a lot of noise or it would not have applied for the Waiver of Standards to permit a 16 percent increase in allowable noise. Also, if noise for nearby property owners is excessive, will applicant turn off the turbines at night? *Id.* This has been required in other parts of the country.

What are the "applicable APMs and MMS"? DEIS at 4-91. Would this include turning off turbines at night, or if this is not successful in giving the landowners relief, buying out the property of the people who are affected?

K. The DEIS fails to adequately evaluate effects on human health and safety.

The DEIS does not adequately disclose potential effects on human health and safety. In describing the supposed mitigation measures, the DEIS describes that "fire prevention" will be provided by the Clark County Fire Department Rural Station 75 located in Searchlight. DEIS at 2-49. However, the small volunteer fire department in Searchlight is totally unprepared to fight the types of wildfires created by failed wind turbines or construction machinery, which can quickly spread over thousands of acres of rough terrain. BLM's nearest fire station is approximately 40 miles away; Laughlin and Boulder City are also at least 40 miles away. All of those stations are approximately one-hour travel time away. Short of creating a fire break around all residences and the entire town of Searchlight (and destroying even more desert vegetation), there is a very good chance that the entire town could be destroyed by a turbine-caused wildfire under the often bone-dry, windy conditions present near the site before adequate fire-fighting capacity arrived.

There should be serious concerns about turbine-caused wild fires, and more complete disclosure of the potential for fires than currently appears in the DEIS. DEIS at 3-109, 4-120. One only needs to visit the Altamont area of northern California to see the frequency of fires within an industrial wind energy facility; BLM should disclose how frequently turbines at other generation sites cause fires. The cause may be equipment failure, or the attraction of lighting to tall structures. Summertime storms in the area of Searchlight are accompanied by a great deal of lightning strikes. Placing 428-foot tall turbines in an area of frequent electrical storms, where they will be the most prominent features in the landscape, should not be permitted.

The DEIS at page 4-120 describes the propensity for WTGs to cause fires. As discussed earlier, the local volunteer fire department may not be able to respond with enough fire-fighting capability to handle wind turbine caused fires, and other fire-fighting agencies are at least 40 miles distant. This would create a very hazardous situation for the residents of Searchlight. Also,

The noise modeling analysis included residential properties that were nearest to any wind turbine locations. Parcel 24324000010, which was included in the analysis, is closer to a wind turbine than parcel 24324000011. Similarly, Parcel 2432400021, which was included in the analysis, is closer to a wind turbine than parcel 24324000012.

The special use permit was obtained because noise levels would not be below the Clark County standard of 43 dBA at the property line, but the noise levels would be below such at the actual residences (see Table 4.10-3. Predicted Operation Noise – 96 WTG Layout Alternative and Table 4.10-4. Predicted Operation Noise – 87 WTG Layout Alternative). See noise modeling in Section 4.10.2-Direct and Indirect Effects by Alternative, for discussion on the conservative projected noise levels in the area. It is not anticipated that noise would exceed Clark County Noise Standards at residences; therefore, no mitigation is required.

Section 4.14-Health and Human Safety Impacts of the document contained a detailed description of the potential effects. Mitigation to reduce fire-related risk is described in MM SAFE-4: Construction Fire Prevention Measures. One measure was to maintain fire suppression equipment on site during construction.

Section 4.14-Health and Human Safety Impacts of the document includes also included on-site measures such as; To reduce fire risk, the Applicant would construct a 20-foot-wide firebreak on the exterior of the perimeter fencing surrounding the O&M building and the proposed substations, in addition to a 20-foot wide firebreak surrounding individual WTG locations (APM-7). Shrubs and other large vegetation would be removed from the firebreak. Grading or discing would maintain the firebreak.

The electrical equipment enclosures that would house the transformers would be either metal or concrete structures. Any fire that could potentially occur would be contained within the structures, which would be designed to meet National Electrical Manufacturers Association standards for electrical enclosures (APM-14).

Additionally, mitigation measure included as an inherent element of the project, APM-7, is for development and implementation of an Emergency Response Plan that would include fire suppression and control.

will exploding turbines cause rare Earth elements to leak into the region? Rare Earth elements, which may cause potential health hazards, are used in manufacturing high-efficiency wind turbines. Exhibits 10, 33. What is the fire/safety plan for this? Who is financially responsible for suppression?

The creation of the fire breaks mentioned would result in clearance of a large amount of desert flora. DEIS at 4-120. This would contribute to very dusty conditions throughout the entire project area. How would Duke prevent dust from blowing following clearing of all vegetation? What ROW conditions will BLM require to prevent this? Will this require even more water than originally stated? The DEIS also indicates a safety set-back from EACH TURBINE OF 886 FEET. *Id.* This would essentially preclude the use of the roads by ORVs, even though in several places in the DEIS one of the "benefits" stated would be the creation of the roads throughout the project. If the roads cannot be used within 886 feet of the WTGs, this essentially prevents the use of any of the roads by the public at any time.

The DEIS conveniently overlooks and fails to evaluate the most significant potential fire hazard/hazardous material/explosion hazard that has been by the applicant is the potential for damage to the high-pressure (300 to 600 psi) Southwest Gas Company gas pipeline(s) that passes by the east side of the town of Searchlight, and runs generally north-south the entire length of the project. DEIS at 4-14 (no discussion of gas pipeline). This gas pipeline is 40 to 50 years old, and in most areas is very near the surface. It enters the state near Laughlin and delivers natural gas to the Las Vegas metropolitan area.

By specification, the pipeline should have been buried a minimum of three feet below grade. However, given the hardness of the bedrock in the area, there is a very good chance that much of the pipeline lies less than three feet below the surface. It is likely that minimal consideration was given at the time to the long-term integrity of the line, and likely no precautions were taken against the imponderable possibility (at that time) that an industrial energy generation facility would be built literally on top of it. The potential for construction (blasting or surface construction) damaging the high pressure gas pipelines in the area is probably the most serious issue that the DEIS ignores. As illustrated by the gas pipeline explosion in San Bruno, California in September 2010, which killed eight and sent a fireball 1,000 feet into the air, or the June 2010 pipeline explosion in Johnson County, Texas, which killed three, construction activities near pipelines can have catastrophic effects.

In describing the transmission lines and pipelines on the project site, the DEIS lists the electrical transmission lines, but makes no mention of high pressure gas pipeline(s) that cross the full length of the project area. DEIS at 3-110, 4-119. Why are gas pipelines ignored in the text of the DEIS, when they are shown on several maps in the DEIS and briefly referenced in the "utility corridors" section? *E.g.* DEIS at 1-5 (Figure 3), 4-56. What safety provisions will be put in place to protect the workers and the residents?

Plans for the project show the gas pipeline(s) being crossed in at least three places by newly constructed roads. Additionally, the plans show a new road paralleling or perhaps on top of the gas pipeline north of town at Oregon Trail Road and extending south for about one-half

Water is the only soil stabilizing substance that is non-toxic. BLM only authorizes water to be used in T&E species habitat. Once stabilized, the firebreaks should not require additional watering. Dust control for the firebreaks will be factored into the O&M water demand. Dust control measures will be in accordance with DAQ requirements and it is not anticipated that fugitive dust emissions from firebreaks would exceed NAAQS.

Southwest Gas Corporation holds a ROW grant from BLM for an existing gas line within the project area. The grant is non-exclusive; therefore, the BLM reserves the right to authorize other actions within a ROW area for compatible uses. The Applicant will be required to coordinate with Southwest Gas should there be any pipeline crossings, e.g., roads, underground electrical collection systems, etc. The result of the coordination would be a legally binding agreement that such crossings would meet Southwest Gas-provided standards for engineering and applicable material requirements to ensure the safe and continued operation of the gas line.

mile (0.5 miles). This area is very rocky and irregular, and this is the area where it is likely that the pipeline was practically laid on the ground surface, and topsoil scraped into a berm over the top of it. A portion of the pipeline under Cottonwood Cove Road may have been reburied to a greater depth—but BLM owes the public the obligation to gather this information, disclose it, and evaluate the effects of the project on the pipeline.

What safety measures will be taken to prevent the compromise of this existing gas pipeline? If the gas pipeline were to be ruptured by the 15-axle trucks and other very heavy equipment that will be crossing over it, the resulting fire and explosion could literally wipe Searchlight off the map. It also would cut off a much of the supply of natural gas to the Las Vegas Metropolitan Area.

The blasting that will be required to excavate the WTG foundations, and/or the use of heavy-duty Ho-Ram type vibratory equipment could also compromise the integrity of this high-pressure gas pipeline. Why is there no mention of this in project documents? What provisions will be made to prevent a catastrophe?

South of Searchlight another area of the gas pipeline could be compromised by the turbine, road or underground collection line construction adjacent to or on top of the gas company easement. Also, how deep will the trenches be for the Pike Underground Collection System? The gas pipeline is a minimum of three feet deep. Will there be a potentially deadly conflict between the existing gas pipeline and the underground collection system in the area of WTG's 60, 74, 75 and 76 (preferred alternative numbering)? Has BLM or Duke done the research necessary to determine if those parts of the project need to be relocated?

The DEIS ignores potential human health effects from the dust that the project will cause, although it acknowledges that "[t]he soils in the Searchlight area are susceptible to erosion by wind and water." DEIS at 3-5. Removal of soil crusts and construction and operation of turbines and associated infrastructure is certain to increase the wind-caused erosion throughout the life of the project. The DEIS discloses that "[w]inds over 50 miles per hour (mph) are infrequent but can occur with vigorous storms. Winter and spring wind events often generate widespread areas of blowing dust and sand." DEIS at 3-37. The project is sited within two miles of the town of Searchlight, and along a major route used by tourists and residents to reach Cottonwood Cove in the Lake Mead NRA. Accordingly there is a significant possibility of adverse human health effects from blowing dust, in the form of respiratory illness, including Valley Fever. The DEIS does not disclose or evaluate the potential that construction and operation of the project will have adverse effects on human health, in particular the potential public health impacts from Valley Fever.

Valley Fever (coccidioidomycosis) is an infection caused by inhaling the microscopic spores of the fungus *Coccidioides immitis*. Spores are the tiny, thick-walled structures that fungi use to reproduce. Valley Fever is spread through spores from airborne dust as a result of ground disturbance. Coccidioidomycosis exists in three forms. The acute form produces flu-like symptoms. The chronic form can develop as many as 20 years after initial infection and, in the lungs, can produce inflamed, injured areas that can fill with pus (abscesses). Disseminated

According to the Center for Disease Control in 2010 there were over 16,000 reported cases of Valley Fever (i.e. coccidioidomycosis), the majority of which were located in Arizona and California (Accessed July 3 2012 at: http://www.cdc.gov/fungal/coccidioidomycosis/statistics.html.). According to the University of Arizona's Valley Fever's Center for Excellence, two-thirds of all infections in the United States occur in Arizona, mostly in the urban areas surrounding Phoenix and Tucson. (Accessed on line July 3, 2012 at: http://www.vfce.arizona.edu/GeneralInfo/default.aspx). This research suggests that although Valley Fever may occur in Nevada, it is not as likely compared to other parts of the southwest. This statement is supported by the information available from Southern Nevada Health District which documents less than 10 cases per year of Valley Fever have been reported in Clark County, Nevada to date (2009-2012) (accessed online July 4, 2012 at: https://www.southernnevadahealthdistrict.org/stats-reports/disease-stats-jan12.php.).

coccidioidomycosis describes the type of coccidioidomycosis that spreads throughout the body affecting many organ systems and is often fatal.

Coccidioidomycosis is an airborne infection. The fungus that causes the disease is found in the dry desert soil of the southwestern United States, Mexico, and Central and South America. Coccidioidomycosis is sometimes called San Joaquin fever, valley fever, or desert fever because of its prevalence in the farming valleys of California.

The chronic form of coccidioidomycosis normally occurs after a long latent period of 20 or more years during which the patient experiences no symptoms of the disease. In the chronic phase, coccidioidomycosis causes lung abscesses that rupture, spilling pus and fluid into the lungs, and causing serious damage to the lungs. The patient experiences difficulty breathing and has a fever, chest pain, and other signs of pneumonia. Medical treatment is essential for recovery.

In its disseminated form, Valley Fever diagnosis of coccidioidomycosis spreads to other parts of the body including the liver, bones, skin, brain, heart, and lining around the heart (pericardium). Symptoms include fever, joint pain, loss of appetite, weight loss, night sweats, skin lesions, and difficulty breathing. Also, in 30-50% of patients with disseminated coccidioidomycosis, the tissue coverings of the brain and spinal cord become inflamed meningitis.

BLM must consider the potential for respiratory illnesses occurring in local residents, resulting from the dust. Many of the local residents are elderly and susceptible to respiratory diseases; some even moved to Searchlight to escape air pollution in other parts of the country. There exists a significant possibility for outbreaks of Valley Fever due to the project. In 2009, in nearby Boulder City and Henderson, people contracted Valley Fever simply by outside on windy, dusty days. Exhibit 34. Valley Fever has been documented in many arid regions in the southwest US. There are reports of recent cases of Valley Fever in areas of Southern California deserts that are being stripped of vegetation for the installation of wind and solar projects. BLM must disclose and evaluate the human health impacts of this project, including its potential to cause incidents of Valley Fever among local residents and visitors.

The DEIS inadequately discloses the impact of noise, air pressure, flicker effect (from spinning turbine blades) and nighttime strobe lights on public health. A recent draft study by the Oregon Health Authority's Office of Environmental Public Health, entitled "Strategic Health Impact Assessment on Wind Energy Development in Oregon," outlines some significant health concerns from industrial-scale wind energy development. The study is enclosed on the CD-ROM. Please evaluate this information in revising the DEIS so it completely discloses potential health effects from the project. Turbines would be located within ¼ mile of populated areas and roads, including the Cottonwood Cove Road over which 300,000 people travel annually, far closer to area of human concentration than many wind projects.

The Strategic Health Impact Assessment reports that "Environmental noise in community settings is linked to sleep disturbance, annoyance, stress, and decreased cognitive performance

The Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States (2005) states that shadow flicker is not considered as significant an issue in the United States as in Europe. It does note that flickering effect may be considered an annoyance, but that modern three-bladed wind turbines are unlikely to cause epileptic seizures in the susceptible population due to the low blade passing frequencies. The relevant text from the Programmatic EIS states:

"When the sun is behind the blades and the shadow falls across occupied buildings, the light passing through windows can disturb the occupants (Gipe 1995). Shadow flicker is recognized as an important issue in Europe but is generally not considered as significant in the United States (Gipe 1995). The American Wind Energy Association (AWEA 2004) states that shadow flicker is not a problem during the majority of the year at U.S. latitudes (except in Alaska where the sun's angle is very low in the sky for a large portion of the year). In addition, it is possible to calculate if a flickering shadow will fall on a given location near a wind farm and for how many hours in a year (AWEA 2004). While the flickering effect may be considered an annoyance, there is also concern that the variations in light frequencies may trigger epileptic seizures in the susceptible population (Burton et al. 2001). However, the rate at which modern three-bladed wind turbines rotate generates blade-passing frequencies of less than 1.75 Hz, below the threshold frequency of 2.5 Hz, indicating that seizures should not be an issue (Burton et al. 2001). (Section 3-20)."

[7-9]. These effects, undesirable in their own right, can in turn adversely affect physical health." Strategic Health Impact Assessment at 6. "There is some evidence that wind turbine sound is more noticeable, annoying and disturbing than other community or industrial sounds at the same level of loudness [16-20]." *Id.* "A small number of epidemiological studies have linked wind turbine noise to increased annoyance, feelings of stress and irritation, sleep disturbance, and decreased quality of life [16-18, 22]." *Id.* The study concludes that "Sound from wind energy facilities in Oregon could potentially impact people's health and well-being if it increases background sound levels by more than 10 dBA, or results in long-term outdoor community sound levels above 35-40 dBA." *Id.* at 9. The rest of the study provides more details. Please also disclose and evaluate other studies that have shown potential health impacts from the noise and visual impacts associated with wind turbines.

Section 4.10-Noise Impacts discloses that noise levels at households are all below the standard and threshold set by Clark County.

The DEIS also fails to evaluate the Waiver of Development Standards that Clark County, Nevada, granted to Duke for the project. *See* Searchlight Wind PUC filing 11-2011 on enclosed CD-ROM. Clark County waived three significant development standards that limit development within the county. It waived the 2,000 foot set-back, allowing turbines to be constructed as close as 1,345 feet from a residential structure, with four turbines closer to homes than the 2,000 foot set-back. *Id.* at p. 11. It waived the 35 foot standard for height, allowing instead turbine construction up to 428 feet tall. *Id.* And it waived the normal nighttime noise limit of 43 decibels, allowing an increase to 51 decibels. *Id.* The DEIS does not disclose these waivers or evaluate the effects of the increased noise and proximity to residential areas that these waivers allow.

Section 4.10-Noise Impacts states" In 2011 Clark County approved a Special Use Permit application for the Proposed Project. They found that there were nighttime noise level exceedances at the property line, described above, but that at the actual residence locations the levels were all below the County's threshold. Therefore, the project was approved by Clark County."

The DEIS also fails to evaluate the potential social effects to a rural community from the importation of transient construction workers. The DEIS admits that it is "very common for a significant amount of specialized labor to be brought into the region from elsewhere (e.g., [wind turbine generator] erection crews)." DEIS at 4-100. However, the DEIS fails to describe how these out-of-area workers would result in increased traffic accidents, damage to existing roads, and increased crime. Such outcomes are not "beneficial" to a small, rural community, even though they may provide benefits which flow to other people outside the community. BLM should disclose and evaluate the likely societal impacts from increased presence of transient construction workers near the community.

Over 300,000 people travel Cottonwood Cove Road annually, the majority of which are from outside the community. The construction work force of would represent about 1% of that number.

L. The DEIS fails to adequately evaluate geology and hydrogeology.

The DEIS presents a cursory and incomplete overview of the geology and hydrogeology of the site. The DEIS frankly admits that no geotechnical studies have been completed yet for the project. DEIS at 2-40, 4-3 ("Each WTG foundation footprint located in competent rock would be much less because the foundation would consist of an excavation into the rock; the depth and circumference of each rock foundation excavation would depend on site-specific geotechnical conditions."), 4-10.

The DEIS covers water resources in Section 3.3. Water resources topics include Watershed Boundaries, drainage basins, flood plains, and surface and ground water. In recognition that there are no surface water resources at the site, the DEIS focuses on ground water resources. Among the defects in the DEIS that BLM must correct are:

The DEIS author in section 3.3.2.3 (Surface water) covers alluvial material. Alluvial material consisting of weathered rock, gravel and sand is the primary material for both storage and flow of subsurface water resources.

- Alluvial material is weathered and eroded rock from the surrounding mountain ranges. This material consists of weathered, decomposed rock which results in the development of desert soils. These soils consist of rock fragments, gravel, sand, and clay.
    - Void spaces within alluvial material are the primary storage for ground water resources in this desert region.
    - The desert plant community in the Piute Valley is unique. This valley is a transition zone of the Great Basin Desert, the Mojave Desert, and the Sonora desert. Plant communities from all three deserts are represented in the Piute Valley
- The DEIS fail to identify the thickness of the alluvial material.
    - Alluvial material thickness varies throughout the area.
    - Alluvial material around the town of Searchlight and the surrounding mining district consists of a thin layer.
    - Alluvial materials south of Searchlight near the town of Cal-Nev-Ari, Nevada, are much thicker. Material eroding from the McCullough Mountains has produced a thick alluvial material.
    - The area surrounding Cal-Nev-Ari has no exposures of bedrock protruding through the alluvial material.
- Subsurface water flow and storage will vary based on alluvial material present
    - It is apparent that little to no actual field work was conducted to survey actual alluvial material within each watershed basin.
    - Surface exposures of crystalline rocks throughout the watershed basins are indications of thin alluvial material and a shallow subsurface aquifer. The alluvial material is only one (1) to three (3) feet thick in and around Searchlight.
    - Exposures of mineralized plutonic crystalline quartz rich rocks are the primary ore bodies of the Searchlight Mining District.
    - Alluvial material around Searchlight is a thin veneer covering portions of the crystalline bedrock.

Comment noted.

The existing Geological environment was presented in EIS Section 3.1-Geology, Soils, and Minerals, and impacts in Section 4.1-Geology, Soils, and Minerals. Geotechnical testing will be conducted at each WTG location prior to construction.

- Alluvial material is the principal material for shallow aquifer storage and flow of subsurface water.
- Crystalline granitic rocks around Searchlight are mineralized and well exposed around the town of Searchlight.
- These crystalline granitic rocks have little permeability (water transport) or porosity (water storage) potential.
- This geologic setting has resulted in shallow water aquifers. The shallow aquifer used to sustain plant life in the area is near surface one (1) to four (4) feet deep. Subsurface water flow through the thin alluvial apron, which lies on top of the crystalline bedrock. Very little water will penetrate below the alluvial to the crystalline granitic and quartz rich rocks.
- Alluvial material is the primary source of water for the desert vegetation during warm and dry periods in the Mojave Desert
- Subsurface water in alluvial material is the primary water source for plants such as Yucca and Joshua trees. Disruption of near surface water flow will impact water resources to vegetation. These trees and other succulent plants rely on shallow water resources for both the stabilization and reproduction. These indirect effects of construction on vegetation are not sufficiently disclosed and evaluated in the DEIS.

- Road construction will cut through the alluvial material disrupting the sub surface water flow. The shallow depth of bedrock will affect how and where construction can occur and how and where facilities can be placed on the site.
  - Road construction and foundations for wind turbines will require blasting to break up the hard granitic crystalline rocks.
  - This blasting will require removal of the upper alluvial material, disrupting ground water flow, and requiring water resources for dust mitigation.
  - The mining in and around the Searchlight mineral district is hard rock mining due to granitic crystalline rocks.
  - Deep water storage is in a fractured matrix of non porous crystalline rocks.
- The north and east portions of the project site have very irregular topography, which is not illustrated in any map in the DEIS but is shown in the map from VTN dated 11-10-2009. This will make construction more difficult and ensure that blasting will be necessary.

Well data indicate that groundwater in the project area is variable but ranges from 170 to about 270 feet (Section 3.3.2.4-Groundwater Resources). Construction excavation for the WTGs would range from ten to thirty feet deep (DEIS Section 2.3.2-Construction, subheading WTG Pads and Foundations). Therefore, it is very unlikely that near surface flows would be impacted.

During construction Searchlight Wind Energy, LLC would be required to use an approved dust palliative (such as water) to lesson blowing soil. After construction is complete disturbed areas would be revegetated to the extent possible.

Figure 2.1-1. 96 WTG Layout Alternative and Figure 2.1-2. 87 WTG Layout Alternative has been updated to illustrate topography. Section 2.3.2-Construction under Road Construction has been updated disclosed that blasting may be required. It cannot be determined to what extent blasting would be required until the ground geotechnical testing has been completed.

particularly taking into account the relatively flat grades that would be necessary to allow for safe passage of long loads. The DEIS does not discuss this issue.

- The area where the Southwest gas pipeline passes through the northern portion of the project site is very rocky and irregular, and the pipeline is located at a very shallow depth in this area. Please specifically describe the geology along the pipeline route to evaluate whether *any* construction can safely be done near this pipeline.

Southwest Gas Corporation holds a ROW grant from BLM for an existing gas line within the project area. The grant is non-exclusive; therefore, the BLM reserves the right to authorize other actions within a ROW area for compatible uses. The Applicant will be required to coordinate with Southwest Gas should there be any pipeline crossings, e.g., roads, underground electrical collection systems, etc. The result of the coordination would be a legally binding agreement that such crossings would meet Southwest Gas-provided standards for engineering and applicable material requirements to ensure the safe and continued operation of the gas line.

- The DEIS discusses (at page 4-3) that the blade throw safety set-back for each WTG of 886 feet, or an area of approximately 57 acres. The total acres of the project site actually affected simply for safety set-backs would be 4,959 acres, or 7.75 square miles. Why would BLM consider granting a ROW for an industrial facility with this many known hazards, hazards which also tie up far more land in perpetuity than stated in the DEIS?

Each turbine has a setback recommended by the manufacturer, which ranges from 866 to 1,050 feet as a function of rotor diameter. No turbines are located within the setback from any building or road, other than the spur road to each turbine used for construction and maintenance.

- Water Flow Models and the hydrology of the Eldorado, Colorado and Piute drainage basins focus on two points.
    - Ground water flow estimates based on a 1966 study by Rush and Huxel.
        - This study is used to build a case for an increase in the water resources in the project area, justifying the withdraw of large amounts of water for construction.
    - Nevada State Water Engineer Report
        - The Eldorado Valley has potential groundwater resources of 2,390 acre-feet/year, which is more than four times the estimated perennial yield of 500 acre-feet per year (Rush and Huxel, 1966).
        - The Piute Valley has potential groundwater resources of 5,039 acre-feet/year, which is over 16 times the estimated perennial yield of 300 acre-feet/year (Rush and Huxel, 1966).
        - The Colorado River Valley has committed groundwater resources of 4,547 acre-feet/year, which is over 22 times its estimated perennial yield of 200 acre-feet/year (Rush and Huxel, 1966).

- The DEIS report attempts to justify the use of ground water based on the differences of water flows in the Rush and Huxel, 1966 paper and the report from the Nevada State Water Engineer Report.
    - The "Nevada State Water Engineer Report" presents more questions than answers, which BLM must answer, disclose and evaluate to the public:

BLM considers publications of the State Engineer to provide reliable information from a credible source regarding Nevada water resources. The commenter would appropriately, direct questions about their methods to them. Since no new wells are planned for this project and no new water rights will be appropriated, the commenter's questions are irrelevant, since water rights holders, SWS, LVVWD, or anybody else who will be supplying that water cannot exceed its duty.

- What was the method used in determining ground water flow rates?
- How many well withdraws were used in pump test?
- What was the duration of each test?
- Where are the locations of well test?
- What was the recharge interval for each well?
- What (if any) is the criteria used in sub divisions of the three basins with respect to water depth, and shallow and deep water resources?
- Are all three (3) drainage basins (Eldorado, Piute, and Colorado River Valley) equal with respect to subsurface hydrology?
- Are water resource estimates based on well locations throughout the area, and does the study include areas of varying alluvial material.
- What is the variation in water flow in areas of crystalline rock such as Searchlight and thicker alluvial near Cal-Nev-Ari.
- Does the subsurface hydrology of Searchlight and the Surrounding mining district match the subsurface hydrology of the surrounding areas?
- There is considerable variation of rock types ranging from volcanic tuffs, rhyolites and plutonic granites that the subsurface hydrology will vary according to rock type.

To accurately depict the environment on the project site, and inform the public and the decision maker about the geological baseline. This baseline is essential to be able to understand how the project would have to be constructed, what natural limitations there will be on where and how facilities can be placed, and to understanding the likely impacts of activities on the project site. To provide this baseline information, BLM must conduct detailed mapping of the project area to determine the depth of alluvial material, exposures of granitic crystalline rock and water basins. Subsurface water within the Searchlight Township and mining district are not the same as those in the Eldorado Basin and southwest Piute Basin. Alluvial material the major source of ground water varies with short distances of less than four (4) miles.

The DEIS presents only a very basic summary of the geology and hydrogeology. The study of groundwater, and basin analysis used existing standard USGS maps to draw surface water contributions and implied that these boundaries represent accurate subsurface water. The flaw in the study is varying geology with respect to plutonic crystalline rocks and alluvial material. Water resource estimates cannot be accurately assessed on simple topography obtained from USGS maps. Ground water withdrawals in the southwestern part of the Piute valley will not

The existing Geological environment was presented in EIS Section 3.1-Geology, Soils, and Minerals, and impacts in Section 4.1-Geology, Soils, and Minerals Impacts. Geotechnical testing will be conducted at each WTG location prior to construction.

Well data indicate that water in the project area is variable but ranges from 170 to about 270 feet (Section 3.3.2.4-Groundwater Resources). Construction excavation for the WTGs would range from ten to thirty feet deep (Section 2.3.2-Construction, subheading WTG Pads and Foundations). Therefore, it is very unlikely that near surface flows would be impacted.

have the same impact as ground water withdrawal from Searchlight. Disruption of near surface water flow around the town of Searchlight will impact a shallow aquifer. Disruption of near surface aquifers has far greater impacts to water resources. Shallow subsurface water is the primary source for vegetation such as the Joshua tree. These trees and other succulent plants rely on shallow water resources for both the stabilization and reproduction of desert communities. A detailed analysis of water resources is important and necessary in order to prevent biological destruction of the area.

M. The DEIS fails to adequately evaluate effects on air quality and climate.

In its discussion of air quality impacts, DEIS at 3-37, BLM fails to disclose that the town of Searchlight has a high percentage of "sensitive populations," elderly people with existing health issues. Approximately 31% of the population is over 65 years of age, while over 35% more are between 45 and 64 as of the 2000 census, and these percentages are likely higher now and should be disclosed along with accurate current demographic information. Also, how will the applicant prevent the air quality at Lake Mead NRA from being compromised by the dust that will result from destroying the desert vegetation and creating 36 miles of unpaved roads, and the very large areas stripped for fire breaks?

The DEIS does not provide sufficient information about the likely negative effects of the project on air quality in the area, particularly with respect to dust. The DEIS acknowledges that "[t]he soils in the Searchlight area are susceptible to erosion by wind and water." DEIS at 3-5. Wind erosion will be a problem for the life of the project, and beyond, not just during construction. The area is prone to blowing dust already. Once the amount of destruction of desert vegetation and the natural crust of the soil surface necessary for the proposed project has taken place, the area will likely be a dust bowl.

Cryptobiotic soil crusts are an essential ecological component in arid lands. They are the "glue" that holds surface soil particles together precluding erosion, provide "safe sites" for seed germination, trap and slowly release soil moisture, and provide carbon dioxide uptake through photosynthesis.[20] The DEIS states that the project area in Clark County is designated as a management area for fine particulates (PM_{10}) but implies also that it is considered "attainment/unclassifiable area" for PM_{10} emissions. DEIS at 3-39. However, the Mojave Desert Air Quality Management District in California has found that this same area is already in non-attainment for PM_{10} particulates. The construction of the proposed project would further increase emissions of these types of particles because of the disruption and elimination of potentially thousands of acres of cryptobiotic soil crusts.

[20] Belnap, J., S. L. Phillips, J. E. Herrick, J. R. Johansen. 2007. Wind erodibility of soils at Fort Irwin, California (Mojave Desert), USA, before and after trampling disturbance: Implications for land management. Earth Surface Processes and Landforms 32(1):75-84; *see also* Belnap, J. *et al.*, Biological Soil Crusts—Ecology and Management (2001) on enclosed CD-ROM

The project emissions will not exceed the NAAQS and Clark County DAQ air quality standards described in Section 4.6- Air Quality Impacts.

Refer to APM-3 - the applicant would use water to control dust to comply with Clark County DAQ dust control requirements (APM-3). Additional mitigation measures are discussed in Section 4.6- Air Quality Impacts.

Less than 2 percent of the project area (382-410 acres) would be disturbed (either temporarily or permanently) as a result of the proposed project; this is a negligible amount of disturbance in relation to the project area (18,949 acres). No current data exists to support that the loss of such a small amount of soil crust relative to available crust would create a measurable change in CO2 volumes in the atmosphere. Furthermore, the Governor of the State of NV has delegated the authority to Clark County DAQ as the compliance oversight for Clean Air in the project area. Clark County has full jurisdiction of the project area, which has been determined to be in attainment/unclassifiable for PM10 emissions.

The DEIS does not describe the on-site cryptobiotic soil crusts. The proposed project will disturb an unidentified portion of these soil crusts and cause them to lose their capacity to stabilize soils and trap soil moisture. The DEIS fails to provide a map of the soil crusts over the project site, and to present any avoidance or minimization measures. It is unclear how many acres of cryptobiotics soils will be affected by the project. A supplemental DEIS must be prepared which identifies the extent of the cryptobiotic soils on site and analyze the potential impacts to these diminutive, but essential desert ecosystem components as a result of this project.

The DEIS's discussion of climate change effects is also inadequate because it provides insufficient information to meaningfully understand the effect of this project on the emission and capture of greenhouse gases. For example, how much carbon dioxide and other greenhouse gas emissions would be offset by construction of the turbines? Would there be *any* offset, if—for example—the additional electricity generated simply led to an increased use of electricity, such that the construction of renewable energy facilities would not remove any generation of carbon dioxide and other greenhouse gases from the electrical production infrastructure? Will there be negative effects on climate change from construction and operation of the project? For example, how much of the greenhouse gas sulfur hexafloride will be released by new transmission? How will the loss of the carbon absorption associated with cryptobiotic soils and vegetation that will be removed

N. The DEIS fails to adequately evaluate effects on transportation.

The DEIS's discussion of transportation is cursory and inadequate. As with most other impacts, the DEIS notes that a Traffic Management Plan will be developed at some future point. However, this means that there is no opportunity for the public to comment meaningfully on what the "plan" is to mitigate the transportation impacts of the project. A Traffic Management Plan needs to be finished and circulated again for public comment so that local residents can give public input to how truck traffic will impact their local roads, and how tourism will be affected. What is the alternate construction route to Cottonwood Cove Road? Photographs should be taken of road conditions before construction and afler to document any damage for the applicant to repair.

The DEIS does not recognize the primary users of the dirt roads northeast of Searchlight. DEIS at 3-43. There are at least five full-time residences, with an estimated 10 to 12 people, who use Oregon Trail Road as their ONLY access to their homes. The DEIS indicates that Oregon Trail Road from US 95 east to Gas Line Road will be used as a major access point for construction of the northeast portion of the project. What provisions will be made to allow these people, who have lived there for 10 to 20 years or more, to have unimpeded access and egress to and from their homes? One family has elementary-age school children; several of the residents work full time. Others are elderly and may need emergency services. Will they be able to get out to US 95 without being held up by construction equipment and traffic for twelve months?

The DEIS does not mention that one of the roads that is routinely maintained is Southwest Gas Company's Gas Line Road. It is used by ORVs, and is in fair condition. However, as detailed earlier, this route, if used by heavy equipment, has a potential for disaster.

The purpose and need for the project is not to offset greenhouse gas emissions. Section 4.6-Air Quality Impacts includes an analysis of air quality and greenhouse gas emissions. No current data exists to support that the loss of such a small amount of soil crust relative to available crust would create a measurable change in CO2 volumes in the atmosphere. Currently there is no technically defensible methodology for predicting potential climate changes from GHG emissions. However, there are, and will continue to be, several efforts to address GHG emissions from federal activities, including BLM authorized uses. Furthermore, this proposed action does not meet the emission level or production capacity for reporting and is not subject to mandatory reporting rules found in General Provisions (40 CFR 98).

The Traffic Management Plan would be prepared by the party responsible for implementing it; namely the construction contractor. As safety is involved, this plan would not reviewed by the general public as the Director of the Nevada Department of Transportation holds responsibility for review. Construction could not legally commence prior to the NDOT approval. Refer to MM TRAN-1 for a discussion of the elements that would be included in the plan. In addition, NDOT typically requires written notification be provided to emergency services (fire, police, ambulance, etc.) at least 24 hours in advance of traffic detours and at least 48 hours prior to the commencement of construction activities.

MM-TRAN-2, Repair Damaged Streets, would specifically require documentation of pre-construction road conditions and post-construction repair standards.

The gas pipeline is within 1000 feet of the residences mentioned in the previous paragraph. BLM must disclose this information and explain how it intends to prevent potentially deadly impacts from such use.

The DEIS states "Unauthorized use of motorized vehicles has damaged resources within the project area by crushing vegetation, disturbing wildlife, increasing noise and airborne particulates, and increasing erosion potential." DEIS at 3-43. These impacts are miniscule compared to the construction of 37 miles of new 36-foot wide roads, 87 turbines, and all of the other infrastructure mentioned. It is incomprehensible that BLM considers the very minimal incidental damage done by ORV's a problem, yet would consider turning the entire 30 square miles (18,949 acres) into an industrial zone for the next 30 to 50 years.

In the discussion of transportation impact indicators, DEIS at 4-51, the first four of the five bullet points are a given; the project would absolutely increase traffic, degrade the roads, prevent adequate emergency access, and cause loss of access to private land parcels. In addition, since each turbine has a safety set-back of 886 feet, access to recreation access points would be affected.

With 300,000 visitors annually to Cottonwood Cove in the Lake Mead NRA, on a road that is narrow and steep, adding construction traffic into the mix is a recipe for disaster. Should there be a necessity for emergency services at the Lake (a common occurrence in the summertime), there could be life-threatening delays in response time.

During the construction period those people who use Oregon Trail Road would encounter great difficulty just coming and going from their homes. Everyday activities (going to work, taking children to school, going to appointments) would become a hassle and a safety hazard.

At page 4-52, the DEIS states that "When construction is completed, access for motorized travel might increase due to the construction of 29 miles of new roads." But with each turbine having an 886 foot safety set-back due to potential for blade throw, just where will the public be allowed to drive? The roads are closer than 886 feet to each turbine. Furthermore, where would anyone WANT to drive, once the turbines are operational. Unless each turbine is set back more than 886 feet from the main roads within the project, there will be no public access. How will BLM and Duke insure that people do not get closer than the 886 feet? Will 47 acres of affected area encircling each turbine be fenced to prevent anyone from getting too close? Will there be gates on the project roads?

The DEIS states at page 4-52 that "Given the number of vehicle trips during the construction period, along with the movement of heavy construction equipment, it is reasonable to anticipate that the Proposed Action might damage pubic roads through increased use." The word "might" should be changed to "will." There is no doubt that the volume of heavy construction equipment will cause severe damage to existing roadways. However, the DEIS is incorrect to say that "Construction of the Proposed Action would have a beneficial effect on road conditions because it would result in restoration of a county road to its preconstruction conditions for both the base and the surface." DEIS at 4-52.

The commenter is incorrect in the assertion that 18,949 acres would be disturbed. The project area is 18,949 acres. Table 2.5-2. Approximate Acreages that would be Affected by Development of Action Alternatives, of the DEIS presents the disturbance associated with the build alternatives ranges from 230-249 acres of temporary disturbance, and 152-160 acres of permanent disturbance.

The setback is in conformance with BLM Instructional Memorandum 2009-043, which states that no turbine on public land will be positioned closer than 1.5 times the total height of the wind turbine (approximately 640 feet) to the right-of-way boundary. No turbines are located within the setback from any building or primary road, other than the spur road to each turbine used for construction and maintenance, or two-track and casual-use roads.

No permanent fencing of the turbines or access roads is proposed because of the additional disturbance and resulting habitat fragmentation.

Refer to Section 4.7-Transportation Impacts, which has been updated to address this comment.

The "*preconstruction* condition" of these roads is not optimal. Saying that post-construction "mitigation" will take a road back to preconstruction condition is like saying it would be beneficial to you that after your ten-year old car is totaled, you'll get the car back after 8 to 12 months in the body shop, complete with the same dings it had before it was wrecked and repaired. On the same page, the DEIS states that "Overweight and oversized loads could cause short-term disruptions to local traffic." BLM should be honest and change "could" to "will." Specifically, oversized loads going east on Cottonwood Cove Road will shut down all other traffic. The road is 24 feet wide, and is the only access route to Cottonwood Cove on Lake Mohave.

Refer to MM TRAN-2- Repair Damaged Streets, which provides that the roads would be returned to their preexisting condition. A Traffic Management Plan (MM-TRAN-1) will address effects on local traffic. The Plan would include the following element: To minimize the effects on local and Lake Mead traffic the Transportation Plan will mandate the use of flagmen or escort vehicles to control and direct traffic flow, and provide schedules that show roadway work will be done during periods of minimum traffic flow. The Traffic Management Plan would be a stipulation of the ROW Grant.

On page 4-53, the DEIS states that "Future roadway improvements in and around Searchlight could reduce potential traffic delays, improve traffic flow, and increase access for motorized travel." This is not only speculative, but its premise is inaccurate and should be corrected. If the roadways around Searchlight are improved, they still don't lead anywhere. All the new roads proposed as part of the project dead-end in the middle of nowhere. It is difficult to comprehend how this is considered beneficial.

This sentence has been removed from the EIS.

BLM also should disclose and evaluate the likely damage to roads from the sheer weight of the turbine-carrying trucks and other construction equipment, and require as a mandatory condition of any ROW grant that Duke enter into an agreement with the Nevada Department of Transportation, supported by a bond, to repair damage to the Cottonwood Cove Road and US 95 from activities associated with the project. *See* Exhibit 8.

O. The DEIS presents confusing and inaccurate information about land use.

The DEIS discloses incorrect information about land use and presents an incomplete analysis. For example, the DEIS states there, among other uses, ". . . limited livestock grazing, . . ." DEIS at 3-44. All cattle, burros and wild horses were removed from this area many years ago. With respect to the land ownership, what compensation will be given to the private owners of the small parcels totaling approximately 644 acres? *Id.* These people bought their land with the understanding they would be able to have the quiet enjoyment of their property in a remote, unspoiled area. Others bought with the intention of building homes in the future, or perhaps to speculate on the land. The land in proximity to the turbines will now be seriously devalued. If Duke argues that value will not be affected by the presence of the turbines, then the company should be willing to buy out these land owners at today's prices.

Section 3.8.2-Existing Environment has been modified to delete reference to livestock grazing.

The DEIS states the project is located in an area under the jurisdiction of the 1998 Las Vegas RMP and ROD (BLM 1998), as amended by the 2005 Wind Energy Development document. DEIS 3-45. The 1998 RMP is currently under revision; the DEIS for the revised RMP is supposed to be available this Fall. Is this statement still true? Which RMP will govern? Will there be any amendments to the RMP that address the project or the lands it affects?

The Las Vegas RMP, approved October 5 1998 is the governing document for this project, along with any other approved planning or programmatic document covering this field office or project type. The revised (Las Vegas) RMP Record of Decision is not anticipated until the summer of 2014.

On page 3-48, the acreage for Duke's rights of way listed differs from that stated elsewhere in the DEIS. This table states 24,382.56 acres; elsewhere the project is described as

The correct acreage for the proposed project area is 18,949 acres of BLM-managed lands. The total from Table 3.8-2. ROWs within or adjacent to the Proposed Project Area is from a database that has not been corrected to reflect the actual ROW.