

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105
July 17, 2014

Cedric Perry, Project Manager
California Desert District Office
Bureau of Land Management
22835 Calle San Juan de Los Lagos
Moreno Valley, California 92553

Subject: Draft Environmental Impact Statement for the Proposed Tylerhorse Wind Project, Kern County, California (CEQ #20140114)

Dear Mr. Perry:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement for the Proposed Tylerhorse Wind Project (Proposed Action). Our review and comments are provided pursuant to the National Environmental Policy Act, the Council on Environmental Quality Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

EPA continues to support increasing the development of renewable energy resources in an expeditious and well planned manner. Using renewable energy resources such as wind power can help the nation meet its energy requirements while reducing greenhouse gas emissions. We encourage BLM to apply its land management and regulatory authorities in a manner that will promote a long-term sustainable balance between available energy supplies, energy demand, and protection of ecosystems and human health.

EPA provided extensive formal scoping comments for the project on August 15, 2011, including detailed recommendations regarding purpose and need, range of alternatives, cumulative impacts, biological and water resources, air quality, and other resource areas of concern. We were pleased to see that the DEIS addresses some of our scoping comments including a comprehensive climate change discussion, air quality analysis, and information on tribal consultation.

Following our review of the DEIS, we have identified concerns with potential impacts to site hydrology, air quality, sensitive receptors from noise and Valley Fever exposure, and to users of the Pacific Crest trail. We are also concerned about potential impacts to avian species, particularly the golden eagle and California condor. Based on our review of the DEIS, we have rated the project and document as *Environmental Concerns – Insufficient Information* (EC-2) (see the enclosed “Summary of EPA Rating Definitions”).

The enclosed detailed comments elaborate on the above concerns and provide specific recommendations regarding analyses and documentation needed to assist in assessing potential significant impacts from the Proposed Action, and for minimizing adverse impacts. We are available to further discuss all recommendations provided. If you have any questions, please contact me at (415) 972-3843 or contact Anne Ardillo, the lead reviewer for this project. Anne can be reached at (415) 947-4257 or ardillo.anne@epa.gov.

Sincerely,

/s/

Kathleen Martyn Goforth, Manager
Environmental Review Office

Enclosures: Summary of EPA Rating Definitions
EPA’s Detailed Comments

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED TYLERHORSE WIND PROJECT, KERN COUNTY, CALIFORNIA, JULY 17, 2014

Water Resources

The proposed Tylerhorse Wind Project has the potential to disrupt natural site hydrology and cause erosion. According to the DEIS, hydrology and erosion-related effects of the Proposed Action will be minimized through mitigation measures WATER-1 through WATER-3 (pg. 4.19-8). We support the Project Proponent's intent to avoid disruption of natural flows, lessen erosion and sedimentation, and incorporate best management practices prior to, during, and post construction. In addition, we have several recommendations to further reduce project impacts.

Recommendations:

In the FEIS, revise Mitigation Measure WATER-1 to include a detailed description of the size and location of proposed detention basins for providing water quality control measures. Additionally, to reduce the potential for basins with standing water to be an attractant and a hazard to wildlife, identify specific measures to deter birds and other wildlife from pond use.

EPA recommends the minimizing the use of hard structures such as the rip-rap proposed in Mitigation Measure WATER-2 at the end of the access road watercourse crossings when the road is "in-sloped". To better protect and maintain existing ecosystem functioning, address the feasibility of bridging and/or bottomless arch culverts to disperse stormwater flow and dissipate energy. Include any updated design measures in the FEIS.

Mitigation Measures WATER-3 and WATER-4 propose the preparation of a Comprehensive Drainage Plan and Operations Period Drainage Maintenance Plan respectively. EPA recommends that these plans be included in the FEIS in order to facilitate assessment of impacts and effectiveness of mitigation measures.

According to the DEIS "preliminary jurisdictional evaluations have been completed in support of the Tylerhorse Wind Project. These evaluations will be made permanent during final engineering and design of the TWP. Acquisition of a Streambed Alteration Agreement, if required, would occur prior to construction of the TWP, thus demonstrating compliance with Section 1602 of the California Fish and Game Code" (pg. 3.19-8).

Recommendation:

In the FEIS, confirm completion of the Streambed Alteration Agreement in the FEIS, or provide a status and schedule for its estimated completion.

A number of unnamed ephemeral washes and drainages occur throughout the project area. These areas generally contain a diversity of desert shrub species, have more structured and complex vegetative assemblages, and possess higher wildlife diversity than the surrounding upland habitats (pg. 3.2-2). Many plant populations are dependent on these aquatic ecosystems and have adapted to their unique conditions. The potential damage that could result from disturbance of washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems, such as adequate capacity for flood control, energy dissipation, and sediment movement; as well as impacts to valuable habitat for desert species.

Recommendations:

To avoid and minimize direct and indirect impacts to ephemeral washes (such as erosion, migration of channels, and local scour), EPA recommends including the following commitments in the FEIS:

- Avoid placing turbine support structures in ephemeral washes to the maximum extent practicable;

- Implement all practicable opportunities to further reduce the footprint of project elements (parking, buildings, roads, etc.);
- Use natural washes, in their present location and natural state, and include adequate natural buffers for flood control to the maximum extent practicable; and
- Minimize the number of road crossings across ephemeral washes and design crossings to provide adequate flow-through during storm events.

Water supply

The DEIS describes site water needed for construction and operation as being very minor; seven acre-feet per year (AF/Y) for construction activities and two AF/Y for the operation phase. These volumes of water would not be withdrawn from any on site groundwater wells, but would instead be trucked in from offsite. The proposed offsite water supplies could potentially be derived from groundwater. However, because the proposed onsite water usage requirements are so minor, they would not be expected to result in substantial drawdown of groundwater levels at source wells (pgs. 3.91-4, 4.19-5).

Even if the amount required is considered minor, we remain concerned about the potential groundwater drawdown and cumulative impacts to the area's basins given the concurrent construction and operational phases of approved and reasonably foreseeable projects in the vicinity. The DEIS indicates that parts of the Antelope Valley groundwater basin have experienced declining groundwater levels (pg. 3.19.2). As prior BLM NEPA documents have noted, even modest drawdowns of 0.3 foot can adversely affect vegetation if groundwater drops below the effective rooting levels for a sustained period of time.¹ A drop in groundwater levels could also impact neighboring wells, lower the water table, and adversely affect groundwater-dependent vegetation and woodlands.

Recommendation:

The FEIS should confirm the availability of an adequate water supply for construction and operations of the Proposed Action. If the water is to be derived from groundwater, the FEIS should disclose its source and evaluate the environmental impacts associated with the ultimately proposed supply of water.

Air Quality

Cumulative Air Quality

EPA is concerned about the direct, indirect and cumulative impacts of construction emissions and fugitive dust associated with the project, even after mitigation measures have been taken into account. The Proposed Action is located in Mojave Desert Air Basin under the jurisdiction of the Eastern Kern Air Pollution Control District, which as shown in Table 3.2-3, is designated as serious non-attainment and marginal non-attainment of the federal PM₁₀ and ozone standards, respectively. The DEIS includes estimated emissions for criteria pollutants and a description of the mitigation measures that would be implemented to reduce the adverse air impacts identified in the DEIS; however, even with implementation of these mitigation measures, daily emissions of NO_x, and cumulative emissions of NO_x, PM, and VOCs would remain significant when considered in conjunction with construction of the related cumulative past, present, or reasonably foreseeable, probable future projects (pg. 4.2.7-17). In light of the area's nonattainment status, potential health impacts to local residents, and the construction of reasonably foreseeable wind and transmission projects in the area, all feasible measures should be implemented to reduce and mitigate air quality impacts to the greatest extent possible.

Recommendations:

In consultation with the EKAPCD, use the cumulative emissions data to develop a phased construction schedule for projects that will undergo construction concurrently, to avoid any violations of local, state, or

¹ For example: Bureau of Land Management and California Energy Commission, March 2010. Staff Assessment and Draft Environmental Impact Statement for Genesis Solar Energy Project, p. C.2-4.

federal air quality regulations. EPA recommends incremental construction on-site to ensure air quality standards are not exceeded.

After committing to a phased construction schedule, and understanding the remaining cumulative emissions impacts, the FEIS should indicate if additional mitigation measures would be needed or if the project would affect the ability of other foreseeable projects to be permitted due to construction emissions.

Additional mitigation for non-road and on-road engines

EPA supports incorporating mitigation strategies to reduce or minimize fugitive dust emissions, as well as more stringent emission controls for PM and ozone precursors for construction-related activity. We commend BLM for incorporating EKAPCD's Rule 402 to reduce PM emissions during construction, as well as Air-1 to further reduce fugitive dust on unpaved roads and particulate emissions from onsite dedicated equipment exhaust (pg. 4.2.6-15). We note that Air-2 requires all off-road diesel engines with a rated output of greater than 50 horsepower to, at a minimum, meet the Tier 32 California Emissions Standards for Off-Road Compression Ignition Engines. Alternatively, if reasonably available, Tier 23 engines with diesel particulate filters and lean-NOX catalysts (or, or equivalent control devices) will be employed (pg. 4.2.6-16). We believe that the DEIS may have a typographic error and assume that the intent of the mitigation measure was to meet Tier 3 and Tier 2 emission standards, respectively. EPA began phasing-in Tier 4 standards for non-road engines in 2008²; however, the DEIS does not mention the availability of Tier 4 non-road engines. The use of such engines would result in an approximately 90% reduction in NO_x and PM emissions as compared to Tier 3.

Recommendations:

In the FEIS, include emission tables for various classifications of on-road and non-road engines and identify emission levels for PM₁₀, PM_{2.5} and NO_x.

Provide in the FEIS list of the equipment to be used during construction and indicate the expected availability of Tier 3 and Tier 4 engines for each application.

Include a commitment to using non-road construction equipment that meets Tier 4 emission standards when available, and best available emission control technology for construction that occurs prior to Tier 4 standards availability.

Commit to implementing best available emission control technologies for construction ahead of the California Air Resources Board's in-use off-road diesel vehicle regulations, regardless of fleet size.³

Include all applicable State and local requirements and the additional and/or revised measures listed above, and include a condition that the Project Proponent incorporate all such measures into construction contracts.

Greenhouse Gas Emissions - Construction and Operation Bid Specifications

To minimize greenhouse gas emissions from project construction and operations, EPA recommends that the FEIS and ROD include commitments to incorporate the following into all contract solicitations:

- a) Soliciting bids that include use of energy- and fuel-efficient fleets;

² See EPA website: <http://www.epa.gov/nonroad-diesel/2004fr/420f04032.htm#standards>

³ See CARB's Factsheet at: http://www.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf

- b) Requiring that contractors ensure, to the extent possible, that construction activities utilize grid-based electricity and/or onsite renewable electricity generation rather than diesel and/or gasoline powered generators;
- c) Employing the use of zero emission or alternative fueled vehicles;
- d) Using lighting systems that are energy efficient, such as LED technology;
- e) Using the minimum amount of GHG-emitting construction materials that is feasible;
- f) Using cement blended with the maximum feasible amount of fly ash or other supplemental cementitious materials that reduce GHG emissions from cement production;
- g) Using lighter-colored pavement where feasible; and,
- h) Recycling construction debris to maximum extent feasible.

Climate Change

EPA commends the BLM for including estimates of greenhouse gas emissions from construction and operation of the project. While the DEIS discusses the environmental impacts of climate change, no discussion is provided on the potential impacts of climate change on the project specifically.

Recommendation:

Considering that the project is planned to be in operation for 30 years, the FEIS should include a description of how climate change may affect the project, particularly its sources of groundwater and reclamation and restoration efforts after construction and decommissioning. The FEIS should also discuss how climate change may affect the project's impacts on sensitive species.

Public Health

According to the California Department of Public Health, Kern County has a high incidence rate of Valley Fever, with 15.1 to 183 cases per every 100,000 people (CDPH, 2009). Soils that possess the potential to contain valley fever spores are typically dry, alkaline, semi-arid or arid soils similar to those found in the TWP site. Project construction would disturb the soil and potentially cause present fungal spores to become airborne, putting construction personnel and wildlife at risk of contracting Valley Fever (pg. 4.11-5). The proposed Dust Control Plan requires a number of dust suppression activities during Project construction that would minimize the spread of fungal spores; however, Valley Fever impacts would not be completely avoided (pg. 4.11-5).

The nearest potential sensitive receptor is 0.25 mile northeast from the closest proposed turbine pad and the nearest sensitive receptor that may be affected by dust is located more than 0.5 miles downwind of construction activities (pg. 4.2-4). The Centers for Disease Control and Prevention states that workers engaged in soil-disturbing activities in endemic areas should be considered at risk for the disease.⁴ Occupational groups at risk include farmers, agricultural workers, construction workers, and archaeologists. The DEIS concludes that the construction emissions and dust air quality impacts will be minimal to nearby residents. However since the spread of fungal spores will not be completely avoided as stated in the DEIS, EPA is concerned that the nearby residents and workers at the TWP may still be at risk of exposure.

Recommendations:

Incorporate a mitigation measure in the FEIS ensuring that sensitive receptors are informed of these potential risks of Valley Fever in advance of construction. This information should be provided concurrently with advanced notification of construction provided as mitigation for noise impacts.

The Environmental Awareness Program for the workers should include training on the health hazards of Valley Fever, how it is contracted, what symptoms to look for, proper work procedures, how to use

⁴ Coccidioidomycosis. Technical Information. 2008 Centers for Disease Control and Prevention.

personal protective equipment, the need to wash prior to eating, smoking or drinking and at the end of the shift, and the need to inform the supervisor of suspected symptoms of work-related Valley Fever. The training should identify those groups of individuals most at risk and urge individuals to seek prompt medical treatment if Valley Fever symptoms (flu-like illness with cough, fever, chest pain, headache, muscle aches, and tiredness) develop.⁵

In addition to regulatory required fugitive dust controls, the Applicant should:

- Avoid areas that may harbor the fungus if practicable.
- Restrict high risk workers from contaminated areas if possible.
- Require that grading and construction equipment cabs be enclosed, HEPA ventilated, and air-conditioned.
- Use personal protective equipment in dusty work areas:
 - Disposable clothing.
 - Method to clean work boots at the end of the shift.
 - NIOSH certified N95 respirator, at a minimum, or one with a higher protection factor.
- Provide personal hygiene (washing) facilities.
- Require crews to work upwind from excavation sites.
- Minimize ground disturbance as much as possible. Revegetate temporarily disturbed areas promptly.
- Discourage workers from carrying any fomites home with them. Institute hygiene measures to limit dust transport offsite.
- Consider limiting visitor site access without proper training or personal protective equipment.
- Prohibit work activities when wind speeds exceed 25 mph.
- Consider mitigation measures that would provide advanced notification to sensitive receptors of the potential effects of a *Coccidioides* infection.
- Provide local public health officials with a schedule of project activities that disturb soil.

Biological Resources

Endangered Species and Other Species of Concern

The site supports a diversity of mammals, birds, reptiles, and bats, including special status wildlife species. According to the DEIS, the Endangered Species Act section 7 formal consultation has been initiated by the BLM with the submittal of a Biological Assessment (BA) to the US Fish and Wildlife Service (pg. 5-3). The Biological Opinion will play an important role in informing the decision on which alternative to approve and what commitments, terms, and conditions must accompany that approval. The DEIS also indicates that a draft Bird and Bat Conservation Strategy (Appendix C-4) was submitted to agencies for review on April 28, 2011. While USFWS and California Department of Fish and Wildlife protocol-level surveys were conducted to assess the project's biological resources, it is unclear what the current status of wildlife monitoring and survey results is.

Recommendations:

Provide an update on the ESA consultation process and include the Biological Opinion, if one is issued.

Provide an update on the Bird and Bat Conservation Strategy and include the finalized plan in the FEIS.

The FEIS and ROD should include any additional mitigation and monitoring measures that result from consultation with USFWS to protect sensitive biological resources, including desert tortoise, burrowing owl, golden eagles, and the California condor

⁵ <http://www.cdph.ca.gov/HealthInfo/discond/Pages/Coccidioidomycosis.aspx>

The FEIS should discuss coordination with USFWS and CDFW and their review of the submitted surveying, monitoring, and reporting protocols completed to date.

Surveys from the neighboring Manzana Project found that golden eagles were using the general area throughout the year. While no nests were identified within the project area of either Manzana or Tylerhorse, observations clearly indicate that the general area contains and supports resident eagles (pg. 3.22-15). It is expected that golden eagles may occur in the project area where they are anticipated to be an uncommon year-round, non-breeding visitor or non-breeding resident. The DEIS indicates that the Project Proponent has submitted a draft Eagle Conservation Plan to agencies for review on March 23, 2011 (pg.4.21-27). It is our understanding USFWS is working with the Project Proponent and BLM in review and development of an Eagle Conservation Plan.

Recommendation:

Include the final Eagle Conservation Plan as an appendix in the FEIS. Discuss whether the Project Proponent will be applying for a Programmatic Eagle Take Permit.

As the DEIS notes, the locations of known California condor sightings in close proximity to the project area indicate that there is a moderate level of risk to the California condor from the Proposed Action. It is conceivable for a California condor to occur within the Project area (pg. 4.21-11).

Recommendations:

Include in the FEIS the results of ESA consultation with the USFWS regarding the California condor and demonstrate how the project will comply with the MBTA for this species.

Address the potential for the transmission towers to provide attractive perching and roosting opportunities for the condor.

Through mitigation measure WIL-li a Condor Monitoring and Avoidance Plan will be submitted, which includes the use of the Remote Condor Observation Network detection system. While the DEIS includes an extensive description on the system's use under different scenarios, EPA further recommends the FEIS elaborate on the following factors:

- Its limitations, including how weather may affect its performance and whether the system has any potential 'blindspots';
- Contingency plans in the event of technical or mechanical failure; and,
- Any results from other projects that have used this approach.

Compensatory Mitigation

The DEIS includes mitigation measures implemented to minimize and mitigate for direct and indirect impacts to aquatic resources and biological resources, including compensatory mitigation land acquisition. The DEIS does not, however, indicate that specific compensation lands are available. In light of the numerous energy projects under construction or proposed, the availability of land to adequately compensate for environmental impacts to resources such as Joshua tree woodlands may not be easily identifiable and may serve as a limiting factor for development. EPA understands that the Project Proponent has proposed in-lieu monetary funding as another option for compensatory mitigation.

Recommendations:

The FEIS should identify compensatory mitigation lands or quantify available lands for compensatory habitat mitigation for this project, as well as reasonably foreseeable projects in the Tehachapi Wind Resource Area.

Specify a clear timetable in the FEIS and ROD for ensuring adequate compensatory mitigation has been identified, approved, and purchased. Describe the implications on project construction if the timetable is not met.

Pacific Crest Trail

As the DEIS acknowledges, the Tylerhorse Wind Project is in close proximity to the Pacific Crest Trail. The western parcel is located adjacent to the PCT's western side; the central parcel is located approximately 1 mile east from the PCT at its closest point; and the third parcel is approximately 2 miles east from the PCT at its closest point. The western parcel includes three wind turbine generators located approximately 500 feet east of the trail corridor conforming to the Kern County setback requirements (pg. 4.18.9). As noted in the DEIS, the Pacific Crest Scenic trail was created under the National Trails System Act to provide for outdoor recreation opportunities and the conservation of significant scenic, historic, natural, or cultural qualities (pg 3.18-8). Section 7(c) of the National Trails Act states that agencies may permit uses that will not substantially interfere with the nature and purposes of National Trails, and efforts shall be made to avoid activities that are incompatible with the purposes for which such trails were established.⁶ The DEIS does not clearly state whether the Proposed Action, especially with the presence of three wind turbines 500 feet from the trail, is consistent with the National Trails Act intent.

The DEIS discusses the potential impacts of the PCT, including fugitive dust, noise and visual intrusions from the wind towers. Specific mitigation measures for construction, operations, and maintenance activities have been proposed to reduce these impacts. However, even with adherence to the proposed mitigation measures, visual impacts to the PCT would remain high based on the high sensitivity of recreational users and the fact the trail has national significance as a congressionally designated scenic trail. Compensatory mitigation consisting of 1,207 acres of off-site land acquisition has been proposed to mitigate the anticipated impacts.

Recommendations:

Expand the discussion on the nature and purposes of the Pacific Crest Trail and discuss whether the Proposed Action substantially interferes with them nature and purposes.

Provide updated information on the consultation with the USFS and Pacific Crest Trail Association, including any feedback on the adequacy of the proposed 1,207 acre compensation.

In September of 2012, the BLM Director approved the agency's National Trails System Manual Series, a comprehensive set of policies for trails that are covered under the provisions of the National Trails System Act⁶. The FEIS should include a discussion of these manuals and their applicability to the TWP.

Consider eliminating the three wind generating turbines that are closest to the trail. According to the DEIS, eliminating the three turbines on the southwest parcel will also potentially result in fewer biological, cultural, and other impacts while maintaining a contiguous footprint for development. Land disturbance would also be reduced because 3 fewer turbine foundations/crane pads would be required and fewer access roads and collectors needed (pg. 2-22).

Noise Impacts

Operational Noise

According to the DEIS, the Kern County Zoning Ordinance, which states, "audible noise due to wind turbine operations shall not be created which causes the exterior noise level to exceed forty-five (45) dBA threshold" (pg. 3.9-8), was used for the noise impact analysis. However, the Noise Technical Report states that Kern County does

⁶ http://www.ntc.blm.gov/krc/uploads/686/NationalScenicHistoricTrails_Transcript.pdf

not have jurisdiction over the Project and the discussion of their noise levels is provided for completeness and reference (pg. E-15). Therefore, it is not clear that these will be the enforceable noise levels for the project.

The DEIS states that the highest predicted project noise level from the maximum turbine layout at a potential residential structure is predicted to be 52 dBA equivalent continuous sound level (Leq), and that noise levels at two residences would exceed the 45 dBA level but not the Kern County General Plan level of 65 dBA day-night average (DNL)(pg. 4.9-4). The DEIS also implies that the cumulative impacts from the turbines surrounding the project site would add an additional 3 dBA to these values (pg. E-26).

EPA is concerned that the analysis did not measure the baseline noise levels at the receptors, but rather referenced published levels. The DEIS states “based on the referenced information, existing background noise levels in the vicinity of the Project are reasonably expected to be approximately 40 dBA or less....wind-induced noise and operations of existing turbines may result in these levels being exceeded periodically” (pg. 3.9-4). This adds substantial uncertainty to the baseline noise assumption and casts doubt on the noise impact analysis results. In addition, the analysis did not consider the fact that the project area is a rural and naturally quiet environment where increases in noise might have a greater impact.

The noise analysis also did not consider low-frequency sound, which is associated with wind turbines, nor how attenuation would apply to low-frequency sound. The relative amount of low-frequency noise is higher for large turbines (2.3-3.6 MW) than for small turbines (≤ 2 MW)⁷. In addition, the methods used in the noise analysis calculated the sound pressure level that would occur after losses from distance, air absorption, ground effects, and screening are considered (pg. 4.9-3); however, lower frequency noise is less attenuated by the atmosphere and building materials than noise at higher frequencies⁸.

The Appendix to the Noise Technical Report shows potential residences #33, 34, and #35 as located very close to Turbines T36,T37 and/or T1, yet no noise estimate is provided for these receptors

Recommendations:

Confirm that the outdoor noise level of 45 dBA will be the level BLM is using as the allowable upper level for the project and indicate whether this will be included as a stipulation in the final BLM Right-of-Way Grant.

Discuss the baseline levels used and their appropriateness given the qualifier in the DEIS stating that existing turbines can affect this level. Discuss the uncertainty of this estimate and indicate why no field noise measurements were taken for the analysis.

Discuss the decibel increase expected at the nearest receptors and how this could relate to factors such as annoyance and sleep disruption.

Evaluate impacts from low-frequency sound and the applicability of the sound attenuation used in the noise model to low frequency sound.

Include the missing noise measurements for the nearby receptors as identified above.

⁷ Møller H, Pedersen CS. Low-frequency noise from large wind turbines. [J Acoust Soc Am](#). 2011 Jun;129(6):3727-44.

⁸ Bruel & Kjaer Sound and Measurement A/S. Environmental Noise. 2000 [cited 2011 June 28];

Available: <http://www.nonoise.org/library/envnoise/index.htm> .

Noise mitigation

Operational noise mitigation measures include a post-decision acoustical analysis based on the final layout with the selected turbines to document projected sound levels. If the 45 dBA sound level is exceeded, possible actions include changing the locations of the wind turbine generators (pg. 4.9-7). The configuration and number of turbines shown in Figure A-1 of the Noise Technical Report show little area on the project parcels not already containing turbines. It does not appear that this is a reasonable mitigation option unless the elimination of turbines is also considered.

The implementation of the property owner agreements granting excess noise levels on their property is not disclosed in the DEIS. The DEIS indicates on pg. 3.9-9 that where noise levels indicated in the preceding text are exceeded, the Project Applicant will obtain easements or agreements from neighboring property owners granting consent to allow noise levels to exceed the maximum limits allowed.

The preceding text discusses the Kern County Zoning Ordinance (Title 19) Wind Energy (WE) Combining District development standards and conditions, which reference several noise levels, including the exterior 45 dBA level, low-frequency noise levels which were not evaluated in the DEIS, and conditions where noise consists of both pure tone and repetitive sounds, also not evaluated in the DEIS (pg. 3.9-8). It is not clear whether the final acoustical analysis will include these metrics and whether these estimates, along with an interpretation of the results, will be disclosed to affected residents prior to or when presenting the property agreements.

In addition, the mitigation measures include creation of a post-construction noise complaint resolution process (Noise-6, p. 4.9-7) which states that the Project Applicant shall document, investigate, evaluate, and attempt to resolve legitimate project-related noise complaints and document actions taken to evaluate and resolve the complaint. It is not clear what would constitute a legitimate noise complaint, how this would be evaluated, and what actions could be taken post-construction to minimize noise impacts. If operations can be modified, the requirement to do so and under what noise levels should be clearly documented.

Recommendations:

The measures to reduce noise impacts in mitigation Noise-5 should include the option to eliminate turbines closest to affected residents.

Provide additional information regarding the metrics that will be used in the post-decision acoustical analysis and whether the additional metrics from the Kern County Zoning Ordinance (Title 19) Wind Energy (WE) Combining District development standards and conditions will be included.

Discuss the process for measuring excess noise levels, how complaints will be deemed legitimate, and who would be responsible for measurements taken once operations have commenced.

Cultural Resources and Coordination with Tribal Governments

According to the DEIS, BLM has received one formal response letter from the tribes that were contacted as part of government-to-government consultation. The Bishop Tribal Council of the Bishop Paiute Tribe recommended that a Tribal Cultural Monitor be hired for monitoring purposed during all ground disturbing activities and that artifacts should be protected from vandals as well as construction crew. The Tribe also expressed concern regarding Bald Eagles, Golden Eagles, and other bird species. (pg. 3.4-9). The document states the BLM is committed to continuing consultation and collaboration efforts with these Tribes and tribal communities regarding the Project (pg. 5-5).

Recommendation:

The FEIS should include an update on the government-to-government consultation between the BLM and the Bishop Paiute Tribe and a description of how the tribe's concerns were addressed.