BLM

United States Department of the Interior
Bureau of Land Management

ALTA EAST WIND PROJECT

PROPOSED
PLAN AMENDMENT AND FINAL
ENVIRONMENTAL IMPACT STATEMENT

Volume 2B

Chapters 7 through Appendix A

February 2013

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Proposed Plan Amendment & Final Environmental Impact Statement for the Alta East Wind Project

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CACA-0052537

Volume 2B
Chapters 7 through Appendix A

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February 2013

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7.1 Introduction

Purpose

As defined by Section 15050 of the California Environmental Quality Act (CEQA) Guidelines and as defined by the National Environmental Policy Act (NEPA); the Kern County Planning and Community Development Department and the Bureau of Land Management have jointly prepared an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Alta East Wind Project (AEWP).

The Final EIS/EIR presents the environmental information and analyses that have been prepared for the AEWP, including comments received addressing the adequacy of the Draft EIS/EIR, and responses to those comments. In addition to the responses to comments, clarifications, corrections, or minor revisions have been made to the Draft EIS/EIR. For the purposes of the County's requirements under CEQA, the Final EIR includes the responses to comments, the Draft EIS/EIR, and the Mitigation Monitoring Program, and these will be used by the Kern County Planning Commission and Kern County Board of Supervisors in the decision-making process for the AEWP.

Environmental Review Process

In compliance with NEPA (40 CFR 1501.7) and CEQA Guidelines §15082 (14 CCR 15000 et seq.), a NOI (DES 12-18; BLM/CA/ES-2012-007+1793; CACA-0052537) and NOP (SCH No. 2011071051) were circulated for a 30-day public review period beginning on July 15, 2011, and ending on August 15, 2011. On August 4, 2011, the BLM and Kern County held publicly noticed Scoping Meetings at the Mojave Veterans Building, Room 1 in Mojave, California. A Public Scoping Report was released for public review in October 2011 and is included as Appendix C.

The scoping meeting was noticed and held on August 4, 2011. Approximately 35 persons attended the meeting, including representatives from local and state agencies, organizations, and private citizens. Eight (8) letters were received during the scoping comment period that ended on August 15, 2011: six (6) from federal, State, and local agencies and organizations; and two (2) from interested parties. Comments were received regarding the following categories: Alternatives; Cultural Resources; Cumulative Impacts; Lands and Realty; Multiple-Use Classes; Noise; Proposed Action; Public Health and Safety; Social and Economic Setting; Transportation and Public Access; Visual Resources; Water Resources; and Wildlife Resources. A summary of these comments is provided in the Public Scoping Report and NOP Comments Received (Appendix C).

Section 1503.4 (40 CFR 1503.4) of the NEPA guidelines and Section 15088 of the CEQA Guidelines require that the lead agency evaluate comments on environmental issues received from persons and agencies that reviewed the Draft EIS/EIR and prepare a written response addressing each of the comments received. The response to comments is contained in this chapter of the Draft EIS/EIR; and Volumes 1 through 6 together constitute the Final EIR for County purposes. A list of agencies, organizations, and interested parties who have commented on the Draft EIS/EIR is provided below in Table 7-1. A copy of each numbered comment letter and a lettered response to each comment are provided in Section 7.4, "Response to Comments," of this chapter.

Table 7-1 Public Comments Received on the DEIR

Letter No.	Commenter	Commenter Type
1	U.S. Department of Agriculture, Forest Service	Federal
2	U.S Environmental Protection Agency	Federal
3	OPR State Clearinghouse	State
4	Native American Heritage Commission	State
5	Lahontan Regional Water Quality Control Board	State
6	California Department of Transportation	State
7	Kern County, Roads Department	Local
8	Center for Biological Diversity	Interested Party
9	Sierra Club/Defenders of Wildlife/Audubon California	Interested Party
10	The Kern Audubon Society	Interested Party
11	Pacific Crest Trail Association	Interested Party
12	Pacific Gas and Electric Company	Interested Party
13	Ruben Grijalva	Interested Party
14	David Grant	Interested Party
15	John Jason Chun	Interested Party
16	Alta Windpower Development, LLC	Interested Party
17	Kern Valley Indian Council	Interested Party
18	ORV Watch Kern County	Interested Party

7.2 Revisions to the Project Draft EIS/EIR

The following revisions are made to the text of the AEWP Draft EIS/EIR. Amended text is identified by page number. Clarifications to the Draft EIS/EIR text are shown with underlining and text removed from the Draft EIS/EIR is shown with ~~strikethrough~~.

Page 2-3

The total height of the WTG at the highest point of the rotor blade rotation would be 142 meters (465 feet) ~~125 meters (410 feet)~~. The ground clearance for the rotor blades at their lowest point of rotation would be 28 meters (98 feet) ~~35 meters (115 feet)~~. The turbines are designed to withstand wind speeds over 120 miles per hour, exceeding the recorded and projected maximum wind speeds at the AEWP site.

Tower. The tower portion of the WTG would consist of a tubular steel monopole that extends from the top of its concrete foundation at ground level to its connection with the nacelle. The tower would support the nacelle, hub, and three-bladed rotor and has internal access ladders for turbine maintenance. The total height of the tower to the hub of the rotor blades would be 85 meters (279 feet) ~~80 meters (262 feet)~~ tall on a 3-meter (10-foot) diameter base.

Page 2-3

Blades/Rotor. WTGs would have three blades bolted to the hub; the blades and hub are collectively called the rotor. The WTG rotors would be up to 112 meters (367 feet) ~~90 meters (295 feet)~~ in diameter. The blades are long, tapered, small-chord airfoils that resemble airplane wings. They vary in thickness (thinnest at the tip and thickest where they attach to the hub) and use aerodynamic lift, similar to an airplane wing, to provide the driving force for spinning the rotor. Each rotor would be equipped with a braking system to prevent rotors from dislocating from the turbine.

Page 2-4

Wind Turbine Foundations and Pad Areas

Each WTG would be supported by a steel-reinforced concrete foundation. The AEWP could include several WTG foundation types depending on geotechnical constraints, wind pattern, and other factors onsite…

- **Spread-footing.** This foundation would be square or octagonal and formed with reinforcing steel and concrete. Depending on geotechnical data, this type of foundation may be as large as 60-by-60 ~~35-by-35~~ feet and 6 to 10 feet thick.

Page 2-20

In accordance with NEPA requirements, the "preferred alternative" is a preliminary indication of the federal responsible official's preference of action, which is chosen from among the proposed action and alternatives. The preferred alternative may be selected for a variety of reasons (such as the priorities of the particular lead agency) in addition to the environmental considerations discussed in the Draft EIS/EIR. In accordance with NEPA (40 CFR§1502.14(e)), the BLM has identified its preferred alternative as Alternative C, Reduced Project North. The BLM's ultimate decision as to the alternative selected will be set forth in its record of decision pursuant to 40 CFR § 1505.2.

Page 3.16-2

Site Access

Primary ~~A~~access to the southern portion of AEWP site is proposed from the west~~. Access to the site would be provided from~~ via the existing Cameron Ridge Road. This road currently extends through the operating Cameron Ridge project, owned by an affiliate of the project proponent. Use of this road ~~and~~ would require minor roadway improvements for approximately 0.5 mile to allow for construction and other AEWP vehicles. AEWP-related traffic accessing the AEWP site from the west would travel along SR 58, then south on SR 14, and then west on Oak Creek Road and then north on Cameron Ridge Road, in order to access the site.

~~An~~ The alternative access for the southern portion of the AEWP site is from the east and would be provided via a bridge across the Los Angeles Aqueduct, proposed as part of the previously approved Alta Infill II Wind Energy Project.
~~Construction vehicle access will be provided through one primary access point, and one alternative access point. The primary access point will be from the west via the existing Cameron Ridge Road which extends through the operating Cameron Ridge project, owned by an affiliate of the project proponent. Minor improvements would be made on approximately a half mile of this road to allow for safe passage of construction and AEWP vehicles. AEWP-related traffic accessing the AEWP site from the west would travel along SR 58, then south on SR 14, and then west on Oak Creek Road and then north on Cameron Ridge Road, in order to access the site.~~

~~The alternative access point will be from the east side of the AEWP via a bridge across the Los Angeles Aqueduct.~~ AEWP-related traffic accessing the AEWP site from the east would travel along SR 58, then south on SR 14, then west on Oak Creek Road, and then north along a private access road, crossing a bridge across the LA Aqueduct. A permanent access will traverse from the bridge, through the Alta Infill II Wind Energy Project along its southern boundary to provide access to the AEWP site. The bridge and north-south access road from Oak Creek Road were evaluated as part of the adjacent Alta Infill II Wind Energy Project, approved in October 2011. It is assumed that the bridge and access road will be constructed prior to development of the AEWP and no additional improvements are required; the technical analyses provided to Kern County assumed construction of the bridge during the same year as development of the AEWP, in order to provide a conservative analysis in the event that construction of the bridge and access road is delayed.

Access to the northern portion of the AEWP site is provided by Randsburg Cutoff Road (connecting to SR 58) west to Rockhouse Road, connecting with the site north on Wildflower Canyon Road.

Page 3.21-21 and 22

Surveys and Results: No condors were observed during any surveys conducted on and near the site, including aerial raptor nest surveys and two (2) years of fixed-point avian use surveys. USFWS data since 2005 indicate that the nearest documented condor was located in the Tehachapi Mountains, 4.3 miles northeast of the AEWP and a historic location was recorded 2.3 miles west of the AEWP.

Page 3.21-38

3.21.3.2 State Law and Regulations

Porter-Cologne Water Quality Control Act

Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect waters of the State to file a report of waste discharge (an application for waste discharge requirements)" (Water Code §13260(a)(1)). The term "waters of the State" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code§13050(e)).

Under Porter-Cologne, dischargers must notify the regional water board when a project will result in the discharge of dredged or fill material to waters of the State, and the RWQCB is required to issue or waive waste discharge requirements (WDRs) whenever it receives a report of discharge (Water Code § 13263(a).

For construction projects having small dredge/fill impacts to non-federal waters of the State, and that are not required to obtain a National Pollutant Discharge Elimination System (NPDES) permit (i.e., the General Construction Permit adopted by the State Board), such as the AEWP, coverage under general WDRs may be obtained from the Lahontan RWQCB (R6T-2003-0004). Discharges of fill into waters of the State have been authorized under these WDRs for other wind energy projects in the project vicinity.

Page 4.6-4

Vegetation Harvesting

The AEWP would not directly impact any individual Bakersfield cactus meeting the federal definition of the listed taxon. Eight (8) such plants were identified in the AEWP area during 2010 and 2011 rare plant surveys, and all would be avoided by the AEWP. However, a total of 112 individuals of Bakersfield cactus meeting the 2011 CDFG guidelines were mapped within the AEWP site in 2010. All of the *O. basilaris* plants classified under the 2011 CDFG guidelines as Bakersfield cactus occur in the hills in the northern portion of the AEWP area. It is likely that some of these individuals cannot be calculated at this time pending final engineering.

Page 4.16-17

MM 4.14~~4~~6-3 Obtain Applicable Permits. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall obtain all applicable permits from the California Department of Transportation, Kern County, and any other applicable agencies pertaining to vehicle sizes, weights, roadway encroachment, grading, and travel routes needed for the first phase of construction. The project proponent shall also obtain any additional permits needed for each remaining phase of construction prior to delivery and acceptance of materials for that phase. The project proponent shall continuously adhere to all conditions of said permits throughout implementation of the project.

Page 4.16-18

MM 4.16-4 Coordination With County Roads Department. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall coordinate with the Kern County Roads Department to implement the following:

a. For those portions of the project that will use public roads, s~~S~~ubmit engineering drawings of project access road design for the review and approval of the Kern County Roads Department.

b. Obtain an encroachment permit from the Kern County Roads Department for any activities within the County road right-of-way or on applicable roads in the Kern County road maintenance system.

c. Enter into a secured agreement with Kern County to ensure that any County roads that are demonstrably damaged by project-related activities is promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the state and or Kern County."

Page 4.17-23 and 24

MM 4.17-1 Habitat Restoration and Revegetation Plan. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall develop and submit a *Habitat Restoration and Revegetation Plan* to the Kern County Planning and Community Development Department and the Bureau of Land Management for review. The Plan shall be reviewed by the BLM to ensure appropriate compliance with the requirements of NEPA. The Plan shall include provisions for the following:

1. Restoration of all areas temporarily disturbed by project construction to pre-construction conditions; including temporary disturbance areas around structure construction sites, laydown/staging areas, and temporary access roads.

2. Provisions which show that work areas (including, but not limited to, staging areas, access roads, and sites for temporary placement of construction materials and soils) will be delineated with orange construction fencing or staking to clearly identify the limits of work. Fencing/staking shall remain in place for the duration of construction. Soils shall be stockpiled in disturbed areas lacking native vegetation or where habitat quality is poor. To the extent possible, disturbance of shrubs and surface soils due to stockpiling shall be minimized. All disturbances, vehicles, and equipment shall be confined to the flagged areas.

3. All grading activities shall include topsoil salvage. Topsoil shall be removed, stockpiled on-site, and returned to the original site or used in habitat restoration activities elsewhere on the site.

4. Hydroseeding, drill seeding, broadcast seeding or an otherwise proven restoration technique shall be utilized on all disturbed surfaces using a locally endemic native seed mix approved by the Bureau of Land Management and Kern County Engineering, Surveying and Permit Services Department.

5. The plan shall include the Best Management Practices identified in the California Department of Fish and Game Streambed Alteration Agreement, if applicable.

6. For any permanent loss of desert wash and riparian habitat, the project proponent shall mitigate at a minimum of 3:1 or as identified in the California Department of Fish and Game Streambed Alteration Agreement. All other native habitats shall be mitigated at a 1:1 ratio for permanent impacts, or as otherwise identified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion. Permanent impacts to ruderal or disturbed habitats shall be mitigated at a 1:1 ratio if those habitats support burrowing owl and/or desert tortoise. Permanent impacts shall be mitigated through one or more of the following:

   a. Through a conservation easement in perpetuity, or through acquisition and conservation in perpetuity of off-site lands which support comparable habitats and species. Restoration and/or enhancement/re-vegetation shall be conducted on mitigation lands as necessary to achieve a functional value comparable to habitats impacted by the project.

      To utilize this option, the project proponent shall acquire one of the following prior to the issuance of grading permits that would result in the disturbance of such lands: Transfer

fee title to the compensation lands; a conservation easement over the lands; or both fee title and conservation easement, as required by the BLM, the Kern County Planning and Community Development Department and any other applicable agencies (such as the USFWS and/or CDFG). Any future transfer of a conservation easement or fee title must be approved by the BLM and the Kern County Planning and Community Development Department; and be made to one of the following: the CDFG, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), the BLM, or other approved public agency. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement will be recorded in favor of CDFG or another entity approved by the BLM and Kern County Planning and Community Development Department. If an entity other than CDFG holds a conservation easement over the compensation lands, the BLM and Kern County Planning and Community Development Department may require that CDFG or another entity approved by the BLM and Kern County Planning and Community Development Department, in consultation with CDFG, be named a third party beneficiary of the conservation easement.

b. Onsite restoration, enhancement, and management (i.e., weed control, etc.) of disturbed areas not impacted by project construction.

c. Mitigation banking.

7. The Plan developed shall establish performance criteria and time frames for restoration of the site in addition to provisions for a monitoring program to assess the success of restoration efforts. The monitoring program will clearly identify the minimum length of the monitoring period, maintenance of restoration sites during the monitoring period, and replacement conditions. Any sites that do not meet the performance criteria within the specified time frames shall be mitigated as permanent impacts as described above.

8. The Plan shall be developed and implemented to preserve native shrub communities to the maximum extent feasible.

Page 4.17-27

MM 4.17-4 Best Management Practices for Activities In or Near Ephemeral Drainages. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall submit a plan which demonstrates how the project proponent will implement all mitigation measures and conditions contained within the Streambed Alteration Agreement obtained from the California Department of Fish and Game for impacts to jurisdictional areas. In addition, the following Best Management Practices shall be implemented during all construction activity in or near ephemeral drainages:

1. Vehicles and equipment shall not be operated in ponded or flowing water except as described in the Streambed Alteration Agreement.

2. The project proponent shall minimize road building, construction activities, and vegetation clearing within ephemeral drainages to the extent feasible.

3. The project proponent shall not allow water containing mud, silt, or other pollutants from grading or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows.

4. Spoil sites shall not be located within 30 feet from the boundaries of drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages.

5. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or

wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering ephemeral drainages.

6. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.
7. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.
8. Avoid placing turbine support structures in aquatic features to the maximum extent practicable.
9. Natural washes shall be used for flood control, to the maximum extent practicable.
10. The number of road crossings over waters shall be minimized to the extent feasible and necessary crossings shall be designed to provide adequate flow-through during storm events to the maximum extent practicable.

Page 4.18-21

MM 4.18-5 Evaluate and Implement PCT Route Enhancement. ~~Prior to the issuance of a Notice to Proceed by the BLM~~ In order to mitigate for impacts that do not substantially interfere with the nature and purpose of the PCT, the project proponent shall consult and coordinate with the U.S. Forest Service, the BLM, and the Pacific Crest Trail Association to develop ~~a route enhancement plan~~ an off-site mitigation plan for the Pacific Crest Trail. The plan shall be submitted for review and approval to the BLM and U.S. Forest Service prior to BLM issuing a Notice to Proceed and commissioning of the wind turbines. The ~~report~~ plan shall identify feasible ~~PCT options, developed under the direction of the federal agencies, which provide for trail relocations, enhancements, or additions that will benefit visitors~~ land acquisition opportunities to protect the PCT corridor and to improve the PCT recreation and scenic opportunities commensurate with the recreation and visual impacts. The provisions shall be designed to apply to those areas where the project would be most visible from the existing trail. If directed by the BLM, in consultation with the U.S. Forest Service, the project proponent shall provide funds for acquisition within one year of issuance of the wind turbine generator building permit.

~~If directed by the BLM, the project proponent shall be responsible for constructing those new trail segments, enhancements, or modifications and restorations as identified in the final approved plan. All construction, restoring and disturbance activities shall be conducted in manner acceptable to the BLM and U.S. Forest Service. Any Trail construction, restoration, enhancement or modifications shall be completed within one year of issuance of the first wind turbine generator building permit.~~

Land acquisition will be based on the concepts developed in the *Draft Pacific Crest National Scenic Trail Best Management Practices to Mitigate Scenery Impacts from Conflicting Land Uses* (USFS, BLM June 2012). Under these Best Management Practices (BMP), the mitigation ratio for land acquisition is calculated by using the distance of the project from the PCT, the distance along the trail that the project is visible to trail users, and the contrast created by the project to the characteristic scenery. Under the preferred alternative, the closest the project is to the trail is 1.2 miles (middleground distance zone), is visible to trail users for approximately 1.5 miles, and creates a moderate to high contrast to the characteristic scenery. Using this scenario, the ratio for land acquisition would be 1:1. Thus, the acres to be acquired off-site for mitigation to impacts to 1.8 square miles would be 1,152 acres.

Page 4.19-36

MM 4.19-4 Submit a Drainage Design Plan. Prior to issuance of grading/building permits from the County, and/or a Notice to Proceed from the BLM, the project proponent shall submit a *Drainage Design Plan* to the BLM and the Kern County Department of Engineering, Survey and Permits Services for review. The plan shall include provisions for the following:

1. Groundcover for the new substation shall be comprised of a pervious and/or high-roughness material (for example, gravel) to the maximum extent feasible, in order to ensure maximum percolation of rainfall after construction.
2. Detention/retention basins shall be installed to reduce local increases in runoff, particularly on frequent runoff events (up to 10 year frequency).
3. Downstream drainage discharge points shall be provided with erosion protection and designed such that flow hydraulics exiting the site mimic the natural conditions as much as possible.
4. On-site drainage from impervious surfaces (e.g., roads, driveways, buildings) shall be directed to a common drainage basin;
5. The project shall design as few basins as possible for the entire development; ~~and,~~
6. Where feasible, mass grading and contouring shall be done in a way to direct surface runoff towards the above-referenced basins (and/or closed depressions); and,
7. Identify the location of all temporary and permanent fencing. Ensure fencing will not entrain debris/sediment or interfere with natural flow patterns to the maximum extent practicable based on applicable hydrological and performance criteria.

Page 4.21-8

Indirect impacts to golden eagles could include the loss of foraging habitat due to the establishment of Invasive weeds potentially resulting in a decline in prey density. Night lighting during construction could also result in indirect impacts to golden eagles.

Page 4.21-10 and 11

Wintering Birds

The AEWP could result in indirect impacts to wintering bird species protected under California Fish and Game Code sections 3503.5 and 3511 and the Migratory Bird Treaty Act. Construction activities could cause destruction of winter foraging and roosting habitat and temporary displacement of individuals due to noise and human activity during construction. Several special-status bird species have been documented during winter on the AEWP site, including golden eagle, loggerhead shrike, northern harrier peregrine falcon, and prairie falcon. No direct impact to wintering birds, in the form of take, is anticipated during construction. Indirect construction-related impacts to wintering bird species, including special-status species, would be reduced through implementation of Mitigation Measures 4.2-1 (Construction fugitive dust emission reduction), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.21-1 (Designated Biologist), and 4.21-2 (Wildlife Impact Avoidance and Minimization). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, minimization of construction night lighting, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, and control of fugitive dust.

Page 4.21-18

Wintering Birds

O&M activities could result in direct and indirect impacts to nesting bird species protected under the California Fish and Game Code and Migratory Bird Treaty Act. Indirect impacts to wintering birds could occur during vegetation management or regrading of access roads, which could cause temporary displacement of wintering birds from adjacent wintering habitats. Direct impacts to wintering birds may result from collision with project features. Indirect and direct impacts to wintering bird species would be mitigated through implementation of Mitigation Measures 4.21-6 (Avian and Bat Protection Plan) which requires the preparation of an Avian and Bat Protection Plan (APP) or equivalent document. To further reduce this potential impact, Mitigation Measure 4.21-2 (Wildlife Impact Avoidance and Minimization) requires preparation of a WEAP, which includes actions and reporting procedures for impacts to wintering birds. Impacts associated with night lighting during O&M would be minimized through implementation of Mitigation Measures 4.18-1 (Reduction of Visual Contrast, Light, and Glare) and 4.18-4 (Comply with Lighting Standards) as described above.

As with construction, increases in invasive plant species would be indirect impacts to wintering bird species. Impacts associated with invasive plant species during O&M would be minimized through implementation of Mitigation Measure 4.17-5 (Weed Control Plan) as described in Section 4.21.3.2.

Page 4.21-22, after second paragraph

The project proponent has been in on-going discussions with the USFWS to demonstrate and determine the effectiveness of the Monitoring and Avoidance Plan. Field trials performed on July 9, 10, and 11, 2012, at Bitter Creek Wildlife Refuge where condors were present, indicated that the system had a 100 percent success rate for detecting condors. The objective of the test was to evaluate the detection system against a human observer. In every case the VHF detection system recorded a condor occurrence before the human observer could detect it and in many cases, detected the occurrence of a condor that a human observe did not detect. Because almost all free flying condors are fitted with VHF transmitters, this system and its protocol will help ensure that condor mortality can be avoided.

The results at the Bitter Creek Wildlife Refuge suggest that the system will be 100 percent effective at the project site. The VHF detection system will be installed in early 2013, and prior to project construction, to monitor a large area in all directions from the AEWP to maximize response times should a condor be detected. By design, the detection system will monitor for and report condor(s) if they are within 16 miles of the AEWP.

Page 4.21-28, after Mitigation Measure 4.21-14

The applicant has been in on-going discussions with the USFWS to demonstrate and determine the effectiveness of the Monitoring and Avoidance Plan for California Condor. Field trials performed on July 9, 10, and 11, 2012, at Bitter Creek Wildlife Refuge where condors were present, indicated that the system had a 100 percent success rate for detecting condors. The objective of the test was to evaluate the detection system against a human observer. In every case the VHF detection system recorded a condor occurrence before the human observer could detect it and in many cases, detected the occurrence of a condor that a human observe did not detect. Because almost all free flying condors are fitted with VHF transmitters, detection of a condor by the system is highly dependable. This system and its protocol will ensure that condor mortality can be avoided.

The results at the Bitter Creek Wildlife Refuge suggest that the system will be 100 percent effective at the project site, as well. Nonetheless, another demonstration of the VHF detection system for the County and FWS occurred October 3 and 4, 2012 at the project site. The VHF detection system will be installed in early 2013 to monitor a large area in all directions from the AEWP to maximize response times should a condor be detected. By design, the detection system will monitor for and report a condor before it can reach the AEWP and as such, it will most often detect a condor that is not headed toward nor threatened by the AEWP but rather traveling to other locations in the surrounding mountainous areas that could be occupied by other, unrelated, facilities that could pose a threat to condors.

Page 4.21-49

MM 4.21-3 Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds.

7(b) Any damaged or collapsed burrow that shows evidence of use by burrowing owl will be replaced with artificial burrows in adjacent habitat.

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Table 5-1. List of Preparers

Name	Job Title	Primary Responsibility
	Aspen Environmental Group	
Capello, Emily	Environmental Scientist	Cumulative Scenario, Growth Inducing Impacts, Irreversible & Irretrievable Impacts, Unavoidable Adverse Impacts and Comparison of Alternatives
Davidson, Jon	Vice President	Editing and Review
Debauche, Scott	Environmental Scientist	Project and Alternatives, Environmental Justice, Noise, Public Health & Safety, Social and Economic Issues, Transportation, Wildland Fire Ecology
Hawkins, Jacob	Environmental Scientist	Wildland Fire Ecology, Policy Consistency
Huerta, Susanne	Environmental Planner	Lands and Realty, Livestock Grazing, Multiple Use Classes, Recreation, Special Designations, Wild Horses and Burros, Policy Consistency
Hwang, Insun	Engineer	Air Resources, Climate Change
Koczwara, Hedy	Environmental Scientist	Deputy Project Manager, Introduction
Lancaster, Jennifer	Biologist	Vegetation Resources, Wildlife Resources
Mescher, Aubrey	Environmental Planner	Soil Resources, Water Resources
Noorzay, Akbar	GIS Specialist	Geographic Information Systems
Simpson, Kati	Graphics Specialist	Graphic Coordinator/Document Production
Spicer, Judy	Document Coordinator	Production Manager
Tangard, Mark	Document Coordinator	Document Production
Vahidi, Negar	Senior Environmental Planner	Project Manager
Walters, Will	Senior Engineer	Air Resources, Climate Change
Yeh, Stanley	Senior Environmental Scientist	Deputy Project Manager

7.3 Errata to the Project Draft EIS/EIR

The following errata are provided for the text of the AEWP Draft EIS/EIR. Amended text is identified by page number. Clarifications to the Draft EIS/EIR text are shown with underlining and text removed from the Draft EIS/EIR is shown with ~~strikethrough~~.

Additional Surveys

Two revised studies were submitted by the project proponent since circulation of the Draft EIS/EIR and provide additional data for the record. These two studies are attached to this Chapter 7, Response to Comments and include: a memo titled Potential Visual Effects of Using Larger Wind Turbine Generators on the Alta East Wind Project; prepared by CH2MHill on October 5, 2012 (Attachment A); and the Alta East Wind Project - Revised Shadow Flicker Analysis prepared by CH2MHill on October 5, 2012 (Attachment B).

In accordance with CEQA Section 15088.5, Kern County concludes that the updated studies provide additional information to augment the record and provide clarification in an adequate EIR. The information is not considered new significant information requiring the recirculation of the Draft EIR and does not create new significant effects on the environment.

Page ES-3

ES.2.2 Project Proponent's Objectives

- Deliver wind energy in eastern Kern County ~~in the Tehachapi Wind Resource Area (TWRA)~~ according to an executed Master Power Purchase and Wind Project Development Agreement (MDA) with SCE;

Page 1-3

1.2 Project Proponent's Objectives

- Deliver wind energy in eastern Kern County ~~in the Tehachapi Wind Resource Area (TWRA)~~ according to an executed Master Power Purchase and Wind Project Development Agreement (MDA) with SCE;

Page 3.18-4

Key Observation Point 7 (KOP 7) – View looking north from Oak Creek Road/Highway 58 Overpass in Mojave

KOP 7 is taken from the elevated Oak Creek Road overpass west of the Community of Mojave at a distance of three miles or greater from the AEWP site. The KOP is representative of views from the Community of Mojave, and provides an overview of both the existing and proposed landscape as seen in views toward the AEWP site. Extensive wind development of eastern Kern ~~the TWRA~~ is visible in the foothills and valley, lending an industrial character to the view. Portions of the AEWP visible within the view are predominantly within the Tehachapi Foothill landscape unit, with the nearest portions of the site within BLM lands in the Antelope Valley Desert Floor landscape unit. All areas are assigned VRM Class IV. Due particularly to intrusion of existing wind development in these views, the applicable Scenic Quality class is C.

Page 3.21-22

~~In 2009/2010, 11 golden eagle observations were recorded at the AEWP (one each in spring and summer, three in fall, and six in winter).~~ A total of 7 golden eagle groups with 11 individual

sightings were recorded during the first year of surveys in 2009/2010. However, all observations occurred off the project area at survey points 4, 5, and 6. Observations were recorded during all seasons (spring, n=1 eagle; summer, n= 1; fall, n= 3; winter, n= 6) and suggested potentially higher use of these areas in winter (CH2M HILL, 2012. *Draft No. 2 Conservation Plan for the Avoidance and Minimization of Potential Impacts to Golden Eagles Alta East Wind Project.* March 2012. [see Appendix D-30 in the EIR/EIS]).

Page 3.21-23

Direct human-caused mortality (including vehicle collisions), pesticides (including chemical eradication of ground squirrels), habitat degradation and loss, and predators are all known threats to burrowing owls (BLM, 2005g). Burrowing owls are known to occur in lower elevations of eastern Kern ~~the TWRA~~.

Page 3.21-32

It is unlikely that significant numbers of bats occur throughout the AEWP site. While studies on some other wind development projects in eastern Kern ~~the TWRA~~ have detected very localized migratory corridors and relatively high levels of at least seasonal activity near perennial water sources and riparian areas, data collected at the AEWP site do not suggest a similar pattern.

Page 4.6-18

MM 4.6-1 Notice to Proceed. Prior to the issuance of grading or building permits and/or a Notice to Proceed from the BLM, the project proponent shall submit a final project design to the authorized officer of Edwards Air Force Base and China Lake Naval Air Weapons Station. Said final project design, shall be in the form of a detailed plot plan as required by Section ~~19.64.140~~ 19.64.130 (Detailed Plot Plan Required – Contents) of the Kern County Zoning Ordinance and shall include final specifications on the height and location of the wind turbine generators to be installed as well as the anticipated schedule of each construction phase.

Page 4.10-12

MM 4.10-1 Develop Paleontological Resource Monitoring and Mitigation Plan

Prior to the issuance of grading or building permits by Kern County or a Notice to Proceed by the BLM, the project proponent shall submit a Paleontological Resource Management Plan that details when and where paleontological monitoring will occur and how paleontological resources located within the project site will be avoided and/or treated. The Paleontological Resource Management Plan shall be prepared, at the sole expense of the project proponent, and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements. The plan shall be submitted for review and approval by the BLM and the Kern County Planning and Community Development Department.

The *Paleontological Resource Management Plan* shall include the following information:

1. Identification and mapping of impact areas of moderate to high sensitivity that will be monitored during construction;

2. A coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbances in sediments determined to have a moderate to high sensitivity. Sediments of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the Qualified Paleontologist);

3. The significance criteria to be used to determine which resources will be avoided or recovered for their data potential;

4. Procedures for the discovery, recovery, and salvage preparation, and analysis of paleontological resources encountered during construction, in accordance with standards for recovery established by the SVP;

5. Provisions for verification that the project proponent has an agreement with a recognized museum repository ~~(e.g., the Buena Vista Museum of Natural History or the Raymond Alf Museum)~~, for the disposition of recovered fossils and that the fossils shall be prepared prior to submittal to the repository as required by the repository (e.g., prepared, analyzed at a laboratory, curated, or cataloged);

6. Specifications that all paleontological work undertaken by the Project Proponent on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to a Paleontological Resources Use Permit (for work on public lands administered by BLM) and a Paleontological Collecting Permit (for work on lands administered by California Department of Parks and Recreation); and,

7. Description of monitoring reports that will be prepared, which shall include daily logs and a final monitoring report with an itemized list of specimens found to be submitted to Kern County Planning and Community Development Department, the project proponent, ~~proponent,~~ and an accredited museum into which any recovered fossil specimens are accessioned into ~~the Buena Vista Museum of Natural History, and the Natural History Museum of Los Angeles County~~ within 90 days of the completion of monitoring.

MM 4.10-2 Train Construction Personnel

Prior to grading or building permits by Kern County or a Notice to Proceed by the BLM, the project proponent shall submit evidence of compliance with the following:

1. The project proponent shall provide for a paleontologist to provide all construction personnel training on implementation of the Paleontological Resource Management Plan and specifically procedures to be followed in the event that a fossil site or fossil occurrence is encountered during construction. An information package shall be provided for construction personnel not present at the initial preconstruction briefing. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws and violations will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order.

~~2. The project proponent shall retain a paleontologist to conduct a site survey to determine if there are any Quaternary deposits present within the project boundary that would be impacted by ground-disturbing activities. If present, those deposits shall be examined for their fossil potential in order to focus monitoring efforts.~~

Page 4.11-32

MM 4.11-6 Spill Prevention, Control, and Countermeasures Plan. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall prepare and submit a Spill Prevention, Control, and Countermeasures Plan to ~~the U.S. Environmental Protection Agency, the California Environmental Protection Agency,~~ the BLM, the Kern County Planning and Community Development Department, and to the Kern County Environmental Health Services Department for review. The Plan will be for the storage

and use of transformer oil, gasoline, or diesel fuel at the site in quantities of 660 gallons or greater. The purpose of the plan will be to mitigate the potential effects of a spill of transformer oil, gasoline, or diesel fuel. The Plan shall include design features of the project that will contain accidental releases of petroleum and transformer oil products from onsite fuel tanks and transformers.

Page 4.14-15

Mitigation Measure 4.14-2 Conduct Studies to Assess Soil Characteristics and Aid in Appropriate Foundation Design *(only changes to part 5 were made)*

5. That the utility lines crossing potentially active faults ~~have been~~ are designed to withstand vertical and horizontal displacement. If determined necessary by the findings of the site-specific geotechnical study, the project proponent shall remove and replace shrink-swell soils with a non-expansive or non-collapsible soil material.

Page 4.16-17

MM 4.16-3 Obtain Applicable Permits.

Page 4.17-2

Construction activities associated with the AEWP would result in direct temporary and permanent losses of native vegetation ~~(Figure 4.17-1)~~.

Page 4.17-3, First Bullet

- Mitigation Measure 4.17-1 (Habitat Restoration and Revegetation Plan) requires revegetation of temporary project impacts and mitigation for permanent impacts to native vegetation and ruderal or disturbed habitats if those habitats support burrowing owl and/or desert tortoise. Permanent impacts to desert wash and riparian habitat would be mitigated at minimum 3:1 or as identified in the California Department of Fish and Game Streambed Alteration Agreement. ~~, while a~~ All other native habitats supporting burrowing owl and/or desert tortoise shall be mitigated at a 1:1 ratio for permanent impacts, or as otherwise identified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion. ~~non-native habitats supporting burrowing owl and/or desert tortoise would be mitigated at 1:1.~~ Permanent impacts would be mitigated through one or more of the following: acquisition and conservation of off-site lands; onsite restoration, enhancement, and management of disturbed areas not impacted by the AEWP; or mitigation banking.

Page 4.17-17

4.17.10.1 Geographic Extent/Context

The geographic scope for the analysis of cumulative impacts related to sensitive vegetative resources includes the vicinity of all reasonably foreseeable cumulative projects and extends throughout the western Mojave Desert and Tehachapi and Piute Mountains ~~including the Tehachapi Wind Resource Area (TWRA)~~, as shown in Figure 4.1-1.

Page 4.17-22

- **VG-2 (Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS).** Implementation of Mitigation Measures 4.17-1 through 4.17-5, 4.2-1

(Construction fugitive dust emission reduction), 4.2-3 (Operation fugitive dust and equipment emissions reduction), and 4.19-3 (drainage design plan) would reduce AEWP-related impacts to ~~special status plants~~ riparian habitat or other sensitive natural communities to less than significant under Criterion VG-2~~1~~. However, AEWP-related construction, O&M, and decommissioning activities would result in temporary and permanent losses of native vegetation. Permanent losses and temporary impacts to vegetation associated with the AEWP combined with losses associated with past, present, and future projects are considered a cumulative impact because these combined impacts have potential to reduce the extent of those communities within the cumulative impacts analysis area. Therefore, impacts are considered significant and unavoidable.

Page 4.18-3 and 4

KOP 2 – View looking northwest from within rural-residential county lands north of SR 58 in Tehachapi Pass

"…..overall AEWP contrast was considered ~~moderate~~ strong."

KOP 3 – View looking southeast from within rural-residential county lands north of SR 58 in Tehachapi Pass.

"…..overall AEWP contrast was considered ~~moderate~~ strong."

KOP 5 – View looking northwest from SR 14/SR 58 interchange

"…..overall AEWP contrast was considered ~~moderate~~ strong."

Page 4.18-12

Would the presence of the AEWP add to a cumulative visual alteration?

Yes. As discussed in Section 4.18.9, the AEWP would make a substantial contribution to the cumulative impact on visual resources, both in the immediate AEWP area (Tehachapi Pass, northern Antelope Valley, Community of Mojave) and eastern Kern ~~the TWRA~~. The resulting visual impact would be significant.

Page 4.18-16

There is the potential for substantial future energy development in the northern Antelope Valley and eastern Kern ~~the TWRA~~ in particular. A list of the existing and reasonably foreseeable cumulative projects is provided in Table 4.1-1 and shown on Figure 4.1-1 in Appendix A.

Page 4.18-17

4.18.10.1 Geographic Extent/Context

- Regional cumulative impacts beyond the immediate AEWP viewshed, extending to existing and reasonably foreseeable future solar and other energy and development projects within the northern Antelope Valley/eastern Kern ~~TWRA~~ as a whole. These projects, while not necessarily located within the same field of view as the AEWP would, in combination with AEWP, contribute to a sense of industrialization or urbanization of the existing landscape character of a 34-mile length of the Tehachapi Mountains where they front on the western Mojave Desert/Antelope Valley. ~~The TWRA as whole encompasses a nearly continuous 25 mile length of the PCT.~~

4.18.10.2 Existing Cumulative Conditions

This section identifies the past and present projects and actions that have affected and will continue to affect landscape character in the local and regional cumulative study areas described above. As described in Section 3.18, the existing landscape within both a 15-mile radius of the AEWP and within eastern Kern ~~the TWRA~~ as a whole exhibit strong presence of existing wind development. Four existing wind projects and one solar project are identified in Table 4.1-1, Cumulative Projects List, within a 15-mile radius of the AEWP: the Alta-Oak Creek-Mojave Wind Project, the Coram Brodie Wind Project, the Pine Tree Wind Project, and the Sky River Wind Project, and the Monte Vista Solar Project. Within eastern Kern ~~the TWRA as a whole~~, Table 4.1-1 identifies one additional existing wind project, the Manzana Wind Project. While wind and solar projects are not the only ones that would contribute to cumulative visual impacts in the region, their spatially very extensive nature and large-scale industrial character causes their potential cumulative visual effects to eclipse those of most other foreseeable future projects listed in Table 4.1-1. The five existing wind projects listed already account for a profoundly transformed landscape within much of eastern Kern ~~the TWRA~~, in which the cumulative industrial character of the projects has come to increasingly dominate much of the northern Antelope Valley west of Mojave.

Page 4.18-18

Regional Cumulative Area

The 18 wind applications and 14 solar applications listed in Table 4.1-1, if realized, would result in similar cumulative effects to those just described, extending to eastern Kern ~~the TWRA~~ and its surrounding viewshed as a whole. The developed portions of eastern Kern ~~the TWRA~~ and a surrounding area extending for 10 miles or more would become visually dominated by the industrial character of intensive wind and solar development. Much of an approximately 25-mile segment of the PCT would become strongly affected by the cumulative effect of these combined projects. The resulting visual impact to the region would be cumulatively considerable.

4.18.10.7 CEQA Significance and Impact Determinations, Cumulative

AEWP's contribution to the visible industrialization of the desert landscape would constitute a significant visual impact when considered in the context of existing cumulative conditions and reasonably foreseeable projects, both within the immediate project viewshed and in a somewhat broader context that encompasses eastern Kern ~~the TWRA~~ and surroundings as a whole.

Page 4.18-19

VIS-3 (*Substantially degrade the existing visual character or quality of the site and its surroundings*). The AEWP, in combination with existing and reasonably foreseeable cumulative projects, would cumulatively alter and dominate the existing landscape of the immediate AEWP vicinity and eastern Kern ~~the TWRA~~ and surroundings as a whole. Where the existing natural basin and range landscape still currently predominates, the industrial character of spatially extensive, highly prominent wind and solar projects would come to strongly dominate, substantially degrading the existing visual character and quality. Areas within the cumulative study area that are already affected by wind development would be much more intensively impacted. Areas within the cumulative study area that are not currently affected by wind development would become visually dominated by it. Mitigation Measures 4.18-2 (Verification of Low Contrast Facilities and Landscaping) and 4.18-3 (Screening and Restoration) would reduce this impact. However, the resulting cumulatively considerable visual impact would be significant and unavoidable.

Page 4.19-14

Construction

WA-1 (Violate water quality standards or waste discharge requirements). Construction of the AEWP would occur in full compliance with all applicable standards and requirements. Mitigation Measure 4.19~~20~~-3 (Demonstrate Compliance with Water Quality Permits) requires the AEWP Proponent to demonstrate compliance with all applicable permitting requirements prior commencing construction, which will ensure that the AEWP is in compliance with all applicable water quality permits and waste discharge requirements. Construction impacts would be less than significant with mitigation.

Page 4.19-16

Operation and Maintenance

WA-1 (Violate water quality standards or waste discharge requirements). Operation of the AEWP would occur in full compliance with all applicable standards and requirements, per Mitigation Measure 4.19~~20~~-3 (Demonstrate Compliance with Water Quality Permits) which requires the AEWP Proponent to demonstrate compliance with all applicable permitting requirements. Operational impacts would be less than significant with mitigation.

Page 4.19-17

Decommissioning

WA-1 (Violate water quality standards or waste discharge requirements). Decommissioning of the AEWP would occur in full compliance with all applicable standards and requirements, per Mitigation Measure 4.19~~20~~-3 (Demonstrate Compliance with Water Quality Permits) which requires the AEWP Proponent to demonstrate compliance with all applicable permitting requirements. Decommissioning impacts would be less than significant with mitigation.

Page 4.19-35

MM 4.19-1 Approval of Sewage Disposal. Prior to the issuance of building permits by the County for an operations & maintenance building and/or a Notice to Proceed from the BLM, the project proponent shall submit evidence of the following:

~~1216:0:~~ 1. The method of sewage disposal for the operations and maintenance facility and any other applicable structures shall be as required and approved by the Kern County Environmental Health Services Division. Compliance with this requirement will necessitate that the Proponent obtain the necessary approvals for the design of the septic system from the Kern County Engineering, Surveying, and Permit Services Department. The septic system disposal field shall be located a minimum of 100-feet from a classified stream or 25-feet from a non-classified stream and shall not be located where it would impact State wetlands or special-status plant species.

~~1432:0:~~ 2. The Proponent shall obtain water appropriation rights for on-site potable water to the satisfaction of the Kern County Environmental Health Services Division, if applicable.

Page 4.21-5

Permanent impacts to desert wash and riparian habitat would be mitigated at minimum 3:1 ratio or as specified in the California Department of Fish and Game Streambed Alteration Agreement,

whichever is greater. ~~, while a~~ All other native habitats non-native habitats supporting burrowing owl and/or desert tortoise shall be mitigated at a 1:1 ratio for permanent impacts, or as otherwise specified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion, whichever is greater. ~~would be mitigated at 1:1.~~

Page 4.21-7

Golden Eagle

The golden eagle is a resident in the Tehachapi Mountains where numerous shallow caves, ledges, and rocky outcrops occur. This species was observed foraging in the project area during fixed-point bird use surveys in ~~all four (4) seasons~~ fall of 2010 and winter of 2010/11. Surveys to identify golden eagle nests were completed on April 13 and May 24, 2010 and on February 22, April 12, and June 1, 2011 covering all suitable nesting habitat within 10 miles of the AEWP site (see Section 3.21). The nearest active nests are located 3.0 miles to the northwest, 3.8 miles to the north, and 6.8 miles to the north of the AEWP. Ten inactive golden eagle nests were identified within the 10-mile nest survey buffer and 3 additional inactive nests were identified just outside the 10-mile buffer. The closest of these inactive golden eagle nests is 1.2 miles to the northwest of the AEWP. Recent surveys for other projects in eastern Kern ~~the Tehachapi Wind Resource Area (TWRA)~~ have identified nesting and foraging golden eagles as well, and together these data suggest a moderate to high population density in the region. While golden eagles can forage over the entire AEWP site, suitable nesting habitat and known nesting locations occur in the rugged terrain to the north and west of the site, and observations of eagles during project surveys were concentrated in the north-central portions of the study area (West, 2011c).

Page 4.21-14

The project proponent would consult with CDFG and USFWS to obtain any necessary take authorization if take of listed species is anticipated ~~for potential impacts to listed species~~ through the context of a 2081 take permit from CDFG and/or a Biological Opinion from the USFWS.

Page 4.21-25

Avian Electrocution Risk

Overhead transmission lines also pose an electrocution risk for avian species, particularly for large, aerial perching birds, such as hawks and eagles, because of their large size, distribution, and behavior (APLIC, 2006). Because raptors and other large aerial perching birds often perch on tall structures that offer views of potential prey, the design of transmission poles or towers appears to be a major factor in raptor electrocution (APLIC, 2006). Electrocution occurs when a perching bird simultaneously contacts two energized phase conductors or an energized conductor and grounded hardware. Electrocution can occur when horizontal separation is less than the wrist-to-wrist (flesh-to-flesh) distance of a bird's wingspan or where vertical separation is less than a bird's length from head-to-foot (APLIC, 2006). Electrocution can also occur when birds perched side-by-side span the distance between these elements (APLIC, 2006). Current guidelines for constructing power lines have been developed to minimize the potential effects from bird strikes and electrocution. To reduce the effects associated with bird strikes and electrocution resulting from implementation of the AEWP, power collection and transmission facilities will be designed to be raptor-safe in accordance with the *Suggested Practices for ~~Raptor~~ Avian Protection on Power Lines: The State of the Art in 2006* and *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994*. Potential impacts associated with electrocution would be minimized through implementation of Mitigation Measure 4.21-13 (Avian Power Line Interaction Committee Standards).

Page 4.21-28

Table 4.21-1. Summary of CEQA Significance Determinations

Species/Category	Known Presence on Site	Construction Impacts	O&M Impacts	Decommissioning Impacts[1]	Cumulative Impacts
Invertebrates	No	LTS	LTS	LTS	LTS
Desert Tortoise	Yes	LTS	LTS	LTS	LTS
Coast Horned Lizard	Yes	LTS	LTS	LTS	LTS
Silvery Legless Lizard	No	LTS	LTS	LTS	LTS
California Condor	No	LTS	SU	LTS	SU
Golden Eagle	Yes	LTS	SU	LTS	SU
Swainson's Hawk	Yes	LTS	SU	LTS	SU
Burrowing Owl	Yes	LTS	SU	LTS	SU
Nesting Birds	Yes	LTS	SU	LTS	LTS
Wintering Birds	Yes	LTS	SU	LTS	SU
Bats	Yes	LTS	SU	LTS	SU
American Badger and Desert Kit Fox	Yes	LTS	LTS	LTS	LTS
Special-Status Mice	Yes	LTS	LTS	LTS	LTS
Mohave Ground Squirrel	No	LTS	LTS	LTS	LTS
Wildlife Movement and Migration Corridors	N/A	LTS	LTS	LTS	SU
Local Policies or Ordinances Protecting Biological Resources	N/A	LTS	LTS	LTS	LTS
Avian and Bat Collision	N/A	N/A	SU	N/A	SU
Avian Electrocution	N/A	N/A	LTS	N/A	LTS
Displacement of Special-Status Avian and Bat Species	N/A	N/A	LTS	N/A	SU

1 – Decommissioning impacts are generally assumed to be equivalent to construction impacts

NI – No impact

LTS – Less than significant impact with mitigation incorporated

SU – Significant and unavoidable impact

Page 4.21-34

4.21.10.1 Geographic Extent/Context

The geographic scope for the analysis of cumulative impacts related to wildlife resources includes the vicinity of all reasonably foreseeable cumulative projects and extends throughout the western Mojave Desert and Tehachapi and Piute Mountains ~~including the Tehachapi Wind Resource Area (TWRA)~~, as shown in Figure 4.1-1. The AEWP is located within or adjacent to federal and private lands that support native vegetation communities and are largely undeveloped or support existing wind energy developments.

Page 4.21-43

4.21.11 Mitigation Measures

If required, the AEWP will obtain ~~require~~ incidental take authorization for impacts to listed species through a Biological Opinion (BO) from the USFWS and/or a 2081 Incidental Take Permit (ITP) from CDFG. The terms and conditions of these authorizations will supersede the

mitigation measures identified below. For items that are addressed in the mitigation measures identified below as well as provisions of the BO and/or ITP, the most conservative measure will apply (for example, the highest mitigation ratio would apply). Nonetheless, in compliance with the requirements identified in CEQA, the project proponent will be required to comply with the reporting and documentation standards addressed in the mitigation measures ultimately approved by Kern County and the BLM.

Page 4.21-45

MM 4.21-2 Wildlife Impact Avoidance and Minimization

5. Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit a Wildlife Mortality Reporting Program to the Bureau of Land Management and Kern County Planning and Community Development Department for review. This program shall be implemented during construction and operation, and shall require the identification and reporting of any dead or injured animals (both special-status and common species) observed by personnel conducting construction and operation activities. Reporting is necessary during construction and operation to demonstrate compliance with the avoidance and minimization measures, to assess the effectiveness of the measures, and to make recommendations, if necessary, for future compliance. The program shall also include provisions to stop work within the immediate vicinity if a dead special-status species is encountered. The project proponent shall notify the BLM, Kern County Planning Department, the on-call biologist, and the appropriate resources agency (e.g., USFWS or CDFG) before construction is allowed to resume. An appropriate reporting format shall be developed in coordination with the Bureau of Land Management, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game.

Page 4.21-49

MM 4.21-3 *(No changes made to parts 1-7(d) of MM 4.21-3)*

7 (e) Impacts to burrowing owl territories shall be mitigated through a combination of off-site habitat compensation and/or off-site restoration of disturbed habitat to native habitat capable of supporting this species. The acquisition of occupied habitat off-site shall be in an area where turbines would not pose a mortality risk. Acquisition of habitat shall be consistent with the California Department of Fish and Game's *Staff Report on Burrowing Owl Mitigation* (CDFG, 2012). The preserved habitat shall be occupied by burrowing owl and shall support native vegetation, and shall be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by a qualified ornithologist. Preservation of cultivated lands will not be allowed in order to ensure the habitat will be preserved in perpetuity. The site shall be approved by the California Department of Fish and Game. Land shall be purchased and/or placed in a conservation easement in perpetuity and managed to maintain suitable habitat. The offsite area to be preserved can coincide with off-site mitigation lands for permanent impacts to sensitive vegetation communities, with the approval of the Bureau of Land Management and the California Department of Fish and Game.

Page 4.21-53

MM 4.21-5 California Condor.

d. Funding for conservation measures such as radio telemetry, condor feeding programs, or other such measures as deemed appropriate shall be provided to the California Condor Recovery Program. Funding shall be calculated at six (6) units per one hundred (100) turbines installed as part of the project. Prior to the issuance of any building or grading permits for the first (1st) turbine, the project proponent shall fund six telemetry units in the amount of $188,100 ($4,150 per unit plus an "endowment" of $163,200 to be used for tracking data over an eight-year period). Prior to the issuance of any building or grading permits for the one-hundred-and first (101st) turbine, the project proponent shall fund six additional telemetry units in the amount of $188,100 ($4,150 per unit plus an endowment of $163,200 to be used for tracking data over an eight year period). The total funding to be provided shall not exceed $376,200 or funding requirements in the Biological Opinion, whichever is greater.

Page 4.21-53

MM 4.21-7 Eagle Conservation Plan. Prior to the issuance of building permits by Kern County, the project proponent shall ~~shall~~ provide documentation to the California Department of Fish and Game, United States Fish and Wildlife Service, and the Kern County Planning and Community Development Department that the project is in compliance with the Bald and Golden Eagle Protection Act (Title 16, United States Code, sections 668 668c).

Page 4.21-64 (after last bullet of 7[B])

The CMS shall include, but not be limited to, the following additional procedures or components:

1. Curtailment of wind farm operations shall commence at the time a condor comes within 1 mile of the project site. Curtailment Sectors (groups of turbines) have been identified and shall be built into the software controls for the wind farm. Curtailment commands may be given for curtailment of specific sectors or all sectors of the facility at the discretion of the Project Site Observer.
2. Wind turbine speeds can be reduced to 15 miles per hour (mph) from 60 to 90 seconds after the curtailment commend is given, depending on the type of turbine. If the project installs turbines that require 90 seconds to reach this speed a distance of 2 miles shall be used to trigger the curtailment command instead of 1 mile. No turbines shall be installed that do not have the ability to curtail within 90 seconds.
3. Telemetry antennae towers shall be placed to avoid blind spots that would allow transmittered condors to enter the wind farm with little advance warning. A lattice detection network shall be implemented.
4. If a condor signal is detected and then subsequently lost, the condor shall be treated as if it is moving towards the project site. If the Project Site Observer cannot establish initial visual contact with the condor, the observer shall spend the remainder of the day on high alert until 30 minutes after sunset. The observer shall continually use hand-held VHF detection equipment and visual lookout in order to send a curtailment command if a condor comes within 1 mile of the project site. Close-Proximity Response shall be practiced in order to facilitate observer search image refinement. Small remote aircraft may be operated within 4 miles of the wind turbines to perform drills and reduce full-time observer response time.
5. If a condor has triggered the detection system and subsequently the signal is lost, and the Project Site Observer cannot locate the condor either visually or with a receiver, one of the following procedures shall be implemented:

a. Good visibility weather conditions (i.e., no fog or sand storm) allows for detection by the observer, but the terrain or distance to the condor prevents visual observation. Unless the observer believes a threat exists, curtailment will not be required as the observer will be able to see the condor as it moves closer into visible range. The curtailment command will not be issued until the condor is seen within the 1 mile perimeter of the project site.

OR

b. Poor visibility weather conditions (i.e., heavy fog or sand storm) preclude detection of the condor by the observer, regardless of terrain or distance to the condor. This scenario shall result in curtailment because the observer may not be able to see the condor.

6. If condor movement result in consistent alarms of a bird entering the detection area, but it remains far from the wind turbines, the following procedures shall be implemented:

a. Once the Project Site Observer communicates that no condor is within 1 mile of the project it will be the responsibility of other Condor Incident Response Team (CIRT) members to search until a visual location is made of the condor that triggered the alert or the alert has lapsed. After a full search for the condor that has triggered an alert, CIRT members may be directed by the CIRT Lead to discontinue monitoring if a condor is not visually detected. The CIRT Lead can direct the CIRT members to discontinue the attempt to visually locate a condor if the signal strength detected by the detection network is too low or the project site has sufficient detection ability should the condor come within 1 mile of the project site. However, the Project Site Observer shall spend the remainder of the day on high alert until 30 minutes after sunset. The observer shall continually use hand-held VHF detection equipment.

b. The SCADA operator and CIRT members will continually monitor visual and VHF information specific to any condor locations. If a CIRT member has visually detected a condor, they will relay location relative to the project site, landmarks, direction of flight, and flight behavior to the CIRT team. If the SCADA operator has a VHF detection of a condor, they will relay transmitter frequency, relative direction from the antenna, and signal strength to the CIRT team. Additionally, every two minutes all CIRT members will receive the information by text and email on their digital devices if a condor is within the detection perimeter.

c. If a condor is visually located and reported as "moved out of the detection network perimeter," the Project Site Observer will visually scan the area around the project site. This will occur each time the condor enters the detection network perimeter.

d. The CIRT, in responding to subsequent condor alerts for any period of time for a condor that is reoccurring, will take information from previous responses such as transmitter frequency, relative direction from antenna, and signal strength into account to determine if there is a particular condor that is occurring more regularly than historically reported. The frequency, location, and duration of reoccurring condor alerts will be used by the CIRT Lead to determine the relative level of risk that exists and how the future response by the CIRT will be carried out in order to avoid condor mortality at the project site. At no time will an alert be ignored regardless of the number of times a condor may trigger the detection system.

7. If a condor roost is identified within the 16-mile detection radius of the telemetry tower, the project proponent shall consult with the USFWS as required based on condor behavior and tracking information. Constant on-site surveillance shall be required if a condor frequents the detection area due to a roost. Refinement in the detection of specific condors that establish or use a new roost may be necessary. Details for refining the monitoring and detection of

changed occurrence patterns of future condors will be based on specific behavior observed as changes occur. No reduction by CIRT in response to detection alerts shall occur.

If specific condors are roosting in a new area inside the network detection perimeter, one option for monitoring would involve installation of additional antennas. Condor VHF frequencies can be programmed into a secondary antenna that has a smaller detection range centered at the project site. This secondary antenna will be programmed to only scan for condors that are known to be regularly using a roost within the 16 mile perimeter and will only scan to a 3 mile radius. Scanning for condors that roost within the detection network perimeter, but do not enter areas within 3 miles of the project site can be accomplished with two antennas each set to monitor different risk zones. This will allow for initiation of the appropriate response by CIRT when a condor that regularly triggers alerts within the 16 mile perimeter, triggers an alert within 3 miles of the project site.

8. The project proponent shall implement the following protocol for recording and reporting condor detections and the proponent's responses to detections:

   a. The project proponent will staff the CIRT Lead position with a full-time biologist. The CIRT Lead will be responsible for coordination with USFWS staff regarding report of data collected by the network detection system. USFWS will provide the point of contact for such coordination. A reporting protocol with the USFWS will be established.

   b. The project proponent will report a condor alert that results in a visual observation and/or curtailment order that occurs for the project.

   c. A central data collection and reporting system will be developed to organize and manage information regarding the network detection system.

   d. A copy of the CIRT Log on response to a detection alert will be provided to the USFWS within 48 hours of completion.

   e. BLM and the project proponent agree that further refinement of the protocol will be implemented during the consultation process.

9. The project proponent shall implement the following protocol for communicating with the Condor Recovery Program regarding re-tagged condors or release of new birds:

   a. The CIRT Lead will acquire weekly updates on the current list of VHF frequencies in use by the Condor Recovery Program. Email is the current method of data sharing and will continue under the project. As an alternative, the Condor Recovery Program can update the CIRT Lead as birds are re-tagged on a real-time basis.

   b. CIRT will be trained on the programming and maintenance of both fixed and handheld telemetry equipment that will include weekly updates of receivers for the most current VHF frequencies.

   c. Hardware will be developed to remotely update the fixed network detection system.

   d. Update frequencies will be programmed into handheld and fixed telemetry equipment on a weekly basis or as changes occur.

   e. BLM and the project proponent agree that further refinement of the protocol will be implemented during the consultation process.

The system shall be active during daytime hours, which includes 30 minutes prior to sunrise and 30 minutes after sunset, for a period of 3 years. During this initial testing period, the project proponent shall submit quarterly reports to Kern County, USFWS, CDFG, and BLM regarding the system's findings and curtailment activities. After a period of 3 years, the system will be evaluated by Kern County, BLM, USFWS, and CDFG for overall effectiveness in detecting and

implementing focused curtailment related to reducing impacts to the California condor. If after a period of 3 years it is determined by the reviewing agencies that additional measures or modifications to the system are necessary to ensure the system is effective in detecting and implementing focused curtailment measures for the California condor, those measures will be implemented by the project proponent through operational adjustments approved by the reviewing agencies.

Due to the 30-year life of this project, and the anticipation that the Condor Recovery Program will continue to be successful, the risk of condor take would increase if the condor population increases, condor use areas change (i.e., moving closer to the project site), and/or if fewer individuals of the flock wore VHF-units. Each of these changes would result in an increase in risk. To be able to off-set this potential increase in risk, the following adaptive management strategy shall be implemented:

1. Change in condor use areas. If a condor is detected within the network detection perimeter more than once during a 30-day period or two or more times during a 60-day period, or if a condor has been detected near the project boundary several times (which will be defined in the Biological Opinion), the BLM, USFWS, and the project proponent shall enter into discussions regarding the circumstances of these detections to determine the appropriate action.

   Potential circumstances include, but are not limited to: a) use of the area is increasing and a greater number of birds are flying within the area of risk; b) birds are entering the area more frequently, but at an altitude that does not place them in harm's way for collision with a turbine; c) bird use has shifted in proximity of the project site, but has already shifted away again; or, d) one bird is responsible for all of the on-site detections.

   During discussions, the BLM and USFWS will determine whether reinitiation of Section 7 consultation is needed based on the new information on condor movement. Should reinitiation be determined the appropriate action, the BLM would complete a Section 7(d) analysis to determine what actions could occur during reinitiation. While the BLM is completing the Section 7(d) analysis, one of the two following measures would also be implemented:

   a. Within 24 hours of notice from the BLM and/or USFWS, the project proponent shall deploy a full-time observer to supplement the VHF-detection system until the Section 7(d) analysis is complete, or should the 7(d) analysis propose this measure, until the reinitiation of consultation is complete

      OR

   b. Within 24 hours of notice from the BLM and/or USFWS, the project proponent shall deploy a proven alternative detection system (e.g., radar system that had been previously been tested and accepted by USFWS)

2. Change in percentage of population wearing VHF-units (short-term). During the first 5 years of the project, if the percentage of birds that are invisible to the detection system is exceeded by a pre-determined amount due to an unanticipated event (e.g., extreme weather prevents replacement of dying batteries, manufacturer fails to ship units), one of the following procedures shall be implemented:

   a. If the project proponent has already deployed a proven and approved alternative detection system that does not rely on birds being tagged for detection, no further action is needed.

   b. If the project proponent has not deployed the alternative detection system that does not rely on birds being tagged for detection, but has one that has been proven effective, it will be deployed within 24 hours notice by the BLM or USFWS, or,

c. The project proponent shall deploy a full-time observer within 24 hours notice by the BLM or USFWS to supplement the VHF-detection system until the non-tagged birds are captured and refitted with VHF-units.

3. Change in percentage of population wearing VHF-units (long term). The project proponent shall develop and deploy an alternative detection system that does not rely on any hardware to be affixed to condors. This system shall be incorporated into their "detect and curtail" strategy within the first 3 years of operation. USFWS would be responsible for maintaining VHF-birds at a pre-determined level for a maximum of 3 years. After such time, the USFWS, with a 60-day notice, could begin transitioning to sampling the population and would no longer be responsible for maintaining transmitters for a pre-determined percent of the flock. If the project proponent has not successfully identified another means to detect and curtail, the project would be out of compliance with the Biological Opinion, and reinitiation of the Section 7 consultation would be triggered. The BLM would conduct a Section 7(d) analysis to determine what actions could occur during reinitiation.

Page 4.21-57

MM 4.21-13 Avian Power Line Interaction Committee Standards. Prior to issuance of approval for final occupancy by Kern County, the project proponent shall submit written documentation to the Bureau of Land Management and Kern County Planning and Community Development Department demonstrating that all power lines are engineered and constructed to the most current Avian Power Line Interaction Committee standards, at the time the lines are engineered ~~of construction~~. The project proponent shall conform to the latest practices to protect birds from electrocution and collision on the transmission line (as outlined in the 2006 Avian Power Line Interaction Committee standards or newer guidance, as applicable).

Page 4.21-59

With the implementation of Mitigation Measures 4.21-1 through 4.21-13, 4.17-1 and 4.17-5, 4.2-1, 4.2-3, 4.18-1, and 4.18-4, the residual impacts to wildlife resources would be:

1. The net loss of habitat on the project site for the duration of AEWP O&M and for some period after ultimate site restoration after decommissioning;

2. The fragmentation and impaired connectivity of wildlife habitat ~~in the upper Chuckwalla Valley~~ over the life of the AEWP;

3. The effects of noise, lighting, dust, and other disturbances to adjacent offsite habitat during construction, O&M, and decommissioning;

4. The effects to displaced wildlife (finding and establishing new home ranges, intra and/ or interspecific competition for food and other resources, etc.); and

5. The potential, but unquantified loss of birds during AEWP O&M.

These impacts are described above in Section 4.21.3.

Under CEQA, implementation of the avoidance, minimization, and mitigation measures would mitigate impacts to most wildlife resources to a level below significance. Implementation of the required mitigation would not result in any additional impacts to wildlife resources. No significant residual impacts to most wildlife resources would occur with the implementation of the avoidance, minimization, and mitigation measures. However, although implementation of the measures described above would reduce the potential for special-status birds and bats to collide with WTGs during operation of the AEWP, these measures cannot eliminate the potential for

mortality to occur. Because some level of avian and bat mortality would occur, this impact would remain significant under CEQA. Without mitigation, the AEWP would contribute to the cumulatively substantial losses of wildlife resources within the western Mojave Desert and eastern Kern ~~TWRA~~. The avoidance and minimization measures as well as compensatory mitigation to offset direct, indirect, and cumulative impacts to wildlife resources would assure compliance with state and federal laws, and the impacts would have no substantial adverse effects following mitigation for most resources. However, as explained above, cumulative impacts related to avian and bat collisions with WTGs would remain adverse, and would be significant and unavoidable under CEQA.

Page 6-9

~~TWRA-Tehachapi Wind Resource Area~~

Appendix A, Page A-6 Figure 2-6, Proposed GPAs

Figure 2-6, *Proposed GPAs*, was included in the DEIS/EIR to illustrate proposed amendments to the Circulation Element of the Kern County General Plan to eliminate future road reservations along section lines within the project boundary. The Circulation Element currently designates section and mid-section lines located in certain areas of eastern-Kern as reserved for future build-out of arterial and collector type roads. This designation is for land use planning purposes only and does not actually denote the locations of any existing physical roads or public easements. Removal of portions of these designations simply means that those areas would no longer be intended for future arterial and collector sized roads. Amendment of the Circulation Element does not remove any existing roads or eliminate any existing legal access to any parcel.

Upon further review of Figure 2-6, the BLM and Kern County have determined that minor adjustments to the areas shown for removal are necessary. The figure shown in the Draft EIS/EIR reflects removal of some partial portions of section lines lines; however, the BLM and Kern County have determined that it would be more appropriate to remove complete section lines to ensure cohesive land use planning because there is no need to retain partial reservations when there are no contiguous reservations remaining. An example of this is shown in Section 33, 32.S. 35.E., which previously illustrated removal of only portions of the south section line, thereby leaving pieces of the section line as reserved without a contiguous reservation. The revised figure reflects removal of the complete south section line. Amendments to this figure are shown on the attached revised Figure 2-6 and do not affect any existing roads and do not change the impacts of the project; therefore, no further revisions are warranted.

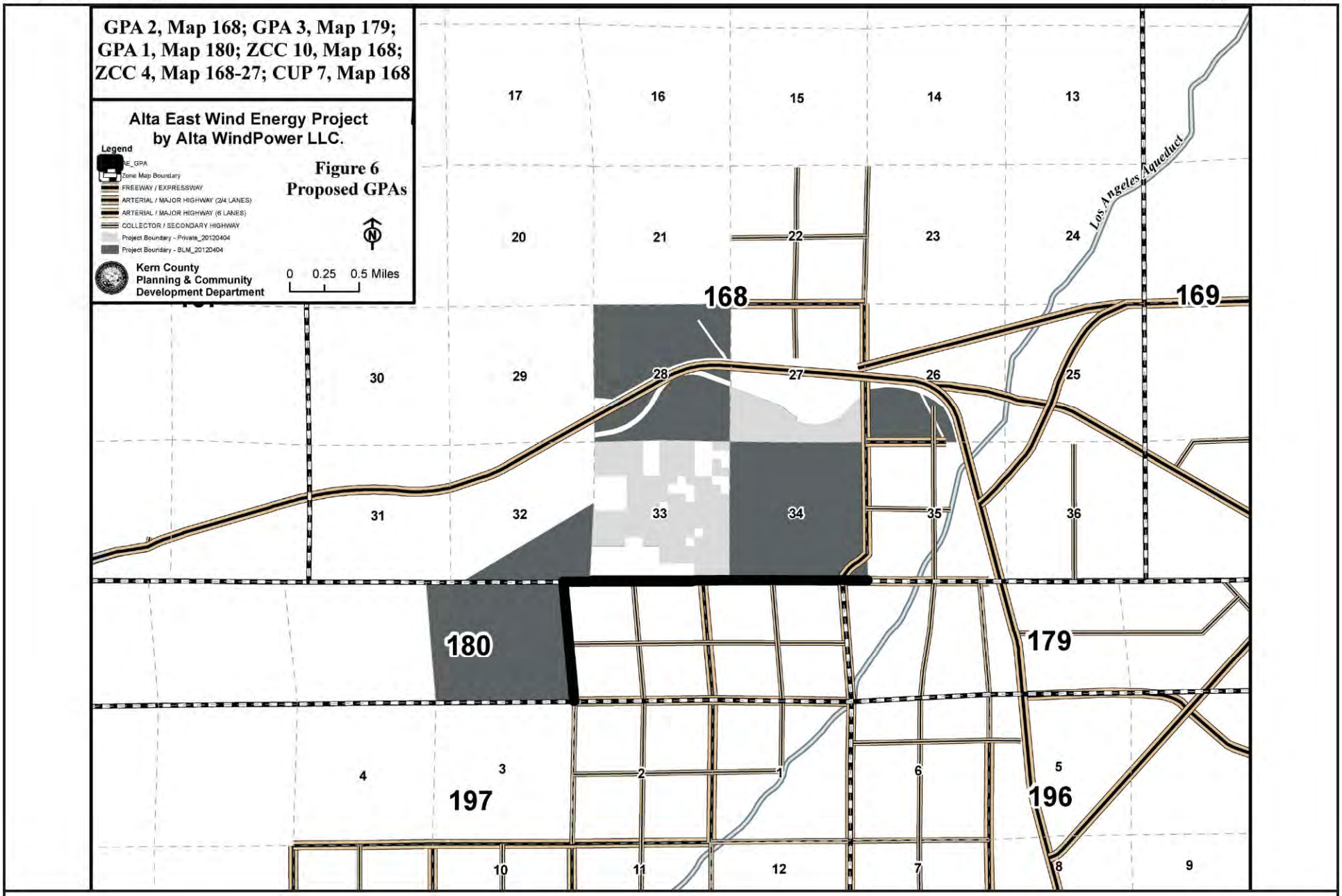

Figure 2-6

Proposed GPA's

Source: Kern County Planning and Community Development Department

Comment Letter 1: U.S. Department of Agriculture, Forest Service (September 26, 2012)

USDA United States Department of Agriculture | Forest Service | Pacific Southwest Region

Regional Office, R5
1323 Club Drive
Vallejo, CA 94592
(707) 562-8737 Voice
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File Code: 2350
Date: September 26, 2012

Loreilei H. Oviatt
Kern County, CA AICP Director
2700 "M" Street,, Suite 100
Bakersfield, CA 93301-2323

Dear Ms. Oviatt,

I am submitting comments on the Draft Resource Management Plan (DRMP) Amendment and Draft Environmental Impact Statement (DEIS) and Environmental Impact Report for the Alta East Wind Project by Alta Windpower Development, LLC). These comments are specific to the planning and management of the Pacific Crest National Scenic Trail (PCT).

The PCT traverses six of North America's seven ecozones, and has the greatest elevation range and highest percentage of trail miles in wilderness of the eleven designated national scenic trails. These factors give the trail a character significantly more diverse, remote and ecologically intact than the other trails. The PCT provides opportunities to experience landscapes that appear pristine and free from development by humankind. The nature and purpose of the PCT is to provide high-quality, scenic, primitive hiking and horseback-riding experiences, and to conserve natural, scenic, historic, and cultural resources along the PCT corridor. As its name implies, the Pacific Crest Trail is meant to showcase the diverse expanses and sublime scenery of the Cascade Mountains of Washington and Oregon, wind through the Klamath, Sierra Nevada, Piute, Tehachapi, San Gabriel, San Bernardino, and San Jacinto Mountain ranges of California, and follow the "crest" of existing ridgelines where feasible (PCT Comprehensive Plan). 1-A

The DRMP amendment and DEIS/DEIR does not appear to address compliance with BLM Manual Policy Direction 6250 for National Scenic and Historic Trails, nor does it follow direction to safeguard the nature and purposes of National Trails. The landmark National Trails System Act of 1968 designates national scenic trails to provide for maximum compatible outdoor recreation potential, and protection, conservation and enjoyment of the nationally significant scenic, historic, natural, and cultural qualities of the areas ***and associated settings*** through which such trails may pass. As the lead administrator for the trail, I request that the following actions are needed to ensure that a substantial interference or significant adverse impact to the nature and purposes of the PCT does not occur:

- **The design of this project must use strategies to avoid impacts to the PCT recreation and scenic experience.** The rationale that the development on private land adjacent to the federal land has already occurred and therefore, it is acceptable to place "a substantial number of the large-scale turbines (up to 410 feet to the top of the turbine blade), including a large number that would break the skyline of the nearby ridge tops south of SR 58" (4.18-3) is inconsistent with the BLM's national scenic trail policy direction to: 1-B

"safeguard the nature and purposes of assigned National Trails, provide for maximum compatible outdoor recreation potential, and protection, conservation and enjoyment of the nationally significant scenic, historic, natural, and cultural qualities of the areas and associated settings through which such trails may pass, as well as the primary use or uses of the trail" (6250-1.6-1). Properly siting an activity may be the most effective way to mitigate potential visual impacts. Of particular concern are the ridgeline turbines that do not meet best management practices for avoiding impacts to the PCT. *Project design features should include a trail platform visual analysis from the Pacific Crest Trail and removal or relocation of turbines that create the highest level of contrast in form, line, color and texture within the project.* **1-B, cont.**

- **The determination that the PCT is inventoried as a IVRM Class IV is inconsistent with the desired condition and nature and purpose of the PCT and should be corrected.** This project is within the foreground/middle ground distance zone of the PCT. The Visual Resource Management (VRM) objective should have been set on the basis that the PCT is a high sensitivity level travel route and a VRM of Class II or Class III would be the typical compatible objectives. To plan further development that allows increased impacts to a 25 mile segment of the trail with "further visual domination by the cumulative effect of wind and solar projects" and to acknowledge that "while Mitigation Measures 4.18-2 and 4.18-3 would reduce this impact, the resulting cumulative visual impact would be significant and unavoidable" (4.18-18) does not meet the intent for management of national scenic trails and violates appropriate visual management measures across agency policies.

  The DEIS needs to assess and disclose whether the proposed developments would substantially interfere with the nature and purposes of the PCT. If the determination is made that there is ***not*** *substantial interference or significant adverse impacts, but the conclusion that impacts will occur, then offsite mitigation must be required.* The slower pace of equestrian and foot travel means that the time spent viewing the proposed project from the trail would likely be prolonged, significantly degrading the natural experience that recreationists demand of a national scenic trail journey. Though it is desirable to have viewshed and recreation experience mitigation occur within the locality of the project area (i.e. within the same county), if such an opportunity does not exist, it is acceptable for mitigation to occur on a trail-wide basis. An inventory of trail-wide PCT acquisition priorities exists and is available for finding willing sellers for land acquisition that would satisfy the requirements of offsite mitigation. **1-C**

  If the determination is made that the proposed developments would cause substantial interference or significant adverse impacts to the PCT, then this project will not comply with the National Trails System Act or BLM National Scenic and Historic Trail policy.

Of particular concern is the mitigation measure MM4.18-5. It directs that "Prior to the issuance of a Notice to Proceed by the BLM, the project proponent shall consult and coordinate with the US Forest Service, BLM and Pacific Crest Trail Association to develop a route enhancement plan for the Pacific **1-D**

Crest Trail. The plan shall be submitted for review and approval to the BLM and US Forest Service prior to commissioning of the wind turbines. The report shall identify feasible PCT options, developed under the direction of the federal agencies, which provide for trail relocations, enhancements, or additions that will benefit vistas. The provisions shall be designed to apply to those areas where the project would be most visible from the existing trail."

Procedures for relocation of the Pacific Crest Trail are outlined in the Optimal Location Review Process found at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5368489.pdf. This process looks to find the optimal location of the trail based on the Design Criteria outlined in Appendix C of the Pacific Crest National Scenic Trail Comprehensive Plan, including providing for "maximum outdoor recreation potential," "follow the "crest where feasible," and "cross man-made features such as roads, aqueducts, and power transmission lines at right angles to avoid prolonger visual contact with them." Since the trail is continuous from Mexico to Canada, relocation to improve the trail experience and provide for enhancement, would likely require a significant relocation – a process that Congress must approve and may not even be feasible. This mitigation measure should be reworded as follows: **1-D, cont.**

MM4.18-5 Rewording: "In order to mitigate for impacts that do not substantially interfere with the nature and purpose of the PCT, the project proponent shall consult and coordinate with the US Forest Service, BLM and Pacific Crest Trail Association (prior to the issuance of a Notice to Proceed by the BLM) to develop an offsite mitigation plan for the Pacific Crest Trail. The plan shall be submitted for review and approval to the BLM and US Forest Service prior to commissioning of the wind turbines. The plan shall identify feasible land acquisition opportunities to protect the PCT corridor and to improve the PCT recreation and scenic opportunities commensurate with the recreation and visual impacts. If directed by the BLM in consultation with the US Forest Service, the proponent shall provide funds for acquisition within one year of issuance of the first wind turbine generator building permit."

Please contact Beth Boyst, National PCT Administrator, at 707-562-8881 or bboyst@fs.fed.us, if you have any questions.

Sincerely,

BETH BOYST
Pacific Crest Trail Program Manager

cc: Mark Conley, CA BLM NLCS Coordinator

Response to Comment Letter 1: U.S. Department of Agriculture, Forest Service (September 26, 2012)

1-A Thank you for your comments. The participation of the U.S. Department of Agriculture in the public review of the document is appreciated. The commenter describes the history and purpose of the Pacific Crest Trail (PCT) and states that the Draft EIS/EIR does not comply with BLM Manual Policy Direction 6250 for National Scenic and Historic Trails or follow direction to safeguard the nature and purpose of National Trails.

As stated in Section 1.3 and Section 4-16 of the EIS/EIR, the Cameron Ridge segment of the Pacific Crest Trail passes within one mile of the northwest portion of the project area, north of SR 58. Manual Transmittal Sheet (MS) 6250 specifically refers to National Scenic and Historic Trail Administration (Public).

The BLM MS 6250 addresses specific functions delegated to the BLM from the Secretary of the Interior pursuant to the National Trails System Act. The manual describes the following: (1) how to conduct National Scenic or Historic Trail Feasibility Studies; (2) how to administer a National Scenic or Historic Trail upon designation by Congress; and, (3) the responsibilities of National Scenic or Historic Trail Administrators. Additionally, the manual identifies data and records management requirements. The EIS/EIR addresses these requirements by addressing potential visual impacts from the Pacific Crest Trail within Section 4.18, Visual Resources (refer to KOP 1 analysis). The presented analysis and Interim VRM designation were completed consistent with the intent of BLM MS 6250 requirements and conducted in coordination with BLM.

1-B The commenter states that it is unacceptable to use the rationale that since development has already occurred on the private land adjacent to the federal component of the project, it is acceptable to place wind turbines within the project site. The commenter also states that the turbines along the ridgelines are of particular concern because they do not meet best management practices for avoiding impacts to the PCT and the commenter requests a visual analysis from the PCT-trail platform along with the removal/relocation of turbines that create the highest level of contrast within the project.

As noted in response to comment 1-A, the BLM Manual 6250 specifies how to administer the National Scenic and Historic Trails. The Pacific Crest Trail is a National Trail and as quoted by the commenter, Section 1.6-1 of the MS 6250 states that the National Trail Administrator shall provide for maximum compatible outdoor recreation potential… of the areas and associated settings through which such trails may pass…" The EIS/EIR addresses these requirements by addressing potential visual impacts from the Pacific Crest Trail within Section 4.18, Visual Resources (refer to KOP 1 analysis). The presented analysis and Interim VRM designation were completed consistent with the intent of BLM MS 6250 requirements and conducted in coordination with BLM.

1-C The commenter states that the Visual Resource Management (VRM) objective should have established the PCT as a VRM Class II or Class III and states that the finding of a significant and unavoidable impact under CEQA does not meet the intent for management of national scenic trails. The commenter also requests an assessment and disclosure of substantial interference with the nature and purposes of the PCT and requests offsite mitigation for project impacts.

As stated in Sections 3.18 and 4.18 of the EIS/EIR, the turbines visible in the view from the PCT key observation point would be located within BLM lands and are assigned an interim VRM Class IV. As such, this class allows for strong contrast that can demand attention and is dominant in the landscape.

In regards to the purpose of the PCT, the 1968 National Trails System Act describes the purpose of national scenic trails as follows: National scenic trails ... will be extended trails so located as to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of natural, or cultural qualities of the areas through which such trails may pass.

The Project site is located over one mile east of the PCT; therefore, the Project would not directly interfere with any recreation activities which constitute the nature and purpose of the PCT. Also, as discussed above, the BLM's interim VRM class provides for strong contrasts in the surrounding environment. The EIS/EIR acknowledges that turbines would present strong structural contrast of form, line, color and texture against the existing landscape from the PCT key observation point. However, because the entire AEWP falls within Class IV interim designations, this level of contrast would conform with the applicable BLM policy, which accommodates strong levels of visual contrast.

Nonetheless, the EIS/EIR states the Project's impacts to the existing visual character are significant and unavoidable.

1-D The commenter requests rewording of MM 4.18-5. The commenter also provides the process for relocation of the PCT.

The commenter references the Optimal Location Review Process for procedures regarding relocation of the PCT. As written, MM 4.18-5, already requires consultation with the U.S. forest Service, the BLM and the Pacific Crest Trail Association. Therefore, the MM has been revised to include a reference to the Optimal Location Review Process, as shown in Section 7.2:

MM 4.18-5 Evaluate and Implement PCT Route Enhancement. ~~Prior to the issuance of a Notice to Proceed by the BLM~~ In order to mitigate for impacts that do not substantially interfere with the nature and purpose of the PCT, the project proponent shall consult and coordinate with the U.S. Forest Service, the BLM, and the Pacific Crest Trail Association to develop ~~a route enhancement plan~~ an off-site mitigation plan for the Pacific Crest Trail. The plan shall be submitted for review and approval to the BLM and U.S. Forest Service prior to BLM issuing a Notice to Proceed and commissioning of the wind turbines. The ~~report~~ plan shall identify feasible ~~PCT options, developed under the direction of the federal agencies, which provide for trail relocations, enhancements, or additions that will benefit visitors~~ land acquisition opportunities to protect the PCT corridor and to improve the PCT recreation and scenic opportunities commensurate with the recreation and visual impacts. The provisions shall be designed to apply to those areas where the project would be most visible from the existing trail. If directed by the BLM, in consultation with the U.S. Forest Service, the project proponent shall provide funds for acquisition within one year of issuance of the wind turbine generator building permit.

~~If directed by the BLM, the project proponent shall be responsible for constructing those new trail segments, enhancements, or modifications and restorations as identified in the final approved plan. All construction, restoring and disturbance activities shall be conducted in manner acceptable to the BLM and U.S. Forest Service. Any Trail construction, restoration, enhancement or modifications shall be completed within one year of issuance of the first wind turbine generator building permit.~~

Land acquisition will be based on the concepts developed in the *Draft Pacific Crest National Scenic Trail Best Management Practices to Mitigate Scenery Impacts*

from Conflicting Land Uses (USFS, BLM June 2012). Under these Best Management Practices (BMP), the mitigation ratio for land acquisition is calculated by using the distance of the project from the PCT, the distance along the trail that the project is visible to trail users, and the contrast created by the project to the characteristic scenery. Under the preferred alternative, the closest the project is to the trail is 1.2 miles (middleground distance zone), is visible to trail users for approximately 1.5 miles, and creates a moderate to high contrast to the characteristic scenery. Using this scenario, the ration for land acquisition would be 1:1. Thus, the acres to be acquired off-site for mitigation to impacts to 1.8 square miles would be 1,152 acres.

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

SEP 2 7 2012

Jeffrey Childers, 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 Alta East Wind Project, Kern County, California (CEQ #20120205)

Dear Mr. Childers:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement (DEIS) for the Proposed Alta East Wind Project. 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. 2-A

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 are pleased to note that, as described in the DEIS, BLM's preferred alternative – Alternative C – would avoid the northern 318 acre parcel containing Joshua tree woodland habitat adjacent to the Pacific Crest Trail and the portion of the project site nearest active golden eagle nests. We also commend the early resource analyses and agency coordination that resulted in the evaluation of 7 alternatives, including two reduced footprint alternatives.

Notwithstanding the positive aspects of the proposed project, EPA is concerned about potential impacts to air quality and site hydrology, and we continue to have the concerns raised in our scoping comments regarding cumulative impacts to resources resulting from the 21 existing or proposed large-scale wind energy projects in the Tehachapi Wind Resource Area. 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").

With respect to adverse air quality impacts resulting from the construction period, we recommend requiring more stringent mitigation measures, phased construction, and early coordination among multiple renewable energy project construction schedules to minimize adverse air quality impacts to nearby sensitive receptors and the region. 2-B

With regard to site hydrology, we understand that, since the publication of the DEIS, the Army Corps of Engineers has determined that all aquatic resources on the project site are intrastate isolated waters not subject to section 404 of the Clean Water Act. While not federally jurisdictional, such resources are important features of the desert ecosystem, and we recommend that avoidance of those drainages and associated habitat on the site be maximized through design modifications to the wind turbine layout.

As noted in the DEIS, the project is located within an essential landscape linkage for a functioning wildland network; therefore, we recommend that the applicant and BLM continue to work closely with the U.S. Fish and Wildlife Service to protect habitat connectivity for special status species and avoid avian bird strikes during operations. In coordination with USFWS, the FEIS should identify sufficient lands for habitat compensation for the project's impacts, in order to ensure that compensatory lands are of comparable or superior quality, and are suitable compensation for the unique habitat on the project's site. In addition to including the final Avian and Bat Protection Plan and Eagle Conservation Plan, the FEIS should clarify how the applicant will comply with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

2-B, cont.

Ongoing renewable energy programmatic planning efforts, such as the Desert Renewable Energy Conservation Plan, may be relevant to the proposed project. We recommend that the FEIS integrate the latest analyses from, and demonstrate the proposed project's consistency with, the DRECP. We also recommend that BLM commit, in the FEIS and ROD, to measures similar to those adopted for the Desert Sunlight Solar Project, to protect the portions of the subject Right-of-Way that were specifically avoided due to resource impacts, and we further encourage BLM to consider such a land use policy modification through the development of the DRECP.

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 project, and for minimizing adverse impacts. We are available to further discuss all recommendations provided.

2-C

Please note that starting October 1, 2012, EPA Headquarters will not accept paper copies or CDs of EISs for official filing purposes. Submissions on or after October 1, 2012, must be made through the EPA's new electronic EIS submittal tool: *e-NEPA*. To begin using *e-NEPA*, you must first register with the EPA's electronic reporting site - https://cdx.epa.gov/epa_home.asp. Electronic submission does not change requirements for distribution of EISs for public review and comment, and lead agencies should still provide one hard copy of each Draft and Final EIS released for public circulation to the EPA Region 9 office in San Francisco (Mail Code: CED-2). If you have any questions, please contact me at (415) 972-3843 or contact Tom Plenys, the lead reviewer for this project. Tom can be reached at (415) 972-3238 or plenys.thomas@epa.gov.

Sincerely,

Kathleen Martyn Goforth, Manager
Communities and Ecosystems Division

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

cc: Jacquelyn Kitchen, Kern County Planning and Community Development Department
Ray Bransfield, United States Fish and Wildlife Service
Craig Bailey, California Department of Fish and Game

Israel Naylor, Chairperson and Dennis Mattison, Environmental Director (ED), Fort Independence Reservation
Wayne Burke, Chairman and John Mosley, ED, Pyramid Lake
Lee Choe, Acting Chairman, San Juan Paiute
George Gholson, Chairperson and Michael Babcock, ED, Timbisha Shohone
Daniel Gomez, Chairman and Oscar Serrano, Senior Engineer, Colusa Indian Colony
Carla Rodriguez, Chairperson and Clifford Batten, Environmental Coordinator, San Manuel

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ). 2-D

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED ALTA EAST WIND PROJECT, KERN COUNTY, CALIFORNIA, SEPTEMBER 27, 2012

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 project is located in Mojave Desert Air Basin which is in non-attainment for federal eight hour ozone standards and State standards for particulate matter 10 microns or less in size (PM_{10}) (p. 4.2-18). 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, maximum daily construction emissions are predicted to exceed Eastern Kern Air Pollution Control District (EKAPCD) thresholds of significance for oxides of nitrogen (NO_x) and PM_{10} (p. 4.2-4). We also note that the project's dispersion modeling analysis identified 'significant and unavoidable' impacts to residents living in close proximity to the project site (p. 4.2-5). In light of the area's nonattainment status, potential health impacts to local residents, and the construction of ten 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:
Include, in the FEIS and Record of Decision (ROD), a commitment to implement all mitigation measures in the DEIS, and additional mitigation measures that go beyond those in the DEIS (see recommendations, below), on a schedule that would reduce construction emissions to the maximum extent feasible. 2-E

Describe, in the FEIS, how these mitigation measures would be made an enforceable part of the project's implementation schedule. We recommend implementation of applicable mitigation measures prior to or, at a minimum, concurrent with the commencement of construction of the project.

Discuss, and consider incorporating in the ROD, mitigation measures from the South Coast Air Quality Management District's Rule 403 to ensure best available and enhanced dust control measures for large scale construction projects, and estimate, in the FEIS, the additional emission reductions that could result.

The FEIS and ROD should include a commitment by the applicant to minimize disturbance to the natural landscape as much as possible, so that the need for measures to reduce fugitive dust is minimized or eliminated.

Correct, or provide support for, the statement that Alternative C would "Result in 80 percent lower annual/total construction emissions" (p. ES-8).

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 MM 4.2-3 to further reduce fugitive dust on unpaved roads and particulate emissions from onsite dedicated equipment exhaust (p. 4.2-25). We note that MM 4.2-2 recommends Tier 3 engines, if available 2-F

(p. 4.2-24). EPA began phasing-in Tier 4 standards for non-road engines in 2008[1]; 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:
The FEIS should discuss, and include emission tables for, various classifications of on-road and non-road engines, highlighting emission levels for PM_{10}, $PM_{2.5}$ and NO_x.

The FEIS should provide a list of the equipment to be used during construction and indicate the expected availability of Tier 3 and Tier 4 engines for each application.

The FEIS and ROD should commit 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. **2-F, cont.**

The FEIS should update the tables in the Section 4.2 impact analysis to reflect the additional criteria pollutant emissions reductions that would result from using Tier 4 engines for each component of project construction.

We recommend that the applicant and BLM 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.[2]

All applicable State and local requirements, and the additional and/or revised measures listed above, should be included in the FEIS, and the FEIS and ROD should include a condition that the applicant incorporate all such measures into construction contracts.

Cumulative Air Quality Analysis

Table 4.2-9 – Cumulative Annual Construction Emissions – indicates that construction of this project, in conjunction with the ten other foreseeable wind and transmission projects listed, would exceed annual EKAPCD emission thresholds for volatile organic compounds (VOCs), NOx, PM_{10} and $PM_{2.5}$ (p. 4.2-19). We also note that the annual PM_{10} emissions threshold will be exceeded during operations of reasonably foreseeable projects.

Recommendations:
Utilize the cumulative emissions data and, in consultation with the EKAPCD, develop a phased construction schedule, for projects that will undergo construction concurrently, that will not result in any violations of local, state or federal air quality regulations. EPA recommends incremental construction on-site to ensure air quality standards are not exceeded. **2-G**

The FEIS should provide technical justification for any determination that a future project is too far from the proposed project to contribute to cumulative air quality impacts. While the DEIS states that a cumulative air quality analysis was conducted within one mile of the project site (p. 4.2-20), the appropriate area to consider depends on the emissions, size of the source, and release height, among other criteria.

[1] See EPA website: http://www.epa.gov/nonroad-diesel/2004fr/420f04032.htm#standards
[2] See CARB's Factsheet at: http://www.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf

Estimate, and incorporate into the FEIS' cumulative impact analysis, air emissions for the High Speed Rail project and provide an update on the expected time frame for its construction.

If additional mitigation measures would be needed, based on the evaluation of cumulative emissions, or if the project would affect the ability of other foreseeable projects to be permitted, the FEIS should discuss this.

In light of the greater than 3,700 daily truck and worker commute trips expected (p. 4.16-14), develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow in coordination with concurrent nearby projects. Incorporate a discussion of potential transit options (including formal rideshare, carpooling, and bussing) to transport workers from the nearest population centers to the project sites, as well as other measures to facilitate accessibility to the job sites and reduce greenhouse gas emissions resulting from worker transportation. **2-G, cont.**

Public Health and Sensitive Receptor Notification

In light of the projected daily emission exceedances and the identified 'significant and unavoidable' impacts to local residents, the FEIS should include a detailed discussion of the potential health effects of these emissions to sensitive receptors and consider a mitigation measure that would ensure that sensitive receptors are informed of these potential risks in advance of construction. This information should be provided concurrently with advanced notification of construction provided as mitigation for noise impacts.

Recommendations:
Expand the air quality impact analysis to include a detailed discussion of the potential health effects to sensitive receptors from exposure to PM_{10} and $PM_{2.5}$, as well as toxic air contaminants. **2-H**

Incorporate into MM 4.6-2 advanced notification to sensitive receptors of the potential health effects of PM_{10} and $PM_{2.5}$, as well as toxic air contaminants.

Given the proximity of several schools to the project site, consider whether the pollutants and sources of concern pose a particular hazard to children's health (for example, PM_{10}, dust, heavy metals, or air pollution from near construction or roadway exposures). Discuss potential impacts to children's health in the context of Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (April 21, 1997), which directs each Federal agency, to the extent permitted by law and appropriate, to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and to ensure that its policies, programs, activities, and standards address these risks.

Greenhouse Gas Emissions - Construction and Operation Bid Specifications

To minimize greenhouse gas emissions from project construction and operations, we recommend 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-I**
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.

2-I, cont.

Water Resources

Drainages and Ephemeral Washes

Proposed project construction associated with access roads and transmission line development could directly (via temporary or permanent fill) and indirectly affect drainages and ephemeral washes within the proposed project area. Roughly 42 acres of State jurisdictional drainages were delineated on site. Based on the current project design, access roads and collector lines are expected to intersect ephemeral streams in 99 locations, and would result in temporary and permanent impacts to roughly 5 acres of California Department of Fish and Game-jurisdictional streambeds (p. 4.17-6).

Ephemeral washes perform a diversity of hydrologic, biochemical, and geochemical functions that directly affect the integrity and functional condition of higher-order waters downstream. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. Ephemeral washes also provide habitat for breeding, shelter, foraging, and movement of wildlife. As the DEIS notes, drainages occurring in the region are likely to function as movement corridors, and upland habitat is expected to provide vital linkages for many terrestrial species (p. 3.21-5). Many plant populations are dependent on these aquatic ecosystems and adapted to their unique conditions. The potential damage that could result from disturbance of flat-bottomed 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.

2-J

The DEIS provides minimal information on the direct and indirect impacts to waters as a result of the proposed project and does not consider the up- and downstream reach and extent of waters or their importance in this landscape.

Recommendations:
The FEIS should characterize the functions of aquatic features, such as washes, on the proposed project site and discuss how the project would protect and maintain those functions.

Describe how the proposed project layout, roads, and drainage channels have been configured to avoid ephemeral washes to the maximum extent practicable.

Demonstrate that downstream flows would not be adversely impacted due to proposed changes to, and crossings of, natural washes.

Include a finalized drainage plan in the FEIS to facilitate assessment of impacts and effectiveness of mitigation measures.

To avoid and minimize direct and indirect impacts to ephemeral washes (such as erosion, migration of channels, and local scour), we suggest the following additions to MM 4.17-4 – BMPs for Activities In or Near Ephemeral Drainages (p. 4.17-26):

- Avoid placing turbine support structures in aquatic features 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 form and including adequate natural buffers, for flood control, to the maximum extent practicable.
- Minimize the number of road crossings over waters and design necessary crossings to provide adequate flow-through during storm events to the maximum extent practicable.

2-J, cont.

The cumulative impacts analysis of Section 4.17, Vegetation Resources, includes a discussion of the impacts and mitigation measures for state jurisdictional drainages and concludes that "jurisdictional habitats are limited in the western Mojave Desert and arid foothills of the Tehachapi Mountains, and when considered cumulatively on a region-wide scale, impacts to jurisdictional areas would remain significant and unavoidable under CEQA" (p. 4.17-20). It appears that the project could result in a net loss of desert wash resource functions as application of MM 4.17-1 (Habitat Restoration and Revegetation Plan) allows for a choice between off site conservation, on-site restoration or mitigation banking (p. 4.17-23).

2-K

Recommendation:
Consider including a commitment to pursue opportunities to restore or enhance other lands within the watershed to replace desert wash functions lost on the project site and to demonstrate, and ensure, no net loss of desert wash resource function.

Fencing

The DEIS does not provide information about the potential effects of fencing on drainage systems. By entraining debris and sediment, fencing can interfere with natural flow patterns. Fence design should address hydrologic criteria, as well as security performance criteria.

Recommendations:
In the FEIS, describe where permanent fencing will be used and the potential effects of fencing on drainage systems. Ensure that the fencing proposed for this project will meet appropriate hydrologic performance standards.

2-L

Review the National Park Service's published article[3] on the effects of the international boundary pedestrian fence on drainage systems and infrastructure, and ensure that such issues are adequately addressed with this project.

[3] National Park Service, August 2008, Effects of the International Boundary Pedestrian Fence in the Vicinity of Lukeville, Arizona, on Drainage Systems and Infrastructure, Organ Pipe Cactus National Monument, Arizona.

Floodplain Hazards

Executive Order 11988 Floodplain Management requires federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. A 100-year Flood Hazard Area designated by FEMA was identified along Cache Creek (p. 4.19-7).

> *Recommendations:*
> Demonstrate, in the FEIS, how each alternative analyzed in the DEIS is consistent with the provisions of Executive Order 11988.
>
> Provide, in the FEIS, a detailed description of the current FEMA floodplain, and include results of consultation with FEMA, if appropriate.

2-M

Groundwater

We are concerned about the potential groundwater drawdown and cumulative impacts to the Fremont Valley Groundwater Basin associated with the concurrent construction and operational phases of the proposed project in conjunction with the reasonably foreseeable projects in the vicinity. 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.[4] A drop in groundwater levels could also impact neighboring wells, lower the water table, and adversely affect groundwater-dependent vegetation and woodlands.

> *Recommendations:*
> The FEIS should include confirmation that the selected municipal water district is able to supply the water needed for construction.
>
> Expand, in the FEIS, MM 4.19-5 – Develop a Water Supply Contingency Plan – to include what mitigation measures would be taken, and by whom, should groundwater resources in the basin become overextended to the point that further curtailment is necessary due to, for example, additional growth, the continued influx of large-scale wind projects, drought, climate change, or the utilization of existing or pending water rights in the basin.
>
> Include, in Section 4.20 of the FEIS, a numerical analysis, based on expected pumping rates and best available data, of the anticipated drop in groundwater levels and associated impacts to groundwater-dependent vegetation and woodlands.

2-N

Biological Resources

Endangered Species and Other Species of Concern

The site supports a diversity of mammals, birds, and reptiles, including special status wildlife species. While we note considerable coordination to date between the applicant, BLM and USFWS on the project's avian issues, we understand that a Biological Opinion has not been prepared for this project, and it is unclear whether a BO is currently under development specific to the resources identified. It is also unclear whether USFWS or the California Department of Fish and Game have reviewed or commented on the adequacy of the surveys and monitoring of biological resources conducted to date.

2-O

[4] 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.

The USFWS finalized the voluntary Land-Based Wind Energy Guidelines on March 23, 2012, which provide a structured scientific process for addressing wildlife conservation concerns at all stages of land-based wind energy development. They also promote effective communication among wind energy developers, government agencies and local conservation organizations and tribes. The Guidelines use a "tiered approach" for assessing adverse effects to species of concern and their habitats.[5].

Recommendations:
The FEIS should provide an update on the Endangered Species Act consultation process and include the Biological Opinion, if one is issued, as an appendix.

2-O, cont.

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, should be included in the FEIS and, ultimately, the ROD.

Discuss, in the FEIS, coordination with USFWS and CDFG and their review of the surveying, monitoring, and reporting protocols completed to date. Include a commitment to consistent application of USFWS and CDFG supported methods in future protection and mitigation efforts.

Coordinate with USFWS to incorporate recommendations from the recently published USFWS Land-Based Wind Guidelines into the FEIS and ROD.

Golden Eagles

The DEIS indicates that golden eagles were observed foraging in the project area during surveys in all four seasons (p. 4.21-7). Three active and 10 inactive golden eagle nests were found within 10 miles of the project boundary. Among golden eagle observations, 87.7 percent were recorded flying within the rotor-swept height (p. 2-22). Further, 7 golden eagle carcasses have been reported at the Pine Tree Wind Farm located roughly 10 miles north of the proposed project (p. 4.21-21).

All raptor species are protected under the Migratory Bird Treaty Act (MBTA). The golden eagle also receives protection under the Bald and Golden Eagle Protection Act (BGEPA). In September 2009, the USFWS finalized permit regulations[6] under the BGEPA for the take of bald and golden eagles on a limited basis, provided that the take is compatible with preservation of the eagle and cannot be practicably avoided. The final rule states that if advanced conservation practices (ACPs) can be developed to significantly reduce take, the operator of a wind-power facility may qualify for a programmatic take permit. Most permits under the new regulations would authorize *disturbance*, rather than take.[7] According to the DEIS, a regression analysis was used to predict raptor mortality. The analysis results predict an estimated fatality rate of 3 raptors per year from the proposed project (p. 4.21-19). While the DEIS acknowledges the risk of golden eagle mortality due to collision with the proposed project's wind turbines

2-P

[5] US Fish and Wildlife, Land-Based Wind Energy Guidelines, March 23, 2012, Available: http://www.fws.gov/windenergy/

[6] See Eagle Permits, 50 CFR parts 13 and 22, issued Sept. 11, 2009. See internet address: http://www.fws.gov/migratorybirds/CurrentBirdIssues/BaldEagle/Final%20Disturbance%20Rule%209%20Sept%202009.pdf

[7] See U.S. Fish Wildlife Service Migratory Bird Management Information: Eagle Rule Questions and Answers. http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BaldEagle/QAs%20for%20Eagle%20Rule.final.10.6.09.pdf

is high (p. 4.21-21), the DEIS does not adequately address the acquisition of permits associated with disturbance or take of golden eagles.

Recommendations:
Identify, in the FEIS, specific measures to reduce impacts to eagles. Specify in the FEIS how approval of the proposed project would comply with the MBTA and BGEPA.

Discuss, in the FEIS, the applicability of the recently finalized USFWS permit regulations (50 CFR Parts 13 and 22) to the proposed project. Elaborate on the process and likelihood of obtaining a permit via these regulations.

Consider site specific risk mapping for avian species of concern as a means to site individual wind turbines in lower risk areas. An example of this type of study was performed at the Altamont Wind Resource Area.[8] This study was funded by the California Energy Commission's Public Interest Energy Research program. **2-P, cont.**

Discuss the applicability of the recent Eagle Conservation Plan Guidelines[9] to the proposed project and, as necessary, describe compensatory mitigation to reduce the effect of permitted mortality to a no-net-loss standard. Include the Final Eagle Conservation Plan as an appendix.

Consider a tactical shut down option during critical hours of species activity, as appropriate, to minimize adverse impacts on such species.

Describe, in the FEIS, design practices, supported by USFWS and CDFG, for the proposed transmission line to minimize bird collisions and reduce raptor fatalities resulting from electrocution. Discuss the recommendations adopted from the following references: *Suggested Practices for Avian Protection on Power Lines: State of the Art in 2006* and the Avian Power Line Interaction Committee's *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994*.

California Condor

As the DEIS notes, the project site is within the historic condor range and recent data suggest that there is range expansion in the general direction of the project area. Additionally, development of a wind resource facility at this location is considered to pose a high risk of collision to this species (p. 4.21-22).
To vet a potential strategy to avoid collisions, we understand that a demonstration of the Condor Monitoring System proposed under MM 4.21-9 is scheduled in October 2012.

2-Q

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

Include the condor in the Final Avian and Bat Protection Plan or develop a protection plan that is unique to the condor.

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[8] Smallwood, K. S., and L. Neher. 2008. Map-Based Repowering of the Altamont Pass Wind Resource Area Based on Burrowing Owl Burrows, Raptor Flights, and Collisions with Wind Turbines. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2009-065.
[9] See Draft Eagle Conservation Plan Guidelines, February 2011: See internet address: http://www.fws.gov/windenergy/eagle_guidance.html

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

Elaborate on the demonstration of the Condor Monitoring System. Factors to address include: 2-Q, cont.

- 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,
- Results from other projects that have used this approach, if any.

Compensatory Mitigation

In light of the numerous renewable energy projects in the Tehachapi Wind Resource Area, the availability of land to adequately compensate for environmental impacts to resources such as state jurisdictional waters, Joshua tree woodlands, and desert tortoise, may serve as a limiting factor for development. For example, we note that mitigation measure MM 4.17-2 provides an extensive protocol to ensure adequate compensatory mitigation for impacts to Joshua tree woodlands and requires protection of compensatory lands 'into perpetuity'; however, the measure defers identification of compensatory lands to a later date. A total of 1,135 Joshua trees greater than 9 feet tall and 8 feet wide have been mapped on the site.

Recommendations:
Identify compensatory mitigation lands or quantify, in the FEIS, available lands for compensatory habitat mitigation for this project, as well as reasonably foreseeable projects in the Tehachapi Wind Resource Area. 2-R

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

The FEIS and ROD should incorporate, for each affected resource, the mechanisms that would protect into perpetuity all compensatory lands that are selected.

Commit, in the FEIS and ROD, to exclude the non-developed portion of the subject ROW from further disturbance or development, as was agreed upon for BLM's Desert Sunlight Solar Farm, based on this project's resource analyses and the decision to select the proposed project's footprint to minimize environmental impacts (e.g. the 318 acre northern parcel of the project not included in Alternative C).

Climate Change

EPA commends the BLM for including estimates of greenhouse gas emissions from construction and operation of the project. The DEIS includes, however, only a brief discussion of the potential impacts of climate change on the project.

Recommendation: 2-S
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. Include, in the FEIS, information detailing the impacts that climate change may have on 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. 2-S, cont.

Consistency with the California Desert Renewable Energy Conservation Plan

The California DRECP, scheduled for completion in 2013, is intended to advance State and federal conservation goals in the desert regions while also facilitating the timely permitting of renewable energy projects in California. The DRECP will include a strategy that identifies and maps areas for renewable energy development and areas for long-term natural resource conservation.

Recommendation: 2-T
The FEIS should elaborate on the DRECP, and include up-to-date maps illustrating the current boundaries and conceptual alternatives that are relevant to the proposed project. Discuss whether the site is expected to be included within renewable energy development areas of the DRECP and whether this is consistent with Kern County's wind resource development areas. Acknowledge that additional requirements and/or conditions may apply upon approval of the DRECP.

Cultural Resources and Coordination with Tribal Governments

A total of 15 cultural resources have been inventoried to date for the project (p. Appendix Q-4.4). The DEIS states that BLM has formally invited American Indian Tribes to consult at the government-to-government level throughout the review of the project and we commend BLM for initiating consultation in February of 2011 (p. 5-5).

Please note that we have copied 6 tribes on these comments in our effort to coordinate pursuant to Executive Order 13175. These tribes, while not geographically located near the project, have historical connections to the area where the project is proposed.

Recommendations:
Identify, in the FEIS, the tribes that were contacted for consultation, and describe the outcome of government-to-government consultation between the BLM and each of the tribal governments contacted. 2-U

Discuss issues that were raised, how those issues were addressed in relation to the proposed action, and how impacts to tribal or cultural resources will be avoided or mitigated consistent with Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments,* Section 106 of the National Historic Preservation Act, and Executive Order 13007, *Indian Sacred Sites.*

Update the Cultural Resources chapter to reflect the above recommendations related to tribal resources and revise the alternatives development and screening section (p. 2.1.1) to account for tribal concerns.

If not included in BLM's consultation communications to date, please include the additional tribal representatives copied on this comment letter to ensure that they are provided the opportunity to participate in the ongoing government-to-government consultation for the project.

Response to Comment Letter 2: U.S. Environmental Protection Agency (September 27, 2012)

2-A Thank you for your comments. The participation of the U.S. Environmental Protection Agency in the public review of this document is appreciated. The commenter states that the U.S. EPA has reviewed the Draft EIS/EIR pursuant to the National Environmental Quality Act (NEPA) and has provided comments. The commenter further states that the U.S. EPA is pleased with the BLM's preferred alternative and commends the early resources analyses and agency coordination that resulted in the evaluation of 7 alternatives.

Thank you for your comments; they have been included in the record for this project.

2-B The commenter states that the U.S. EPA is concerned about potential impacts to air quality and site hydrology, and continues to have concerns raised in the scoping comments regarding cumulative impacts. The commenter further recommends that the Applicant and the BLM continue to work closely with the U.S. Fish and Wildlife Service to protect habitat connectivity for special status species and avoid avian bird strikes. The commenter also recommends that the Final EIS integrate the latest analyses from, and demonstrate the project's consistency with the DRECP.

Please see the responses below to specific comments, regarding the issues described in your introductory comments.

2-C The commenter states that starting October 1, 2012, EPA headquarters will not accept paper copies or CDs of EISs for official filing purposes. Submissions must be made through the EPA's new electronic EIS submittal tool: e-NEPA.

The BLM will submit the Final EIS/EIR through e-NEPA.

2-D The commenter has provided a summary of EPA environmental impact rating definitions as a background to the comment letter and provide details for EPA determinations of environmental impact of the action and adequacy of the impact statement.

Kern County and the BLM would like to thank you for your comment and providing the EPA environmental impact rating definitions.

2-E The commenter states concerns with the cumulative impacts of the project, even after the incorporation of mitigation measures and notes that the project will result in significant and unavoidable impacts to air quality. The commenter provides several recommendations for revisions to the analysis. Specifically, the commenter requests that the Final EIS (FEIS) and Record of Decision (ROD) include a commitment to implement all mitigation measures; that the FEIS include a description of how the MMs will be made enforceable; that the ROD include MMs from the South Coast Air Quality Management District's (SCAQMD) Rule 403; that the FEIS and ROD include a commitment to minimize disturbance; and that the document provide support for the conclusion that Alternative C would result in reduced emissions.

With regard to the introductory comments regarding concerns with the projects' potential cumulative impacts to Air Quality, a response to this topic has been provided below under item 2-F because that comment provides specific comments regarding cumulative impacts.

With regard to the recommendations made by the commenter, the Final EIS/EIR and Record of Decision (ROD) issued by the BLM will include the commitment to implement all approved mitigation measures, and a discussion of the enforcement of the mitigation measures will be included in the Final EIS/EIR.

The air quality mitigation measures included in the Draft EIS/EIR are considered adequate and enforceable for this project and this project's air basin. The requested implementation of mitigation requirements from the SCAQMD's adopted Rule and Regulations is not required because the SCAQMD is in another air basin and the project is not located within the jurisdiction of the SCAQMD. As described in Chapter 3.2, *Air Resources*, of the EIS/EIR, the project is located entirely in the Mojave Desert Air Basin (MDAB), which encompasses over 20,000 square miles of California's desert. The MDAB consists of the eastern half of Kern County, the northern desert portion of Los Angeles County, most of San Bernardino County, and eastern Riverside County. The eastern portion of Kern County where the AEWP is located is regulated by the Eastern Kern Air Pollution Control District (EKAPCD).

The EIS/EIR includes requirements to minimize disturbance areas; See Mitigation Measure MM 4.21-2, which requires that the grading plans minimize the area required for temporary construction work and operational activities.

With regard to the statement on Page ES-8; the statement was written erroneously, and should have been written to explain that Alternative C would result in a 20 percent reduction in construction emissions and slightly less O&M emissions. This reduction would come from a 20 percent reduction in overall project features, and thus a direct 20 percent decrease in construction and less operational emissions when compared to that of Alternative A. Therefore, as shown in Section 7.3, the Final EIS/EIR has been corrected to indicate that Alternative C would:

- Result in 20 ~~80~~ percent lower ~~annual~~ total construction emissions and slightly less O&M emissions.

2-F This commenter commends the use of the EKAPCD's Rule 402 to reduce PM emissions during construction; as well as MM 4.2-3 to further reduce fugitive dust on unpaved roads. The commenter seeks to modify/enhance quantitative emission estimates to consider Tier 4 non-road engine use during construction. Furthermore, the commenter seeks to modify/enhance the mitigation measures proposed to reduce air quality impacts.

Section 3.2.2 of the Draft EIS/EIR describes existing federal and state vehicle emissions standards; however, the Draft EIS/EIR does not require a discussion of the various emissions standards for the different classifications of on-road and off-road vehicles because Mitigation Measure 4.2-2 includes the classifications of off-road and on-road vehicle specification requirements.

On December 9, 2004, the California Air Resources Board adopted the final rule introducing Tier 4 emission standards, which was approved by the office of Administrative Law on December 7, 2005, that are to be phased-in over the period of 2008-2015. This regulation covers the emissions requirements for new off-road compression-ignition (diesel) engines and is nearly identical to the federal Tier 4 regulations approved earlier in 2004 [69 FR 38957-39273, 29 Jun 2004]. This regulatory requirement only applies to new equipment, so it will take years beyond the implementation date for equipment fleets to have significant numbers of available Tier 4 equipment. Additionally, the Tier 4 emission standard requirements for the larger construction equipment (greater than 75 horsepower) that will be used for project construction are not phased in until 2011 through 2014 for interim Tier 4 standards and final Tier 4 standards are not phased in until after 2014 or 2015. The project's construction years are anticipated to occur between 2013 and 2014; therefore, it is not considered reasonable to require that the project's construction off-road equipment meet Tier 4 engine standards. The availability of such Tier 4 engines for the project's construction timeframe is currently unknown and MM 4.2-2 requires off-road equipment to meet

Tier 3 standards. This requirement does not preclude the project proponent form using of any Tier 4 compliant equipment if it becomes available.

Data is not currently available regarding the potential availability of specific engine tiers by equipment type; however, the EIS/EIR includes a listing of off-road equipment that will be used during construction of the project (See page 11 of "Appendix B – Emissions Calculations" of Appendix G).

The project applicant would be required by law to meet all applicable state and local requirements, so there is no need to include such a stipulation in the ROD; however, the air quality mitigation measures will be included in the ROD.

2-G The commenter seeks to modify/enhance cumulative construction analysis. The commenter notes that the EIS/EIR demonstrates that cumulative construction impacts, in conjunction with other foreseeable projects, would exceed EKAPCD thresholds for VOCs, NOx, PM10, and PM2.5; and that cumulative operational impacts would exceed the thresholds for PM10. Additionally, the commenter makes several recommendations including: development of a phased construction schedule for multiple projects; further cumulative impact analysis; description of emissions for the high speed rail; the need for additional mitigation; and development of a traffic management plan.

As noted in Section 4.2.10.7 of the EIS/EIR, the AEWP would have temporary significant and avoidable impacts related to air quality standards during construction, and the addition of emissions from other cumulative projects would only worsen those air quality impacts. Therefore, the cumulative impacts during construction would be significant and unavoidable. During operations, the emissions from the AEWP would be well below the EKAPCD thresholds of significance (see Table 4.2-4). However, the cumulative project mitigated operation emissions (see Table 4.2-10) exceed the EKAPCD threshold of significance for PM10. Therefore, the operational cumulative projects emissions are cumulatively considerable and would have significant and unavoidable impacts to regional air quality. Mitigation measures have been incorporated to reduce these impacts as feasible; however, the existence of other previously approved projects precludes the ability to reduce these impacts to a less than significant level.

The recommended imposition of a phased construction schedule for the various proposed wind projects within Kern County is not practical primarily that a number of wind projects are already under construction. Additionally, it is believed that while there will be some overlap in these projects' construction, market forces will also limit construction overlap due to availability of equipment resources. The cumulative construction emissions table (Table 4.2-9) shows the worst-case cumulative emissions potential assuming all projects worst case construction periods overlap. The actual cumulative construction emissions are likely to be lower than the values shown in these tables.

The cumulative impacts analysis included in the EIS/EIR provides an analysis of known wind energy projects located within the Mojave Air Basin; as well as an analysis of all proposed projects located within six miles of the project border and those within one mile of the project border for the purposes of regional and localized cumulative impact assessment, respectively. The use of a one mile border for assessing impacts to localized sensitive receptors is considered reasonable both based on the amount of dispersion that would occur downwind of one mile and the fact that a one mile border for this large project site, which extends almost four miles from east to west and almost three miles from south to north, actually covers an area of nearly 20 square miles.

With regard to the recommendation that impacts from the High Speed Rail Project be incorporated into the cumulative analysis; it is noted that the Draft EIS/EIR has provided emissions for

cumulative projects where emission estimates are available. However, emission estimates for the segment of the High Speed Rail Project located in Mojave, near the AEWP site, are not publically available at the time of this writing. As noted on the California High-Speed Rail Authority website (http://www.cahighspeedrail.ca.gov), "Due to the large scope of the project… the environmental review is being conducted in two parts: at the statewide level followed by a more specific project-level review of each of the nine sections of the system. Each project section is moving through this process at a different pace." At the time of this writing; the "Bakersfield to Palmdale" segment of the high-speed rail, which is located partially in eastern Kern County, is still in preliminary stages and specific emission estimates are not yet available. Therefore, it would be speculative to estimate emissions from this project to include in the cumulative analysis at this time.

With regard to the request that the project be required to develop a traffic management plan, Mitigation Measure 4.16-1 (Construction Traffic Control Plan) requires the project proponent to prepare and submit a Construction Traffic Control Plan which includes specifying both construction-related vehicle travel and oversize load haul routes, minimizing construction traffic during A.M. and P.M. peak hours, distributing construction traffic flow from State Routes 14 and 58 across alternative routes to access the AEWP site, minimizing use of Oak Creek Road, and avoiding residential neighborhoods to the maximum extent feasible.

2-H The commenter seeks to modify/enhance air quality analysis and MM 4.6-2 to further address public health effects of air quality emissions on sensitive receptors. The commenter notes that the Final EIS/EIR should expand the air quality impact analysis to include a detailed discussion of the potential health effects to sensitive receptors (with particular emphasis on children's health given the proximity of schools to the Project site) from exposure to PM10 and PM2.5, as well as toxic air contaminants. Commenter further requests that advanced notification requirements within MM 4.6-2 include specifications related to potential health effects of PM10 and PM2.5, as well as toxic air contaminants.

Mitigation Measure MM 4.6-2 (Notification to Property Owners) requires at least 30 days prior to the commencement of grading or building and/or a Notice to Proceed, the project proponent shall mail a copy of the construction schedule to property owners within 1,000 feet of the project site. The purpose of this notification shall be so that property owners are informed as to the time and location of disturbance. Updates shall be provided as necessary.

While the project site does have several residential property owners located within 1,000 feet of the project site boundary, and one that would be within 700 feet of a wind turbine site, in general Eastern Kern County is sparsely populated and the overall number of residential properties directly adjacent to the project site is relatively low, and the project site itself is very large at over 2,500 acres with an overall fence line boundary of over 18 miles. Additionally, the project's construction emissions will be distributed at many locations throughout the project site so no single receptor site would be located near a large proportion of the construction emissions. Finally, air pollution emissions reduction mitigation measures have been included to reduce both equipment tailpipe and fugitive dust emissions to reduce air pollutant emissions and public exposure to levels that were determined to be less than significant.

2-I The commenter seeks to modify/enhance greenhouse gas analysis by recommending several potential new mitigation strategies.

This project would indirectly cause a large reduction in greenhouse gas emissions through the reduction of fossil fuel fired power generation, and the project was found to have less than significant greenhouse gas/climate change impacts. In fact, the overall greenhouse gas emissions

reductions that would be achieved by this renewable energy project, emissions reductions that dwarf the construction and operation greenhouse gas emissions, are considered a beneficial impact. Consistent with these findings no greenhouse gas emissions mitigation for the project's construction and operation, other than those that would indirectly occur through the air quality mitigation measures, have been determined to be necessary. However, as noted in the Draft EIS/EIR, the project would have to meet all applicable current, and potentially future, greenhouse gas emission reduction measures required by law such as those required under the California Green Buildings Initiative. Therefore, the incorporation of mitigation measures to address Greenhouse Gas emissions is not required.

2-J The commenter requests enhancement of the Vegetation Resources analysis through further evaluation of potential impacts to on-site drainages and ephemeral washes.

The following additions to Mitigation Measure MM 4.17-4 have been incorporated to avoid and minimize direct and indirect impacts to ephemeral washes (such as erosion, migration of channels, and local scour) and onsite drainages:

MM 4.17-4 Best Management Practices for Activities In or Near Ephemeral Drainages. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall <u>submit a plan which demonstrates how the project proponent will</u> implement all mitigation measures and conditions contained within the Streambed Alteration Agreement obtained from the California Department of Fish and Game for impacts to jurisdictional areas. In addition, the following Best Management Practices shall be implemented during all construction activity in or near ephemeral drainages:

1. Vehicles and equipment shall not be operated in ponded or flowing water except as described in the Streambed Alteration Agreement.
2. The project proponent shall minimize road building, construction activities, and vegetation clearing within ephemeral drainages to the extent feasible.
3. The project proponent shall not allow water containing mud, silt, or other pollutants from grading or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows.
4. Spoil sites shall not be located within 30 feet from the boundaries of drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages.
5. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering ephemeral drainages.
6. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.
7. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.
8. <u>Avoid placing turbine support structures in aquatic features to the maximum extent practicable.</u>
9. <u>Natural washes shall be used for flood control, to the maximum extent practicable.</u>

10. The number of road crossings over waters shall be minimized to the extent feasible and necessary crossings shall be designed to provide adequate flow-through during storm events to the maximum extent practicable.

2-K The commenter suggests including a commitment in the Final EIS/EIR to pursue opportunities to restore or enhance other lands within the watershed to replace desert wash functions lost on the project site and to demonstrate, and ensure, no net loss of desert wash resource function.

Mitigation Measure 4.21-1 (Habitat Restoration and Revegetation Plan) requires mitigation for permanent loss of desert wash and riparian habitat at a minimum 3:1 ratio, and due to the large size of the watershed and the nature of the desert washes on the project site, the mitigation lands would likely be within the same watershed. Permanent impacts may be mitigated through a conservation easement, acquisition and conservation of off-site lands, onsite restoration, mitigation banking, or a combination of these approaches. However, specific locations of compensatory lands have not been identified in the mitigation measure in order to allow flexibility in meeting the needs of Kern County and the BLM as well as additional agencies that may require compensatory mitigation to work together to identify specific compensatory lands that will provide the most meaningful benefit to the target resources. As described in Section 4.17.3, this requirement for compensatory mitigation would contribute to the minimization of impacts to desert wash resources under NEPA and the reduction of the impact to a less-than-significant level under CEQA. Neither CEQA nor NEPA have a no-net-loss standard, although it is noted that permit requirements for impacts to Waters of the State issued by the Regional Water Quality Control Board and/or CDFG may impose additional requirements.

2-L The commenter requests clarification to the potential effects of required fencing on drainage systems.

As discussed in Section 2.0, during the construction period, temporary fencing would be installed around staging areas, storage yards, and excavation areas to limit public access. In addition, permanent security fencing would be installed in accordance with Kern County zoning requirements, which allow either fencing the perimeter of the entire AEWP property or fencing each wind turbine generator (WTG) cluster or row independently. At this time, it has not been determined which of these options would be used. Therefore, the location of permanent fencing and potential effects of fencing on drainage systems cannot be determined at this time. To address this, the following additions to Mitigation Measure MM 4.19-4 have been incorporated to address potential fencing impacts to drainage:

MM 4.19-4 Submit a Drainage Design Plan. Prior to issuance of grading/building permits from the County, and/or a Notice to Proceed from the BLM, the project proponent shall submit a *Drainage Design Plan* to the BLM and the Kern County Department of Engineering, Survey and Permits Services for review. The plan shall include provisions for the following:

1. Groundcover for the new substation shall be comprised of a pervious and/or high-roughness material (for example, gravel) to the maximum extent feasible, in order to ensure maximum percolation of rainfall after construction.
2. Detention/retention basins shall be installed to reduce local increases in runoff, particularly on frequent runoff events (up to 10 year frequency).
3. Downstream drainage discharge points shall be provided with erosion protection and designed such that flow hydraulics exiting the site mimic the natural conditions as much as possible.

4. On-site drainage from impervious surfaces (e.g., roads, driveways, buildings) shall be directed to a common drainage basin;
5. The project shall design as few basins as possible for the entire development; ~~and,~~
6. Where feasible, mass grading and contouring shall be done in a way to direct surface runoff towards the above-referenced basins (and/or closed depressions)~~;~~ and,
7. Identify the location of all temporary and permanent fencing and method to ensure that fencing will not entrain debris/sediment or interfere with natural flow patterns to the maximum extent practicable.

2-M The commenter seeks clarification on analyzed alternatives consistency with provisions of Executive Order 11988.

As discussed in Section 4.19 (Water Resources), according to FEMA, development is permitted in Flood Hazard Areas provided that the development complies with local floodplain management ordinances. All analyzed alternatives would fully comply with all applicable floodplain management ordinances in accordance with FEMA's regulations on development in Flood Hazard Areas. Therefore, project alternatives would be consistent with provisions of Executive Order 11988.

2-N The commenter requests additional information regarding potential drawdown and cumulative impacts to the Fremont Valley Groundwater Basin.

As discussed in Section 4.19.3.2, temporary construction water requirements would be supplied by Mojave Public Utility District (MPUD) and/or Tehachapi-Cummings County Water District (TCCWD) in compliance with existing water management plans and per a one-time purchase agreement for up to 150 acre-feet, which is within the available supply for these purveyors. Operational water requirements would be met by pumping water from the Fremont Valley Groundwater Basin using an on-site supply well. Operational water requirements of 0.224 acre feet per year (afy) are far below California Senate Bill 267 threshold of 75 afy to define an action as a "Project" under Senate Bill 610, and a Water Supply Assessment (WSA) is therefore not required (although one has nevertheless been prepared and is included as EIS/EIR Appendix I).

Mitigation Measure 4.19-5 (Develop a Water Supply Contingency Plan) would ensure that project alternatives do not exacerbate long-term overdraft conditions, if present in local groundwater basin(s). Mitigation Measure 4.19-7 (Develop Master Drought Water Management and Water Conservation Education Programs) would ensure that appropriate water conservation efforts are implemented during drought years to avoid adverse water supply effects. If use of an on-site groundwater supply well(s) is not feasible during operations, 0.224 afy would be purchased from MPUD and/or TCCWD and trucked to the site as an alternative method. The WSA included as EIS/EIR Appendix I indicates that these purveyors have sufficient water supply availability to meet operational water requirements.

2-O The commenter recommends that the Final EIS/EIR provide an update on the federal Endangered Species Act consultation process and include the Biological Opinion as an appendix, if available. The commenter recommends that mitigation and monitoring measures that result from consultation with USFWS be included in the Final EIS/EIR and, ultimately, the ROD. The commenter suggests adding a discussion to the Final EIS/EIR regarding coordination with USFWS and CDFG and their review of the surveying, monitoring, and reporting protocols completed to date, and recommends the inclusion of a commitment to consistent application of USFWS- and CFDG-supported methods in future protection and mitigation efforts. The commenter recommends coordination with the USFWS to incorporate recommendations from the USFWS Land-Based Wind Energy Guidelines into the Final EIS/EIR and ROD.

The BLM is currently consulting with the USFWS under Section 7 of the ESA. A Biological Opinion has not yet been issued for the proposed project. Mitigation and monitoring measures to protect sensitive biological resources have been identified in Sections 4.17 (Vegetation Resources) and 4.21 (Wildlife Resources) of the Draft EIS/EIR. These measures have been developed by Kern County and the BLM to minimize and mitigate impacts under CEQA and NEPA. Any additional measures that may be determined by USFWS and/or CDFG to be required to minimize impacts under the federal and California Endangered Species Acts, respectively, will be included in applicable take permits that have not yet been finalized. With regard to coordination with CDFG and USFWS with respect to survey, monitoring, and reporting, the Biological Resources Report for the project (Appendix D-1 of the Draft EIR/EIS) states that a Biological Survey Plan, which detailed the proposed field survey methods, was submitted to the California Department of Fish and Game (CDFG), the U.S. Fish and Wildlife Service (USFWS), and the Bureau of Land Management (BLM) on June 9, 2010. Minor comments from CDFG were received on August 18, 2010 (Sloan pers. comm., 2010). No comments were received from USFWS or the BLM (page 1-1). Comments received from CDFG were incorporated into the survey plan. With regard to the USFWS Wind Energy Guidelines, these guidelines are voluntary, and were one source of information used in the impact analysis and mitigation approach identified in Section 4.21 (Wildlife Resources).

2-P The commenter recommends identification of specific measures to reduce impacts to golden eagles, and specification of how approval of the proposed project would comply with the MBTA and BGEPA. The commenter recommends identifying the applicability of recently finalized permit regulations under the Bald and Golden Eagle Protection Act (50 CFR Parts 13 and 22) and the process for the proposed project. The commenter recommends site-specific risk mapping for avian species of concern as a means to site turbines in lower risk areas within the project area. The commenter suggests discussing the applicability of the recent Eagle Conservation Plan Guidelines to the proposed project and compensatory mitigation to reduce the effects of permitted mortality to a no-net-loss standard (as applicable). The commenter also requests the inclusion of the Final Eagle Conservation Plan as an appendix to the Final EIS/EIR. The commenter suggests curtailing turbine operation during critical hours to minimize adverse effects, and requests that the Final EIS/EIR include a description of design practices to minimize collision and electrocution effects from the proposed transmission line.

The project proponent is currently consulting with the USFWS regarding potential take authorization for golden eagle, and is developing an Eagle Conservation Plan as a component of this process. A draft version of the Eagle Plan was included in Appendix D-30 of the Draft EIS/EIR. The plan is still in draft form and a final version of the plan is not yet available. Additionally, the selection of the Agency Preferred Alternative would reduce the likelihood of impacts to golden eagles. The northern portion of the project is located within a single eagle territory and would not be approved with the selection of Alternative C (or 3).

With regard to specific measures to reduce impacts to golden eagles, please see Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction Fugitive Dust Emission Reduction), and 4.2-3 (Operation Fugitive Dust and Equipment Emission Reduction). As described in Section 4.21.3.2 of the Draft EIS/EIR, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, and control of fugitive dust. Mitigation Measure 4.21-3 specifically addresses golden eagles and requires preconstruction nest surveys and a ¼-mile no-activity buffer around any active nests with a direct

line of sight to the work area. If the work area is not within direct view of the nest, the no-disturbance buffer would be 660 feet, unless adjusted in consultation with CDFG and/or USFWS. Operational impacts to golden eagles would be minimized through implementation of Mitigation Measures 4.21-6 (Avian and Bat Protection Plan), 4.21-7 (Eagle Conservation Plan), 4.21-8 (Lighting Specifications to Minimize Bird and Bat Collisions), 4.21-9 (Minimize Avian and Bat Turbine Strikes), 4.21-10 (Post-Construction Breeding Monitoring), 4.21-11 (Post-Construction Avian and Bat Mortality Monitoring), and 4.21-12 (Supplemental Measures for Unanticipated Significant Impacts). These measures are described in detail in sections 4.21.3.3 and 4.21.11 of the Draft EIR/EIS. See also the Draft Eagle Conservation Plan in Appendix D-30 of the Draft EIS/EIR. Mitigation Measure 4.21-13 requires the project proponent to engineer and construct all power lines in accordance with the most current Avian Power Line Interaction Committee standards to minimize collision and electrocution risks along the gen-tie line.

2-Q The commenter requests that the Final EIS/EIR include the results of any Endangered Species Act (ESA) consultation with the USFWS regarding the California condor, and to demonstrate how the project will comply with the MBTA for this species. The commenter requests the condor be included in the Final Avian and Bat Protection Plan, or the development of a protection plan specific to the condor. The commenter requests a discussion of the potential for the transmission towers to provide attractive perching and roosting opportunities for the condor. The commenter requests an elaboration on the Condor Monitoring System with specific details to be addressed.

Please see the Response to Comment 2-N regarding the status of the Section 7 consultation, which includes the California condor. The California Condor is covered in the Section 7 consultation process which has been in process with the FWS for the last few months. An ABPP or Eagle Conservation Strategy will be utilized to assess impacts and to identify measures to reduce impacts to eagles. The commenter is correct that transmission towers have the potential to provide perching and roosting opportunities for condors, although given the location of the proposed gen-tie with respect to the current activity areas of condors, this likelihood is low. Mitigation Measure 4.21-13 (Avian Power Line Interaction Committee [APLIC] Standards) requires power collection and transmission facilities to be designed to be raptor-safe in accordance with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* and *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994*. Implementation of this measure would minimize the attractiveness of gen-tie line towers to condors for perching and roosting; therefore reducing potential impacts.

2-R The commenter recommends identifying compensatory lands for the project, or quantifying available lands for compensatory habitat mitigation for this project as well as reasonably foreseeable projects in Eastern Kern. The commenter requests a clear timetable for compensatory mitigation be specified and adopted in the ROD. The commenter suggests that the Final EIS/EIR and ROD should incorporate, for each affected resource, the mechanisms that would protect into perpetuity all compensatory lands that are selected. The commenter requests that Kern County and the BLM commit, in the Final EIS/EIR and ROD, to exclude the non-developed portion of the subject ROW from further disturbance or development, as was agreed on the Desert Sunlight Solar Farm, based on the proposed project's resource analyses and the decision to select the proposed project's footprint to minimize environmental impacts (e.g., the 318-acre northern parcel not included in Alternative C).

Please see the Response to Comment 2-J regarding maintaining flexibility with respect to location of the compensatory lands in order to allow selection of lands that would provide the most meaningful benefit to the target species/resources.

Regarding the request for a clear timetable for compensatory mitigation, Mitigation Measure 4.17-1 (Habitat Restoration and Revegetation Plan) has been revised to state that prior to the

issuance of grading permits that would result in the disturbance of lands that warrant compensatory mitigation, the project proponent will acquire the appropriate conservation easement over replacement lands. This measure has also been revised to provide details on fee title and conservation easements on the compensation lands to ensure that the lands remain in conservation in perpetuity. With regard to the request to exclude the non-developed portion of the subject ROW (project area) from further and future development, the BLM and Kern County note that no further applications have been submitted at this time. Additionally, all permanent losses of desert wash and riparian habitat will be compensated for, as described in MM 4.17-1; therefore, further mitigation is not warranted.

2-S The commenter requests an evaluation of the impacts of global climate change on the project and potential impacts on the project's groundwater and wildlife resources.

Climate change impacts are limited to project-related emissions within the EIS/EIR. Potential global climate change impacts to groundwater and wildlife resources during 30-year operation of the facility would extend beyond the scope of proposed alternatives and cumulative analysis. Therefore, any analysis of global climate change impacts to the project or to groundwater and wildlife resources, particularly beyond decommissioning, would be speculative and outside NEPA and CEQA requirements.

2-T The commenter requests a consistency analysis between proposed alternatives and the Desert Renewable Energy Conservation Plan (DRECP).

The DRECP and the associated EIS/EIR are currently under preparation and not finalized. Therefore, consistency of the proposed alternatives with any draft plan would be speculative. Based on the most currently available DRECP maps, the Alta East Wind Project site is located within DRECP Development Focused Areas (DFA), which identify areas found suitable for renewable energy development.

2-U The commenter recommends (1) that the Final EIS/EIR identify the tribes that were contacted for consultation and describe the outcome of government-to-government consultation between the Bureau of Land Management (BLM) and each of the tribal governments contacted; (2) discuss issues that were raised, how those issues were addressed in relation to the proposed action, and how impacts to tribal or cultural resources will be avoided or mitigated consistent with Executive Order 13175 and 13007; (3) update the Cultural Resources chapter to reflect the recommendations related to tribal resources and revise the alternatives development and screening section to account for tribal concerns; and (4) include the six additional tribal representatives copied on the comment letter to ensure that they are provided the opportunity to participate in the ongoing government-to government consultation for the project.

The Draft EIS/EIR included a listing of the tribes that were provided a copy of the documents related to this document. As listed in Appendix C, a copy of the NOI/NOP was provided to the Native American Heritage Council and identified tribal contacts. Additionally, as shown in the distribution materials included with the Draft EIS/EIR, a copy of the Draft document was distributed to 18 tribal contacts.

Additionally, the project includes a request to amend the circulation element of the Kern County General Plan to remove reservations for future roads along section lines. Therefore, in compliance with the requirements of Senate Bill (SB) 18, Kern County submitted a request for a Tribal Consultation List to the Native American Heritage Commission and Staff subsequently received a list in response. On April 3, 2012, the County then mailed letters to each of the listed tribes questing their review and comments on the potential impacts on cultural places associated with each tribe by

the project proposal. The County requested responses within 90 days, as required by SB 18, or by July 3, 2012.

With regard to additional letters to tribes, the BLM has sent out additional tribal consultation letters regarding cultural resources within the Project area. However, one comment letter, from the Kern Valley Indian Community, has been received since last fall. The Cultural Resources chapter has been updated to include information from this comment letter. The BLM has continued to consult with the four tribal communities (Tubatulabals of Kern County, Kern Valley Indian Council, Monache Intertribal Council, Nuui Cunni Interpretive Center [Kern River Paiute Council]) in which they have been in contact with throughout the review of and prior to a final decision the project, in order to fulfill their obligation under Section 106 of the National Historic Preservation Act (NHPA) and Executive Orders 13175 (Consultation and Coordination with Indian Tribal Governments) and 13007 (Indian Sacred Sites). In addition, the BLM has added federally recognized tribes in Lone Pine, Fort Independence Reservation, Big Pine, Bishop, and the Timbisha Shoshone of Death Valley to this round of consultation.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 3: OPR State Clearinghouse (August 14, 2012); (September 28, 2012)

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

August 14, 2012

Jacquelyn R. Kitchen
Kern County Planning and Community Development Dept.
2700 M Street, Suite 100
Bakersfield, CA 93301

Subject: JRK 01-11 Alta East Wind Energy Project by Alta WindPower, LLC.
SCH#: 2011071051

Dear Jacquelyn R. Kitchen:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on August 13, 2012, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

3-A

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH#	2011071051
Project Title	JRK 01-11 Alta East Wind Energy Project by Alta WindPower, LLC.
Lead Agency	Kern County

Type	EIR Draft EIR
Description	Kern County and the Bureau of Land Management have jointly prepared a DEIS/EIR for general plan amendments, zone changes, and a CUP to allow for the construction of up to 106 wind turbines which would generate a maximum of 318 megawatts of energy. The project consists of 2,592 acres, of which 2,024-acres are located on federally-owned BLM land, with the remaining 568-acres being located on privately-owned land. Request includes the construction of ancillary facilities and supporting infrastructure and the concrete batch plants are necessary to provide concrete and materials for turbine, system block, substation, and building foundations. The application also proposes to incorporate flood hazard zoning for areas subject to flooding. Access to the project is provided by SR 58. The project will also include the construction of 14 miles of 230-kV overhead transmission corridor, which would ultimately connect to the SCE Windhub Substation.

Lead Agency Contact

Name	Jacquelyn R. Kitchen		
Agency	Kern County Planning and Community Development Dept.		
Phone	661 862 8619	*Fax*	
email			
Address	2700 M Street, Suite 100		
City	Bakersfield	*State* CA	*Zip* 93301

Project Location

County	Kern						
City	Tehachapi						
Region							
Lat / Long	35° 6' 6" N / 118° 11' 5" W						
Cross Streets	3 miles northwest of the unincorporated community of Mojave in the Mojave Desert						
Parcel No.	Multiple						
Township	mult.	*Range*	mult.	*Section*	mult.	*Base*	SBB&M

Proximity to:

Highways	SR 58 & 14
Airports	No
Railways	No
Waterways	Los Angeles Aqueduct
Schools	No
Land Use	Various

Project Issues	Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Landuse; Cumulative Effects; Growth Inducing; Schools/Universities; Septic System; Sewer Capacity; Solid Waste
Reviewing Agencies	Resources Agency; Department of Fish and Game, Region 4; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 9; Regional Water Quality Control Bd., Region 6 (Victorville); California Energy Commission; Native American Heritage Commission; Public Utilities Commission

Note: Blanks in data fields result from insufficient information provided by lead agency.

Document Details Report
State Clearinghouse Data Base

Date Received 06/29/2012 *Start of Review* 06/29/2012 *End of Review* 08/13/2012

Note: Blanks in data fields result from insufficient information provided by lead agency.

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

8/13/12
Clearl

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JUL 18 2012
STATE CLEARING HOUSE

July 16, 2012

Ms. Jacquelyn R. Kitchen
Kern County Department of Planning and Community Development
2700 M Street, Suite 100
Bakersfield, CA 93301

Re: SCH#2011071051; NEPA/CEQA Notice: draft Environmental Impact Report / draft Environmental Impact Statement (DEIR/DEIS) Alta East Wind Project: GPA 2; GPA 3; GPA 1 (PP11212); located three miles north of the unincorporated community of Mojave; Kern County, California.

Dear Ms. Kitchen:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3rd 604).

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. This area is known to the NAHC to be very culturally sensate; therefore, careful and sensitive planning is urged.

The NAHC "Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American

contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code § 5097.95, the NAHC requests cooperation from other public agencies in order that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.

Furthermore, the NAHC if the proposed project is under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq*, and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for inadvertent discovery of human remains mandate the processes to be followed in the event of a discovery of human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a).

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

September 28, 2012

Jacquelyn R. Kitchen
Kern County Planning and Community Development Dept.
2700 M Street, Suite 100
Bakersfield, CA 93301

Subject: JRK 01-11 Alta East Wind Energy Project by Alta WindPower, LLC.
SCH#: 2011071051

Dear Jacquelyn R. Kitchen:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on August 13, 2012. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project. **3-B**

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2011071051) when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

California Water Boards

Edmund G. Brown Jr., Governor

Matthew Rodriquez, Secretary for Environmental Protection

Lahontan Regional Water Quality Control Board

September 26, 2012

8-13-12

File: Environmental Doc Review
Kern County

RECEIVED

SEP 27 2012

STATE CLEARING HOUSE

Jacquelyn Kitchen, Planner
Kern County Planning and Community
Development Department
2700 M Street, Suite 100
Bakersfield, CA 93301
Email: kitchenj@co.kern.ca.us

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE ALTA EAST WIND PROJECT, ALTA WINDPOWER DEVELOPMENT, LLC, KERN COUNTY, STATE CLEARINGHOUSE, NO. 2011071051

California Regional Water Quality Control Board (Water Board) staff reviewed the Draft Environmental Impact Statement / Report (Draft EIS/EIR) for the above-referenced project (Project). The DEIR, prepared by the Kern County Planning and Community Development Department (County), was received on August 7, 2012, and submitted in compliance with provisions of the California Environmental Quality Act (CEQA). The Draft EIS/EIR included a description of the proposed Project and a narrative review of the Project's potential impacts, including those to hydrology and water quality. Our comments on the Project are presented below.

Pursuant to CEQA Guidelines, California Code of Regulations (CCR), title 14, section 15096, responsible agencies must specify the scope and content of the environmental information germane to their statutory responsibilities. Water Board staff, acting as a responsible agency, have reviewed the above-referenced document as to how well the proposed Project protects water quality, and ultimately, the beneficial use of waters of the State. We hope the County will consider our comments and value our position with respect to protecting and maintaining water quality.

Project Overview

The proposed Alta East Wind Energy Project is a renewable energy development project located within the Mojave Desert area of eastern Kern County, in the Willow Springs – Cache Peak areas, near the City of Mojave. The purpose of this Project is to harness wind to produce electrical power; California has mandated a state-wide goal of 33% of its power to come from renewable resources by the year 2020. Water Board staff understands that this project would generate up to 318 megawatts of electricity from 106 wind turbine generators (WTGs). The Project area is approximately 2,592 acres, 536 acres of which are privately owned parcels. Project components include the installation of the 106 WTGs, creation of a 3-acre operations and maintenance yard, a

6-acre sub-station, two meteorological towers, one temporary concrete plant, an internal roadway system, collector substations, and underground and overhead electrical collection lines. The Project would require the construction and use of new facilities resulting in temporary disturbance of up to approximately 658 acres and permanent disturbance of approximately 94 acres.

Authority

All groundwater and surface waters are considered waters of the State. Surface waters include, but are not limited to, drainages, streams, washes, ponds, pools, or wetlands, and may be permanent or intermittent, either natural or manmade, and may or may not be identified as "blueline streams" on published topographic maps. All waters of the State are protected under California law. State law assigns responsibility for protection of water quality in the Lahontan Region to the Lahontan Water Board. Some waters of the State are also waters of the U.S. The Federal Clean Water Act (CWA) provides additional protection for those waters of the State that are also waters of the U.S.

The *Water Quality Control Plan for the Lahontan Region* (Basin Plan) contains policies that the Water Board uses with other laws and regulations to protect the quality of waters of the State within the Lahontan Region. The Basin Plan sets forth water quality standards for surface water and groundwaters of the Region, which include designated beneficial uses as well as narrative and numerical objectives which must be maintained or attained to protect those uses. The Basin Plan also includes prohibitions and policies to achieve water quality objectives including maintaining high quality waters and beneficial uses. The Basin Plan can be accessed via the Water Board's web site at http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml.

The Project is located within the Willow Springs Hydrologic Area (Antelope Hydrologic Unit) and Cache Peak Hydrologic Area (Fremont Hydrologic Unit) of the Lahontan Region. Water quality objectives and standards, for waters of the State, including those within these Areas, are outlined in Chapter 3 of the Basin Plan. Implementation of the proposed Project must comply with all applicable water quality standards and prohibitions, including provisions of the Basin Plan.

SPECIFIC COMMENTS

Use of Existing Roads Where Possible

Impacts to hydrology and water quality occur where roadways cross streams and/or other surface water resources. Figure 4 of Appendix I-2 details the proposed road crossings of ephemeral streams. However, no discussion was included regarding the necessity to build new roads rather than existing roads, and, thereby, further potentially impact hydrology and water quality. The Water Board stresses that avoidance and minimization strategies be considered first where water quality may be impacted. If these impacts are unavoidable, then mitigation must be considered. The proposed installation of new roads in the immediate vicinity of existing roads must be further

recommend the Draft EIS/EIR include a discussion in the hydrology study of the potential impacts of the Project to riparian habitat connectivity, and what measures will be taken to avoid and minimize such disruption.

Cumulative Impacts of Wind Energy Projects

Nearly two dozen wind energy projects either exist or are planned for the Tehachapi Foothills and other portions of Kern County. The cumulative impacts of these projects on water quality and hydrology, over time, must be fully evaluated in each Draft EIS/EIR. We re-iterate our request to the County to provide a thorough analysis of ***cumulative impacts*** of these WTG projects on the environment, in addition to considering their environmental impacts as singular, separate projects. The analysis should consider the point impacts of all alternative energy projects planned and constructed within the watershed and evaluate the potential impacts to groundwater recharge due to increased impervious surface and compacted soils, changes in the hydrology of the respective watershed(s) and potential flooding implications, and habitat connectivity. The cumulative impacts analysis should identify both regional and project-specific mitigation measures that, when implemented, will reduce potential impacts to a less than significant level.

Thank you for the opportunity to comment on the Draft EIS/EIR. If you have any questions regarding this letter, please contact me at (760) 241-7391 (thomas.browne@waterboards.ca.gov) or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 (pcopeland@waterboards.ca.gov).

Sincerely,

Tom Browne

Tom Browne, PhD, PE
Water Resource Control Engineer

cc: State Clearinghouse (SCH 2012041063)
(via email, state.clearinghouse@opr.ca.gov)
Dave Hacker, California Department of Fish and Game
(via email, dhacker@dfg.ca.gov)
Paul Amato, Wetlands Regulatory Office, USEPA, Region 9
(via email, Amato.Paul@epamail.epa.gov)

U:\Patrice Unit\Tom\Alta East Wind Energy\final Alta East Wind Draft DEIR/DEIS review.docx

Response to Comment Letter 3: OPR State Clearinghouse (August 14, 2012); (September 28, 2012)

3-A Thank you for your comments. The participation of the OPR State Clearinghouse in the public review of this document is appreciated. The commenter states that the State Clearinghouse submitted the Draft EIS/EIR for selected agencies to review. It is stated further that the letter acknowledges compliance with State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. A comment letter from the Native American Heritage Commission (NAHC) (7/16/12) is attached.

Responses to the NAHC letter are provided in Response to Comment Letter 2.

3-B The commenter states that the State Clearinghouse received a letter after the end of the state review period, which closed on August 13, 2012. A letter from the RWQCB (dated 9/26/12) was attached.

Responses to the RWQCB letter are provided in Response to Comment Letter 5.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 4: Native American Heritage Commission (July 16, 2012)

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

July 16, 2012

Ms. Jacquelyn R. Kitchen
Kern County Department of Planning and Community Development
2700 M Street, Suite 100
Bakersfield, CA 93301

Re: SCH#2011071051; NEPA/CEQA Notice: draft Environmental Impact Report / draft Environmental Impact Statement (DEIR/DEIS) Alta East Wind Project: GPA 2; GPA 3; GPA 1 (PP11212); located three miles north of the unincorporated community of Mojave; Kern County, California.

Dear Ms. Kitchen:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3rd 604).

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. This area is known to the NAHC to be very culturally sensate; therefore, careful and sensitive planning is urged. **4-A**

The NAHC "Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American **4-B**

contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code § 5097.95, the NAHC requests cooperation from other public agencies in order that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources. **4-B, cont.**

Furthermore, the NAHC if the proposed project is under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.' **4-C**

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity. **4-D**

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for inadvertent discovery of human remains mandate the processes to be followed in the event of a discovery of human remains in a project location other than a 'dedicated cemetery'. **4-E**

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects. **4-F**

Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a). **4-G**

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251. **4-H**

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

Native American Contacts
Kern County
July 16, 2012

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589 Yokuts
Porterville , CA 93258
chairman@tulerivertribe-nsn.
(559) 781-4271
(559) 781-4610 FAX

Tejon Indian Tribe
Katherine Montes- Morgan, Chairperson
2234 4th Street Yowlumne
Wasco , CA 93280 Kitanemuk
kmorgan@bak.rr.com Kawaiisu
661-758-2303

Ron Wermuth
P.O. Box 168 Tubatulabal
Kernville , CA 93238 Kawaiisu
warmoose@earthlink.net Koso
(760) 376-4240 - Home Yokuts
(916) 717-1176 - Cell

Kawaiisu Tribe of Tejon Reservation
David Laughinghorse Robinson
PO Box 1547 Kawaiisu
Kernville , CA 93238

horse.robinson@gmail.com

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez, Chairperson
115 Radio Street Yowlumne
Bakersfield , CA 93305 Kitanemuk
deedominguez@juno.com
(626) 339-6785

Kern Valley Indian Council
Julie Turner, Secretary
P.O. Box 1010 Southern Paiute
Lake Isabella, CA 93240 Kawaiisu
(661) 366-0497 Tubatulabal
(661) 340-0032 - cell Koso
Yokuts

S an Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 Fernandeño
Newhall , CA 91322 Tataviam
tsen2u@hotmail.com Serrano
(661) 753-9833 Office Vanyume
(760) 885-0955 Cell Kitanemuk
(760) 949-1604 Fax

San Manuel Band of Mission Indians
Ann Brierty, Policy/Cultural Resources Departmen
26569 Community Center. Drive Serrano
Highland , CA 92346
(909) 864-8933, Ext 3250
abrierty@sanmanuel-nsn.
gov
(909) 862-5152 Fax

4-I

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2011071051; NEPA/CEQA draft Environmental Impact Report / Environmental Impact Statement (DEIR/DEIS) for the East Wind Alta Windpower Development Project (PP11212); located three miles north of the Community of Mojave; Kern County, California.

Native American Contacts
Kern County
July 16, 2012

Tubatulabals of Kern Valley
Robert L. Gomez, Jr., Cultural Resources Coord.
2619 Driller Avenue
Bakersfield , CA 93306
rogomezjr@gmail.com
(661) 246-5481 - cell

Paiute
Yokuts
Tubatulabal

Kern Valley Indian Council
Robert Robinson, Co-Chairperson
P.O. Box 401
Weldon , CA 93283
brobinson@iwvisp.com
(760) 378-4575 (Home)
(760) 549-2131 (Work)

Tubatulabal
Kawaiisu
Koso
Yokuts

Tubatulabals of Kern Valley
Dr. Donna Begay, Tribal Chairwoman
P.O. Box 226
Lake Isabella, CA 93240
drbegay@aol.com
(760) 379-4590
(760) 379-4592 FAX

Tubatulabal

4-I, cont.

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2011071051; NEPA/CEQA draft Environmental Impact Report / Environmental Impact Statement (DEIR/DEIS) for the East Wind Alta Windpower Development Project (PP11212); located three miles north of the Community of Mojave; Kern County, California.

Response to Comment Letter 4: Native American Heritage Commission (July 16, 2012)

4-A Thank you for your comments. The participation of the Native American Heritage Commission in the public review of this document is appreciated. The commenter provides an introduction to the letter, states the requirements of the California Environmental Quality Act (CEQA), and states that the Lead Agency is required to assess whether the Project will have an adverse impact on cultural resources within the area of potential effect, and if so, to mitigate that effect.

Kern County and the BLM have conducted an environmental analysis of cultural resource impacts from the Project in accordance with CEQA. Section 4.4 of the Draft EIS/EIR provides the environmental setting, impacts, and mitigation measures for this resource area.

4-B The commenter recommends early consultation with Native American tribes in the Project area and with tribes and interested Native American tribes/individuals (provided a list).

With regard to consultation, Section 5.2.3 (Tribal Consultation) indicates that the BLM invited Indian Tribes to consult on the AEWP on a government-to-government basis at the earliest stages of project planning by letter on February 1, 2011. Since that time, the BLM has had no requests for formal or informal meetings with Tribal governments, tribal staff, and tribal members and has followed up with Tribal governments through additional correspondence, communication, and provision of other project information. The BLM has also had individual face-to-face meetings with various Tribal Governments in tribal chambers about this project along with tribal cultural staff and conducted a field visit to the project area.

Additionally, the project includes a request to amend the circulation element of the Kern County General Plan to remove reservations for future roads along section lines. Therefore, in compliance with the requirements of Senate Bill (SB) 18, Kern County submitted a request for a Tribal Consultation List to the Native American Heritage Commission and Staff subsequently received a list in response. On April 3, 2012, the County then mailed letters to each of the listed tribes questing their review and comments on the potential impacts on cultural places associated with each tribe by the project proposal. The County requested responses within 90 days, as required by SB 18, or by July 3, 2012.

4-C The commenter recommends consultation conducted in compliance with the requirements of federal National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA).

The BLM consults with Indian Tribes on a government-to-government basis in accordance with several authorities including NEPA, the NHPA, the American Indian Religious Freedom Act, and Executive Order 13007. Under Section 106 of the NHPA, the BLM consults with Indian Tribes as part of its responsibilities to identify, evaluate, and resolve adverse effects on historic properties affected by BLM undertakings. Consultation in compliance with the requirements of NEPA and the NHPA was conducted for this project.

4-D The commenter recommends confidentiality of "historic properties of religious and cultural significance."

Kern County and the BLM concur with your comment regarding confidentiality. As contained in Appendix Q of the Draft EIS/EIR, the Cultural Resources Technical Report prepared for the Project does not include maps or location descriptions of cultural resources.

4-E The commenter provides a discussion of the accidental discovery of archaeological resources and/or human remains.

BLM Best Management Practices (BMPs) have been proposed to protect previously unidentified cultural resources discovered during construction activities and the process to be followed in the event of an accidental discovery of human remains during construction activities, including the following BMP:

"Unexpected discovery of cultural or paleontological resources during construction shall be brought to the attention of the responsible BLM authorized officer immediately. Work shall be halted in the vicinity of the find to avoid further disturbance to the resources while they are being evaluated and appropriate mitigation measures are being developed."

4-F The commenter states that consultation on specific projects must be the result of an ongoing relationship between Native American tribes and Kern County and the BLM, project proponents and their contractors.

See Response to Comment 4-B.

4-G The commenter states that when Native American cultural sites and/or burial sites are prevalent within the project site, 'avoidance' of the site is recommended.

See Response to Comment 4-E.

4-H A Native American contact list is provided.

See Response to Comment 4-B.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 5: Lahontan Regional Water Quality Control Board (September 26, 2012)

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

Lahontan Regional Water Quality Control Board

September 26, 2012

File: Environmental Doc Review
Kern County

Jacquelyn Kitchen, Planner
Kern County Planning and Community
Development Department
2700 M Street, Suite 100
Bakersfield, CA 93301
Email: kitchenj@co.kern.ca.us

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE ALTA EAST WIND PROJECT, ALTA WINDPOWER DEVELOPMENT, LLC, KERN COUNTY, STATE CLEARINGHOUSE, NO. 2011071051

California Regional Water Quality Control Board (Water Board) staff reviewed the Draft Environmental Impact Statement / Report (Draft EIS/EIR) for the above-referenced project (Project). The DEIR, prepared by the Kern County Planning and Community Development Department (County), was received on August 7, 2012, and submitted in compliance with provisions of the California Environmental Quality Act (CEQA). The Draft EIS/EIR included a description of the proposed Project and a narrative review of the Project's potential impacts, including those to hydrology and water quality. Our comments on the Project are presented below.

Pursuant to CEQA Guidelines, California Code of Regulations (CCR), title 14, section 15096, responsible agencies must specify the scope and content of the environmental information germane to their statutory responsibilities. Water Board staff, acting as a responsible agency, have reviewed the above-referenced document as to how well the proposed Project protects water quality, and ultimately, the beneficial use of waters of the State. We hope the County will consider our comments and value our position with respect to protecting and maintaining water quality. **5-A**

Project Overview

The proposed Alta East Wind Energy Project is a renewable energy development project located within the Mojave Desert area of eastern Kern County, in the Willow Springs – Cache Peak areas, near the City of Mojave. The purpose of this Project is to harness wind to produce electrical power; California has mandated a state-wide goal of 33% of its power to come from renewable resources by the year 2020. Water Board staff understands that this project would generate up to 318 megawatts of electricity from 106 wind turbine generators (WTGs). The Project area is approximately 2,592 acres, 536 acres of which are privately owned parcels. Project components include the installation of the 106 WTGs, creation of a 3-acre operations and maintenance yard, a

6-acre sub-station, two meteorological towers, one temporary concrete plant, an internal roadway system, collector substations, and underground and overhead electrical collection lines. The Project would require the construction and use of new facilities resulting in temporary disturbance of up to approximately 658 acres and permanent disturbance of approximately 94 acres.

Authority

All groundwater and surface waters are considered waters of the State. Surface waters include, but are not limited to, drainages, streams, washes, ponds, pools, or wetlands, and may be permanent or intermittent, either natural or manmade, and may or may not be identified as "blueline streams" on published topographic maps. All waters of the State are protected under California law. State law assigns responsibility for protection of water quality in the Lahontan Region to the Lahontan Water Board. Some waters of the State are also waters of the U.S. The Federal Clean Water Act (CWA) provides additional protection for those waters of the State that are also waters of the U.S.

The *Water Quality Control Plan for the Lahontan Region* (Basin Plan) contains policies that the Water Board uses with other laws and regulations to protect the quality of waters of the State within the Lahontan Region. The Basin Plan sets forth water quality standards for surface water and groundwaters of the Region, which include designated beneficial uses as well as narrative and numerical objectives which must be maintained or attained to protect those uses. The Basin Plan also includes prohibitions and policies to achieve water quality objectives including maintaining high quality waters and beneficial uses. The Basin Plan can be accessed via the Water Board's web site at http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml. **5-A, cont.**

The Project is located within the Willow Springs Hydrologic Area (Antelope Hydrologic Unit) and Cache Peak Hydrologic Area (Fremont Hydrologic Unit) of the Lahontan Region. Water quality objectives and standards, for waters of the State, including those within these Areas, are outlined in Chapter 3 of the Basin Plan. Implementation of the proposed Project must comply with all applicable water quality standards and prohibitions, including provisions of the Basin Plan.

SPECIFIC COMMENTS

Use of Existing Roads Where Possible

Impacts to hydrology and water quality occur where roadways cross streams and/or other surface water resources. Figure 4 of Appendix I-2 details the proposed road crossings of ephemeral streams. However, no discussion was included regarding the necessity to build new roads rather than existing roads, and, thereby, further potentially impact hydrology and water quality. The Water Board stresses that avoidance and minimization strategies be considered first where water quality may be impacted. If these impacts are unavoidable, then mitigation must be considered. The proposed installation of new roads in the immediate vicinity of existing roads must be further

evaluated. We request that the Draft EIS/EIR include an evaluation of the need for new roads if existing roads may be used for both permanent and temporary access/maintenance roads, and identify all potential impacts to hydrology and water quality as a result of roadway construction. Avoidance and minimization measures to reduce those impacts to a less than significant level need to be evaluated in the environmental review process. **5-A, cont.**

Minimize Impacts to Landscape at Each Wind Turbine Generator Location

Water Board staff acknowledges and approves the analysis of ephemeral stream crossings included in Appendix I-2 of the Draft EIS/EIR. We request that a similar analysis and discussion be included for all of the other construction sites requiring clearing, grubbing, or grading. We re-iterate the importance of minimizing impacts to the landscape as a means of protecting natural drainage and water quality. Low-impact development practices help maintain aquatic values and could also reduce local infrastructure requirements and maintenance costs, as well as benefit air quality, open space, and habitats. Maintaining natural drainage paths and landscape features will help slow and filter runoff and maximize groundwater recharge. **5-B**

Effect on Groundwater Recharge

The foothills of the Tehachapi Mountains are an important area for groundwater recharge to the Willow Springs and Cache Peak Hydrologic Areas, and a portion of the Project area may impact this recharge beneficial use. We request that the hydrology analysis include a discussion of the groundwater recharge beneficial use in the Project area and evaluate the potential loss of recharge due to disturbance of the area. **5-C**

Beneficial Uses of Surface Waters

We request that the Draft EIS/EIR identify and list the beneficial uses of the identified surface water resources, as outlined in the Basin Plan. Such identification and discussion appeared to be omitted from the Draft EIS/EIR. We also request an evaluation of the Project's potential impacts to water quality with respect to those beneficial uses. We reiterate that surface waters include *named and unnamed* ephemeral streams, as well as seeps and springs that may also be seasonal. We request the Draft EIS/EIR include alternatives to avoid those impacts or list specific mitigation measures that, when implemented, minimize unavoidable impacts to a less than significant level. **5-D**

Disruption of Riparian Habitat Connectivity

Watersheds are complex natural systems in which physical, chemical, and biological components interact to support the beneficial uses of water. Poorly planned development upsets these natural interactions and degrades water quality through a network of interrelated effects. One potential impact of a poorly-planned development project on water quality is the disruption of riparian habitat connectivity. We **5-E**

recommend the Draft EIS/EIR include a discussion in the hydrology study of the potential impacts of the Project to riparian habitat connectivity, and what measures will be taken to avoid and minimize such disruption. **5-E, cont.**

Cumulative Impacts of Wind Energy Projects

Nearly two dozen wind energy projects either exist or are planned for the Tehachapi Foothills and other portions of Kern County. The cumulative impacts of these projects on water quality and hydrology, over time, must be fully evaluated in each Draft EIS/EIR. We re-iterate our request to the County to provide a thorough analysis of ***cumulative impacts*** of these WTG projects on the environment, in addition to considering their environmental impacts as singular, separate projects. The analysis should consider the point impacts of all alternative energy projects planned and constructed within the watershed and evaluate the potential impacts to groundwater recharge due to increased impervious surface and compacted soils, changes in the hydrology of the respective watershed(s) and potential flooding implications, and habitat connectivity. The cumulative impacts analysis should identify both regional and project-specific mitigation measures that, when implemented, will reduce potential impacts to a less than significant level. **5-F**

Thank you for the opportunity to comment on the Draft EIS/EIR. If you have any questions regarding this letter, please contact me at (760) 241-7391 (thomas.browne@waterboards.ca.gov) or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 (pcopeland@waterboards.ca.gov).

Sincerely,

Tom Browne, PhD, PE
Water Resource Control Engineer

cc: State Clearinghouse (SCH 2012041063)
(via email, state.clearinghouse@opr.ca.gov)
Dave Hacker, California Department of Fish and Game
(via email, dhacker@dfg.ca.gov)
Paul Amato, Wetlands Regulatory Office, USEPA, Region 9
(via email, Amato.Paul@epamail.epa.gov)

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Response to Comment Letter 5: Lahontan Regional Water Quality Control Board (September 26, 2012)

5-A Thank you for your comments. The participation of the Lahontan Regional Water Quality Control Board in the public review of this document is appreciated. The commenter states that no discussion was included regarding the necessity to build new roads rather than existing roads, and, thereby, further potentially impacts hydrology and water quality. The commenter recommends that the Draft EIS/EIR include a discussion in the hydrology study of the potential impacts to riparian habitat connectivity, and what measures will be taken to avoid and minimize such disruption.

Draft EIS/EIR Section 4.19 (Water Resources) analyzed the proposed access road configurations provided in Section 2.0 (Project and Alternatives). Any limitations of existing internal site circulation and necessity of new access roads (including proposed turbine locations and topography) was considered and incorporated into the development of the proposed Project and alternatives, as presented in Final EIS/EIR Section 2.0. Additionally, Mitigation Measures MM 4.19-2 (Submit a Road Plan to the BLM and Kern County for Review), MM 4.19-3 (Demonstrate Compliance with Water Quality Permits), and MM (4.19-4 Submit a Drainage Design Plan) ensure that any new access road construction would reduce any surface water quality impacts to a less than significant level as these mitigation measures would ensure that new internal access roads do not significantly alter existing drainage and hydrology within the site. As such, minimal change to existing conditions would occur with respect to riparian habitat connectivity from all onsite drainages and ephemeral washes. Additionally, as discussed in the Draft EIS/EIR on p. 4.21-13, new access road construction was evaluated with respect to potential wildlife movement and migration corridor impacts. Potential impacts to riparian connectivity habitat would be reduced to a less than significant level by implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.2-1 (Construction Fugitive Dust Emission Reduction), and 4.2-3 (Operation Fugitive Dust and Equipment Emission Reduction).

5-B The commenter acknowledges and approves the analysis of ephemeral stream crossings that is included in Appendix I-2 of the Draft EIS/EIR. The commenter requests that a similar analysis be included for all other construction sites that required clearing, grubbing or grading for minimizing impacts to natural drainage and water quality.

Analysis was provided regarding the effects of construction activities on crossings and water quality. Appendix I-2 is considered part of the Draft EIS/EIR analysis provided in Section 4.19 (Water Resources). The requested discussion regarding potential impacts to on-site drainages and ephemeral washes is provided in Draft EIS/EIR Sections 4.19 (Water Resources) and 4.17 (Vegetation Resources). As discussed in Section 4.19, Mitigation Measure 4.19-2 (Submit a Road Plan to the BLM and Kern County for Review) would ensure that all planned access roads and spur roads are appropriately designed to minimize or avoid adverse effects, including as related to the potential for erosion, sedimentation, and flooding to occur. In addition, Mitigation Measure 4.19-4 (Submit a Drainage Design Plan) would minimize the potential for the proposed development to accelerate stormwater runoff rates by requiring that alterations to the permeability of surface materials that would occur under the Project, such as new surfaces and ground cover, would be as permeable as possible; the Drainage Design Plan would also ensure that downstream drainage discharge points are provided with an appropriate level of erosion protection in order to mimic the natural conditions as much as possible.

Similar comments were received from the U.S. Environmental Protection Agency (See Response 2-J, above) regarding the importance of minimizing impacts to protect natural drainage and water quality. Therefore, as shown in Response 2-I, clarifications were made to Mitigation Measure MM 4.17-4 to further avoid and minimize direct and indirect impacts to ephemeral washes. These include requirements for the project proponent to avoid placing turbine support structures in aquatic features to the maximum extent practicable; requirements to use natural washes for flood control, to the maximum extent practicable; and requirements for the number of road crossings over waters to be minimized to the extent feasible and any necessary crossings shall be designed to provide adequate flow-through during storm events.

5-C The commenter requests that the hydrology analysis include a discussion of groundwater recharge beneficial use in the project area and evaluate the potential loss of recharge due to the disturbance of the area.

The discussion of beneficial and potentially significant temporary and permanent impacts with respect to groundwater recharge is provided in Draft EIS/EIR Section 4.19 (Water Resources) pp. 4.19-4, 4.19-5, and 4.19-10. As discussed in that section, Alternative A (Project) would result in temporary disturbance to 657.90 acres of the 2,575-acre Project site, or approximately 25.5 percent of the overall Project site. The Fremont Valley Groundwater Basin underlies 523 square miles (334,720 acres) of alluvial valley in eastern Kern County and northwestern San Bernardino County and has a total storage capacity of 4,800,000 acre-feet. The temporary disturbance acreage accounts for 0.2 percent of the total Fremont Valley Groundwater Basin. This nominal amount of temporary disturbance associated with construction of the Project would be site-specific and is not anticipated to adversely affect recharge in the Fremont Valley Groundwater Basin. With regard to permanent disturbance, Table 2-3 (Alternative A, Approximate Dimensions of Project Components and Estimated Temporary and Permanent Land Disturbance) notes that the Project would result in permanent disturbance to 93.98 acres of the 2,575-acre Project site, or approximately 3.6 percent of the overall Project site. Operation and maintenance of the Project would not introduce any new impervious surfaces (in addition to those facilities introduced during Project construction) that could interfere with groundwater recharge by reducing the amount of surface area through which precipitation and surface water percolates to underlying aquifers. The permanent disturbance acreage accounts for 0.03 percent of the total Fremont Valley Groundwater Basin. This nominal amount of permanent disturbance associated with the Project is not anticipated to affect recharge in the Fremont Valley Groundwater Basin.

Impacts associated with the groundwater recharge that could result from the introduction of new impervious surfaces and the potential need to conduct dewatering activities would be less than significant with implementation of BMPs and mitigation measures listed in Section 4.19.11. Mitigation Measure 4.19-4 (Submit a Drainage Design Plan) would ensure that new impervious areas are minimized, and designed to avoid potential adverse effects, including as related to groundwater recharge.

5-D This comment requests an evaluation of the Project's potential impacts to ephemeral streams, as well as seeps and springs that may be seasonal.

Please refer to the Response to Comment 5-B.

5-E This comment requests that the hydrology analysis include a discussion of the potential impacts of the Project to riparian habitat connectivity, and what measures will be taken to avoid and minimize such disruption.

Please refer to the Response to Comments 5-A and 5-B.

5-F The commenter notes that nearly two dozen wind energy projects exist or are planned in eastern Kern County and requests the County provide a thorough analysis of cumulative impacts of WTG projects on the environment, in addition to considering their environmental impacts as singular, separate projects. The commenter further states the analysis should consider the point impacts of all alternative energy projects planned and constructed within the watershed and evaluate the potential impacts to groundwater recharge due to increased impervious surface and compacted soils, changes in the hydrology of the respective watershed(s) and potential flooding implications and habitat connectivity. Cumulative impacts should identify both regional and project-specific mitigation measures that, when implemented, will reduce potential impacts to a less than significant level.

The cumulative impacts of other existing and planned wind energy projects were included in the analysis of the Draft EIS/EIR. As discussed on Draft EIS/EIR p. 4.19-26, "the geographic scope of the cumulative effects analysis for water resources takes into consideration the entirety of impacts that other renewable energy projects, zone changes, and general plans discussed in Section 4.1.6 would have on water resources. This analysis considers the area downstream from the AEWP site, including projects that could potentially result in similar impacts as the AEWP and alternatives. This analysis also considers groundwater resources in the southwestern-most portion of the Fremont Valley Groundwater Basin that could potentially be affected by the introduction of impermeable surfaces that could affect recharge rates or patterns."

The Draft EIS/EIR goes on to state that analysis of the entire extent of the Fremont Valley Groundwater Basin in the context of cumulative impacts assessment was not necessary because the proposed Project and alternatives will pump amounts of minimal water from the Fremont Basin and pumping will occur during operations only. Water use would be monitored per mitigation required under Draft EIS/EIR Mitigation Measures MM 4.19-5 (Develop a Water Supply Contingency Plan) and MM 4.19-7 (Develop Master Drought Water Management and Water Conservation Education Programs). Per this mitigation, groundwater use would be discontinued in the event any adverse effects are identified to the applicable hydrological area. Therefore, the geographic extent of the Draft EIS/EIR cumulative impacts analysis was identified as the area within a six-mile radius downstream of the proposed Project site as it encompasses all surface water and groundwater resources that could be affected.

Additionally, with regard to the potential for cumulative impacts to existing drainage patterns, the Draft EIS/EIR notes, beginning on page 4.19-28, that the project would not substantially alter existing drainage patterns of the site due to implementation of specific mitigation measures to minimize drainage patterns alternations. It is noted that the total estimated number of WTGs that are approved or proposed within eastern Kern County ranges from 680 to 2,000, depending on the final size of the turbines constructed (1MW to 3MW WTGs). Although there are no boundaries which limit where future wind development may occur, the industry consensus is that wind energy is currently developed within an area that includes roughly 232,000 acres. With a worst case scenario of 2,000 additional WTGs, the amount of increased impervious surface due to WTG concrete pads would be less than 115 acres or .0005% of the total resource area. The implementation of mitigation measures, as well as the compliance the KCGP, Kern County Ordinance, Storm Water Pollution Prevention Plan, NPDES General Permit, and BMPs, would reduce project impacts to less than significant. Therefore, no cumulative impact would occur regarding the alteration of existing drainage patterns.

As discussed in the Draft EIS/EIR, Section 4.19.10.3 (Reasonably Foreseeable Projects), the cumulative analysis considered a number of adjacent cumulative projects, including five renewable energy projects with the potential to combine with similar proposed Project and alternatives water related impacts. As discussed in the Draft EIS/EIR, Sections 4.19.10.4 (Construction) and 4.19.10.5 (Operation and Maintenance), through implementation of BMPs and

mitigation measures identified in Section 4.19.11, potential water quality impacts of the proposed Project or an alternative is not anticipated to combine with similar effects of other projects in the cumulative scenario.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 6: California Department of Transportation (July 31, 2012)

DEPARTMENT OF TRANSPORTATION
DISTRICT 9
500 SOUTH MAIN STREET
BISHOP, CA 93514
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Flex your power!
Be energy efficient!

July 31, 2012

Jacquelyn R. Kitchen
Kern Planning/Community Development
2700 M Street, Suite 100
Bakersfield, California 93301-2323

File: Ker-58-106
DEIR/DEIS
SCH #: 2011071051

Dear Ms. Kitchen:

Alta East Wind Energy - Draft Environmental Impact Report/Draft Environmental Impact Statement (DEIR/DEIS) - GPA 2, CUP 7, Map 168

Thank you for giving the California Department of Transportation (Caltrans) District 9 the opportunity to comment on the DEIR/DEIS for the proposed wind energy facility, northwest of the community of Mojave and straddling State Route 58. It appears concerns noted in our Notice of Preparation letter (August 11, 2011) have been addressed. We now offer the following:

- For encroachment permit information you may contact Kurt Weiermann at (780) 872-0781 or kurt.weiermann@dot.ca.gov. Also see:

  Encroachment Permit Application:
  http://www.dot.ca.gov/hq/traffops/developserv/permits/pdf/forms/Std._E.P._Application_(TR-0100).pdf

  Encroachment Permit Instructions:
  http://www.dot.ca.gov/hq/traffops/developserv/permits/pdf/forms/encrchpermt_instruc.pdf

- Oversized vehicle permits are now issued from the Transportation Permits Office in Sacramento. Please see http://www.dot.ca.gov/hq/traffops/permits/.

- The Construction Traffic Control Plan may be sent to me for District 9 review.

6-A

We value a cooperative working relationship regarding project impacts upon State highways in eastern Kern County. I may be contacted at (760) 872-0785, with any questions.

Sincerely,

GAYLE J. ROSANDER
IGR/CEQA Coordinator

c: State Clearinghouse
Jeff Childers, Bureau of Land Management
Mark Reistetter, Caltrans

"Caltrans improves mobility across California"

Response to Comment Letter 6: California Department of Transportation (July 31, 2012)

6-A Thank you for your comments. The participation of the California Department of Transportation in the public review of this document is appreciated. The commenter states that concerns noted in the Notice of Preparation Letter dated August 11, 2011 have been addressed. The commenter also offers contact information for encroachment permits and oversized vehicle permits, and indicates that the Construction Traffic Control Plan may be sent to the commenter.

Thank you for the contact information regarding encroachment permits and oversized vehicle permits. With regard to these issues, as identified in Draft EIS/EIR Section 4.16 (Transportation and Public Access), Mitigation Measure 4.16-3 requires these permits be obtained prior to issuance of grading or building permits. With regard to the Construction Traffic Control Plan, Mitigation Measure 4.16-1 requires that this plan occur as part of the Project and includes coordination and approval by the Kern County Roads Department. This plan will be submitted to District 9 of Caltrans for review.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 7: Kern County, Roads Department (July 20, 2012)

COUNTY OF KERN
DEVELOPMENT SERVICES AGENCY
ROADS DEPARTMENT
Office Memorandum

To: Lorelei H. Oviatt, AICP, Director — July 20, 2012
Planning & Community Development Department
Attn: Jacqui Kitchen, Supervising Planner

From: Warren D. Maxwell, Transportation Development Engineer
Roads Department

Subject: 7-8.5b Draft Environmental Impact Report for the Alta East Wind Project by Alta Windpower Development, LLC.(PP11212)

This Department has reviewed the DEIR for the subject project and recommends the following:

1. Page 3.16-1, States that Project access will be along private access easements off Oak Creek Road and Cameron Ridge Road to the Project Site. However, Mitigation Measure 4.16-4a (Page 4.16-18) requires the applicant to submit plans for the road design to the Kern County Roads Department for review and approval, which is not required because private access roads are not within the County's jurisdiction. All that is required, for the private access road, is a paved road approach tie-in to Oak Creek Road under a County encroachment permit. Approval of the private road should be through a grading permit obtained from the Engineering, Surveying and Permit Services Department. **7-A**

2. Page 3.16-2, Site Access – Access to the northern region of the project is unclear, as it is separated from the southern region by a rail line and State Route 58. What are the primary and alternative access routes for this region; similar to those for the southern project region? **7-B**

3. Page 4.16-18, Mitigation Measure 4.16-4b should be clarified to include any work within the County road right of way, not just road related activities. These permits can be obtained from our Permits Engineer. **7-C**

Thank you for the opportunity to comment on this project, if you have any questions or comments please contact Steven Young at 862-8860.

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Response to Comment Letter 7: Kern County, Roads Department (July 20, 2012)

7-A Thank you for your comments. The participation of the Kern County Roads Department in the public review of this document is appreciated. The commenter states that the Applicant is not required to submit plans for the road design to the Kern County Roads Department for review and approval for those portions of project access that utilize private roads because private roads are not within the County's jurisdiction. Approval of the private road should be through a grading permit.

Mitigation Measures MM 4.16-3 (p. 4.16-17 of the Draft EIS/EIR) and MM 4.16-4 (p. 4.16-18 of the Draft EIS/EIR) have been changed to address this comment:

MM 4.16~~4~~-3 Obtain Applicable Permits. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall obtain all applicable permits from the California Department of Transportation, Kern County, and any other applicable agencies pertaining to vehicle sizes, weights, roadway encroachment, grading, and travel routes needed for the first phase of construction. The project proponent shall also obtain any additional permits needed for each remaining phase of construction prior to delivery and acceptance of materials for that phase. The project proponent shall continuously adhere to all conditions of said permits throughout implementation of the project.

MM 4.16-4 Coordination With County Roads Department. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall coordinate with the Kern County Roads Department to implement the following:

a. For those portions of the project that will use public roads, s~~S~~ubmit engineering drawings of project access road design for the review and approval of the Kern County Roads Department.

b. Obtain an encroachment permit from the Kern County Roads Department for any activities within the County road right-of-way or on applicable roads in the Kern County road maintenance system.

c. Enter into a secured agreement with Kern County to ensure that any County roads that are demonstrably damaged by project-related activities is promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the state and or Kern County."

7-B The commenter states that on Page 3.16-2, access to the northern region of the project is unclear and inquires about the primary and alternative access routes for this region.

Page 3.16-2, Site Access, has been changed to address this comment:

Site Access

Primary ~~A~~access to the southern portion of AEWP site is proposed from the west~~. Access to the site would be provided from~~ via the existing Cameron Ridge Road. This road currently extends through the operating Cameron Ridge project, owned by an affiliate of the project proponent. Use of this road ~~and~~ would require minor roadway improvements for approximately 0.5 mile to allow for construction and other AEWP vehicles. AEWP-related traffic accessing the AEWP site from the west would travel along SR 58, then south on SR 14, and then west on Oak Creek Road and then north on Cameron Ridge Road, in order to access the site.

~~An~~ The alternative access for the southern portion of the AEWP site is from the east would be provided via a bridge across the Los Angeles Aqueduct, proposed as part of the Alta Infill II Wind Energy Project.

~~Construction vehicle access will be provided through one primary access point, and one alternative access point. The primary access point will be from the west via the existing Cameron Ridge Road which extends through the operating Cameron Ridge project, owned by an affiliate of the project proponent. Minor improvements would be made on approximately a half mile of this road to allow for safe passage of construction and AEWP vehicles. AEWP-related traffic accessing the AEWP site from the west would travel along SR 58, then south on SR 14, and then west on Oak Creek Road and then north on Cameron Ridge Road, in order to access the site.~~

~~The alternative access point will be from the east side of the AEWP via a bridge across the Los Angeles Aqueduct.~~ AEWP-related traffic accessing the AEWP site from the east would travel along SR 58, then south on SR 14, then west on Oak Creek Road, and then north along a private access road, crossing a bridge across the LA Aqueduct. A permanent access will traverse from the bridge, through the Alta Infill II Wind Energy Project along its southern boundary to provide access to the AEWP site. The bridge and north-south access road from Oak Creek Road were evaluated as part of the adjacent Alta Infill II Wind Energy Project, approved in October 2011. It is assumed that the bridge and access road will be constructed prior to development of the AEWP and no additional improvements are required; the technical analyses provided to Kern County assumed construction of the bridge during the same year as development of the AEWP, in order to provide a conservative analysis in the event that construction of the bridge and access road is delayed.

Access to the northern portion of the AEWP site is provided by Randsburg Cutoff Road (connecting to SR 58) west to Rockhouse Road, connecting with the site north on Wildflower Canyon Road.

7-C The commenter states that Mitigation Measure 4.16-4b should be clarified to include any work within the County road right of way, not just road related activities.

Please see Response to Comment 7-A. Mitigation Measure MM 4.16-4 (p. 4.16-18 of the Draft EIS/EIR) has been changed to address this comment.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

CENTER for BIOLOGICAL DIVERSITY Because life is good.

protecting and restoring natural ecosystems and imperiled species through science, education, policy, and environmental law

via email and USPS

9/27/2012

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Re: Comments on Draft Plan Amendment & Draft Environmental Impact Statement/Draft Environmental Impact Report for the Alta East Wind Project SCH No. 2011071051 DOI Document Control No. DES 12-18 Publication Index Number: BLM/CA/ES-2012-007+1793 CACA-0052537.

Dear Mr. Childers and Ms. Kitchen

These comments are submitted on behalf of the Center for Biological Diversity (Center) regarding the Draft Plan Amendment and Draft Environmental Impact Statement/Draft Environmental Impact Report for the Alta East Wind Project SCH No. 2011071051 DOI Document Control No. DES 12-18 Publication Index Number: BLM/CA/ES-2012-007+1793 CACA-0052537.

Introduction

The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of global warming, and to assist California in meeting emission reductions. The Center strongly supports the development of renewable energy production, and the generation of electricity from wind power. However, like all projects, 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. **8-A**

Unfortunately, the Draft Environmental Impact Statement/ Draft Environmental Impact Report (DEIS/R) for the proposed plan amendment and right-of-way application fails to provide adequate identification and analysis of the significant impacts to California condor, golden eagle,

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other avian species, bats, desert tortoise, rare plants and plant communities, ephemeral streams and washes other biological resources, cumulative and growth inducing impacts of the project, and lacks consideration of a reasonable range of alternatives. In addition, the agencies have failed to fully examine in impact of the proposed plan amendment (and other similar proposed plan amendments) that would result in industrial sites sprawling across the California Desert Conservation Area within habitat that should be protected to achieve the goals of the federal bioregional plans as a whole and specifically habitat that is essential to the recovery of the endangered California condor, and threatened desert tortoise. **8-A, cont.**

Purpose And Need and Project Description are Too Narrowly Construed and Unlawfully Segment the Analysis

Agencies cannot narrow the purpose and need statement to fit only the proposed project and then shape their findings to approve that project without a "hard look" at the environmental consequences. To do so would allow an agency to circumvent environmental laws by simply "going-through-the-motions." It is well established that NEPA review cannot be "used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5; *Metcalf v. Daley*, 214 F.3d 1135, 1141-42 (9th Cir. 2000) ("the comprehensive 'hard look' mandated by Congress and required by the statute must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.") As Ninth Circuit noted an "agency cannot define its objectives in unreasonably narrow terms." *City of Carmel-by-the-Sea v. U.S. Dept. of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997); *Muckleshot Indian Tribe v. U.S. Forest Service*, 177 F. 3d 900, 812 (9th Cir. 1999). The statement of purpose and alternatives are closely linked since "the stated goal of a project necessarily dictates the range of 'reasonable' alternatives." *City of Carmel*, 123 F.3d at 1155. The Ninth Circuit recently reaffirmed this point in *National Parks Conservation Assn v. BLM*, 586 F.3d 735, 746-48 (9th Cir. 2009) (holding that "[a]s a result of [an] unreasonably narrow purpose and need statement, the BLM necessarily considered an unreasonably narrow range of alternatives" in violation of NEPA). **8-B**

The purpose behind the requirement that the purpose and need statement not be unreasonably narrow, and NEPA in general is, in large part, to "guarantee[ ] that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). The agency cannot camouflage its analysis or avoid robust public input, because "the very purpose of a draft and the ensuing comment period is to elicit suggestions and criticisms to enhance the proposed project." *City of Carmel-by-the-Sea*, 123 F.3d at 1156. The agency cannot circumvent relevant public input by narrowing the purpose and need so that no alternatives can be meaningfully explored or by failing to review a reasonable range of alternatives. **8-C**

The BLM's purpose and need for the proposed Alta East project is "to respond to a FLPMA ROW application submitted by the Applicant to construct, operate, maintain, and decommission a wind energy-generating facility and associated infrastructure on public lands

administered by the BLM in compliance with FLPMA, BLM ROW regulations, and other applicable Federal laws and policies" (DEIS/R at 1-2), and also states that the "BLM authorities include:

- Executive order 13212, dated May 18, 2001, which mandates that agencies act expediently and in a manner consistent with applicable laws to increase the "production and transmission of energy in a safe and environmentally sound manner."
- The Energy Policy Act 2005 (EPAct 05), which sets forth the "sense of Congress" that the Secretary of the Interior should seek to have approved non-hydropower renewable energy projects on the public lands with a generation capacity of at least 10,000 MW by 2015.
- Secretarial Order 3285A1, dated March 11, 2009, and amended on February 22, 2010 which "establishes the development of renewable energy as a priority for the Department of the Interior."

8-C, cont.

(DEIS/R at 1-2). The DEIS/R notes that an amendment to the CDCA Plan is needed in order to approve the project and identifies the preferred alternative as Alternative C, but provides little decision- making process on how that alternative was selected (DEIS/R at 2-25). BLM's purpose and need is very narrowly construed to the proposed project itself and various configurations of the proposed. The purpose and need provided in the DEIS/R is impermissibly narrow under NEPA for several reasons, most importantly because it forecloses meaningful alternatives review in the DEIS/R. Because the purpose and need and the alternatives analysis are at the "heart" of NEPA review and affect nearly all other aspects of the EIS, on this basis and others, BLM must revise and re-circulate the DEIS/R.

8-D

The County does not provide a purpose and need for the project, but instead only provides a purpose for the DEIS/R – "project-level EIR will analyze the environmental impacts of the project" (at 1-3).

8-E

In its discussion of the need for renewable energy production the DEIS/R fails to address risks associated with global climate change in context of including both the need for climate change mitigation strategies (e.g., reducing greenhouse gas emissions) and the need for climate change adaptation strategies (e.g., conserving intact wild lands and the corridors that connect them). All climate change adaptation strategies underline the importance of protecting intact wild lands and associated wildlife corridors as a priority adaptation strategy measure including the State of California[1].

8-F

The habitat fragmentation, impacts to avian species, loss of connectivity for terrestrial wildlife, and introduction of predators and invasive weed species associated with the proposed project in the proposed location may run contrary to an effective climate change adaptation strategy. Siting the proposed project in the proposed location impacting ecologically functioning ecosystems, occupied habitat and important habitat linkage areas, desert washes and other fragile desert resources could undermine a meaningful climate change adaptation strategy with a poorly executed climate change mitigation strategy. Moreover, the project itself will emit greenhouse

8-G

1 http://www.climatechange.ca.gov/adaptation/strategy/index.html

gases during construction and manufacturing in particular and the DEIS/R contains no discussion of ways to avoid, minimize or off-set these emissions although such mitigation is clearly necessary. The way to maintain healthy, vibrant ecosystems is not to fragment them and reduce their biodiversity. **8-G, cont.**

Alternatives Analysis is Inadequate

The alternatives analysis is inadequate even with the inclusion two smaller 97- and 87-MW project alternatives. At least one alternative should be considered that avoids of all desert tortoise habitat. Moreover, other alternatives should be considered for example, siting on previously degraded lands. In addition, the Notice and the DEIS/R should have considered distributed renewable energy alternatives, a no-build alternative that would focus on programs to efficiency and conservation efforts which could more than make up in energy savings the power that would be produced by this project, and other alternatives that could avoid impacts of the proposed project as well as impacts of the associated transmission lines and substations. **8-H**

The DEIS/R failed to adequately address such any off-site alternative that would significantly reduce the impacts to biological resources including the California condor, desert tortoise and their occupied habitat, and other special status species including golden eagles and other raptors . The Center urges the BLM/County to revise the DEIS/R to adequately address these and other issues detailed below and then to re-circulate both a revised Notice and a supplemental DEIS/R for public comment.

The DEIS/R Does Not Adequately Describe Environmental Baseline

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 Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988), 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." Similarly, without a clear understanding of the current status of these public lands BLM cannot make a rational decision regarding proposed project. *See Center for Biological Diversity v. U.S. Bureau of Land Management, et al*., 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). **8-I**

The DEIS/R fails to provide adequate baseline information and description of the environmental setting in many areas including in particular the status of rare plants, animals and communities including California condors, golden eagles, desert tortoise, burrowing owls and other imperiled and common desert species.

The baseline descriptions in the DEIS/R are inadequate particularly for the areas where surveys were a single season, a day, or not performed at all. As discussed below, because of the

deficiencies of the baseline data for the proposed project area, the DEIS/R fails to adequately describe the environmental baseline. Many of the rare and common but essential species and habitats have incomplete and/or vague on-site descriptions that make determining the proposed project's impacts difficult at best. Some of the rare species/habitats baseline conditions are totally absent and as a result no impact assessment is provided either. A supplemental document is required to fully identify the baseline conditions of the site, and that baseline needs to be used to evaluate the impacts of the proposed project. **8-I, cont.**

Failure to Identify and Analyze Direct and Indirect Impacts to Biological Resources

The DEIS/R fails to adequately analyze the direct, indirect, and cumulative impacts of the proposed project on the environment. The Ninth Circuit has made clear that NEPA requires agencies to take a "hard look" at the effects of proposed actions; a cursory review of environmental impacts will not stand. *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1150-52, 1154 (9th Cir. 1998). Where the BLM has incomplete or insufficient information, NEPA requires the agency to do the necessary work to obtain it where possible. 40 C.F.R. §1502.22; *see National Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 733 (9th Cir. 2001) ("lack of knowledge does not excuse the preparation of an EIS; rather it requires [the agency] to do the necessary work to obtain it.") **8-J**

Moreover, BLM and the County must look at reasonable mitigation measures to avoid impacts in the DEIS/R but failed to do so here. Even in those cases where the extent of impacts may be somewhat uncertain due to the complexity of the issues, BLM is not relieved of its responsibility under NEPA to discuss mitigation of reasonably likely impacts at the outset. Even if the discussion may of necessity be tentative or contingent, NEPA requires that the BLM provide some information regarding whether significant impacts could be avoided. *South Fork Band Council of Western Shoshone v. DOI* , 588 F.3d 718 , 727 (9th Cir. 2009). **8-K**

The lack of comprehensive surveys is particularly problematic. Failure to conduct sufficient surveys – and a single year or season is inadequate to evaluate the resources and uses on this large of a project site - prior to construction of the project also effectively eliminates the most important function of surveys - using the information from the surveys to avoid and minimize harm caused by the project and reduce the need for mitigation. Often efforts to mitigate harm are far less effective than avoiding and preventing the harm in the first place. In addition, without understanding the scope of harm before it occurs, it is difficult to quantify an appropriate amount and type of mitigation. For example, the DEIS/R admits that no surveys were done for invertebrates (at pg. 4.21-2). **8-L**

The DEIS/R fails to provide all of the information necessary for decisionmakers and the public to adequately review the proposed project. Therefore the impacts cannot be fully analyzed or mitigated appropriately or fully. For this reason alone, a supplemental or revised DEIS/R needs to be provided and additional alternatives are included (including a preferred alternative) that avoids and reduces the impacts to biological resources. **8-M**

Avian Species and Risk Assessment

While the DEIS/R attempts to provide a risk assessment to avian species (primarily birds) and collision with wind turbines, recent science shows that "No relationship between variables predicting risk from E[nvironmental] I[mpact] A[ssessments]s and actual recorded mortality was found" and more importantly that "EIAs are usually conducted at the scale of the entire wind farm. The correlation between predicted mortality and actual mortality must be improved in future risk assessment studies by changing the scale of these studies to focus on the locations of proposed individual wind turbine sites and working on a species specific level".[2] Unfortunately the DEIS/R risk assessment is at the scale of the entire wind project and fails to evaluate specific turbine locations and their impact on avian species. While micrositing is discussed in Appendix D-29 as part of the Preliminary Draft #2 Avian Protection Plan, the point of micrositing is to reduce impact to species by analyzing the use of the propose project site by avian and bat species and designing the project to not site turbines in locations used by those species. However, the DEIS/R has not included this crucial avoidance and minimization strategy as part of its environmental analysis, and instead has deferred it to a post-environmental review plan (the final ABPP). This individual wind turbine analysis (microsite analysis) actually should be done prior to the DEIS/R in order to avoid and minimize environmental impacts. It would then provide information that could also help inform additional siting alternatives that could also be designed to minimize impacts to rare, migratory and resident avian species. **8-N**

Migratory Birds

The DEIS/R briefly discusses migratory birds, however, it fails to discuss or even include studies on nocturnal bird migration. Recent published scientific reports indicate that greater than 10% of nocturnal migrating songbirds migrating over ridges fly at elevations putting them within the area of rotating turbines.[3] An on-site nocturnal radar study in California's desert at San Gorgonio Pass prior to the wind energy development there, reported that "approximately 37 million birds passed through the Coachella Valley in the fall and an additional "approximately 32 million birds flew through the Coachella Valley during spring 1982," making the total in 1982 approximately 70 million birds. The study concludes "we estimate that approximately 256,000 birds/km could potentially come into contact with wind turbine generators each fall in the WRSA" and "approximately 182,000 birds/km potentially come into contact with wind turbine generators each spring."[4] The document needs to analyze the on site impacts of the large turbines proposed at Alta East Wind project on nocturnal migratory songbirds and bats in comparison to data on a nearby non-windfarm site. **8-O**

Furthermore, the DEIS/R fails to acknowledge that the Alta East Wind project is located on the Pacific Flyway and provides no data for the impacts of the project on nocturnal migratory birds and bats or on migratory pathways for birds and bats. Migratory birds are protected by the Migratory Bird Treaty Act of 1918 and the project must identify, analyze and address these impacts. Recent research has established that species such as golden eagles tend to hunt or **8-P**

2 Ferrer et al. 2011
3 Mabee at al. 2006
4 McCrary, et al 1982

migrate at or below ridgelines, potentially putting these species at risk especially for turbines that are deployed in ridge areas (Manville 2009). The proposed "mitigation" measures fail to provide any real mitigation, but instead appear to be "best management practices". Avoidance measures that should be required include having a full-time biologist during daylight hours of turbine operation, to detect target species (California condors, golden eagles, etc.) from observation towers and if the target species were detected, the biologist would have the ability to shut down the WTGs in portions of the site to help minimize and avoid collisions with WTGs. We have hopes that in the future, technologies such as avian radar systems or high resolution video camera technologies could be implemented for the same purposes, but currently the technology is not proven. The biologist would also be responsible for determining when the eagle has left the project site so that operation of the WTGs could resume. We recognize that this current strategy may not be 100% effective for avoidance of target species and it would do nothing for nocturnal migration. **8-P, cont.**

California Condors

We agree with the statement in the DEIS/R that "a wind energy facility built where California condors commonly occur would likely be at risk for lethal take of this species" (DEIS/R at pg. 4.21-21). With the expanding range of the California condor – a success story of the Endangered Species Act - additional wind turbine development in the Tehachapi Wind Resource Area will only increase the likelihood that a California condor will be hit by a wind turbine, likely causing mortality. Therefore it is incumbent upon the BLM and the County to require implementation of all reasonable avoidance and minimization measures for this species, which is one place that this DEIS/R is woefully inadequate. The DEIS/R also fails to identify if a "take" permit is being sought for California condor. We support a regional approach to condor conservation, and find the DEIS/R impact analysis and cumulative analysis at odds with conservation goals for the California condor. **8-Q**

The mitigation measures proposed in Appendix D-29 are actually not mitigation measures at all. For example, they call for "Elimination of lead bullet fragments and lead shot from the current and future range of the California condor in California" (at pg. 4-5), but that is already required by law (Ridley-Tree Condor Conservation Act of 2008). Grazing and hunting simply should not be allowed on the proposed project site, eliminating the feeding opportunities to condors of animal carcasses on site. Supplemental feeding, while currently in use by the U.S. Fish and Wildlife Service is not a long-term strategy for recovery of the condor. The proposal of using it for "mitigation" suggests an attempt to "grow' condors, which is very controversial. It is unclear what benefits to the condor would result from "hiring a full-time biologist" (D-29 at 4-5). Amazingly, while these purported "mitigation measures" are from Appendix A of Appendix D-29, one mitigation measure that was not brought forward from Appendix A is the "Implementation of a Common Raven Management Plan" (at pg. 1 of Appendix A) which would also have benefit to the desert tortoise. **8-R**

The proposed monitoring program for California condors (and other avian species) is inadequate in that it proposes to monitor for only five years. In order to accurately document impacts to avian species, monitoring must occur *over the life of the project*. **8-S**

Golden Eagle

The DEIS/R fails to adequately address the issue of golden eagle collisions with turbines. Nor does it address the Bald and Golden Eagle Protection Act, which imposes strict limitations on take of eagles. The Final Rule on Eagle Act Take Permits (74 FR 48635) establishes a "no net loss" standard for eagles, and it is unknown whether proposed mitigation efforts in the Draft #2 Eagle Conservation Plan (Appendix D-30) will pass muster with the U.S. Fish & Wildlife Service (USFWS). The DEIS/R fails to make any determination on the significance of impacts to golden eagles from the operation and maintenance, which is likely where the greatest and cumulative impacts will occur. **8-T**

The DEIS/R also notes that "The nearest active nests are located 3.0 miles to the northwest, 3.8 miles to the north, and 6.8 miles to the north of the AEWP. Ten inactive golden eagle nests were identified within the 10-mile nest survey buffer and 3 additional inactive nests were identified just outside the 10-mile buffer. The closest of these inactive golden eagle nests is 1.2 miles to the northwest of the AEWP." (DEIS/R at 4.21-7). However, the National Golden Eagle Colloquium on March 2-3, 2010 attended by 85 participants from various agencies and Golden Eagle and raptor scientists from across the country contradicts this analysis. The scientists concluded that "[b]uffers we currently recommend are at least 4 - 10 air miles from a golden eagle territory."(note that territory encompasses nest site)[5]. In fact, the DEIS/R fails to identify the actual number of golden eagle territories that occur on the proposed project site. **8-U**

The Draft #2 Eagle Conservation Plan (Appendix D-30) also needs to follow the Draft Eagle Conservation Plan Guidance[6] as issued by the U.S. Fish and Wildlife Service. **8-V**

Comparing densities of golden eagles from other parts of the country is inappropriate. The goal of the environmental review is to identify the impacts to the local environment that includes maintaining golden eagles across their natural range. Consequently impacting golden eagles even in areas of low densities fails the metric of maintaining eagles across their range. **8-W**

We strongly urge that the DEIS/R be revised and re-circulated in order to reconsider impacts to golden eagles more thoroughly using recommendations and analysis by eagle experts who performed the surveys as well as the data be peer review by qualified independent eagle experts. Such reconsideration would allow the agencies to fully evaluate the site and whether it should be abandoned due to unacceptable, unmitigable risk to golden eagles. **8-X**

Raptors

Raptor species on the proposed project site are protected under the federal Migratory Bird Treaty Act as well, including those species known to be vulnerable to turbine collision such as the red-tailed hawk. Many important questions remain unanswered including, for example, the following: **8-Y**

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5 National Golden Eagle Colloquium 2010
6http://www.fws.gov/windenergy/docs/ECP_draft_guidance_2_10_final_clean_omb.pdf

- How close are red-tailed hawk nests and other raptor species nests located to proposed wind turbines?
- Combined with nest survey results, is red-tailed hawk use (data from point count surveys) of the Alta East Wind project considered reflective of a low or high density of this species as compared to other parts of the County?
- Is the proposed Alta East Wind project likely to result in impacts to the local population of red-tailed hawks from turbine collision and if so, how will these impacts be minimized?

These and other similar species questions need to be addressed in a supplemental EIS/R, because of the potential for significant impacts to local (and migratory) raptor populations, which are simply not analyzed in the DEIS/R. **8-Y, cont.**

Burrowing Owl

The DEIS/R notes that only a single burrowing owl was documented in the proposed project area (DEIS/R at 4.21-9). Recent data from the statewide census identified that the Sonoran desert harbors few Western burrowing owls.[7] Even more worrisome is the documented crash of burrowing owls in their former stronghold in the Imperial Valley. The Imperial Valley has had a recently documented decline of 27% in the past 2 years[8], resulting in an even more dire state for burrowing owls in California. Because burrowing owls are in decline throughout California, and now their "stronghold" is documented to be declining severely, the burrowing owls on this proposed project site (and on other renewable energy projects) become even more important to species conservation efforts. The recirculated or supplemental DEIS/R needs to evaluate the potential impact of the proposed project on this regional distribution of owls. **8-Z**

The DEIS/R needs to incorporate the most recent guidance from the California Department of Fish and Game on the impact evaluation and mitigation for burrowing owl[9]. The DEIS/R needs to include specific burrowing owl mitigation in case, if the project moves forward, burrowing owl are identified on site during pre-construction monitoring. Mean burrowing owl foraging territories are 242 hectares in size, although foraging territories for owl in heavily cultivated areas is only 35 hectares[10]. Regardless, the acquisition must adequately mitigate for the number of territories found on site, calculated by using the mean foraging territory size times the number of owls. Using the average foraging territory size for mitigation calculations may not accurately predict the carrying capacity and may *overestimate* the carrying capacity of the proposed project site especially in this area of the Mojave desert. Lastly, because the carrying capacity for burrowing owls is tied to habitat quality, language should be included that mitigation lands that are acquired for burrowing owl be native habitats on undisturbed lands, not cultivated lands, which are subject to the whims of land use changes. The long-term persistence of burrowing owls lie in their ability to utilize natural landscapes, not human-created ones. **8-A2**

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7 Wilkerson and Siegel 2011
8 Manning 2009
9 www.dfg.**ca**.gov/**wildlife**/non**game**/docs/BUOWStaffReport.pdf
10 USFWS 2003

While "passive relocation" does minimize immediate direct take of burrowing owls, ultimately the burrowing owls' available habitat is reduced, and "relocated" birds are forced to compete for resources with other resident burrowing owls and may move into less suitable habitat, ultimately resulting in "take". Other renewable energy projects in the area have been required to construct two burrows for every burrowing owl burrow disturbed or destroyed and this strategy should be included in the supplemental DEIS/R. **8-B2**

Bats

The DEIS/R is inadequately assesses potential impacts to bats. The DEIS/R states that no bat roosts were found on site, but incompletely evaluates bat foraging on site. In addition, the DEIS/R fails to address a potential impact that could be avoided – the color of the turbine towers. Studies have shown that the color of the typical turbine towers is key in attracting insects on which bats prey at significantly higher levels.[11]

8-C2

Additionally data suggest that bat mortality at tall wind turbines is directly linked to nocturnal insect migrations[12], yet this issue is also not addressed in the DEIS/R and needs to be included in a supplemental DEIS/R. With the numerous bat species that are currently foraging or have potential to forage on the project site, the impact analysis is woefully inadequate.

Desert Tortoise

The DEIS/R identifies that five desert tortoise were located on the proposed project site. However the DEIS/R fails to estimate the number of desert tortoises that occur in the project area and analyze how many will be impacted by the proposed project. It appears that the desert tortoise will remain on site during construction and operation, and yet no clear information on how those desert tortoise will be protected from harm in perpetuity. **8-D2**

It is unclear the amount of desert tortoise habitat that occurs on the site. The DEIS/R fails to analyze the impacts to tortoise habitat. Impacts not only from turbine construction and road building will fragment the habitat and provide additional access to others into areas that previously were inaccessible. **8-E2**

While mitigation is proposed, it is too vague and confusing to be meaningful: "Permanent impacts would be mitigated through one or more of the following: acquisition and conservation of off-site lands; onsite restoration, enhancement, and management of disturbed areas not impacted by the AEWP; or mitigation banking" (DEIS/R at 4.21-5). Additionally the DEIS/R appears to rely on the acquisition for desert tortoise mitigation as mitigation for other rare species (nested mitigation). The DEIS/R needs to clarify that the desert tortoise mitigation lands must provide habitat for the "nested" species mitigation and if alternative desert tortoise mitigation (restoration, enhancement and management of disturbed areas) is selected, mitigation is still required for the other species. We also note that successful plant "restoration" or "enhancement" is notoriously difficult in the Mojave desert and requires timelines that are **8-F2**

11 Long 2011
12 Rydell 2010

typically much longer than the proposed project. Also, it is unclear if "restoration" or "enhancement" includes moving additional tortoises into the area – please clarify. The DEIS/R also needs to clarify what it means by "management of disturbed areas not impacted by AEWP". Does this mean fencing areas off? **8-F2, cont.**

Cryptobiotic Soil Crusts Not Identified and Avoided.

The proposed project is located in the Mojave Air Pollution Control District, which is already in non-attainment for PM-10 particulate matter[13]. The construction of the proposed project further increases emissions of these types of particles because of the disruption and elimination of potentially hundreds of acres of cryptobiotic soil crusts. 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 CO_2 uptake through photosynthesis[14].

The DEIS/R 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, trap soil moisture and keep small soil particles from becoming airborne (PM_{10}). The DEIS/R 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. The revised or supplemental DEIS/R must identify 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. **8-G2**

Locally Unique Plant Series

The DEIS/R identifies a plant association that occurs on 464.1 acres of the project site as Brittlebush Scrub-Mormon Tea Scrub (DEIS/R at pg. 3.17-3). In the Appendix D-1 (at pg. 3-3), Brittlebush is identified as *Encelia farinosa* and is mapped on 698 acres (Figure 3 – no page number). *Encelia farinosa* is not documented to occur in Kern County by the Flora of Kern County, California (Twisselman 1995) except as a "waif" at Edwards Air Force Base. While we are aware of *Encelia farinosa* occurrences along Highway 14 near California City that were introduced as part of a CalTrans "revegetation" project, this DEIS/R documents a large naturally occurring series that represents a regionally unique plant series. As a regionally unique plant community (series), it should be recognized and the impacts to this series should be more carefully analyzed and mitigated. **8-H2**

The Project Fails Avoid Impacts to All Desert Washes and Ephemeral Streams

Because of the uniqueness of water resources in the desert, all desert washes and ephemeral streams should be avoided. As the BLM and County are well aware desert washes are fragile and disturbance of the soils in these areas can significantly increase erosion and **8-I2**

13 http://www.mdaqmd.ca.gov/index.aspx?page=355

14 Belnap 2003, Belnap et al 2003, Belnap 2006, Belnap et al. 2007

sedimentation. Although water is scarce and flooding infrequent in desert regions, ephemeral and intermittent streams are a significant ecosystem component and washes are critical to the survival of many native plants and animals. *See, e.g.*, Levick, et al. (2008). "Ephemeral and intermittent streams make up approximately 59% of all streams in the United States (excluding Alaska), and over 81% in the arid and semiarid Southwest (Arizona, New Mexico, Nevada, Utah, Colorado and California)." *Id.* at iii. Ephemeral and intermittent streams provide the same ecological and hydrological functions as perennial streams by moving water, nutrients, and sediment throughout the watershed. When functioning properly, these streams provide landscape hydrologic connections; stream energy dissipation during high-water flows to reduce erosion and improve water quality; surface and subsurface water storage and exchange; ground-water recharge and discharge; sediment transport, storage, and deposition to aid in floodplain maintenance and development; nutrient storage and cycling; wildlife habitat and migration corridors; support for vegetation communities to help stabilize stream banks and provide wildlife services; and water supply and water-quality filtering. They provide a wide array of ecological functions including forage, cover, nesting, and movement corridors for wildlife. Because of the relatively higher moisture content in arid and semiarid region streams, vegetation and wildlife abundance and diversity in and near them is proportionally higher than in the surrounding uplands. *Id.* **8-I2, cont.**

The use of washes for any of the proposed project facilities, including access roads and transmission should be prohibited as well as destruction of vegetation. Specifically, creation of a network of new roads in the washes to access turbines and infrastructure outside of the washes should be avoided because such roads would destroy vegetation and habitat, increase siltation, and destroy soil integrity. **8-J2**

Key Plans Not Provided

The DEIS/R relies on numerous "conservation" plans for on-site resources as avoidance and minimization, however only two of these plans are actually provided for public review (Draft Golden Eagle Conservation Plan and Draft Avian and Bat Protection Plan) and they are *draft* plans only. Absent finalized plans which the wildlife agencies have approved, it remains unclear if the "conservation" plans are actually adequate to minimize and mitigate the consequential impacts. And as noted above, because all of the significant impacts have not yet been identified and analyzed these plans cannot be adequate and must be updated once additional, supplemental environmental review is prepared and circulated for public review.

In addition to the final eagle plan and final avian and bat protection plan, other missing plans include: **8-K2**

- Worker Education Awareness Program (DEIS/R at 4.21-4)
- Weed Management Plan (DEIS/R at 4.21-5)
- Habitat Restoration and Revegetation Plan (DEIS/R at 4.21-5)
- Fugitive Dust Control Plans (construction and operation) (DEIS/R at 4.21-5)
- Raven Control Plan (DEIS/R at 4.21-5)
- Habitat Restoration/Revegetation Plan (HRRP) (DEIS/R at 4.21-41)
- Wildlife Mortality Monitoring Program (DEIS/R at 4.21-4)

In the absence of these plans, it is impossible to evaluate the minimization of impacts and the actual impacts to the flora and fauna currently on the project site. **8-K2, cont.**

General Mitigation Acquisition Requirements Are Flawed

For a number of species – condor, golden eagle etc. - habitat acquisition to off-set impacts is not required. Even for those species where it is an option (desert tortoise) or requisite (burrowing owl), any acquired habitat must already be inhabited by the same species for which mitigation is sought. This mitigation strategy ensures a *net decrease* in habitat for impacted species. To actually provide mitigation that staunches species' habitat losses, mitigation ratios must actually address the impacts to each species and must be high enough to fully mitigate the impacts to those species.[15] A *minimum* 5:1 mitigation is more appropriate for all habitat impacts to assure, not only that the project impacts are mitigated, but that the net losses of habitat for rare species are stopped. **8-L2**

Cumulative Impacts

Cumulative impacts analysis is a critical part of any CEQA analysis.

> [t]he cumulative impact analysis must be substantively meaningful. "'A cumulative impact analysis which understates information concerning the severity and significance of cumulative impacts impedes meaningful public discussion and skews the decisionmaker's perspective concerning the environmental consequences of the project, the necessity for mitigation measures, and the appropriateness of project approval. [Citation.]' [Citation.] [¶] While technical perfection in a cumulative impact analysis is not required, courts have looked for 'adequacy, completeness, and a good faith effort at full disclosure.' (Cal. Code Regs., tit. 14, § 15151.) "A good faith effort to comply with a statute resulting in the production of information is not the same, however, as an absolute failure to comply resulting in the omission of relevant information." [Citation.]" (*Mountain Lion Coalition v. Fish & Game Comm.* (1989) 214 Cal. App. 3d 1043, 1051-52.)

8-M2

(*Joy Road Area Forest and Watershed Assoc. v. Cal. Dept. of Forestry* (2006) 142 Cal. App. 4th 656, 676.) Where, as here, the impacts of a project are "cumulatively considerable" the agency must also examine alternatives that would avoid those impacts and mitigation measures for those impacts. (CEQA Guidelines §15130(b)(3).) In some cases the potential cumulative impacts will be best addressed by compliance with existing regulations (such as land use plans, conservation plans, or clean air act standards), in other cases avoidance and mitigation measures will be site specific, and in some cases new regulations or ordinances may be needed to address cumulative concerns.

We agree with the DEIS/R that under CEQA, cumulative impacts to Wildlife Movement and Migration Corridors, Avian and Bat Collisions and to Displacement of Special-Status Avian and Bat Species are significant (DEIS/R at 4.21-29), and therefore consideration of the County's **8-N2**

15 http://onlinelibrary.wiley.com/doi/10.1111/j.1526-100X.2008.00382.x/full
http://www.wcrc.govt.nz/mtwilliam/hearing/applicant/Mark%20Christensen%20-%20Biodiversity%20offset.pdf

purpose and need for this project should be clarified. Approving another wind project will do nothing to decrease the significant impacts to these imperiled resources. **8-N2 cont.**

Under NEPA, a cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. The Ninth Circuit requires federal agencies to "catalogue" and provide useful analysis of past, present, and future projects. *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.*, 123 F.3d 1142, 1160 (9th Cir. 1997); *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 809-810 (9th Cir. 1999).

"In determining whether a proposed action will significantly impact the human environment, the agency must consider '[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment.' 40 C.F.R. § 1508.27(b)(7)." *Oregon Natural Resources Council v. BLM*, 470 F.3d 818, 822-823 (9th Cir. 2006). NEPA requires that cumulative impacts analysis provide "some quantified or detailed information," because "[w]ithout such information, neither courts nor the public . . . can be assured that the Forest Service provided the hard look that it is required to provide." *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1988); *see also id*. ("very general" cumulative impacts information was not hard look required by NEPA). The discussion of future foreseeable actions requires more than a list of the number of acres affected, which is a necessary but not sufficient component of a NEPA analysis; the agency must also consider the actual environmental effects that can be expected from the projects on those acres. *See Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995-96 (9th Cir. 2004) (finding that the environmental review documents "do not sufficiently identify or discuss the incremental impact that can be expected from each [project], or how those individual impacts might combine or synergistically interact with each other to affect the [] environment. As a result, they do not satisfy the requirements of the NEPA.") Finally, cumulative analysis must be done as early in the environmental review process as possible, it is not appropriate to "defer consideration of cumulative impacts to a future date. 'NEPA requires consideration of the potential impacts of an action *before* the action takes place.'" *Neighbors*, 137 F.3d at 1380 *quoting City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1313 (9th Cir. 1990) (emphasis in original). **8-O2**

The NEPA regulations also require that indirect effects including changes to land use patterns and induced growth be analyzed. "Indirect effects," include those that "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include *growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems*." 40 C.F.R. s.1508.8(b) (emphasis added). *See TOMAC v. Norton*, 240 F. Supp.2d 45, 50-52 (D.D.C. 2003) (finding NEPA review lacking where the agency failed to address secondary growth as it pertained to impacts to groundwater, prime farmland, floodplains and stormwater run-off, wetlands and

wildlife and vegetation); *Friends of the Earth v. United States Army Corps of Eng'rs*, 109 F. Supp.2d 30, 43 (D.D.C. 2000) (finding NEPA required analysis of inevitable secondary development that would result from casinos, and the agency failed to adequately consider the cumulative impact of casino construction in the area); *see also Mullin v. Skinner*, 756 F. Supp. 904, 925 (E.D.N.C. 1990) (Agency enjoined from proceeding with bridge project which induced growth in island community until it prepared an adequate EIS identifying and discussing in detail the direct, indirect, and cumulative impacts of and alternatives to the proposed Project); *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975) (requiring agency to prepare an EIS on effects of proposed freeway interchange on a major interstate highway in an agricultural area and to include a full analysis of both the environmental effects of the exchange itself and of the development potential that it would create). **8-O2, cont.**

The DEIS/R failed to include an analysis of the growth inducing cumulative impacts from this project. **8-P2**

Conclusion

The DEIS/R is inadequate because it omits important information regarding potentially significant impacts especially to California condor, golden eagles, and other rare and unique biological species and resources, fails to consider a range of alternatives that will avoid the impacts to sensitive biological resources. The Center urges the BLM and Kern County to revise the environmental review documents and provide a supplemental DEIS/R that addresses all of the inadequacies detailed in our letter above. Please feel free to contact me with any questions. **8-Q2**

Sincerely,

Ileene Anderson
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8-R2, cont.

Response to Comment Letter 8: Center for Biological Diversity (September 27, 2012)

8-A Thank you for your comments. The participation of the Center for Biological Diversity in the public review of this document is appreciated. The commenter states that they are supportive of renewable energy but that projects should avoid impacts to sensitive species and be sited properly. The commenter states that the Draft EIS/EIR fails to provide adequate identification and analysis of the significant impacts to California condor, golden eagle, other avian species, bats, desert tortoise, rare plants and plant communities, ephemeral streams and washes, other biological resources, cumulative and growth inducing impacts of the project, and lacks consideration of a reasonable range of alternatives.

Please refer to the remainder of these responses regarding specific concerns raised regarding the document's adequacy. Alternatives considered in the Draft EIS/EIR are based on issues identified by the BLM as well as comments received during the public scoping process. Section 2.4 provides an overview of all alternatives analyzed. The BLM and CEQA (15126.6) require consideration in detail of a range of alternatives that are considered "reasonable," usually defined as technologically and economically feasible (not speculative), and that respond to the purpose of and need for the project. The alternatives, four of which are action alternatives, are considered reasonable.

The commenter also states that the agencies have failed to fully examine in impact of the proposed plan amendment that would result in industrial sites sprawling across the California Desert Conservation Area within habitat that should be protected to achieve the goals of the federal bioregional plans as a whole and specifically habitat that is essential to the recovery of the endangered California condor, and threatened desert tortoise.

Please refer to the remainder of these responses regarding specific concerns raised regarding the document's adequacy.

8-B The commenter states that agencies cannot narrow the purpose and need statement to fit only the proposed project and then shape their findings to approve that project without a "hard look" at the environmental consequences. The commenter states that NEPA review cannot be used to rationalize or justify decisions already made.

Under the Council of Environmental Quality's regulations, the BLM's purpose and need statement describes the problem or opportunity to which the BLM is responding and what the BLM hopes to accomplish by the action, not the applicant's interests and objectives (BLM NEPA Handbook Section 6.2; 40 C.F.R. § 1513). However, because the BLM is not required to consider alternatives that are not practical or feasible from the technical and economic standpoint and using common sense, the applicant's interests and objectives, including any constraints or flexibility with respect to their proposal, help to inform the BLM's decision, as it helps determine which alternatives are analyzed in detail through the NEPA process and may also provide a basis for eliminating some alternatives from detailed analysis.

For most renewable energy projects, like the AEWP, the BLM's purpose and need for action will arise from the BLM's responsibility under the Federal Land Policy and Management Act (FLPMA) to respond to a ROW application requesting authorized use of public lands for a specific type of renewable energy development by a particular project proponent.

Consistent with Title IV of the FLPMA, the BLM, as land management agency, relies on applicants to identify renewable energy technologies and general project locations and configurations that are technically and economically viable given current market conditions,

renewable portfolio standards, technological advancements, and transmission access. Through pre-application and NEPA processes for such projects, the BLM works with applicants, federal land and resource management agencies, and stakeholders in identifying appropriate project locations that conform with federal law, regulation, and policy, and with existing land use plans. These activities result in refinements to proposals and/or the identification of alternate locations.

The purpose and need statement also describes the BLM's authorities and management objectives with respect to renewable energy and public lands. In accordance with FLPMA (Section 103 (c)), public lands are to be managed for multiple use in a manner that takes into account the long-term needs of future generations for renewable and non-renewable resources. The Secretary of the Interior is authorized to grant ROWs on public lands for systems of generation, transmission, and distribution of electric energy (Section 501 (a)(4)). In responding to a ROW grant application under this authority, the BLM may decide to deny the proposed row, grant the row, or grant the ROW with modifications. In accordance with the row regulations, modifications may include modifying the proposed use or changing the route or location of the proposed facilities (43 CFR 2805.10(a)(1).

As explained in the purpose and need statement for this EIS/EIR, the proposed AEWP would, if approved, assist the BLM in addressing the management objectives in: (i) the Energy Policy Act of 2005, which set forth the "sense of Congress' that the Secretary of the Interior to approve 10,000 MW of electricity from non-hydropower renewable energy projects located on public lands by 2015; and (ii) Secretarial Order 3285Al (March 11, 2009) which establishes the development of environmentally responsible renewable energy as a priority for the Department of the Interior.

Courts generally defer to agency judgment in defining the objectives of proposed projects as long as the statement is reasonable. Generally, agencies need to follow only a "rule of reason" in preparing an EIS. This rule of reason governs both the purpose/need statement and the alternatives the agency must discuss, and the extent to which it must discuss them. The agency bears the responsibility for defining at the outset the objectives of an action. In Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 198 (D.C. Cir 1991) the court stated that "[t]he goals of an action delimit the universe of the action's reasonable alternatives" and held that an agency "may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the EIS would become a foreordained formality. Nor may any agency frame its goals in terms so unreasonably broad that an infinite number of alternatives would accomplish these goals and the project would collapse under the weight of the possibilities."

For example, need was addressed in Roosevelt Campobello International Park Commission v. E.P.A., 684 F.2d 1034 (1st Cir. 1982) which dealt with EPA's decision of whether to grant a permit under the National Pollutant Discharge Elimination System to a company proposing a refinery and deep-water terminal in Maine. The criteria used by EPA in its select of alternative sites to evaluate was "focused by the primary objectives of the permit applicant," and EPA had limited its consideration of sites only to those sites that were considered feasible when considering the applicant's stated goals. The court found that these criteria for selection of alternative sites were sufficient to meet its NEPA responsibilities.

Additionally, Section 1.1.2 of the EIS/EIR adequately addresses the Purpose and Need of the EIR in accordance with the requirements of CEQA.

The purpose and need section of this EIS/EIR presents the problem being addressed and the actions being addressed. The purpose and need as formulated permitted the BLM to develop a

reasonable range of alternatives that would resolve the problem (namely responding to the proponent's ROW application), including alternatives that partly meet the purpose and need while resulting in fewer environmental impacts, thereby allowing the decision makers to evaluate trade-offs, and the benefits of the proposed action. It appropriately distinguishes between the need for the proposed action and the desires or preferences of the agency or applicant, and provides the parameters for defining a reasonable range or alternatives to be considered.

8-C The commenter states the reason that the purpose and need statement not be unreasonably narrow, and the purpose for NEPA in general is, in large part to guarantee that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision. The commenter states that the agency cannot circumvent relevant public input by narrowing the purpose and need so that no alternatives can be meaningfully explored or by failing to review a reasonable range of alternatives.

Please see Response to Comment 14-B. A range of alternatives was evaluated for inclusion in the EIS/EIR and is described in Chapter 2. Courts have held that an agency need not consider all of the possible alternative actions in the environmental analysis, but is only required to look at those that are reasonable in light of the stated purpose and need of the project.

Potential alternatives were considered and evaluated in order to establish a reasonable range of alternatives to be evaluated in detail in this EIS/EIR. Potential alternatives were developed by the EIS/EIR preparers at the direction of and in coordination with BLM and the County, using appropriate screening criteria pursuant to NEPA and CEQA. These criteria were used to evaluate whether a potential alternative would: achieve the project purpose and meet most project objectives; be feasible; and offer environmental advantages over the proposed project, including avoidance or reduction of significant environmental impacts.

8-D The commenter states that the Draft EIS/EIR provides little description of the decision-making process on how Alternative C was selected as the preferred alternative. The commenter further states that the purpose and need and the alternatives analysis are at the "heart" of NEPA review and affect nearly all other aspects of the EIS, on this basis and others, BLM must revise and re-circulate the Draft EIS/EIR.

Section 2.1.1, *Alternatives Development and Screening*, of the Draft EIS/EIR, describes the process used by the BLM and the County to develop and screen the alternatives. Alternative C was selected as the environmentally superior alternative by the County through a process of comparing alternatives. As supported in the analysis sections of the EIS/EIR (Section 4), Alternative C was selected for the following reasons:

- Result in 20 percent lower annual/total construction emissions and slightly less O&M emissions;
- Slight decrease in potential for impacts during construction to known and unknown cultural resources;
- Reduced noise impacts by eliminating sensitive receptors subject to construction and operational noise north of SR 58;
- Slight decrease in potential for impacts during construction to paleontological resources;
- Slight decrease in potential for impacts during construction and operation to geology and soil resources;
- Slightly reduce daily traffic volumes during construction;

- Reduce disturbance to vegetation communities down to nine (9) sensitive vegetation communities and land cover types, as well as reducing acreage of temporary and permanent disturbance;
- Reduce visual impacts to viewers north of SR 58;
- Slightly reduce water use during construction and operation;
- Slightly reduce potential for wildfire ignition; and
- Reduce potential for impacts to golden eagles and condors.

Please the see Response to Comment 14-B regarding purpose and need. Re-circulation of the Draft EIS/EIR is not required.

8-E The commenter states that the County does not provide a purpose and need for the project, but instead only provides a purpose for the Draft EIS/EIR.

The project's purpose and need for the County would be identical to the CEQA project objectives which are defined in Section 1.2 of the Draft EIS/EIR and repeated below:

- Help the federal government reach its renewable energy goals;
- Be a major supplier of clean, renewable energy to meet the growing demands of California consumers;
- Support California's Renewable Portfolio Standard (RPS) and California Assembly Bill 32 by serving as a source of clean renewable energy, reducing the need for electricity generated from fossil fuels and offsetting greenhouse gas emissions;
- Deliver wind energy according to an executed Master Power Purchase and Wind Project Development Agreement (MDA) with SCE;
- Increase the tax base of Kern County;
- Provide increased revenue to BLM for the use of the federal land;
- Create a substantial number of temporary and permanent jobs in the county;
- Boost local business activity during construction and operation;
- Provide revenue to county residents who own underutilized land that has little potential to be developed for other uses while allowing these landowners to retain much of their current land use;
- Use land located near existing industrial facilities, mines, and operating wind projects to minimize the environmental and visual impact of the project; and
- Construct and operate a wind project that can attract commercially available financing.

8-F This comment requests the Climate Change and Greenhouse Gases analysis address climate change mitigation strategies and climate change adaptation strategies.

Draft EIS/EIR Table 4.3-3 identifies current California emission reduction strategies to reduce greenhouse gases and identifies the applicability of each strategy and the Project design feature or mitigation measure that is proposed to comply with the applicable strategies. Additionally Draft EIS/EIR Section 4.3.3.2 (GHG Emissions Impacts) p. 4.3-7 discusses project consistency with Office of the California Attorney General CEQA Mitigations for Global Climate Change Impacts, while p.4.3-8 discusses all feasible climate change mitigation.

8-G The commenter requests the Climate Change and Greenhouse Gases analysis include discussion of ways to avoid, minimize, or off-set emissions with respect to climate change adaptation and mitigation strategies.

Please see Response to Comment 8-F, which discusses how the Draft EIS/EIR addressed these issues.

8-H The commenter states that the alternatives analysis is inadequate even with the inclusion of two smaller 97- and 87-MW project alternatives and that at least one alternative should be considered that avoids all desert tortoise habitat. The commenter further states that other alternatives should be considered for examples, siting on degraded lands. The Draft EIS/EIR should have considered distributed renewable energy alternatives, a no-build alternative that would focus on programs to efficiency and conservation efforts, and other alternatives that could avoid impacts of the proposed project. The commenter states that there was failure to address any off-site alternative that would significantly reduce the impacts to biological resources including the California condor, desert tortoise and occupied habitat, and other special-status species. The commenter further states that these and other issues should be addressed in a revised document and recirculated.

A range of alternatives was evaluated for inclusion in the EIS/EIR and is described in Section 2 of the Draft EIS/EIR. Courts have held that an agency need not consider all of the possible alternative actions in the environmental analysis, but is only required to look at those that are reasonable in light of the stated purpose and need of the project.

Potential alternatives were considered and evaluated in order to establish a reasonable range of alternatives to be evaluated in detail in this EIS/EIR. Potential alternatives were developed by the EIS/EIR preparers at the direction of and in coordination with BLM and Kern County using appropriate screening criteria pursuant to NEPA and CEQA. These criteria were used to evaluate whether a potential alternative would achieve the project purpose and meet most project objectives; be feasible; and offer environmental advantages over the proposed project, including avoidance or reduction of significant environmental impacts.

Section 2 of the Draft EIS/EIR contains a detailed description of the alternatives screening process, and Alternative C (Reduced Project North Alternative) was one of the alternatives carried forward for analysis. Alternative C was developed specifically to reduce impacts to biological resources, including those mentioned in the comment. In addition, Section 2.10.3 considered several alternatives that use different generation methods, and several of these would likely reduce impacts to biological resources. However, these were determined to be either infeasible or unable to meet the purpose/objectives criteria for the project. Recirculation of the document is not warranted as a result of this comment.

The County notes that the CEQA Guidelines are not proscriptive as to the number of alternatives that constitute a “reasonable range.” CEQA Guidelines state that an EIR must consider a reasonable range of alternatives that will foster informed decision making and public participation and that there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason (CEQA Guidelines § 15126.6(a).). CEQA Guidelines further state that a “rule of reason” requires the EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines § 15126.6(f).).

Consistent with the Proposed Action’s purpose and need, this EIS/EIR did not analyze alternative or different generation technologies because the BLM was responding to a right-of-way application for a specific technology. NEPA does not specify the nature and number of alternatives that must be analyzed as it varies from project to project.

Distributed solar generation was described and considered in Section 2.10.3. It was noted that the alternative would partially meet objectives (renewable energy). However, it would not meet the primary objective of wind power generation and would not likely be implemented in a timeframe

to meet the Renewables Portfolio Standard requirements. Implementation of this alternative would likely be economically infeasible for the Applicant to implement. Additionally, barriers exist for distributed solar generation related to interconnection with the electrical distribution grid.

8-I The commenter describes, citing case law, requirements for establishing environmental baseline under NEPA. The commenter states that the Draft EIS/EIR fails to provide adequate baseline information and descriptions of the environmental setting in many areas including in particular the status of rare plants, animals, and communities, including California condors, golden eagles, desert tortoise, burrowing owls, and other imperiled and common desert species. The commenter states that the baseline descriptions in the Draft EIS/EIR are inadequate particularly for areas where surveys were a single season, a day, or not performed at all. The commenter states that many of the rare and common but essential species and habitats have incomplete and/or vague onsite descriptions that make determining the project's impacts difficult. The commenter further states that some of the rare species/habitats baseline conditions are absent, and no impact analysis is provided for these resources. The commenter asserts that a supplemental document is required.

The comment is general in scope, and does not identify specific deficiencies in the baseline information provided in the Draft EIS/EIR. Resources identified in the comment are addressed in the Draft EIS/EIR. See Section 3.17.2.1 for a description of vegetation communities, Section 3.17.2.3 for a description of special-status plants, and Section 3.21.2 for a description of special-status wildlife including California condor, desert tortoise, and burrowing owl. Appendix D of the Draft EIS/EIR contains reports of biological surveys conducted for the proposed project.

Additionally, the EIS/EIR includes a complete description of the environmental setting for the project and all impact sections. Chapter 3 describes the existing environmental components in the project area that could be affected by implementation of the Alta East Wind Project (AEWP), including existing resources, resource uses, and special designations. "Resources" include air, climate change, soil, water, vegetative communities, wild horses and burros, wildlife and plant species, wildland fire ecology and management, as well as cultural, paleontological, and visual resources. "Resource uses" include livestock grazing management, minerals, recreation management, transportation and public access, and lands and realty. "Special designations" include areas of critical environmental concern (ACECs), wilderness areas (WAs), and wilderness study areas (WSAs).

Kern County and the BLM have considered the best available information from the project site and the region in describing the environmental baseline, and have determined that the baseline description for biological resources is adequate under NEPA and CEQA. These descriptions adequately describe the baseline conditions at the project site and surrounding areas.

8-J The commenter states that the EIS fails to adequately analyze the direct, indirect, and cumulative impacts of the proposed project on the environment and cites case law regarding the NEPA requirement of agencies to take a "hard look" at the effects of proposed actions.

Please see Response to Comment 8-H. The commenter does not provide specific examples or details regarding potential inadequacies in the direct, indirect, and cumulative impact analyses presented in the Draft EIS/EIR. Kern County and the BLM have considered the best available information from the project site and the region in describing the environmental baseline and the potential direct, indirect, and cumulative impacts to baseline resources, and have determined that the impact analysis is adequate under NEPA and CEQA.

8-K The commenter states that Kern County and the BLM fail to look at reasonable mitigation measures to avoid impacts; even in those cases where the extent of impacts may be somewhat

uncertain due to the complexity of the issues, BLM is not relieved of its responsibility under NEPA to discuss mitigation of reasonably likely impacts at the outset.

The commenter does not provide specific examples or details regarding potential inadequacies in the mitigation measures presented in the Draft EIS/EIR, and does not suggest any additional mitigation measures for Kern County and the BLM' consideration.

8-L The commenter states that the lack of comprehensive surveys does not allow the project to avoid and minimize impacts and define and quantify appropriate mitigation. The commenter states that efforts to mitigate harm are often less effective than avoiding and preventing the harm in the first place. The commenter provides as an example that no surveys were conducted for invertebrates.

See Response to Comment 8-I. Kern County and the BLM have determined that surveys conducted for the proposed project are adequate to characterize biological resources present and potentially present at the project site, and as a result are adequate to assess the potential impacts of the AEWP and potential measures to mitigate those impacts. Surveys have been conducted for a wide variety of biological resources, including general reconnaissance, vegetation, rare plants, avian use, raptor nests, bat use, bat roosts, Swainson's hawk, desert tortoise, burrowing owl, Mohave ground squirrel, and jurisdictional wetlands (see Appendix D of the Draft EIR/EIS for survey reports).

While it is correct that focused surveys were not conducted specifically for invertebrates, Kern County and the BLM have determined that these are not warranted based on the regulatory status of invertebrates with the potential to occur, as well as the limited potential distribution on the project site. Page 4.21-2 of the EIS/EIR notes that there is a moderate potential for Kern shoulderband and whitefir shoulderband to occur based on known distributions and habitat use for these species and that these species are considered "special animals" by CDFG. The section also notes that the "special animals" designation means the species hold no special status at the state or federal level but are tracked in the California Natural Diversity Database (CNDDB). The section notes that direct impacts to special-status snails could occur during construction if such species are present and that potential indirect impacts include compaction of soils and the introduction of exotic plant or animal species. Potential operational impacts include risk of mortality due to increased use of the project area by maintenance personnel. However, the section concludes that while these species may be subject to direct, indirect, and operational impacts as a result of implementation of the AEWP, the Kern shoulderband and whitefir shoulderband are expected to be widely distributed throughout Kern County in microhabitats that support suitable soil moisture, foliage, and cover and that impacts associated with the AEWP would be localized and are not likely to result in adverse effects to viable populations of these species.

8-M The commenter states that the Draft EIS/EIR fails to provide information necessary for decision-makers and the public to adequately review the proposed project, and that impacts cannot be fully analyzed or mitigated appropriately or fully. The commenter states that this necessitates a supplemental or revised Draft EIS/EIR that provides additional alternatives avoiding or reducing biological resource impacts.

See the Responses to Comments 8-I, 8-J, 8-K, and 8-L. Alternative C would reduce impacts to biological resources compared with the proposed project, and there are no other feasible alternatives to further reduce impacts to biological resources (see Section 2 of the Draft EIS/EIR). A supplemental or revised Draft EIS/EIR is not warranted.

8-N The commenter states that the correlation between predicted mortality and actual mortality (to avian species from collision with WTGs) must be improved in future risk assessment studies by changing the scale of the studies to focus on the locations of individual wind turbine sites and

working on a species-specific level rather than at the scale of the entire wind project. The commenter notes that the Draft EIS/EIR risk assessment is at the scale of the entire wind project and does not evaluate specific turbines and their impact on avian species. The commenter states that the point of micrositing (which is discussed in the draft Avian and Bat Protection Plan in Appendix D-29) is to reduce impacts to species by analyzing the use of the project site by avian and bat species and designing the project to not site turbines in locations used by these species. The commenter asserts that the Draft EIR/EIS does not include this avoidance measure as part of the environmental analysis and has deferred it to a post-environmental review plan (the final ABPP). The commenter states that microsite analysis should be done prior to the Draft EIS/EIR to avoid and minimize impacts, and this information could be used to inform additional siting alternatives to minimize impacts to rare, migratory, and resident species.

The commenter's request for additional analysis of individual wind turbines in regard to the avian species with potential for impact is acknowledged. However, turbine locations have not yet been finalized pending final engineering, and locations identified in Figures 2-9 and 2-10 provide approximations of the final turbines locations. Therefore, it is more appropriate to analyze the project as a whole, and note areas within the site that support higher levels of bird use.

Kern County and the BLM have determined that the biological survey data is adequate to assess bird use at specific locations within the project area (see Appendices D-3 through D-8 of the Draft EIS/EIR). As illustrated in the Appendices, fixed-point bird use survey points were distributed throughout and adjacent to the project site and provide adequate coverage of the site. As described in Section 3.21.2 of the Draft EIS/EIR, the habitat and features of the AEWP site are not unique to the surrounding landscape, nor do they appear to be particularly preferred or critical to migrants. For example, no riparian habitat or perennial water sources exist on or near the site, and features such as these tend to attract large numbers of migrants especially in the arid Mojave Desert and foothills of the Tehachapi and Piute Mountains. Studies conducted at the site do not show substantially higher levels of migratory bird use in any given area within the project site. However, golden eagle use was found to be concentrated in the discontinuous northern portion of the project area, and this area is in proximity to known active and inactive golden eagles nest locations. Alternative C (Reduced Project North) was developed to eliminate wind development in this portion of the project area in order to minimize impacts to golden eagles, and was found to be the NEPA preferred alternative and the CEQA environmentally superior alternative (see Sections 2.8 and 2.9 of the Draft EIS/EIR). Therefore, the suggestion to conduct microsite analysis that could be used to inform the development of siting alternatives to minimize avian impacts is not necessary.

8-O The commenter states that nocturnal bird migration was not studied or addressed, and the document needs to analyze the on-site impacts of the turbines on nocturnal migratory songbirds and bats in comparison to data on a nearby non-windfarm site.

The BLM and Kern County have considered this comment and determined that the impact analysis contained in the Draft EIS/EIR adequately considers available regional and local information. Page 4.21-13 of the EIS/EIR states that nocturnal wildlife would be affected less by construction than diurnal (i.e., active during the day) species since construction would occur primarily during daylight hours. Additionally, Section 3.21.1.2 (Connectivity and Migration Corridors) includes a detailed discussion of bird migration in relation to the proposed project site. Please see Section 4.21.3.3 includes analysis of impacts to birds, including migratory birds. Note that the analysis considered all best available information, and concluded "Data from the AEWP site and other nearby wind developments suggest a more diffuse pattern of avian migration in the region, and no focused bird or bat migratory corridors have been identified in the vicinity of the AEWP. No surface water or riparian vegetation that may support higher levels of use by migrating birds and bats occur on or near the site. Therefore, operation of the AEWP is not

expected to substantially interfere with any bird or bat migratory corridor." It is concluded that the EIS/EIR utilized the best available data in analysis.

8-P The commenter states that the Draft EIS/EIR fails to acknowledge that the project site is located on the Pacific Flyway and provides no data for the impacts of the project on nocturnal migratory birds and bats or on migratory pathways for birds and bats. The commenter states that migratory birds are protected under the Migratory Bird Treaty Act and impacts must be identified and analyzed. The commenter noted that golden eagles migrate at or below ridgelines, putting them at risk especially for turbines sited in ridge areas. The commenter states that mitigation measures presented in the Draft EIS/EIR appear to be "best management practices" and suggests additional avoidance measures such as employing a full-time biologist during daylight hours of turbine operation to detect target species such as California condors and golden eagles, and who could shut down turbines to minimize collision risk. The commenter also expressed hope that technologies such as avian radar systems or video systems could be implemented for the same purposes, but currently the technology is not prove.

The identified information was disclosed in the Draft EIS/EIR, and the impacts were analyzed. Please see Section 3.21.1 (Connectivity and Migration Corridors) of the Draft EIS/EIR for a detailed discussion of regional and local avian and bat migration, including the project's location in the vicinity of the Pacific Flyway. As discussed on Draft EIS/EIR page 3.21-5, no known bird migration routes cross the AEWP area. Although the Pacific Flyway, a large migration route used by numerous bird species that pass throughout large portions of California, is within the vicinity of the project area, bird watching records in the area do not indicate focused or well-defined migration patterns in the immediate area, but rather broad-front, scattered migration. As discussed on Draft EIS/EIR page 3.21-6, a total of 217 bat passes were detected at two (2) locations in the central and eastern portions of the AEWP site during 1192 detector-nights during the 2009/2010 study period. During the period December 13, 2010 to April 11, 2011 a total of 95 bat passes were detected during 233 detector-nights at one (1) location in the southwestern project area. See Section 4.21.3 for the analysis of impacts to golden eagles, migratory birds and bats. Mitigation Measure 4.21-9 (Minimize Avian and Bat Turbine Strikes), which requires turbines to be sited away from the upwind sides of ridge crests wherever feasible.

With regard to the commenter's suggestion for mitigation including biologists or radar technology to monitor for target species and shut down portions of the project as needed in response to the monitoring, see Mitigation Measures 4.21-9, Part 7 (Minimize Avian and Bat Turbine Strikes) and 4.21-14 (Post-Construction Condor Monitoring), which require the monitoring program and adaptive curtailment suggested by the commenter. In addition, the project proponent has provided information on ongoing discussions it is having with the USFWS regarding a condor monitoring system to detect VHF-tagged condors that it plans to employ at the proposed project site. Page 4.21-22, Avian and Bat Collision Risk, has been changed to address this comment:

<u>The project proponent has been in ongoing discussions with the USFWS to demonstrate and determine the effectiveness of the Monitoring and Avoidance Plan. Field trials performed on July 9, 10, and 11, 2012, at Bitter Creek Wildlife Refuge where condors were present, indicated that the system had a 100 percent success rate for detecting condors. The objective of the test was to evaluate the detection system against a human observer. In every case the VHF detection system recorded a condor occurrence before the human observer could detect it and in many cases, detected the occurrence of a condor that a human observe did not detect. Because almost all free flying condors are fitted with VHF transmitters, this system and its protocol will help ensure that condor mortality can be avoided.</u>

The results at the Bitter Creek Wildlife Refuge suggest that the system will be 100 percent effective at the project site. The VHF detection system will be installed in early 2013, and prior to project construction, to monitor a large area in all directions from the AEWP to maximize response times should a condor be detected. By design, the detection system will monitor for and report condor(s) if they are within 16 miles of the AEWP.

Page 4.21-28 has also been changed to address this comment:

The applicant has been in on-going discussions with the USFWS to demonstrate and determine the effectiveness of the Monitoring and Avoidance Plan for California Condor. Field trials performed on July 9, 10, and 11, 2012, at Bitter Creek Wildlife Refuge where condors were present, indicated that the system had a 100 percent success rate for detecting condors. The objective of the test was to evaluate the detection system against a human observer. In every case the VHF detection system recorded a condor occurrence before the human observer could detect it and in many cases, detected the occurrence of a condor that a human observe did not detect. Because almost all free flying condors are fitted with VHF transmitters, detection of a condor by the system is highly dependable. This system and its protocol will ensure that condor mortality can be avoided.

The results at the Bitter Creek Wildlife Refuge suggest that the system will be 100 percent effective at the project site, as well. Nonetheless, another demonstration of the VHF detection system for the County and FWS occurred October 3 and 4, 2012 at the project site. The VHF detection system will be installed in early 2013 to monitor a large area in all directions from the AEWP to maximize response times should a condor be detected. By design, the detection system will monitor for and report a condor before it can reach the AEWP and as such, it will most often detect a condor that is not headed toward nor threatened by the AEWP but rather traveling to other locations in the surrounding mountainous areas that could be occupied by other, unrelated, facilities that could pose a threat to condors.

8-Q The commenter states that additional wind development in Eastern Kern would increase the likelihood that a California condor will be hit by a turbine, and therefore it is incumbent upon Kern County and the BLM to require implementation of all reasonable avoidance and minimization measures for the species. The commenter states that the Draft EIS/EIR fails to state whether a take permit is being sought for California condor. The commenter supports a regional approach to condor conservation, and finds that the Draft EIS/EIR impact analysis and cumulative analysis are at odds with conservation goals for the condor.

Kern County and the BLM have determined that all reasonable and feasible avoidance and minimization measures for the California condor have been identified and incorporated into mitigation measures presented in the Draft EIS/EIR and include the following: Mitigation Measure 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-5 (California Condor), 4.21-6 (Avian and Bat Protection Plan), 4.21-7 (Eagle Conservation Plan), 4.21-8 (Lighting Specifications to Minimize Bird and Bat Collisions), 4.21-9 (Minimize Avian and Bat Turbine Strikes), 4.21-10 (Post-Construction Breeding Monitoring), 4.21-11 (Post-Construction Avian and Bat Mortality Monitoring), 4.21-12 (Supplemental Measures for Unanticipated Significant Impacts), 4.21-14 (Post-Construction Condor Monitoring), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation Fugitive Dust and Equipment Emission Reduction).

With regard to a take permit for California condor, the BLM is currently consulting with the USFWS under Section 7 of the ESA for federally listed species including the condor. The California Condor is covered in the Section 7 consultation process which has been in process with the FWS for the last few months. An ABPP or Eagle Conservation Strategy will be utilized to

assess impacts and to identify measures to reduce impacts to eagles. Because the condor is Fully Protected in California, CDFG cannot issue take authorization for this species.

The commenter's opinion that the Draft EIS/EIR impact analysis and cumulative analysis are at odds with conservation goals for the condor is noted.

8-R The commenter makes several comments on mitigation measures contained within the draft Avian and Bat Protection Plan in Appendix D-29 of the Draft EIS/EIR, including eliminating lead bullets, grazing and hunting, and supplemental feeding. The commenter also states that implementation of a Common Raven Management Plan was not brought forward from Appendix A of the ABPP to the ABPP itself as a mitigation measure.

The suggestions will be considered by the BLM and Kern County. The EIS/EIR prepared for this project also include mitigation measures that require monitoring [See MM 4.21-10 (Post-Construction Breeding Monitoring), 4.21-11 (Post-Construction Avian and Bat Mortality Monitoring), and 4.21-14 (Post-Construction Condor Monitoring)]. These monitoring reports will include evaluation of the portions of the project described note that the wind energy projects that have been permitted by Kern County in the last several years have included mitigation measures which establish consistent monitoring protocols and data submission standards.

Mitigation is proposed in the Draft EIS/EIR to reduce impacts to condors for the purposes of CEQA and NEPA; see Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-5 (California Condor), 4.21-6 (Avian and Bat Protection Plan), 4.21-7 (Eagle Conservation Plan), 4.21-8 (Lighting Specifications to Minimize Bird and Bat Collisions), 4.21-9 (Minimize Avian and Bat Turbine Strikes), 4.21-10 (Post-Construction Breeding Monitoring), 4.21-11 (Post-Construction Avian and Bat Mortality Monitoring), 4.21-12 (Supplemental Measures for Unanticipated Significant Impacts), 4.21-14 (Post-Construction Condor Monitoring), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). In addition, see Mitigation Measure 4.21-4 (Raven Management Plan) which does require the implementation of a Raven Management Plan.

8-S The commenter states that the monitoring program for California condor and other avian species is inadequate because it requires monitoring for five years, whereas the commenter states that monitoring must occur over the life of the project.

Mitigation measures have been included that require life of the project monitoring for those avian species that are listed as endangered and/or fully protected.

MM 4.21-9 (Minimize Avian and Bat Turbine Strikes) requires that, prior to turbine commissioning or turbine operation, the project proponent consult with the BLM (on federal lands) and Kern County Planning and Community Development Department (on private lands) to design and implement one of two options for reducing impacts to the California Condors. These options include (a) Full time human observation during all daylight hours of observation; or, (b) utilization of an approved Condor Monitoring and Avoidance Plan using an approved Condor Monitoring System (CMS) to detect VHG-tagged condors that come within 16 miles of the project boundary during daylight hours. The system will be evaluated after an initial 3 year period to determine if operational adjustments are required.

Mitigation Measure 4.21-11(5) (Post-Construction Avian and Bat Mortality Monitoring) requires life-long annual Post-Construction Mortality Monitoring for the golden eagle, which is a CDFG Fully Protected Species. The project proponent is required to submit this monitoring to the Kern

County Planning and Community Development Department, the Bureau of Land Management, the United States Fish and Wildlife Service, and the California Department of Fish and Game.

Kern County and the BLM conclude that sufficient mitigation measures are in place to ensure appropriate life of the project monitoring of the California condor and the Golden Eagle.

8-T The commenter states that the Draft EIS/EIR does not address the Bald and Golden Eagle Protection Act and inadequately addresses the issue of golden eagle collisions with turbines. The commenter also asserts that the Draft EIS/EIR fails to make any determination on the significance of impacts to golden eagles during operation and maintenance of the project, which is likely where the greatest and cumulative impacts will occur.

With regard to discussion of the Bald and Golden Eagle Protection Act, please see Section 3.21.3.1 (Federal Regulations), where the Bald and Golden Eagle Act (BGEPA) is described. Section 3.21.1.3 (Special-Status Animal Species), which includes species protected under the BGEPA in the definition of special-status species addressed in the Draft EIS/EIR. Section 3.21.1 (Environmental Setting), identifies golden eagle as a species known to breed in the region and that is protected under the BGEPA.

With regard to the commenter statement that the Draft EIS/EIR contains an inadequate analysis of golden eagle collisions with turbines, the commenter does not provide specific detail or examples of any potential inadequacies in the analysis. Kern County and the BLM have considered the best available information in the analysis of operational impacts to golden eagles contained in the Draft EIS/EIR. Section 4.21.3.3, pages 4.21-16 and 4.21-18 through 4.21-23 all discuss the potential operational and maintenance impacts of the project to Golden Eagle. Regarding the determination of significance, see page 4.21-29, where operational impacts to special-status birds and bats from collisions with turbines is identified as a significant and unavoidable impact under CEQA. Determinations of significance are not made for impacts under NEPA.

The commenter also notes the “no net loss” standard for eagles under the Final Rule on Eagle Act Take Permits, and states that it is unknown whether proposed mitigation efforts identified in the draft Eagle Conservation Plan in Appendix D-30 will “pass muster” with USFWS. Kern County and the BLM note that the project proponent is currently in the process of developing the Eagle Plan in consultation with the USFWS. This Plan is required by Mitigation Measure 4.21-7 (Eagle Conservation Plan); which states that the project proponent shall develop and implement an Eagle Conservation Plan or equivalent document to address project impacts to golden eagles.

8-U The commenter states that the locations of active and inactive golden eagle nests within ten miles of the project site identified in the Draft EIS/EIR (page 4.21-7) contradicts the National Golden Eagle Colloquium on March 2-3, 2010 because attendees of the Colloquium concluded that recommended buffers are at least 4-10 air miles from a golden eagle territory. The commenter states that the actual number of territories that occur on the project site is not identified in the Draft EIS/EIR.

The comment is noted. However, it is not clear to what the suggestion regarding buffers being established at least 4-10 air miles from territories is referring to. It is also noted that this is a suggestion and not an Agency approved protocol. Because the number of territories in a given region will vary from year to year, Kern County and the BLM have determined that the identification of active and inactive nests in proximity to the project is an adequate measure of the density of the local breeding population in the context of the impact analysis presented in Section 4.21 of the Draft EIS/EIR.

8-V The commenter states that the draft Eagle Conservation Plan in Appendix D-30 of the Draft EIS/EIR needs to follow the Draft Eagle Conservation Plan Guidance as issued by the USFWS.

The suggestions will be considered by the BLM and Kern County. The EIS/EIR prepared for this project also includes mitigation measures that require monitoring [See MM 4.21-10 (Post-Construction Breeding Monitoring), 4.21-11 (Post-Construction Avian and Bat Mortality Monitoring), and 4.21-14 (Post-Construction Condor Monitoring)]. These monitoring reports will include evaluation of the portions of the project described note that the wind energy projects that have been permitted by Kern County in the last several years have included mitigation measures which establish consistent monitoring protocols and data submission standards. Please note that the project proponent is currently in the process of developing the Eagle Plan in consultation with the USFWS.

8-W The commenter states that comparing densities of golden eagles from other parts of the country is inappropriate, and the goal of the environmental review is to identify the impacts to the local environment that includes maintaining golden eagles across their natural range. The commenter states that impacting golden eagles even in areas of low densities fails the metric of maintaining eagles across their range.

The comment is noted. Kern County and the BLM considered the best available data and information when analyzing impacts to golden eagles, and that includes data for the species collected in other parts of the country in areas across their range.

8-X The commenter suggests that the Draft EIS/EIR be revised and recirculated in order to reconsider impacts to golden eagles using recommendations and analysis by eagle experts that conducted the surveys as well as qualified independent golden eagle experts.

The Draft EIS/EIR incorporated recommendations by Western EcoSystems Technology, Inc. (WEST), the eagle experts who performed the surveys. The public review period for the Draft EIS/EIR provided an opportunity for eagle experts (among others) to comment on the project, and the agencies' own expert personnel will consider the data in making permit decisions. Also, the BLM and project proponent are currently consulting with the USFWS regarding to compliance with the Bald and Golden Eagle Protection Act compliance. Therefore, there is no need for recirculation of the document.

8-Y The commenter notes the protection of raptors under the Migratory Bird Treaty Act. The commenter states that several questions remain unanswered, including how close raptor nests including red-tailed hawk are to proposed wind turbines, is red-tailed hawk data from the project site reflective of high or low density compared to other parts of the country, is the proposed project likely to result in impacts to the local red-tailed hawk population from turbine collisions and if so, how will these impacts be minimized? The commenter states that these and other similar questions need to be addressed in a supplemental EIS/EIR because of the potential for significant impacts to local and migratory raptor populations, which are not analyzed in the Draft EIS/EIR.

The proximity of raptor nests, including red-tailed hawk, is identified in Section 3.21.2 and Appendix D-8 (see Figure 2 – Location of raptor nests at the Alta East Wind Resource Area). As described in Appendix D-8, in 2011 seven active red-tailed hawk nests were identified between two and ten miles from the project site, but none were identified on site or within two miles. It is unclear what information would be gained in terms of the impact analysis by comparing red-tailed hawk population density in the project area to other areas in the country. Pages 4.21-19 to 4.21-20 of the analysis state that based on species composition of the most common raptor fatalities at other western wind-energy facilities, and species composition of raptors observed at the AEWP during the surveys, the majority of the fatalities of diurnal raptors would likely consist of red-tailed hawks. Collisions with turbines were found to be a significant and unavoidable impact under CEQA for red-tailed hawks as well as all affected avian species. As stated in

Section 4.21.3.3, the impacts would be minimized through implementation of mitigation measures, but not to a level below significance. Mitigation to minimize impacts to local and migratory raptor populations include Mitigation Measures 4.21-6 (Avian and Bat Protection Plan), 4.21-7 (Eagle Conservation Plan), 4.21-8 (Lighting Specifications to Minimize Bird and Bat Collisions), 4.21-9 (Minimize Avian and Bat Turbine Strikes), 4.21-10 (Post-Construction Breeding Monitoring), 4.21-11 (Post-Construction Avian and Bat Mortality Monitoring), 4.21-12 (Supplemental Measures for Unanticipated Significant Impacts), and 4.21-14 (Post-Construction Condor Monitoring).

Contrary to the commenter's assertion, impacts to local and migratory raptor populations are analyzed in the Draft EIS/EIR in Section 4.21.3.3, and a supplemental document is not warranted.

8-Z The commenter states that, because burrowing owls are in decline throughout California, burrowing owls on the proposed project site and on other renewable energy projects become even more important to species conservation efforts. The commenter states that the EIS/EIR needs to evaluate the potential impacts of the proposed project on this regional distribution of owls.

The comment regarding the importance of the local burrowing owl population to species conservation efforts is noted. Impacts to burrowing owls are addressed in Section 4.21 (see pages 4.21-9 to 4.21-10, 4.21-16 to 4.21-18, 4.21-25, 4.21-36, and 4.21-39. As described in Section 4.21, operational impacts to the regional population of burrowing owls are significant and unavoidable under CEQA both at a project level as well as cumulatively. A recirculated or supplemental document is not warranted as a result of this comment.

8-A2 The commenter states that the impact analysis needs to incorporate the most recent guidance from the California Department of Fish and Game on the impact evaluation and mitigation for burrowing owl. The commenter states that specific mitigation for burrowing owl is required, and states that compensatory mitigation should be based on the number of burrowing owl territories ultimately impacted during construction. The commenter further states that language should be incorporated into the compensatory mitigation to specify that mitigation lands acquired for burrowing owl must be native habitats on undisturbed lands, not cultivated lands that are subject to land use changes.

The impact analysis presented in the Draft EIS/EIR did consider and incorporate the most recent burrowing owl guidance from the CDFG, as appropriate. Pages 4.21-9 to 4.21-10 of the EIS/EIR describes the requirements of the CDFG, as described in the *Staff Report on Burrowing Owl Mitigation* . Note that the guidance is voluntary, and general recommendations contained within the guidance can and should be modified where needed to account for site- and project-specific conditions.

Regarding the comment about burrowing owl compensatory mitigation, please see Mitigation Measure 4.21-3, part 7(e) which requires offsite compensation for impacts to burrowing owl territories consistent with the current (2012) CDFG Staff Report on Burrowing Owl Mitigation.

With regard to the commenter's statement that mitigation should consist of native habitats on undisturbed lands, as shown in Section 7.3, Mitigation Measure 4.21-3 has been revised as follows:

MM 4.21-3 *(No changes made to parts 1-7(d) of MM 4.21-3)*

7 (e) Impacts to burrowing owl territories shall be mitigated through a combination of off-site habitat compensation and/or off-site restoration of disturbed habitat <u>to native habitat</u> capable of supporting this species. The acquisition of occupied habitat off-site shall be in an area where turbines would not pose a mortality risk. Acquisition of habitat shall be

consistent with the California Department of Fish and Game's *Staff Report on Burrowing Owl Mitigation* (CDFG, 2012). The preserved habitat shall be occupied by burrowing owl and shall support native vegetation, and shall be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by a qualified ornithologist. Preservation of cultivated lands will not be allowed in order to ensure the habitat will be preserved in perpetuity. The site shall be approved by the California Department of Fish and Game. Land shall be purchased and/or placed in a conservation easement in perpetuity and managed to maintain suitable habitat. The offsite area to be preserved can coincide with off-site mitigation lands for permanent impacts to sensitive vegetation communities, with the approval of the Bureau of Land Management and the California Department of Fish and Game.

8-B2 The commenter states that passive relocation of burrowing owls may ultimately result in 'take.' The commenter states that other renewable energy projects in the area have been required to construct two burrows for every burrowing owl burrow destroyed and that this strategy should be included in the supplemental Draft EIS/EIR.

The commenter's statements that relocated burrowing owls compete for resources and may move into less suitable habitat, which may result in take is noted. Mitigation Measure 4.21-3, part 7 allows passive relocation only outside of the nesting season, and if proposed, requires the project proponent to develop eviction plans in coordination with CDFG. Eviction would be permitted only after Kern County and the BLM receive formal written approval from the CDFG authorizing the eviction. The commenter's request for the strategy of constructing two burrows for every burrowing owl burrow disturbed or destroyed to be included in the Draft EIS/EIR is noted. The number of artificial burrows to be constructed for any burrowing owls to be relocated would be determined in coordination with CDFG and would be provided in a Burrowing Owl Mitigation and Monitoring Plan.

8-C2 The commenter states that the Draft EIS/EIR incompletely evaluates bat foraging on site. Furthermore, the comment states that the color of the turbine towers could attract insects on which bats prey causing bat mortality at tall wind turbines during nocturnal insect migrations.

The commenter's statement that the Draft EIS/EIR fails to evaluate bat foraging on site is noted; however, bat foraging is addressed on pages 3.21-29 to 3.21-32, 4.21-10 to 4.21-11, and 4.21-17 to 4.21-18.

The commenter states the Draft EIS/EIR fails to address two potential impacts to bat species: wind turbine color and height of wind turbines and cited two studies published in the European Journal of Wildlife Research. The impact analysis in the Draft EIS/EIR evaluated the project design proposed by the Applicant and variations in wind turbine color and wind turbine height were not considered as part of the analysis.

A comparison of bat collision risk for short and tall wind turbines is beyond the scope of analysis for a project-specific EIS/EIR. The scope of analysis for the bat collision risk in the Draft EIS/EIR was to evaluate the baseline survey data from the AEWP surveys and information from other nearby projects to assess impacts on those species based on the proposed project.

As described in Section 2.1.2.3 of the Draft EIR/EIS, the WTGs would be light gray in color with a non-reflective finish, which is consistent with the requirements of the Kern County design guidelines specified in the WE Combining District, as well as Federal Aviation Administration (FAA) requirements. Long et al. (2011), cited by the commenter, conducted an assessment of the attractiveness of various colors to insects, with the goal of assessing whether turbine color played

a role in attracting insects (and bats that could be killed at turbines while foraging). The authors found that insects were attracted to white and light gray colors significantly more than several other colors tested. However, the study consisted of laying out variously colored cards onto the ground near a wind turbine at midday and one hour after sunset, and counting the number of insects associated with each colored card. On some evenings (but not all), a lamp was used to illuminate the cards. It is likely that a different assemblage of insects forages near the ground compared with at rotor-swept height, where aggregating insects could put bats at risk from collision. Aerially foraging insects may not show the same patterns of attraction to the colors noted in the study as the insects foraging near the ground. Second, night lighting (especially white light) is known to attract insects and the use of lamps for some of the evening portions of the study likely confounded results. Finally, the color found in the study to attract the fewest insects, purple, is not a feasible mitigation due to the impacts it would cause for other issue areas (namely, visual resources). It should also be noted that the study identified paint colors with higher ultraviolet and infrared reflection as being significantly more attractive to insects. The turbines associated with the proposed project would be painted with a non-reflective finish, which may reduce attractiveness to insects. Very little is known about the effects of turbine color on the attraction of insects and resulting mortality of bats, and the results of this study do not warrant additional mitigation for the proposed project. As Long et al. (2010) state, "…it should be made clear that modifying turbine colour alone may not be enough to mitigate the problem of wildlife-turbine interaction and that further research into other aspects such as thermal generation is needed."

It is not clear whether there is a direct relationship between insect assemblages and wind turbine color and height in the western United States. As stated in Rydell et al. (2010), the mortality of bats at wind developments is a complex phenomenon, and insect migration remains one of several viable hypotheses. As described in Section 4.21.3.3, the level of bat fatalities at wind developments depends on many variables, including local environmental characteristics and specific weather conditions, but no single predictive factor has yet been identified. It is likely that risk to bats varies seasonally, dependent on weather, migration of bats, migration of insect populations (food sources), and other factors not clearly understood at this time. Kern County and the BLM thank the commenter for the additional information, but note that this information does not change the conclusions identified in the EIR/EIS regarding the analysis of potential impacts to bats.

8-D2 The commenter states that the Draft EIS/EIR does not estimate the number of desert tortoises that occur in the project area and how many will be impacted by the proposed project. The commenter also notes that it appears desert tortoise will remain on site during construction and operation, but no clear information is proved regarding how those tortoises will be protected from harm in perpetuity.

Regarding the protection of tortoises on site during construction and operation, Mitigation Measures 4.21-1, 4.21-2, and 4.21-3 require biological monitoring of ground disturbance during the construction and operation phases, minimization of disturbance areas during construction and operation, a speed limit of 15 miles per hour on all dirt access/maintenance roads, the requirement that all vehicles remain on designated access/maintenance roads, a *Worker Education Awareness Program* that all construction and operation personnel must attend, pre-construction surveys for desert tortoise and the use of temporary tortoise-proof fencing around construction areas, the requirement that whenever a vehicle or any construction equipment is parked longer than 15 minutes within desert tortoise habitat the ground around and underneath the vehicle will be inspected for desert tortoises prior to moving the vehicle; the requirement that, unless otherwise authorized through the context of the Biological Opinion (BO) and 2081 take authorization, any tortoise encountered in the work area will be left to move on its own and would not be handled; a

biological monitor will survey for tortoises immediately in front of vegetation clearance activities; avoidance of desert tortoise burrows unless otherwise authorized by the USFWS and CDFG; Construction pipe, culvert, or similar structures with a diameter greater than three (3) inches and stored less than eight (8) inches above ground on the construction site for one or more nights shall be inspected for tortoises and other special-status wildlife before the material is moved, buried, or capped; open trenches would be fenced with temporary tortoise-proof fencing or inspected by authorized personnel periodically, at the beginning and at the end of each day, and immediately before backfilling; following construction, preparation of a report documenting the numbers and locations of desert tortoises encountered, their disposition, effectiveness of protective measures, practicality of protective measures, and recommendations for future measures that allow for better protection or more workable implementation; notification procedures upon encountering a dead or injured tortoise; and biological monitoring during any O&M activities conducted during the desert tortoise active period (March 15 to May 31 and September 1 to October 31) that may result in ground disturbance, such as weed management or vehicular access off of a designated access/maintenance road.

8-E2 The commenter states that it is unclear the amount of tortoise habitat that occurs on site, and that the Draft EIS/EIR fails to analyze the impacts to tortoise habitat. The commenter notes that impacts would occur from turbine construction and road building, which would fragment habitat and provide additional access into areas that previously were inaccessible.

The entire project site and gen-tie route supports suitable habitat for the desert tortoise; therefore, all impacts to vegetation and habitat analyzed in Sections 4.17 and 4.21 are considered impacts to tortoise habitat. As stated on page 4.21-3, the maximum ground disturbance in tortoise habitat that would result from permanent proposed project features and the temporary construction ROW is estimated at 656 acres. Of this, roughly 94 acres would be permanent habitat loss. Public access to the project site would be prohibited; therefore, the project would not result in an increase in accessibility for the general public.

8-F2 The commenter states that mitigation proposed is too vague and confusing to be meaningful and cites the requirement for compensatory mitigation for permanent impacts. The commenter also notes that if compensation lands for tortoise and other resources are nested, the compensation lands must provide habitat for all affected resources, and that if alternative desert tortoise mitigation (restoration, enhancement, and management of disturbed lands) is selected, mitigation is still required for the other species.

The strategy for achieving compensatory mitigation for permanent impacts to desert tortoise habitat allows for acquisition, restoration/enhancement or disturbed lands, and mitigation banking as options in order to allow flexibility in meeting the needs of Kern County and the BLM as well as additional agencies that may require compensatory mitigation to work together to identify specific compensatory lands that will provide the most meaningful benefit to the target resources, including desert tortoise. Nesting of compensatory mitigation required by mitigation measures or other permits and authorizations (such as a Biological Opinion, 2081 take authorization, etc.) is appropriate provided the compensation lands support suitable and/or occupied habitat for all target species. The project proponent is required to fully implement its mitigation requirements for all resources, regardless of the strategy option(s) ultimately selected.

8-G2 The comment states that the construction of the proposed project further increases emissions of particulate matter because of the disruption and elimination of potentially hundreds of acres of cryptobiotic soil crusts. Draft EIS/EIR does not describe the on-site cryptobiotic soil crusts and fails to provide a map of the soil crusts over the project site, and to present any avoidance or minimization measures. The revised Draft EIS/EIR must identify the extent of the cryptobiotic soils on site and analyze potential impacts to these ecosystem components.

The project's fugitive dust control measures are designed to require all disturbed areas to be stabilized in a manner that would be similar to the stabalization afforded by crytobiotic soils. The reduction in biotic CO2 uptake from the project, including that from disturbed cryptobiotic soils, is very small in comparison to the reduction of CO2 caused by the projects renewable energy displacement of fossil fuel combustion.

8-H2 The commenter states that a plant association identified in Section 3.17, Brittlebush Scrub-Mormon Tea Scrub, is a regionally unique plant community because *Encelia farinosa* is not known from Kern County except as a "waif" at Edwards Air Force Base. The commenter states that as a regionally unique plant community, impacts should be more carefully analyzed and mitigated.

As discussed in Draft EIS/EIR Appendix D-24 (page 31, Figure 4 and Appendix A), *Encelia farinosa* was not found within the project site. Furthermore, this finding was also confirmed within Draft EIS/EIR Appendix D-27 (page A-1, Appendix A).

8-I2 The commenter states that because of the uniqueness of water resources in the desert, all desert washes and ephemeral streams should be avoided, and expresses concern about impacts in desert washes creating erosion and sedimentation. The commenter discusses the ecological functions of desert washes and the proportionally higher vegetation and wildlife abundance and diversity associated with washes compared with the surrounding uplands.

The distribution of desert washes and ephemeral streams throughout the site (see Figures 3.17-2, 3.17-4, and 3.17-5) coupled with the nature of construction and operation of a wind energy project, makes complete avoidance of these features infeasible. The comment is correct in noting that ephemeral and intermittent streams are an important component to the existing environment, and important to native plants and animals. Potential impacts of the project associated with drainage pattern alterations, including erosion and sedimentation, would be minimized through implementation of Mitigation Measures 4.17-4 (Best Management Practices for Activities In or Near Ephemeral Drainages) and 9.19-4 (Submit a Drainage Design Plan). Mitigation Measure 4.17-4 has been updated as follows:

MM 4.17-4 Best Management Practices for Activities In or Near Ephemeral Drainages. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall <u>submit a plan which demonstrates how the project proponent will</u> implement all mitigation measures and conditions contained within the Streambed Alteration Agreement obtained from the California Department of Fish and Game for impacts to jurisdictional areas. In addition, the following Best Management Practices shall be implemented during all construction activity in or near ephemeral drainages:

1. Vehicles and equipment shall not be operated in ponded or flowing water except as described in the Streambed Alteration Agreement.
2. The project proponent shall minimize road building, construction activities, and vegetation clearing within ephemeral drainages to the extent feasible.
3. The project proponent shall not allow water containing mud, silt, or other pollutants from grading or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows.
4. Spoil sites shall not be located within 30 feet from the boundaries of drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages.
5. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or

wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering ephemeral drainages.

6. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.
7. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.
8. Avoid placing turbine support structures in aquatic features to the maximum extent practicable.
9. Natural washes shall be used for flood control, to the maximum extent practicable.
10. The number of road crossings over waters shall be minimized to the extent feasible and necessary crossings shall be designed to provide adequate flow-through during storm events to the maximum extent practicable.

Impacts to native plants and animals are characterized in Sections 4.17 and 4.21, respectively, including as relevant to surface water features and identification of mitigation measures where necessary to minimize adverse effects. The proposed AEWP would not result in any significant unavoidable impacts to surface waters and drainage patterns.

8-J2 The commenter states that the use of washes for any of the proposed project facilities, including access roads and transmission should be prohibited, as destruction of associated vegetation. Specifically the commenter states that creation of a network of new roads in the washes shold be avoided because such roads would destroy vegetation and habitat, increase siltation, and destroy soil integrity.

Please see Responses to Comments 2-J and 8-I2.

8-K2 The commenter states that only two of the proposed conservation plans that the project proposes to use for on-site resources as avoidance and minimization have been included in the Draft EIS/EIR, and lists other plans required by mitigation measures.

Those measures in the EIS/EIR that call for the preparation of plans as a component of a mitigation measure, including the plans identified in the comment, provide adequate descriptions of the intent of these plans, the required content for these plans, and performance standards for implementation of mitigation actions, as feasible. The mitigation measures also indicate where certain plans must be reviewed and approved by appropriate agencies and, where applicable, must conform to established protocols or guidance promulgated by responsible resource agencies, such as the US Fish and Wildlife Service. Therefore, the required content of the plans is known to the reader and it is possible to evaluate the minimization of impacts. A supplemental document is not warranted as a result of this comment.

In regards to the Fugitive Dust Control Plan, measures required in the plan are generally spelled out in the mitigation measures and the plan will only be providing clarification of the exact approach and other needed information, such as contact information and proposed compliance assurance/monitoring methods.

8-L2 The commenter states that for a number of species (condor, golden eagle, etc.), habitat acquisition to offset impacts is not required. The comment further states that the compensation lands must already be inhabited by the same species for which mitigation is sought, so that there would be a

net decrease in habitat for impacted species. Therefore, the comment asserts that a minimum 5:1 ratio is more appropriate for all habitat impacts.

The mitigation measures for providing mitigation lands require the appropriate agencies review and approve the mitigation sites prior to acquisition (for example, see Mitigation Measures 4.17-1 for native habitats and 4.21-3 for burrowing owl). With regard to the recommendation for a minimum 5:1 mitigation ratio, Mitigation Measure 4.17-1 includes compensation and/or restoration at a minimum 1:1 ratio for upland habitats and 3:1 for desert wash habitats or as required by the permitting agencies. Kern County and the BLM have determined that this approach is appropriate for the purposes of CEQA and NEPA. Compensation is just one of the mitigation strategies identified to minimize impacts to biological resources.

8-M2 The commenter describes cumulative impact analysis as a critical part of a CEQA analysis, and cites case law. The commenter states that where impacts of a project are "cumulatively considerable" the agency must also examine alternatives that would avoid those impacts and mitigation measures for those impacts, and describes different ways that potential cumulative impacts can be addressed.

Kern County and the BLM agree that a cumulative impact analysis is a required component of CEQA analysis. As such, each of the impact analysis sections included in Chapter 4 of the EIS/EIR contain an analysis of cumulative impacts of the project (Alternative A) and each of the six project alternatives (Alternatives B-G). Additionally, beginning on page 4.1-4, Section 4.1.6 provides a complete discussion of the cumulative analysis approach. Section 2.1 of the EIS/EIR also includes a discussion of the alternatives development and screening processing, beginning on page 2-2.

8-N2 The commenter agrees with the conclusions in the Draft EIS/EIR regarding significant cumulative impacts to wildlife movement and migration corridors, avian and bat collisions, and displacement of sensitive avian and bat species, and states that consideration of the County's purpose and need for the project should be clarified. The commenter states that approving another wind project will do nothing to decrease the significant impacts to these resources.

Although significant cumulative impacts would occur, the avoidance and minimization measures as well as compensatory mitigation to offset direct, indirect, and cumulative impacts to wildlife resources would assure compliance with state and federal laws, and the impacts would have no substantial adverse effects following mitigation for most resources. The potential for significant cumulative impacts does not change the project objectives of the project, which include potentially beneficial impacts. The project objectives include supporting California's Renewable Portfolio Standard (RPS) and California Assembly Bill 32 by serving as a source of clean renewable energy, reducing the need for electricity generated from fossil fuels and offsetting greenhouse gas emissions; and creating a substantial number of temporary and permanent jobs in the county. Please see Section 2.1.2.1 for a complete list.

8-O2 The commenter defines cumulative impacts under NEPA, citing case law.

This information is noted.

The commenter, citing case law, describes NEPA requirements for conducting cumulative analysis, including determination of whether a proposed action will significantly impact the human environment, the requirement for quantification or detailed information in the analysis, a consideration of the actual environmental effects that can be expected on resources from cumulative projects, and that the cumulative analysis must be done as early in the environmental review process as possible (before the action takes place).

This information is noted.

The commenter states that NEPA regulations also require that indirect effects including changes to land use patterns and induced growth be analyzed, and defines indirect effects. The commenter references case law pertaining to growth-inducing effects.

Thank you for your comment. Growth inducing impacts of the project were analyzed and discussed in Section 4.24 (Growth-Inducing Impacts) of the Draft EIS/EIR. Cumulative impacts, which include the evaluation of indirect effects, were considered and evaluated in detail in this EIS/EIR. The evaluation of indirect effects within the cumulative analysis was developed by the EIS/EIR preparers at the direction of and in coordination with BLM and Kern County using appropriate screening criteria pursuant to NEPA and CEQA. These criteria were used to evaluate whether a potential alternative would result in indirect or cumulative impacts, and included avoidance or reduction of any such identified potentially significant environmental impacts.

8-P2 The commenter states that the Draft EIS/EIR failed to include an analysis of the growth inducing cumulative impacts from the project.

Growth inducing impacts of the project were analyzed and discussed in Section 4.24 (Growth-Inducing Impacts) of the Draft EIS/EIR. Employment, proposed transmission line facilities, and roadways associated with the AEWP would not induce growth. Implementation of the proposed AEWP would be in response to anticipated future load growth and would be consistent with current regional planning projections.

8-Q2 The commenter concludes the comment letter by stating the Draft EIS/EIR is inadequate because it omits important information regarding potentially significant impacts, especially to California condor, golden eagle, and other rare and unique biological species and resources, and fails to consider a range of alternatives that will avoid the impacts to sensitive biological resources. The commenter urges Kern County and the BLM to revise the environmental review documents and provide a supplemental Draft EIS/EIR that addresses all of the issues raised in the comment letter.

Please see Responses to Comments 8-A though 8-R2.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

8-R2 The commenter provided a number of references (as a CD attachment) as support to their comments.

All provided references will be included as part of the administrative record for the EIS/EIR. The comments and supporting references have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 9: Sierra Club/Defenders of Wildlife/Audubon California (September 26, 2012)

September 26, 2012

Ms. Jacquelyn Kitchen
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Bureau of Land Management
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22835 Calle San Juan de Los Lagos
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Dear Ms. Kitchen and Mr. Childers:

On behalf of Audubon California, Defenders of Wildlife and Sierra Club with a combined total of over 300,000 members we thank you for the opportunity to submit our comments on the joint 9-A

Draft Environmental Impact Report (DEIR) and Draft Environmental Statement (DEIS) for the Alta East Wind Energy Project.

In recognition of the growing threats to human and ecological communities presented by the release of greenhouse gases and the resultant climate change, **Audubon** has championed the aggressive development of both energy conservation and renewable energy generation to reduce those threats. In locations throughout our state Audubon at the state level, and our chapters at a local level, have successfully collaborated on the development of renewable energy facilities—striking a balance between landscape conservation priorities and renewable energy.

Defenders of Wildlife ("Defenders") has more than 1 million members nationwide with more than 170,000 members and supporters in California. Defenders is dedicated to protecting all wild animals and plants in their natural communities. To this end, we employ science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions in order to impede the accelerating rate of extinction of species, associated loss of biological diversity, and habitat alteration and destruction. **9-A, cont.**

The Sierra Club is a national nonprofit organization of approximately 1.3 million members and supporters (approximately 250,000 of whom live in California) 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.

Our groups have ongoing concerns regarding the cumulative impacts of wind energy development in the Southern Sierra on sensitive species (particularly avian species), and believe there are numerous improvements in the avoidance, minimization and mitigation measures that need to be incorporated into a revised EIR/EIS to reduce the impacts to species. The County and BLM's goals need to be to reduce the impacts to a less than significant level, and adoption of our recommendations/requests will help achieve that goal, if possible.

As the County is aware, CEQA serves "to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." (*Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.* (1988) 47 Cal. 3d 376, 392.) If CEQA is "scrupulously followed," the public will know the basis for the agency's action and "being duly informed, can respond accordingly to action with which it disagrees." (*Id.*) Thus, CEQA "protects not only the environment but also informed self-government." (*Id.*) The environmental review documents must "contain facts and analysis, not just the agency's bare conclusions or opinions." (*Laurel Heights Improvement Assn. v. Regents* (1989) 47 Cal. 3d 376, 404 [and cases cited therein].) The environmental review documents "must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." (Id.) **9-A, cont.**

Our comments are presented in a new format – a spread sheet – that incorporates

- the text from the DEIR
- the location in the DEIR
- our comment
- our recommendation

We hope you find this template useful. We believe there are numerous improvements in the avoidance, minimization and mitigation measures that need to be incorporated into a revised EIR to reduce the impacts to species. The County's goals need to be to reduce the impacts to a less than significant level, and adoption of our recommendations/requests will help achieve that goal, if possible. **9-A, cont.**

Sincerely,

Garry George
Renewable Energy Project Director
AUDUBON CALIFORNIA

Stephanie Dashiell
California Desert Associate
Defenders of Wildlife

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

Comment#	Statement	Location	Comment	Recommendation	
1	In accordance with NEPA (40 CFR §1502.14(e)), the BLM has identified its preferred alternative as Alternative C, Reduced Project North.	DEIR/DEIS 2-25	Of all the alternatives, Audubon supports this NEPA alternative		9-B
2	Among the other AEWP alternatives, Kern County has identified Alternative C, Reduced Project North as the environmentally superior alternative because it would:	DEIR/DEIS 2-25	Of all the alternatives, Audubon supports this CEQA alternative		9-C
3	GENERAL		We note and thank the proponent for the amount of effort, detail, analysis and presentation of documentationon of wildlife usage of the site that accompanies this document. The multiple Appendices, copy of the Avian Bat Protection Plan (now called Bird Bat Conservation Strategy) and Eagle Conservation Plan have all been prepared in advance to inform the design of the project and in adherence to federal Land-based Wind Turbine guidelines.	Include a requirement in future wind energy applications in Kern County and BLM to meet this level of effort.	9-D
4	GENERAL		The DEIR fails to address issues of habitat fragmentation from the proposed project. While it references USFWS' Land-Based Wind Energy Guidelines (WEG)[1], it does not apply the guidance in the impact analysis. For example, the DEIR does not identify, much less analyze the impacts to fragmentation-sensitive species (WEG at 12) that occur on the proposed project site. It fails to analyze the large-scale fragmentation of habitat (WEG at 12) for rare and common species that has occurred in the area and how the further fragmentation by the proposed project will impact ecological processes and crucial connectivity. These fragmentation issues are only the first tier of guidelines that remain unaddressed in the DEIR, however, without these most basic issues identified and analyzed, the DEIR fails to comply with the WEG on this issues. We recognize that WEG are voluntary, however, the methodology presented in the WEG is extremely useful in evaluating the impacts from the proposed project on the habitat in the CEQA review process[1] www.fws.gov/windenergy/docs/WEG_final.pdf . EnXco has publicly stated that they will follow the guidelines (see attached letter to Secretary Salazar)	Use the WEG guidelines to evaluate the habitat fragmentation impacts from the proposed project, and the guidance for minimizing and mitigating residual impacts.	9-E

5 Raptor and other avian baseline and risk analysis in Appendices D-3,4,5,6,7,8	DEIS/DEIS Appendix D	These documents are confusing as a baseline description of the avian use of the site. The documents are filled with subjective statistical analysis that compares the site to other unnamed sites in other parts of the country, fails to describe the methodology used for choosing other sites to compare, and the relevancy of the analysis in assessing risk or establishing a baseline for purposes of CEQA or for purposes of comparison to post-construction monitoring.	Compare raptor use to other projects in the Tehachapis, including Pine Tree Wind Project, rather than comparing data from unnamed sites in unnamed locations for comparisons or risk assessment. Methodology for choosing the sample sites should be included in the analysis. Additionally, Ferrer et al in **Weak Relationship between risk assessment studies and recorded mortality in wind farms**, Journal of Applied Ecology, 2011: There was no clear relationship between predicted risk and the actual recorded bird mortality at wind farms. Risk assessment studies incorrectly assumed a linear relationship between frequency of observed birds and fatalities. Nevertheless, it is known that bird mor tality in wind farms is related to physical characteristics around individual wind turbines. However, EIAs are usually conducted at the scale of the entire wind farm. The correlation between predicted mortality and actual mortality must be improved in future risk assessment studies by changing the scale of these studies to focus on the locations of proposed individual wind turbine sites and working on a species specific level. Proponent should characterize habitat and usage per planned turbine rather than sectors or the entire site.	9-F
6 A qualitative comparison of mapped flight paths across survey points indicate higher use for some raptor species (buteos, eagles, and falcons) at points four, five, and six, in the areas of greater topographic relief	DEIS/DEIR, Appendix D-3, p. 9	This would suggest further evaluation of turbine design in areas four, five and six.	Reevaluate the project design for these areas, and prioritize monitoring in these areas.Monitoring Protocol and data should be standardized across all wind projects in the Tehachapis, for cumulative impacts comparisons and comparison across projects.	9-G
7 Using mortality data collected during a 10-year period from wind-energy facilities throughout the entire United States, the average number of bird collision fatalities is 3.1 per megawatt (MW) per year, or 2.3 fatalities per turbine per year (NWCC 2004).	DEIS/DEIR, Appendix D-3, p. 11	Pine Tree is 11.8 per megawatt (MW) per yea in the Tehachapis. This would be a more scientific comparison and shows a higher risk in this area.	Use a risk adverse analysis or use these mortality averages as thresholds in the BBCS. Monitoring Protocol and data should be standardized across all wind projects in the Tehachapis, for cumulative impact comparisons and comparison across projects.	9-H
8 The SCWRA does not appear to provide important stopover habitat for migrant songbirds based on the results of the fixed point bird use surveys.		This analysis is inadequate. Birds may fly through the SCWRA RSA on ascent or descent to stopover habitat nearby. *Most songbirds, waterfowl, shorebirds, herons, and egrets migrate at night (Kerlinger and Moore, 1989). Nocturnal migrants generally take off after sunset, ascend to their cruising altitude between 300 and 2,000 feet (90–610 meters), and return to land before sunrise (Kerlinger, 1995). For most of their flight, songbirds and other nocturnal migrants are above the reach of wind turbines, but they pass through the altitudinal range of wind turbines during ascents and descents and may also fly closer to the ground during inclement weather or when negotiating mountain passes (Able, 1970; Richardson, 2000).*	Conduct a more thorough analysis of nocturnal migration through the project area using radar.	9-I
9 Bird types most often observed flying within the turbine rotor-swept height were vultures (58.3%) and raptors (23.1%).	DEIR/DEIS D3- p.i	Passerines (songbirds) have been the most abundant avian fatality at wind farms outside California, often comprising more than 80% of total avian fatalities (Erickson et al. 2001a). Also, Pine Tree Wind Project mortality report shows that. *The vast majority of bird fatalities were migrant and resident passerine birds.(citation: The Pine Tree Mortality report).*	Conduct a more thorough analysis of nocturnal migration through the project area using radar.	9-J

10	Due to the fact that very few nonraptor species were observed in the rotor swept area (RSA), and no nonraptor USFWS designated Birds of Conservation Concern species were observed in the RSA, it is extremely unlikely that non-raptor populations will be adversely affected by direct mortality from the operation of the wind energy facility.	ABB	This conclusion is not supported by evidence. See above.	Nocturnal studies were not conducted. Either conduct nocturnal studies or remove this conclusion	9-K
11	The low levels of documented use by all bird species suggest that bird density is very low and migration corridors or stopover habitat are not present onsite.	ABB	This conclusion needs to be supported by evidence of how birds use the site at night.	Same as above	9-L
12	Nighttime visibility data available for the area suggest that risk of nocturnal avian fatality during migration is low because of infrequent low visibility events that are associated with bird strike risk.	ABB	This conclusion is not supported by evidence that nocturnal avian fatality in California during migration is caused by low visibility events.	Remove this conclusion or support it with evidence that nocturnal avian fatality in California is caused by low visibility events.	9-M
13	AWD is not aware of any significant fatality events involving nocturnal migrants in the region.	ABB	What is the definition of "significant" used here?	See Pine Tree Wind Project Monitoring Report	9-N
14	To ensure that impacts on avian species do not reach levels of significance during project operation or result in a net loss of avian species in the regional population, study results will be provided to USFWS on an annual basis.	ABB	This statement is unclear.	Please define standard of "significance" used here.	9-O
15	GENERAL on ABB	ABB	ABB has no threshholds of mortality or disturbance to generate adaptive management or operational changes	Thresholds of mortality should trigger adaptive management or operational changes	9-P
16	Alta East differs from this wind resource area in that it has few perches and potentially low small mammal and prey resource densities.	ABB	No prey base studies were done so how can this conclusion be supported?	Conduct prey base study or remove this statement.	9-Q
17	Although project prey studies were not done, the project area generally consists of habitats typically not selected by golden eagles.	ECP	This conclusioni is unsupported by evidence.	No prey base studies were done so how can this conclusion be supported?	9-R
18	It is generally understood that nonbreeding eagles use areas on the margins of territories occupied by breeding adults (Watson, 1997; Hunt, 1998; Caro et al., 2010). These "floaters" have been shown to be more vulnerable to collision with turbine blades at wind energy projects than locally breeding adults and juveniles are (Hunt et al., 1999 and 2002); however, Hunt (2002) associates this risk with hunting of live prey behavior, which was not observed and is not common based on the data collected for the project.	ECP	This conclusion is unsupported by evidence.	No prey base studies were done so how can this conclusion be supported?	9-S
19	Potential for seasonal variability in use of the project area exists, and data indicate that the project is likely more attractive to eagles in the fall and winter than during other times of the year.	ECP	ECP should provide for a threshold of Eagle mortality that will trigger a seasonal shutdown in fall or winter. (see following comment).		9-T
20	Golden eagle use accounted for approximately 22.2 percent of the observed raptor use at the AEWRA during the two years of study; therefore, assuming the proportion of eagles observed is related to the proportion of eagle mortality that would be expected, an eagle mortality rate of 0.0022 eagles/MW/year (0.0066 eagles/turbine/year), or 0.700 eagle fatalities per year, would be estimated for the proposed 318-MW wind energy project. Using this prediction, project-wide eagle mortality would be approximately three to four eagles every five years	ECP	1.) Three to four eagles every five years contradicts earlier predictions of low Eagle mortality and the assessment of the site as Category 3. 2.)	Thresholds for Eagles should be set at this predicted level or an adjusted level that corresponds to propnents earlier prediction	9-U

21	This regression analysis currently one means of predicting raptor fatality, and AWD cannot identify any specific behaviors or risk factors that would cause the eagles present on the project to be at risk of collision fatality (see Table 3); therefore, eagle fatality would be predicted to be zero for the project using this method and AWD concludes that take of eagles is highly unlikely during operation.	ECP	This is contradictory to above.	We recommend using this conclusion as a threshold for the ECP.	9-V
22	AWD will provide BLM and USFWS with the results of the mortality study for eagles annually. A qualified biologist will conduct mortality monitoring using a statistically significant sample size of operational turbines within the project area, not to exceed 33 percent of the WTGs. Depending on the results of the monitoring, more or fewer turbines may be monitored each subsequent year of study.	ECP		The documents have identified turbine areas where Eagles have been seen the most as areas 4,5,6. Turbines in those areas should be prioritized for monitoring if only 33% of the turbines are monitored.	9-W
23	AWD or its representative will conduct post-construction breeding monitoring of eagle territories within 10 miles of the project in the first and third years following the project's initial operation. Post-construction breeding monitoring will include aerial surveys completed in accordance with the USFWS 2010 Inventory and Monitoring Protocol recommendations (Pagel et al., 2010). Survey results will be provided annually to BLM and USFWS.	ECP	We are concerned about the impacts such as disurbance of frequent and numerous helicopter surveys in the Tehachapi Mtns.	These surveys should be coordinated among developers in the Tehachapis and minimized.	9-X
24	Mitigation Measure 4.17-1.... all other native habitats non-native habitats supporting burrowing owl and/or desert tortoise would be mitigated at 1:1. Permanent impacts would be mitigated through one or more of the following: acquisition and conservation of off-site lands; onsite restoration, enhancement, and management of disturbed areas not impacted by the AEWP; or mitigation banking.	MM 4.17-1	This mitigation measure is inadequate to reduce impacts on Desert Tortoise.	We encourage the applicant to acquire off-site desert tortoise habitat in the ration of 1:1 for all permanently impacted desert tortoise habitat on the project site.	9-Y
25	Desert Tortoise: Four (4) adult tortoises and one (1) juvenile were found on the site, as well as 28 burrows, 1 shell-skeletal remains, and 40 scat events (Sundance, 2009).	3.21-20 (Wildlife Resources)		We recommend the applicant develop a home range buffer around active burrows in order to maintain and conserve the small desert tortoise population on-site over the life of the project. The applicant should make every attempt to leave desert tortoise habitat intact and avoid desert tortoise active burrows.	9-Z
26	Mitigation Measure 4.2.1-3(e) "Impacts to burrowing owl territories sahll be mitigated through a combination of off-site habitat ompensation and/or off-site restoration of disturbed habitat capable of supporting the species." "The offsite area to be preserved can coincide with off-site mitigation lands for permanent impacts to sensitive vegetation communities, with the approval of the Bureau of Land Management and the California Department of Fish and Game."	MM 4.2.1-3(e)	This mitigation measure is inadequate to reduce impacts on Burrowing owl to less than significant.	We recommend the applicant to mitigate for impacts to burrowing owl territories through habitat compensation placed in conservation easements in perpetuity and managed for the conservation of the burrowing owl. Burrowing Owl mitigation lands should not coincide with off-site mitigation lands for conservation of sensitive vegetation communities.	9-A2

27	MM 4.21-6. Avian and Bat Protection Plan. Section 6.4 states that "Mortality predictions and avian and bat risk assessments performed in the permitting process will be used in conjunction with any agency requirements among other factors including but not limited to economic considerations to determine if adaptive management is necessary."	MM 4.21-6/Appendix D-29	Assessments in the permitting stage are often insufficient indicators of avian mortality during project operations.	We encourage a robust adaptive monitoring and management strategy with conservation measures including seasonal curtailment, curtailment in response to specific events, decommissioning and/or relocation of specific turbines when mortality thresholds are met, and other measures if/when proven effective by wildlife agencies. Monitoring Protocol and data should be standardized across all wind projects in the Tehachapis, for cumulative impacst comparisons and comparison across projects.	9-B2
28	MM 4.21-7. Conservation Plan for the Avoidance and Minimization of Potential Impacts to Golden Eagles. Section 2.5.1. Fatality Studies--describe that fatality studies will occur at years 1, 3 and 5 of the project to demonstrate that "the level of incidental injury and mortality does not result in unanticipated long-term decline in populations of eagle in that region. Monitoring would be ceased, explaned or continued in response to the data collected." Section 3.0 "Adaptive Management" is incomplete.	MM 4.21-7/Appendix D-30	This mitigation measure is inadequate to reduce the impacts on Golden Eagle to less than significant.	We recommend that fatality studies occur for the life of the project. Unanticipated long-term effects on eagle in the region is overly broad and may be difficult to prove. A more appropriate metric would be eagle fatalities at the project site, as discussed above. Section 3.0 should include specific corrective actions triggered by specific take thresholds. Adaptive management measures should include: seasonal curtailment, curtailment in response to specific events, decommissioning and/or relocation of specific turbines when mortality thresholds are met, and other measures if/when proven effective by USFWS. Given the large number of wind projects under development by the applicant in the TWRA, and the cumulative impacts of this wind development, we also recommend that AWD prepare a comprehensive Golden Eagle Mitigation strategy for its projects in the Tehachapis similar to its California Condor Mitigation Strategy.	9-C2
29	Adaptive Management	Section 3.0	This section on "Adaptive Management" is incomplete.	Complete this section	9-D2
30	Swainson's Hawk	DEIR/DEIS, D-13,14	This data and analysis are inadequate to reduce impacts to Swainson's Hawk to less than significant	Proponent should also conduct survey of foraging habitat that will be removed by project construction and transmission infrastructure. Foraging habitat including agricultural lands for nesting pairs of Swainson's Hawk in the Antelope Valley is protected and must be mitigated. California Department of Fish & Game can share a map of known nests in the Antelope Valley. Mitigation measures are in the attached document.	9-E2

Swainson's Hawk
Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California

State of California
California Energy Commission and Department of Fish and Game
June 2, 2010

Swainson's Hawk Background Information

The Swainson's hawk (*Buteo swainsoni*) is listed as a California state threatened species under the California Endangered Species Act (CESA). The species is not listed as threatened or endangered under the federal Endangered Species Act. To comply with state wildlife protection requirements and receive project approvals, renewable energy project developers proposing projects in the Desert Renewable Energy Conservation Plan (DRECP) area may be required to conduct surveys and avoid or minimize impacts to Swainson's hawks and related nesting and foraging habitat. The survey protocols and mitigation and monitoring plan recommendations provided below suggest approaches and measures for complying with protection requirements.

Antelope Valley Swainson's hawks are known to have historically nested in Joshua tree woodlands and foraged in grasslands and native desert scrub communities. Currently, they nest in Joshua tree woodlands, ornamental roadside trees, and windrow or perimeter trees in active and historical agricultural areas. Foraging habitat includes dry land and irrigated pasture, alfalfa, fallow fields, low-growing row or field crops, new orchards, and cereal grain crops. Swainson's hawks may also forage in grasslands, Joshua tree woodlands, and other desert scrub habitats that support a suitable prey base. Gophers dominate the prey base of agriculturally based pairs while Swainson's hawks nesting in natural desert habitats consume a wider variety of prey species. While California's Central Valley Swainson's hawk population winters in Mexico, Central America South America, and a small percentage in the Central Valley, the migration habits of the Antelope Valley population are unknown. Recent observations suggest that they may arrive in nesting territories generally later than the Central Valley Population (Pete Bloom, raptor biologist, personal communication). 9-F2

Environmental Review Considerations

The California Environmental Quality Act (CEQA), Warren-Alquist Act and implementing regulations, and CESA require consideration of direct, indirect, temporary, permanent, individual project, and cumulative impacts. CEQA allows approval of projects with significant effects when measures have been included to avoid or mitigate those effects, or specific considerations make such measures infeasible and specific benefits outweigh the significant effects. (CEQA Guidelines §21081). CESA regulates the

taking of state-listed species. "Take" is defined as to "hunt, pursue, catch, capture, or kill, or to attempt to hunt, pursue, catch, capture, or kill." (Fish and Game Code §86). Incidental take authorization requires that all impacts to the species are minimized and fully mitigated and that mitigation is roughly proportional to the extent of the impacts of the taking. (14CCR § 783.4). This "full mitigation" standard is intended to ensure that the status of the species is the same or better after project and mitigation implementation as it was prior to project implementation.

Renewable energy project development could cause direct, indirect, individual, and cumulative adverse impacts to Swainson's hawks when facility construction and operation areas (such as wind turbines, power plants, solar panels and tower sites, access roads, staging areas, and pulling/splicing locations) occur in areas where hawks are present. Potential impacts include loss of foraging habitat and disruption of breeding activities due to increased dust, noise, and human presence. Direct mortality from vehicle strikes and collisions with wind turbines is also known to occur. Construction disturbance during the breeding season and habitat loss could cause incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment.

The current land uses in the Antelope Valley area support approximately 10 breeding pairs. This area comprises the southernmost edge of the known breeding range for this species in California. The small number of breeding Swainson's hawks in the Antelope Valley and the potential isolation from other Swainson's hawk populations makes the Antelope Valley population particularly susceptible to extirpation. Swainson's hawks have high nest site fidelity, meaning they return to the same site year after year (Estep 1989, Woodbridge et al. 1995) This may limit exchange of individual birds between distant breeding groups (Hull et al. 2007). Hull et al. (2007) found evidence suggesting that the Central Valley population has had little recent genetic exchange with other populations east of the Sierra Nevada. Due to the geographical isolation of the Antelope Valley Swainson's hawk population from other breeding populations, together with the species' high site fidelity, it is reasonable to infer that rapid re-colonization of the Antelope Valley would be unlikely if nesting pairs were lost. Given these facts, the California Department of Fish and Game (Department) would consider impacts to breeding pairs to be potentially significant because they may cause the population to become less than self-sustaining. **9-F2, cont.**

A substantial reduction in numbers or habitat of a rare, threatened, or endangered species would be considered a significant impact under CEQA. Potentially significant impacts may result from activities that cause nest abandonment, loss of nest trees, loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), or direct mortality. Due to the Swainson's hawk's known preference for areas of low vegetation that support abundant prey, such as grasslands or alfalfa fields (Bechard 1982, Babcock 1995), the Department considers conversion of foraging areas to renewable energy power plant facility sites to be habitat loss. For example, solar panel arrays are expected to eliminate most or all foraging potential. Significant habitat loss may result from individual projects and cumulatively, from multiple projects. Each

project which contributes to a significant cumulative effect must offset its contribution to that effect in order to determine that the cumulative impacts have been avoided.

The Department considers a nest site to be active if it was used at least once during the past 5 years. Impacts to suitable habitat or individual birds within a five-mile radius of an active nest will be considered significant and to have the potential to "take" Swainson's hawks as that term is defined in §86 of the Fish and Game Code. Please consult with the Department when determining whether "take" authorization is warranted for a specific project.

Special Considerations for Wind Energy Development

Wind turbines present an additional, continuous, long-term risk of Swainson's hawk take throughout the life of a project. This continuous risk is not always considered in the environmental analyses for other types of projects that may have limited short-term impacts (e.g. construction related impacts). It has been documented elsewhere in California that Swainson's hawks are killed by wind turbines. Turbine strikes could occur during migration or during the nesting season. Swainson's hawk surveys for wind energy development should follow the same methods as for solar energy projects, described below, but the impacts analysis and corresponding mitigation should consider the additional continuous long-term risk of turbine-related fatalities. Habitat impact analysis should consider both the ground surface area and the air space that is used by Swainson's hawks. The mitigation methods described below are specific to ground surface impacts. Wind energy development project proponents should consult with the Department to develop avoidance measures and mitigation specific for the loss of air space and the potential for on-going take of Swainson's hawk during project operations." For additional avian considerations that are applicable to Swainson's hawk, please refer to the "California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development" (California Energy Commission and California Department of Fish and Game 2007). The guidelines can be found at http://www.energy.ca.gov/windguidelines/index.html. **9-F2, cont.**

Survey Protocol

The following survey protocols and monitoring/mitigation recommendations suggest surveys and acquisition of mitigation lands prior to construction of the project if nests are found within five miles of a project site. Before conducting surveys for a particular project, project developers are encouraged to contact the Department and the appropriate lead agencies for up-to-date, site-specific issues and possible refinement of the following survey protocols and monitoring/mitigation recommendations. Survey methods may be flexible depending on surveyor experience and/or already-known nesting status for a given site. Please contact the Department (Region 4 for Kern County and Region 5 for Los Angeles County) to use an alternate survey plan from that suggested within this document.

A qualified raptor biologist with Swainson's hawk survey experience, approved by the Department and the appropriate lead agency, should conduct surveys in a manner that maximizes the potential to observe the adult Swainson's hawks and the nest/chicks via visual and audible cues within a five-mile radius of the project. All potential nest trees within the five-mile radius shall be surveyed for presence of nests. Surveys should be conducted prior to environmental analysis. Surveys should be repeated within the 5-mile radius if a survey season ensues or elapses before the onset of project related activities. If construction begins mid-survey season the year after the initial surveys, then the surveys should continue for that part of the season before construction.

Examples of suitable habitats are Joshua tree woodlands, grasslands, desert scrub communities, and agricultural lands (such as alfalfa, fallow fields, beet, tomato, onions, and other low-growing row or field crops, dry-land and irrigated pasture, cereal grain crops [including corn after harvest], and new orchards). Consult with the Department when determining whether the project site is within five miles of already-known nest sites. If hawks or known nest sites are found within the five-mile radius, consult with the Department and the appropriate lead agency for follow-up to the surveys.

Minimum Equipment

Minimum survey equipment includes a high-quality pair of binoculars and a high quality spotting scope. Surveying even the smallest project area will take hours, and poor optics often result in eye-strain and difficulty distinguishing details in vegetation and subject birds. Other equipment includes good maps, GPS units, flagging, and notebooks.

9-F2, cont.

Walking vs Driving

Driving or "windshield surveys" are usually preferred to walking if an adequate roadway is available through or around the project site. While driving, the observer can typically make a closer approach to a hawk without causing the bird to fly. Although it might appear that a flying bird is more visible, they often fly away from the observer using trees as screens; and it is difficult to determine from where a flying bird originated. Walking surveys are useful in locating a nest after a nest territory is identified, or when driving is not an option.

Angle and Distance to the Tree

Surveying subject trees from multiple angles will greatly increase the observer's chance of detecting a nest or hawk, especially after trees are fully leafed and when surveying multiple trees in close proximity. When surveying from an access road, survey in both directions. Maintaining a distance of 50 meters to 200 meters from subject trees is optimal for observing perched and flying hawks without greatly reducing the chance of detecting a nest/young. Once a nesting territory is identified, a closer inspection may be required to locate the nest.

Speed
Travel at a speed that allows for a thorough inspection of a potential nest site. Survey speeds should not exceed 5 miles per hour to the greatest extent possible. Stop frequently to scan subject trees with binoculars and a spotting scope.

Visual and Audible Cues
Focus surveys on both observations and vocalizations. Observations of nests, perched adults, displaying adults, and chicks during the nesting season are all indicators of nesting Swainson's hawks. In addition, vocalizations are extremely helpful in locating nesting territories. Vocal communication between hawks is frequent (1) during territorial displays, (2) during courtship and mating, (3) through the nesting period as mates notify each other that food is available or that a threat exists, (4) and as older chicks and fledglings beg for food.

Distractions
Minimize distractions while surveying. Although two pairs of eyes may be better than one pair at times, conversation may limit focus. Radios should be off, not only are they distracting, they may cover a hawk's call.

Notes and Species Observed
Take thorough field notes. Detailed notes and maps of the location of observed Swainson's hawk nests are essential for filling gaps in the California Natural Diversity Data Base; please note all observed nest sites, including date and time of observation, location name, UTM coordinates, number of young, and any behavioral observations. Also document the occurrence of nesting great homed owls, red-tailed hawks, red-shouldered hawks and other potentially competitive species. These species will infrequently nest within 100 yards of each other, so the presence of one species will not necessarily exclude another. **9-F2 cont.**

Timing
To meet *the minimum level* of protection for the species, surveys should be completed for *at least* the two survey periods immediately prior to a project's initiation. For example, if a project is scheduled to begin on June 1, you should complete three surveys in Period II and three surveys in Period III. However, it is always recommended that surveys be completed in Periods II, III, and IV prior to environmental review.

Survey Period I
Survey dates: January-March 31 (optional but recommended; pre-arrival)
Survey Time: All day
Number of Surveys: 1
Justification and search image: Prior to Swainson's hawks arrival from wintering grounds, it is very helpful to survey the project area to determine potential nest locations. Most nests are easily observed from relatively long distances, giving the surveyor the opportunity to identify potential nest sites, as well as becoming familiar with the project area. It also gives the surveyor the opportunity to locate and map competing species nest sites such as great homed owls from February on, and red-tailed hawks

from March on. After March 1, surveyors may observe Swainson's hawks staging in traditional nest territories.

Survey Period II
Survey dates: April 1 – April 30 (arrival; nest building)
Survey Time: All day
Number of Surveys: 3
Justification and search image: Most Antelope Valley Swainson's hawks return by April 1, and immediately begin occupying their traditional nest territories. For those few that do not return by April 1, there are often hawks ("floaters") that act as place-holders in traditional nest sites; they are birds that do not have mates, but temporarily attach themselves to traditional territories and/or one of the site's "owners." Floaters are usually displaced by the territories' owner(s) if the owner returns. Most trees are leafless and are relatively transparent; it is easy to observe old nests, staging birds, and competing species. The hawks are usually in their territories during the survey hours, but typically soaring and foraging in the mid-day hours. Swainson's hawks may often be observed involved in territorial and courtship displays, and circling the nest territory. Potential nest sites identified by the observation of staging Swainson's hawks will usually be active territories during that season, although the pair may not successfully nest/reproduce that year. Both males and females are actively nest building, visiting their selected site frequently. Later in this survey period, territorial and courtship displays are increased, as is copulation. The birds tend to vocalize often, and nest locations are most easily identified. This period may require a great deal of "sit and watch" surveying. **9-F2, cont,**

Survey Period III
Survey dates: May 1 – May 30 (egg laying; incubation)
Survey Time: daylight hours, as needed to monitor known nest sites only
Number of Surveys: 3
Justification and search image: Nests are extremely difficult to locate this time of year, and even the most experienced surveyor may miss them, especially if the previous surveys have not been done. During this phase of nesting, the female Swainson's hawk is in brood position, very low in the nest, laying eggs, incubating, or protecting the newly hatched and vulnerable chicks; her head may or may not be visible. Nests are often well-hidden, built into heavily vegetated sections of trees or in clumps of mistletoe, making them all but invisible. Trees are usually not viewable from all angles, which may make nest observation impossible. Following the male to the nest may be the only method to locate it, and the male will spend hours away from the nest foraging, soaring, and will generally avoid drawing attention to the nest site. Even if the observer is fortunate enough to see a male returning with food for the female, if the female determines it is not safe she will not call the male in, and he will not approach the nest; this may happen if the observer, or others, are too close to the nest or if other threats, such as rival hawks, are apparent to the female or male.

Survey Period IV
Survey dates: June 1 – July 15 (fledging)
Survey Time: Sunrise to 1200, 1600 to sunset
Number of Surveys: 3
Justification and search image: Young are active and visible, and relatively safe without parental protection. Both adults make numerous trips to the nest and are often soaring above, or perched near or on the nest tree. The location and construction of the nest may still limit visibility of the nest, young, and adults.

Reporting
Provide the Department and the appropriate lead agency with pre-construction survey results in a written report, within 30 days prior to commencement of construction activities. Report should include date of the report, authors and affiliations, contact information, introduction, methods, study location (include map), results, discussion, and literature cited. For surveys intended to support environmental impact analyses prior to project approval, provide the Department and the lead agency with written survey reports within 30 days of survey completion. Submit California Natural Diversity Database (CNDDB) forms for any listed, fully protected, or species of special concerncountered and positively identified. CNDDB forms may be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDB_FieldSurveyForm.pdf. **9-F2, cont.**

Monitoring and Mitigation Plan Recommendations

1. If surveys locate a nest site, prepare a Swainson's hawk Monitoring and Mitigation Plan in consultation with the Department and the appropriate lead agency. Plans should be prepared by a qualified biologist approved by the Department and the appropriate lead agency. Include in the plans detailed measures to avoid and minimize impacts to Swainson's hawks in and near the construction areas. For example:

    a. If a nest site is found, design the project to allow sufficient foraging and fledging area to maintain the nest site.

    b. During the nesting season, ensure no new disturbances, habitat conversions, or other project-related activities that may cause nest abandonment or forced fledging occur within 1/2 mile of an active nest between March 1 and September 15. Buffer zones may be adjusted in consultation with the Department and the lead agency.

    c. Do not remove Swainson's hawk nest trees unless avoidance measures are determined to be infeasible. Removal of such trees should occur only during the timeframe of October 1 and the last day in February.

2. Monitoring plans should include measures for injured Swainson's hawks:

   a. For hawks found injured during project-related activities on the project site, plans should call for immediate relocation to a raptor recovery center approved by a Department regional representative.
   b. A system should be set-up so that costs associated with the care or treatment of such injured Swainson's hawks will be borne by the project developer.

   c. Include appropriate contact information for immediate notification of the Department and the appropriate lead agency of a hawk injury incident. Have approved procedures in place to notify the Department and the lead agency outside normal business hours. Notify the appropriate personnel via telephone or email, followed by a written incident report. Include the date, time, location, and circumstances of the incident in the reports.

3. Mitigation plans should focus on providing habitat management (HM) lands. Lands which are currently in urban use or lands that have no existing or potential value for foraging Swainson's hawks will not require mitigation nor would they be suitable for mitigation. The plans should call for mitigating loss of Swainson's hawk foraging habitat by providing HM lands within the Antelope Valley Swainson's hawk breeding range at a minimum 2:1 ratio for such habitat impacted within a five-mile radius of active Swainson's hawk nest(s). The Department considers a nest active if it was used one or more times within the last 5 years. **9-F2, cont.**

   Project developers may consider delegating responsibilities for acquisition and management of the HM lands to the Department or a third party, such as a non-governmental organization dedicated to Mojave Desert habitat conservation. Seek approval of such delegations from the Department and the appropriate lead agency.

   Approaches for acquisition and management of HM lands:

   a. <u>HM Land Selection Criteria.</u> Identify the region within which lands would be acquired, and the type/quality of habitat to be acquired. Foraging habitat should be moderate to good with a capacity to improve in quality and value to Swainson's hawks, and must be within the Antelope Valley Swainson's hawk breeding range. Foraging habitat with suitable nest trees is preferred.

   b. <u>Review and Approval of HM Lands Prior to Acquisition</u>. Provide an acquisition proposal to the Department and the appropriate lead agency for their approval at least 3 months before acquiring the property. The proposal should discuss the suitability of the property by comparing it to the selection criteria.

   c. <u>Land Acquisition Schedule and Financial Assurances.</u> Complete acquisition of proposed HM lands before initiating ground-disturbing project activities. If an irrevocable letter of credit or other form of security is provided, complete land acquisition within 12 months prior to beginning ground-disturbing project

activities. Provide financial assurances for dedicating adequate funding for impact avoidance, minimization and compensation measures required for project approval (see 3. d. below).

d. HM Lands Acquisition. Be prepared to provide a preliminary title report, initial hazardous materials survey report, biological analysis, at a minimum to the Department and the appropriate lead agency. The information will likely also be reviewed by the California Department of General Services, Fish and Game Commission and/or Wildlife Conservation Board.

Fee title or conservation easement will likely be transferred to a Department of Fish and Game-approved non-profit third party and the Department, or solely to the Department. Be prepared to support enhancement and endowment funds for protection and enhancement of acquired lands. The Department will approve establishment and management of the funds, ensuring that qualified non-profit organizations or the Department will manage the funds in an appropriate manner. Contributed funds and any related interest generated from the initial capital endowment would support long-term operation, management, and protection of the approved HM lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action designed to protect or improve the habitat values of the HM lands. Be prepared to reimburse the Department or other entities for all land acquisition costs. **9-F2, cont.**

References

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Estep, J.A. 1989. Biology, movements, and habitat relationships of the Swainson's Hawk in the Central Valley of California, 1986–87. California Department of Fish and Game, Nongame Bird and Mammal Section Report.

Woodbridge B, Finley KK, Bloom PH. 1995. Reproductive performance, age structure, and natal dispersal of Swainson's Hawks in the Butte Valley, California. Journal of Raptor Research 29:187–192.

9-F2, cont.

Response to Comment Letter 9: Sierra Club/Defenders of Wildlife/Audubon California (September 26, 2012)

9-A Thank you for your comments. The participation of the Sierra Club/Defenders of Wildlife/Audubon California in the public review of this document is appreciated. The commenter provides an introduction to the comment letter and provides a brief description about the three groups that are commenting.

Responses to your concerns are provided in Responses to Comments 9-B through 9-F2.

9-B The commenter expresses support for the preferred NEPA alternative: Alternative C, Reduced Project North.

Section 2.1.1, *Alternatives Development and Screening*, of the Draft EIS/EIR, describes the process used by the BLM and the County to develop and screen the alternatives. Alternative C was selected as the environmentally superior alternative by the County through a process of comparing alternatives. As supported in the analysis sections of the EIS/EIR (Section 4), Alternative C was selected for the following reasons:

- Result in 20 percent lower annual/total construction emissions and slightly less O&M emissions;
- Slight decrease in potential for impacts during construction to known and unknown cultural resources;
- Reduced noise impacts by eliminating sensitive receptors subject to construction and operational noise north of SR 58;
- Slight decrease in potential for impacts during construction to paleontological resources;
- Slight decrease in potential for impacts during construction and operation to geology and soil resources;
- Slightly reduce daily traffic volumes during construction;
- Reduce disturbance to vegetation communities down to nine (9) sensitive vegetation communities and land cover types, as well as reducing acreage of temporary and permanent disturbance;
- Reduce visual impacts to viewers north of SR 58;
- Slightly reduce water use during construction and operation;
- Slightly reduce potential for wildfire ignition; and
- Reduce potential for impacts to golden eagles and condors.

In accordance with NEPA requirements, the "preferred alternative" is a preliminary indication of the federal responsible official's preference of action, which is chosen from among the proposed action and alternatives. The preferred alternative may be selected for a variety of reasons (such as the priorities of the particular lead agency) in addition to the environmental considerations discussed in the Draft EIS/EIR. In accordance with NEPA (40 CFR§1502.14(e)), the BLM has identified its preferred alternative as Alternative C, Reduced Project North. The BLM's ultimate decision as to the alternative selected will be set forth in its record of decision pursuant to 40 CFR § 1505.2.

This conclusion does not dismiss the validity of the alternative, but rather concludes that impacts would be less than those associated with Alternative A.

9-C The commenter expresses support for preferred CEQA alternative: Alternative C, Reduced Project North.

Please see Response to Comment 9-B.

9-D The commenter notes and thanks the proponent for the amount of effort and information provided with respect to wildlife usage of the site. Commenter also notes the advance preparation and availability of the draft Avian Bat Protection Plan and Eagle Conservation Plan. Commenter recommends that Kern County and the BLM require future wind energy applications to meet this level of effort.

The Final EIS/EIR is intended to evaluate the proposed Alta East Wind Project and the Alternatives presented within Section 2.0 under both NEPA and CEQA. Based on these limitations, the analysis is not able to require Kern County and the BLM to require future wind energy applications to meet the requested level of effort. Such a change is related to Lead Agency policy as it relates to both NEPA and CEQA requirements.

9-E The commenter states that the Draft EIS/EIR fails to address issues of habitat fragmentation from the proposed project, and recommends the application of the USFWS' Land-Based Wind Energy Guidelines in the impact analysis to evaluate the habitat fragmentation impacts from the proposed project. The commenter also recommends using the guidance in that document for minimizing and mitigating residual impacts. The commenter also references an attached letter from another company (enXco) to Secretary Salazar; however, this letter was not attached to the comment letter submitted to Kern County and the BLM by the commenter.

Please see the discussion of wildlife movement and migration corridors in Section 4.21.3.3 of the Draft EIS/EIR for a discussion of the proposed project's potential impacts related to habitat fragmentation for wildlife (pages 4.21-27 to 4.21-28). As described in that section, the project would not permanently preclude access by most wildlife (with the possible exception of large terrestrial species). Fencing would be designed to allow small animals and species such as desert tortoise to pass underneath (see Mitigation Measure 4.21-2 [Wildlife Impact Avoidance and Minimization]). Additionally, this section notes that surveys of the project site over several years have not detected large amounts of sign from terrestrial wildlife that would indicate that the area is used extensively for movement or migration. The analysis concludes that project site is not in an area that, either by topography or by habitat, would be expected to "funnel" terrestrial wildlife movement into a defined corridor; therefore, the project is not expected to substantially interfere with wildlife movement during operation and maintenance. Further, as the commenter notes, the USFWS Wind Energy Guidelines are voluntary, and were one source of information used in the impact analysis (see Draft EIS/EIR page 4.21-18). These guidelines, as utilized within the EIS/EIR, are referenced by the USFWS at: http://www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html.

9-F The commenter states that the project proponent's raptor and other avian baseline and risk analyses presented in Appendix D of the Draft EIS/EIR are confusing as a baseline description of the avian use of the project site. Commenter specifically comments on statistical analyses presented in the proponent's reports and methods used to assess risk to birds. Commenter recommends comparing raptor use to other projects in the Tehachapis, suggests a published study to consider, and suggest that the proponent should characterize habitat and bird usage per planned turbine location rather than sectors or the entire site when conducting the risk assessment.

Please see Response to Comment 8-N with respect to avian risk analysis. The Draft EIS/EIR Appendix D analyses are just one source of information used to conduct the impact assessment under CEQA and NEPA. However, it is noted that the setting presented in Section 3.21.1 of the EIS/EIR provides sufficient baseline information regarding avian use at the site and in the region that is based on information provided by the project proponent as well as other sources of information including published literature, federal and state databases, and the results of studies

conducted for other projects in the region. The BLM and Kern County have determined that the baseline description provided in the Draft EIR/EIS clearly identifies conditions at the project site. Please see Section 4.21.5 of the Draft EIS/EIR for the BLM and Kern County's cumulative assessment of potential impacts to raptors and other birds, which considered information from other wind developments in the Tehachapi area.

9-G The commenter states that the proponent's analysis of mapped flight paths would suggest that the proponent further evaluate turbine design in areas four, five, and six, and prioritize monitoring in these areas. The commenter also recommends that monitoring protocol and data should be standardized across all wind projects in the Tehachapis for cumulative impact comparisons and comparison across projects.

The suggestions will be considered by the BLM and Kern County. Kern County and the BLM note that the wind energy projects that have been permitted by Kern County in the last several years have included mitigation measures which establish consistent monitoring protocols and data submission standards. The EIS/EIR prepared for this project also include mitigation measures that require monitoring [See MM 4.21-10 (Post-Construction Breeding Monitoring), 4.21-11 (Post-Construction Avian and Bat Mortality Monitoring), and 4.21-14 (Post-Construction Condor Monitoring)]. These monitoring reports will include evaluation of the portions of the project described by the commenter.

9-H The commenter states that the estimate of mortality should be revised to consider the Pine Tree wind project, located in the Tehachapi Mountains, which shows a higher risk in this area. The commenter recommends the use of a risk adverse analysis or to use the mortality averages stated in Appendix D-3 as thresholds in the BBCS. The commenter also recommends that monitoring protocol and data should be standardized across all wind projects in the Tehachapi Mountains for cumulative impact comparisons and comparison across projects.

Please see Draft EIS/EIR Section 4.21.3.3 for Kern County and the BLM' assessment of impacts to birds from operation of the proposed project, in which data from the Pine Tree wind development are considered. The biological reports prepared in relation to this project (presented in Appendix D of the Draft EIS/EIR) are just one source of information used by Kern County and the BLM to assess the potential impacts of the project; other studies, knowledge of biological resources within the region, and regulatory and other experts' input was also considered. Section 3.21 of the EIS/EIR includes a listing of the sources used in this analysis (page 3.21.1). See Response 9-G regarding monitoring protocols.

9-I The commenter states that the analysis of the project area as migrating bird stopover habitat is inadequate, and recommends conducting a more thorough analysis of nocturnal migration through the project area using radar.

Please see Response to Comment 8-O with respect to nocturnal migration. Kern County and the BLM have considered this comment and determined that the impact analysis contained in the Draft EIS/EIR adequately considers available regional and local information. Please see Section 3.21.1.2 (Connectivity and Migration Corridors) for a detailed discussion of bird migration and stopover habitat in relation to the proposed project site. Additionally, the EIS/EIR analyzes the potential impacts of night lighting on avian species and notes that night lighting has the potential to disrupt avian species. Mitigation Measure 4.21-2 (Wildlife Impact Avoidance and Minimization) requires that any night lighting used during construction be directed toward the interior of the disturbance area or at the specific location being constructed in order to minimize adverse effects to owls and other wildlife species. Page 4.21-13 also notes that, with regard to construction, nocturnal wildlife would be affected less by construction than diurnal species since

construction would occur primarily during daylight hours. The suggested requirement to conduct additional radar analyses is not warranted given the body of information available.

9-J The commenter notes that songbirds have been the most abundant avian fatality at wind farms outside of California, and similar results have been found at Pine Tree. The commenter recommends conducting a more thorough analysis of nocturnal migration through the project area using radar.

Please see Draft EIS/EIR Section 4.21.3.3 for Kern County and the BLM' assessment of impacts to birds from operation of the proposed project, in which data from the Pine Tree wind development are considered. The biological reports prepared in relation to this project (presented in Appendix D of the Draft EIS/EIR) are just one source of information used by Kern County and the BLM to assess the potential impacts of the project; other studies, knowledge of biological resources within the region, and regulatory and other experts' input was also considered. Section 3.21 of the EIS/EIR includes a listing of the sources used in this analysis (page 3.21.1).

Please also see Responses to Comments 9-G and 9-I.

9-K This comment is specific to the proponent's draft Avian and Bat Protection Plan and Eagle Conservation Plan. Both plans are being developed by the proponent in consultation with the USFWS, and Kern County and the BLM are not involved with the development of these plans . MM 4.21-6 (Avian and Bat Protection Plan) and MM 4.21-7 (Eagle Conservation Plan) require the proponent to submit a current copy of the ABPP and to document that the project is in compliance with the Bald and Golden Eagle Protection Act prior to the issuance of building permits.

9-L Please see the Response to Comments 9-G and 9-I.

9-M Please see the Response to Comments 9-G and 9-I.

9-N Please see the Response to Comments 9-G and 9-I.

9-O Please see the Response to Comments 9-G and 9-I.

9-P Please see the Response to Comments 9-G and 9-I.

9-Q Please see the Response to Comments 9-G and 9-I.

9-R Please see the Response to Comments 9-G and 9-I.

9-S Please see the Response to Comments 9-G and 9-I.

9-T Please see the Response to Comments 9-G and 9-I.

9-U Please see the Response to Comments 9-G and 9-I.

9-V Please see the Response to Comments 9-G and 9-I.

9-W Please see the Response to Comments 9-G and 9-I.

9-X Please see the Response to Comments 9-G and 9-I.

9-Y The commenter states that Mitigation Measure 4.17-1 is inadequate to reduce impacts to desert tortoise, and encourages the proponent to acquire off-site desert tortoise habitat at a 1:1 ratio for all permanently impacted desert tortoise habitat on the project site.

Mitigation Measure 4.17-1(6) requires that "permanent impacts to ruderal or disturbed habitats shall be mitigated at a 1:1 ratio if those habitats support burrowing owl and/or desert tortoise." Therefore, Kern County and the BLM have considered this comment and determined that Mitigation Measure 4.17-1 provides adequate mitigation for impacts to desert tortoise habitat, and is consistent with other regional projects. Off-site compensation is one strategy to achieve, in whole or in part, the 1:1 mitigation requirements for permanent impacts to tortoise habitat.

9-Z The commenter recommends that the proponent develop a home range buffer around active burrows in order to maintain and conserve the small desert tortoise population on site over the life of the project. The commenter also suggests that the proponent make every effort to leave desert tortoise habitat intact and avoid active tortoise burrows.

Please see Mitigation Measure 4.21-3, part 8(g), which requires avoidance of any occupied and unoccupied tortoise burrows found in the construction area and consultation with the USFWS if burrows cannot be avoided.

9-A2 The commenter states that Mitigation Measure 4.21-3 is inadequate to reduce impacts to burrowing owl to less than significant, and recommends that the applicant mitigate for impacts to burrowing owl territories through habitat compensation placed in conservation easements in perpetuity and managed for the conservation of burrowing owl. The commenter also states that burrowing owl mitigation lands should not coincide with offsite mitigation lands for conservation of sensitive vegetation communities.

Kern County and the BLM have considered this comment and determined that Mitigation Measure 4.21-3 provides adequate mitigation for impacts to burrowing owl territories, and is consistent with other regional projects. This measure requires off-site compensation and/or restoration of off-site habitat for the benefit of this species, and compensation lands shall be purchased and/or placed in a conservation easement in perpetuity and managed to maintain suitable habitat. With regard to offsite mitigation lands for burrowing owl and sensitive vegetation, Kern County and the BLM have determined that the acquisition and preservation of offsite lands to mitigate impacts to burrowing owl and sensitive vegetation is appropriate provided the compensation lands meet the requirements for mitigation for both resources as identified in Mitigation Measures 4.21-3 part 7(e) and 4.17-1.

9-B2 With regard to the Avian and Bat Protection Plan required under Mitigation Measure 4.21-6, the commenter states that risk assessments conducted in the permitting stage are often insufficient indicators of avian mortality during project operations, and encourages a robust adaptive monitoring and management strategy with conservation measures including seasonal curtailment, curtailment in response to specific events, decommissioning and/or relocation of specific turbines when mortality thresholds are met, and other measures if/when proven effective by wildlife agencies. The commenter also recommends that monitoring protocol and data should be standardized across all wind projects in the Tehachapi Mountains for cumulative impact comparisons and comparison across projects.

Please see Response to Comment 8-N with respect to avian risk analysis. Please see Mitigation Measures 4.21-10 and 4.21-11, which require post-construction monitoring of avian breeding and avian and bat mortality. Mitigation Measure 4.21-12 requires supplemental adaptive measures for unanticipated significant impacts, and Mitigation Measure 4.21-14 requires additional monitoring for California condors and measures, including specific curtailments, to minimize impacts in response to the condor monitoring program.

9-C2 The commenter states that Mitigation Measure 4.21-7 is inadequate to reduce impacts to golden eagle to less than significant, and recommends that the fatality studies occur for the life of the

project. The commenter also makes a number of detailed recommendations for revisions to the proponent's draft Eagle Conservation Plan. The commenter recommends that the proponent prepare a comprehensive Golden Eagle Mitigation Strategy for its projects in the Tehachapi Mountains similar to its California Condor Mitigation Strategy.

Please see Response to Comment 9-A2 regarding avian monitoring requirements. Please see Responses to Comment 9-K regarding the Eagle Plan.

9-D2 The commenter notes that Section 3.0 (Adaptive Management) of the proponent's draft Eagle Conservation Plan is incomplete, and recommends completing the section.

Please see Responses to Comment 9-Kregarding the Eagle Plan.

9-E2 The commenter states that the data and analysis presented in the Draft EIS/EIR and in appendices D-13 and D-14 are inadequate to reduce impacts to Swainson's hawk to less than significant. The commenter recommends that the proponent also conduct a survey of foraging habitat that will be removed by project construction and transmission infrastructure. The commenter states that foraging habitat for nesting pairs in the Antelope Valley, including agricultural lands, is protected and must be mitigated. The commenter suggested that CDFG can share a map of known nests in the Antelope Valley, and also attached the Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California (CEC and CDFG, 2010) which includes mitigation measures recommended by the commenter.

Kern County and the BLM have considered this comment and determined that the impact analysis contained in the Draft EIR/EIS adequately considers available regional and local information regarding Swainson's hawk. The biological reports (presented in Appendix D) are just one source of information used by Kern County and the BLM to assess the potential impacts of the project to Swainson's hawks; other studies, knowledge of biological resources within the region, and regulatory and other experts' input was also considered. Section 3.21 of the EIS/EIR includes a listing of the sources used in this analysis (page 3.21.1)

The CDFG recommends that buffer zones of a minimum of one-half (1/2) mile be placed around nest locations away from urban development to reduce the risk of construction disturbance to nesting Swainson's hawks. Pre-construction surveys would be required to determine the presence of Swainson's hawk in and near the project area prior to ground disturbance, and a disturbance-free buffer would be implemented around any active nests found (Mitigation Measure 4.21-3, Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds). Mitigation presented in Section 4.21 (Wildlife Resources) to minimize impacts to Swainson's hawk are consistent with the Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California (CEC and CDFG, 2010) provided by the commenter, and this document was considered during preparation of the Draft EIS/EIR. Compensation for permanent impacts to vegetation, including potential Swainson's hawk foraging habitat, would be required at a minimum 1:1 ratio per Mitigation measure 4.17-1 (Habitat Restoration and Revegetation Plan).

9-F2 The commenter provided an attachment titled "Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California.

The attachment will be included as part of the administrative record for the EIS/EIR.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 10: The Kern Audubon Society (August 22, 2012)

"PROTECTING OUR GREAT NATIONAL HERITAGE"

THE KERN AUDUBON SOCIETY

P. O. Box 3581 Bakersfield, CA 93385

August 22, 2012

Kern County Planning and Community Development Department
2700 M Street, Suite 100
Bakersfield, CA 93301

RE: DEIR of the Alta East Wind Project

Dear Jacqui Kitchen:

In regards to the alternatives presented in the DEIR for this project, the Kern Audubon Society recommends that ***Alternative C and Alternative D be merged into one alternative***.

First, we strongly support the exclusion of the portion of the proposed project north of state route 58 because of a high potential for mortality collisions by golden eagles and California condors. This exclusion has another effect, that of enhancing the visual quality by drivers of highway 58. Second, we also believe that the portion of Alternative D that eliminates WTs in the area currently used for grazing is important in reducing the potential impacts by condors. Condors forage looking for dead animal carcasses. A primary and historical food supply is cattle. The combination of alternatives would result in a highly effective and environmentally friendly choice. **10-A**

We look forward to the FEIR reflecting this proposal.

Sincerely,

Harry Love
Conservation Chair

Response to Comment Letter 10: The Kern Audubon Society (August 22, 2012)

10-A Thank you for your comments. The participation of the Kern Audubon Society in the public review of this document is appreciated. The commenter recommends that Alternatives C and D be merged into one alternative. The commenter strongly supports the exclusion of the portion of the project north of State Route 58 due to high potential for mortality collisions by golden eagles and California condors. The commenter also suggests that the exclusion of the project north of State Route 58 would enhance the visual quality of drivers; and that the portion of Alternative D that eliminates wind turbines in the area currently used for grazing is important in reducing impacts to condors.

Table 2.1, Project Alternative and other Alternatives analyzed in this Document, shows that Alternative C (Reduced Project North) would eliminate a portion of the Alternative A boundary north of State Route 58 to reduce potential biological impacts. Alternative D (Reduced Project Southwest) would eliminate a portion of the Alternative boundary in the southwest portion of the site to reduce potential impacts to livestock grazing.

As noted in Section 2.9 of the EIS/EIR, and "environmentally superior alternative" was selected in accordance with CEQA requirements. The environmentally superior alternative is the alternative found to have an overall environmental advantage compared to the other alternatives based on the impact analysis in the EIR. State CEQA Guidelines Section 15126.6(e)(2) requires that, if the environmentally superior alternative is the No Project alternative, the EIR identify an environmentally superior alternative from among the other alternatives. In the case of the AEWP, Alternative E or F (both of which are No Project Alternatives), would be environmentally superior to any of the action alternatives. Therefore, among the other alternatives, Alternative C (Reduced Project North) was identified as the environmentally superior alternative because it would reduce impacts to the following: air resources, cultural resources, noise, biological and aesthetics.

Kern County and the BLM note that Alternatives C and D, as well as 5 other alternatives, have been identified and analyzed in the EIS/EIR. The final decision regarding approval and implementation of the project will be left to decision makers from the County and BLM.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 11: Pacific Crest Trail Association (September 26, 2012)

September 26, 2012

Lorelei H. Oviatt
Kern County, CA AICP Director
2700 "M" Street,, Suite 100
Bakersfield, CA 93301-2323

To Whom It May Concern:

I am submitting comments on the Draft Resource Management Plan (DRMP) Amendment and Draft Environmental Impact Statement (DEIS) and Environmental Impact Report for the Alta East Wind Project by Alta Windpower Development, LLC). These comments are specific to the planning and management of the Pacific Crest National Scenic Trail (PCT).

I am writing on behalf of the Pacific Crest Trail Association (PCTA). Our 9,000-member organization is the primary private partner with the United States Forest Service, Bureau of Land Management, National Park Service, and California State Parks in the management and protection of the Pacific Crest National Scenic Trail (PCNST) from Mexico to Canada. Last year alone, programs organized under PCTA's leadership provided 115,000 hours of volunteer labor to manage the PCNST on the ground and we have participated in dozens of planning processes from the national to the local level in that time. **11-A**

Seemingly, the DEIS/DEIR does not comply with BLM Manual Policy Direction 6250 for National Scenic and Historic Trails and direction to safeguard the nature and purposes of National Trails to provide for maximum compatible outdoor recreation potential, and protection, conservation and enjoyment of the nationally significant scenic, historic, natural, and cultural qualities of the areas and associated settings through which such trails may pass, as well as the primary use or uses of the trail. Additional actions are needed to ensure that significant adverse impact to the nature and purposes of the PCT do not occur.

1. **Utilize design strategies to avoid impacts to the PCT for both recreational and scenic experiences.** It is not acceptable to infer the rationale that since the development on private land adjacent to the federal land has already occurred therefore, it is acceptable to place "a substantial number of the large-scale turbines (up to 410 feet to the top of the turbine blade), including a large number that would break the skyline of the nearby ridge tops south of SR 58" (4.18-3). Further, the fact that "their uniformity in size and shape, the fact that their large scale allows large spacing between units, and siting that follows the contours of existing topography all contribute to a degree of overall visual unity and coherence, and a reduced level of visual disorder compared to some other wind developments in the region" (4.18.3) avoids the bottom line that wind turbines create a high level of contrast in form, line, color and texture. It is inappropriate to decide that **11-B**

PACIFIC CREST TRAIL ASSOCIATION

Pacific Crest Trail Association
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because it's better than other projects in the area, it's acceptable. A significant aspect of concern for this project is the siting of turbines on ridgelines as this does not meet best management practices for the avoidance of impacts to the Pacific Crest Trail. A visual analysis from the PCT-trail platform along with the removal/relocation of turbines that create a high level of contrast in form, line, color and texture should be conducted as part of the project. **11-B, cont.**

2. **Reclassify the PCT to VRM Class II or Class III.** It is inconsistent with the desired condition and nature and purpose of the PCT for it to be inventoried as a IVRM Class IV. As the project is located within the foreground/middle ground distance of the PCT and the PCT is a high sensitivity level travel route, a VRM Class II or Class III would seem to be the typical compatible objectives. **11-C**

3. **Assess and disclose substantial interference with the nature and purposes of the PCT.** It is imperative that the DEIS indicate whether the impacts to the trail would substantially interfere with the nature and purposes of the PCT. Equestrian and foot travel dictates a slower rate of travel and an increase in time spent viewing the proposed project from the trail. This view would be a view of a significantly degraded "natural experience" and not the "natural experience" that recreationists demand when they utilize a national scenic trail. **11-D**

4. **Rewording of mitigation measure MM4.18-5.** This measure indicates that "Prior to the issuance of a Notice to Proceed by the BLM, the project proponent shall consult and coordinate with the US Forest Service, BLM and Pacific Crest Trail Association to develop a route enhancement plan for the Pacific Crest Trail. The plan shall be submitted for review and approval to the BLM and US Forest Service prior to commissioning of the wind turbines. The report shall identify feasible PCT options, developed under the direction of the federal agencies, which provide for trail relocations, enhancements, of additional that will benefit vistas. The provisions shall be designed to apply to those areas where the project would be most visible from the existing trail." **11-E**

Relocation of the PCT needs to follow a strict process outlined in the Optimal Location Review Process found at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5368489.pdf. This process examines and analyzes different possible trail location to find the most optimal location based on the Design Criteria outlined in Appendix C of the Pacific Crest National Scenic Trail. The PCT runs for over 2650 miles from Mexico to Canada and, as you can imagine, to improve the trail experience and to provide for enhancement, the trail would likely require a significant relocation approved by Congress. **11-F**

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As always, the PCTA wishes to offer our assistance in regards to a comprehensive analysis of the visual and other impacts on the trail created by wind energy projects, in order to correct and prevent future impacts to the PCT. **11-F, cont.**

Sincerely,

Anitra I. Kass
Regional Representative
Pacific Crest Trail Association

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Response to Comment Letter 11: Pacific Crest Trail Association (September 26, 2012)

11-A Thank you for your comments. The participation of the Pacific Crest Trail Association in the public review of this document is appreciated. The commenter states that the Draft EIS/EIR does not comply with BLM Manual Policy Direction 6250 for National Scenic and Historic Trails.

Refer to Response 1-A.

11-B The commenter states that it is unacceptable to infer the rationale that since development on private land adjacent to the federal land has already occurred, therefore, it is acceptable to place wind turbines. Commenter also requests a visual analysis from the PCT-trail platform along with the removal/relocation of turbines.

Refer to Response 1-A.

11-C The commenter requests reclassification of the PCT to VRM Class II or Class III.

Refer to Response 1-C. As stated in Sections 3.18 and 4.18 of the EIS/EIR, the turbines visible in the view from the PCT key observation point would be located within BLM lands and are assigned IVRM Class IV. As such, this class has already been inventoried and assigned to IVRM Class IV, which allows for strong contrast that can demand attention and is dominant in the landscape.

11-D The commenter requests an assessment and disclosure of substantial interference with the nature and purposes of the PCT.

Refer to Response 1-C. In regards to the purpose of the PCT, the 1968 National Trails System Act describes the purpose of national scenic trails as follows: National scenic trails ... will be extended trails so located as to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of natural, or cultural qualities of the areas through which such trails may pass.

The Project site is over one mile from the PCT; therefore, the Project would not directly interfere with recreation activities. Also, as discussed above, the BLM's assigned interim VRM class allows for strong contrasts in the surrounding environment. The EIS/EIR acknowledges that turbines would present strong structure contrast of form, line, color and texture against the existing landscape from the PCT key observation point. However, because the entire AEWP falls within an interim VRM Class IV designation, this level of contrast would conform with the applicable BLM policy. Nonetheless, the EIS/EIR states the Project's impacts to the existing visual character are significant and unavoidable.

11-E The commenter requests MM 4.18-5 be clarified to include discussion of the Optimal Location Review Process, which analyzes possible trail locations based on Pacific Crest national Scenic Trail design criteria.

Refer to Response 1-D.

11-F The comment provides the process for relocation of the PCT.

Refer to Response 1-D.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 12: Pacific Gas and Electric Company (September 11, 2012)

Pacific Gas and Electric Company

Sarah Gassner, Supervisor
Environmental Planning and Permitting

1455 E. Shaw Ave., Bag 31
Fresno, CA 93710
Office: (559) 263-5073
Fax: (559) 263-5720
Email: SEG1@pge.com

September 11, 2012

Kern County Planning and Community Development Department
Public Services Building
Attn: Jacqui Kitchen, Planner III
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2370

RE: Comment to the Draft Plan Amendment & Environmental Impact Statement/Environmental Impact Report for the Alta East Wind Project by Alta Windpower Development, LLC; GPA 2, Map 168; GPA 2, Map 168-27; GPA 3, Map 179; GPA 1, Map 180; ACC 10, Map 168; ACC 4, Map 168-27; CUP No. 7, Map 168

Dear Ms. Kitchen:

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to review and provide comment on the Draft Plan Amendment & Environmental Impact Statements/Environmental Impact Report (EIS/EIR) for the Alta East Wind Project. The project is described in the Draft EIS/EIR as a proposal to construct and operate a wind generation facility on 2,592 acres. In addition, the project facility would generate up to 318 MW of energy by utilizing up to 106 wind turbine generators. The project site is located 3-miles northwest of the unincorporated community of Mojave in the Mojave Desert, in eastern Kern County. Pacific Gas and Electric Company (PG&E) has the following comments to offer regarding the proposed project.

PG&E's Facilities Will Not be Affected by the Interconnection Project. 12-A

This wind project is occurring outside of the service territory of Pacific Gas and Electric Company. Therefore, PG&E has no comment to offer regarding the Draft EIS/EIR for the Alta East Wind Project.

We appreciate the opportunity to comment on the Draft Amendment and EIS/EIR for this project. PG&E remains dedicated to interconnection enterprises while maintaining efficient, cost-effective, and timely service to our customers. If you have any questions regarding this letter, please contact Jameson Saberon, Senior Land Planner, by telephoning (559) 263-5214 or emailing at J71Q@PGE.COM. .

Sincerely,

Sarah Gassner
Supervisor, Environmental Planning and Permitting

Response to Comment Letter 12: Pacific Gas and Electric Company (September 11, 2012)

12-A Thank you for your comments. The participation of Pacific Gas and Electric Company in the public review of this document is appreciated. The commenter states that the project is occurring outside of the service territory of Pacific Gas and Electric Company (PG&E), and therefore PG&E has no comment to offer regarding the Draft EIS/EIR.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 13: Ruben Grijalva (September 26, 2012)

September 26, 2012

Jeffery Childers, Project Manager,
Bureau of Land Management
California Desert District Office
22835 Calle San Juan de Los Lagos,
Moreno Valley, California 92553-9046

Re: Alta East Wind Energy Project

Mr. Childers,

I am writing to comment on section MM 4.20-2 of the draft plan amendment. It states "Prior to energizing the project, the project proponent shall perform one of the following options in consultation with the Kern County Planning and Community Development Department, the Kern County Fire Department and the County Administrative Office to reduce fire impacts:

Option 1: Install an automatic fire extinguishing system that complies with international standards for fire protection systems on each wind turbine generator at the project site. Proof of system installation shall be submitted to Kern County.

Option 2: Purchase at a cost not to exceed $350,000 an Industrial Mini Pumper for the Kern County Fire Department. If an Industrial Mini Pumper has already been purchased for the project area, the Fire Department shall consult with the County Administrative Office (CAO) to determine if there are any outstanding reimbursement requirements associated with that purchase. If the Industrial Mini Pumper has not yet been fully reimbursed by the County, then the project proponent shall pay their proportionate share of $88,000.00 to the Planning and Community Development Department for the purpose of reimbursement of the pumper. **13-A**

Option 3: If an Industrial Mini Pumper has already been purchased and reimbursed by the County, the purchase of other fire extinguishing equipment shall occur in an alternative manner that has been mutually agreed upon by the project proponent and Kern County.

I am writing to encourage the adoption of option 1. While I support the ideas contained in options 2 and 3, they should be in addition to option 1, not in lieu of it.

I am the former California State Fire Marshal and director of CAL FIRE between 2004-2009, under Governor Arnold Schwarzenegger. I am a big supporter of alternative energy sources such as wind turbines and photo voltaics. I have photo voltaics installed on the roof of my own home. **13-B**

I also advocate that local, state, and federal land use decisions not add an increased burden on the dwindling fire suppression resources of California without built-in fire

protection as a mitigation. As you know, jurisdictions throughout the state are cutting back on resources due to the current economy, including fire prevention personnel, station closures, and rolling brown outs. Built in fire protection becomes even more important as these cuts are made. In the absence of built in fire protection, the magnitude of any fire will be greater.

13-B, cont.

As you might expect, as the former State Fire Marshal, my emphasis is on fire prevention. As former director of CAL FIRE, my emphasis is on firefighter safety and reducing the costs of fire suppression for the taxpayers of California.

As a former local government fire chief (Palo Alto) and a former local government fire marshal (Sunnyvale), I have supported new large developments to fund fire suppression resources such as fire stations, fire personnel, and fire equipment. But I have never supported this at the expense of built in fire protection. I have never waived fire sprinklers in buildings for fees. Such an exchange would be a losing compromise for fire and life safety merely for economic considerations. As stewards of public safety we must consider what is in the public interest for fire and life safety beyond what is in the economic interest of the developer.

13-C

When a fire starts in a remote location with high winds the probability of that fire spreading beyond the capability of the first arriving fire engine increases substantially. By the time a pumper or hand crews can respond, the fire will be growing and spreading into the wildland urban interface. Fires of this nature often grow quickly beyond the capability of firefighters within proximity. By then they will need more than a mini-pumper to fight the fire. Mutual aid becomes necessary to bring in engines, hand crews, and aviation assets from outside the area.

13-D

There is no comparable substitute for built in fire protection, especially in remote areas. Fire equipment and personnel can complement the fire prevention technology, but without the built in fire protection a mini-pumper and crew will not be able to handle the resulting fire scenario on their own. The wind turbine owner may then be subjected to civil cost recovery for the cost of the fire response as well as damages to surrounding property, business loss, and injuries. If not recovered from the owner, those costs are past on to local government, the state of California, and taxpayers.

13-E

While I was in office, I agued publicly and in the legislature that local and federal land use decisions were impacting the cost of fire protection for the state. I spent time drafting legislation with state Senator Kehoe (from San Diego area) to give the state some input into the local land use decision making process and to require local government to show that they had adequate fire suppression ability for the projects they were approving. I had similar discussions with Senator Diane Feinstein about federal government land use decisions. Several attempts at legislation have been made since I began my discussion, and continue to this day (SB1241). Local governments were also concerned about increased risks, as well as costs associated with fires on federal lands based on land use decisions, locations, and lack of adequate firefighting resources. I firmly believe that fire prevention is the key to mitigating these concerns.

13-F

While my major concern was with housing being built in the high fire severity zones within California, my concern applies to any land use project in high fire severity zones which could adversely impact fire suppression resources. A few years ago, I became involved in supporting the adoption of National Fire Protection Association (NFPA) 850, the national standard for fire protection in electrical generating sources, including wind turbines. As I looked into incidents of fire involving wind turbines, I became concerned about them as a source of wildland fires in high wind and remote locations throughout California. **13-G**

I wish to request that BLM does not consider a waiver for the nacelle fire protection requirements in the EIR of the Alta East Wind Energy project in Kern County. I would like the opportunity to present my issues and concerns in any public meeting that may be held on modifications relating to fire protection contained the EIR/EIS. I would also appreciate the opportunity to inform any local and state emergency response fire agencies which could be impacted by such a decision, and which would likely be called for mutual aid (including state resources from CAL FIRE). In addition, I would like the time to insure that other stakeholders have an opportunity to understand and respond to any modifications relating to fire protection contained in the EIR/EIS. **13-H**

Thanks for your time and consideration in this matter. If you have any questions, please do not hesitate to contact me at 916-799-9710 or by e-mail at calfire@gmail.com

Sincerely,

Ruben Grijalva
Former CA State Fire Marshal
Former Director of CAL FIRE

Wind Industry Fire Incidents US & Abroad
As of August 2012

With the height of a wind turbine nearing 300 feet when a fire occurs the best option is to wait patiently for the fire to burn out. This option can be very expensive and dangerous for employee safety, equipment replacement and debris management. Fire is the second most common accident found and documented by Caithness Windfarms Information Forum.

From the data gathered from Caithness Windfarm Information Forum, since 1993 to present there have been 128 fire incidents reported. A majority of fire incidents are not reported to the authorities and/or reported by news organizations. In addition, the number of those fires that were not included in the Caithness report there are three incidents one in which there was a fatality by a man who fell from a turbine that was on fire.

There are currently no regulations for reporting fire incidents whether large or small, making it far more difficult to offer accurate fire data. Most wind farm owners have experienced some fire loss and with the ever increasing demand for renewable energy availability it is difficult to have a wind turbine down for months while awaiting component replacement. 13-I

- Many of the largest wind turbine manufacturers have found it important to offer fire suppression as an option to their customers and are working with fire suppression organizations globally to make these offerings available.

Health & safety regulation and protection for renewable energy are far behind many of the other utility scale power generation plants. With wind and other renewable energy the high expectation for availability and efficiency are expected. While equipment such as gear boxes, transformers and blades are very important pieces to maintain for availability and effectiveness, health and safety of workers as well as equipment need to take center stage. With an expectation of a 20 year life expectancy for a wind turbine and an installed capacity of roughly 31,000MW in the US alone it is important that health & safety catch up.

The National Fire Protection Association (NFPA) has added wind turbine and out building fire protection standards to the NFPA 850 Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations. These recommendations have been accepted as of January 2010.

The Occupational Safety & Health Administration (OSHA) is developing a working relationship with the American Wind Energy Association (AWEA) to develop best practices for health & safety in the growing renewable wind energy sector. Because of the added attention to the industry it is important that health & safety play a more significant role.

Insurance providers, while they do like the idea of fire protection for their own assets, are finding it difficult to provide premium reductions. Insurers are in situations where they are splitting the coverage of a wind farm with another insurer and only able to cover 50%. This would make it difficult for one insurer to make a determination for only half of the farm coverage. For those large wind farm owners they may have a deductible that covers them during down time but if they have a loss of only one cabinet and replacement and down time stays below the known deductible of $250,000 the cost of our fire suppression system would be less than 1%. In addition, there are many wind farm owners that find themselves depending on the warranty to cover such incidents and/or are self-insured leaving them open for significant loss and replacement costs. "It is not a matter if (there is a fire) it is a matter of when," says a Technical Service Manager for Starr Technical Risk Agency.

Specific Fire Incidents Data and Results:

13-I, cont.

- 89 components in a wind turbine have been damaged by fire since 2002 as reported by one technical repair organization called AREPA. These wind turbine components include control panels, transformers and other micro-environments that can be easily protected. These are a selection of the many unreported incidents affecting the wind industry.
- $750,000-$ 6 million is the range of property damage on those incidents reported.
- 13 injuries and 1 death are the result of fire in the wind turbine.
- 900 acres and 240 firefighters were required to put out a blaze started by a wind turbine.
- 220 acres burned due to wind turbine fire.
- 367 acres burned due to wind turbine fire.
- **139** fire incidents have been reported as of February 2012 in the United States and abroad according to Caithness WindFarms Information Forum and other News Reports.

- Since August 2011 there have been 11 news reported fires, see attached.

13-I, cont.

McBain Wind Turbine Catches Fire

Posted On: 8/3/2011

Construction crews will have to assess the damage to a wind turbine that caught fire in **Missaukee County**.

Crews cut the power to the turbine near **McBain** Tuesday, which seemed to put out the flames before firefighters arrived.

This was the first fire emergency with those turbines and the fire chief says if the fire was serious there is really little they can do to fight it and save the turbine.

Crews still aren't sure what caused the fire.

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13-I, cont.

KTXS.com

Wind Turbine Erupts Into Flames Southwest Of Abilene

By Wayne McCormick, KTXS News
POSTED: 4:26 pm CDT August 25, 2011
UPDATED: 5:03 pm CDT August 25, 2011

ABILENE, Texas -- Firefighters from at least three volunteer departments are on the scene of a burning wind turbine southwest of Abilene.

ECCA Fire Chief Gary Young said the fire started in the wind turbine tower and then spread to grass around the tower.

Young said firefighters are working in rough terrain trying to keep the fire from spreading to other towers in the area.

The turbine is owned by NextEra Energy and is located in the Callahan Divide wind project off of FM Road 89 about 5 miles west of Highway 277.

Crews from ECCA, Buffalo Gap and Nolan are on the scene.

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13-I, cont.

KTXS.com

Wind Turbine Catches Fire Near Rep. Susan King's Home

By Michelle Chan, KTXS News
A fire started near the weekend home of Texas Representative Susan King. Representative King called authorities just after 10 p.m. on Sunday after she spotted a wind turbine on fire.

The Buffalo Gap, View and Ecca Volunteer Fire Departments responded with eight engines and dozens of firefighters. The fire spread to surrounding grass and burned around two acres before crews were able to put it out.

It is unclear what caused the wind turbine to catch fire, but this is the second time a wind turbine has caught on fire in the same area in the last five weeks.

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13-l, cont.

WINDPOWER MONTHLY

WHEN OFFSHORE WIND EXPERIENCE COUNTS...

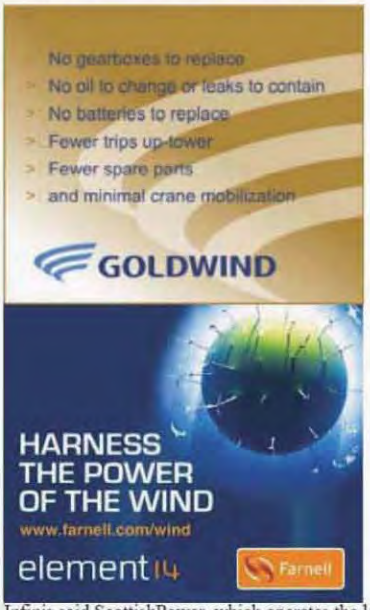
Vestas turbine catches fire in high winds

James Quilter, Windpower Monthly, 09 December 2011, 9:02am

UK: A wind farm in Ayrshire, Scotland has been disconnected from the grid after one of the project's Vestas 2MW turbines caught fire during high winds.

The 30MW Ardrossan project in Ayrshire is owned by Infinis Energy and uses Vestas 2MW turbines. The incident occurred as the northern half of the UK faced winds of up to 165mph.

In a statement, Infinis confirmed the nacelle had caught fire but was unable to give further details on the cause. It said no one was present when the incident happened, as staff are always evacuated from the site in 55mph+ winds as a precautionary measure.



Infinis said ScottishPower, which operates the local network, had disconnected the wind farm.

The incident comes only a year after Infinis acquired the project from Scottish and Southern Energy. The project was commissioned in 2004 and received a 6MW extension in 2009.

The image of the burning wind turbine, which was sent into the BBC by a member of the public, has been reproduced in the UK press to illustrate the weather conditions.

13-I, cont.

Officials investigating turbine fire

Posted: Friday, January 20, 2012 12:00 am

WETHERSFIELD — Officials are investigating what caused a fire Monday at a Noble Environmental Power wind turbine.

"On Jan. 16 a transformer failed at the base of a wind turbine,"said Asset Management Director Brad Hastings. "There were no injuries. The transformer was replaced and the turbine resumed operation later that day."

Noble Environmental Power operates two wind farms in Wyoming County. The Noble Wethersfield project includes 84 turbines, while Noble Bliss includes 67 turbines.

13-I, cont.

Wind turbine catches on fire

By WCAX News - bio | email

Altona, New York - January 29, 2012

Authorities are investigating what caused a wind turbine to catch fire in Northern New York.

It happened Saturday night in Altona. Officials say people driving by the windfarm noticed the fire in one of the 400 foot turbines. Noble Environmental, the owner of the windfarm, says no one was injured. The cause of the fire is not known.

Two years ago a turbine at the same park came crashing down when the blades spun out-of-control in high winds. An investigation in that case uncovered a wiring problem that prevented the turbine from safely shutting down.

Wind speed at the time of Saturday night's fire was reportedly around 25 miles per hour.

13-I, cont.

Blue Knob Firefighters respond to Wind mill fire

By BRUCE WALTERS Correspondent

1st Responder Network Story Number 020612107

Disclaimer: This article is a direct street report from our correspondent and has not been

At 07:01 Blair County 911 alerted the Blue Knob VFD for a Wind Mill fire at the Allegheny Wind Farm in Juniata Township. Engine/Tanker 86-21, Tanker 86-22, Brush 86-71, Squad 86-41, and Special Unit 86-42 all responded on the call under the direction of Assistant Chief 86-04 (Walters). The burning unit could be see by responders as they left the fire station. Crews had to gain access via a dirt lane which was over 4 miles off of Route 164.

Units arrived on the scene to find a 300ft wind mill well involved. A perimeter was set and crews stage while the fire was left to burn itself out. Special Unit 86-42 was later deployed to recon the area for burning debris.

Mutual aid was requested from Cambria County Station 83 (Portage) and Station 72 (Lilly) as well as Blair County Station 20 (Duncansville)

Crew's remained on the scene for over 6 hours with the area was secured.

The cause of the fire is not yet known.

13-I, con`t.

"(In the first seven months of 2011, eight wind turbines were burned down due to various reasons.)"

WINDPOWER MONTHLY

meteodyn WT CFD SOFTWARE FOR WIND RESOURCE ASSESSMENT

CSR turbine fire kills two workers in Inner Mongolia

Wu Qi, Windpower Monthly Magazine, 22 February 2012, 9:06am

CHINA: Huaneng Renewables has revealed one of its wind turbines caught fire in a wind farm in Inner Mongolia, killing two engineers.

The accident happened at a Huaneng wind farm in Inner Mongolia

The accident happened at a Huaneng wind farm in Inner Mongolia

The accident took place in the Second Zhurihe Wind Farm, Tongliao city, north China's Inner Mongolia. Huaneng has not officially released information on the accident. Huaneng Tongliao Wind Power Company, which runs the Second Zhurihe Wind Farm, said the incident is under investigation.

At about 16:00 of 7 February, the wind farm, undergoing an overhaul when one of the turbines caught fire. Two maintenance personnel were in the nacelle eliminating frequency converter faults.

The wind turbine is made by China South Locomotive and Rolling Stock (CSR) and the frequency converter was made by AMSC. CSR said the cause of the accident was unclear and that it was investigating the accident with Huaneng and the local safe production regulators.

The first stage of the Second Zhurihe Wind Farm has 300MW installed capacity. To date, all the other 100-odd turbines have been operating normally, according to sources in the wind farm.

Since the fire fighting apparatus could not reach the hub height of 80-metres, the fire fighters failed to control the fire. It burnt for about 12 hours and extinguished by itself at about 3:00a.m in the second morning. The wind turbine nacelle was burnt away, and the three blades were damaged to varying degrees.

The fire fighters found a body at the second platform of the wind tower, who had died as a result of head injuries. The other engineer has not been found.

CSR says that when the accident took place, the wind turbine was shut down for overhaul, and this means the accident was not caused by turbine quality problems. "We will not say the turbine is flawless, but there must be other reasons," said CSR.

In recent years, China has seen many cases of wind turbines catching fire, as more and more wind farms go into operation.

Yang Kun, the chief engineer of State Electricity Regulatory Commission, recently said that since 2010, there has been a rise in the number of accidents with Chinese wind turbines. In the first seven months of 2011, eight wind turbines were burned down due to various reasons.

Chinese wind farms largely keep only a number of portable fire extinguishers in the turbine engine room and the bottom of the wind tower. The ground-based fire fighting apparatuses are helpless to fire burning in the engine room, because they cannot reach the height.

Industry officials say that China remains backward in the standard with fire fighting system in wind farms, and wind farm developers have not paid enough attention to the problem.

Huaneng Tongliao Wind Power Company has installed over 1GW in Tongliao. It plans to expand this to 2.13GW by 2015.

13-I, cont.

north american WINDPOWER

More Trouble For Vestas? New Wind Turbine Model Catches Fire In Germany

Laura DiMugno, Tuesday 03 April 2012 - 08:45:07

Two recent incidents could hurt Danish wind turbine manufacturer Vestas' reputation, which has suffered from credibility problems over the past year due to massive layoffs, earnings revisions and a major corporate restructuring.

The first incident involves a Vestas wind turbine that caught fire at the Gross Eilstorf wind farm in Lower Saxony, Germany, on March 30. According to the company, the V112-3.0 MW turbine - a new Vestas turbine model - had been working properly before the fire broke out.

Vestas said that safe access to the wind turbine was still possible and that the fire was burning under "controlled conditions."

In addition to disconnecting the affected turbine from the power grid, Vestas shut down three other V112 wind turbines located nearby. The wind farm's remaining 13 V112 turbines are running as usual, the company said.

As a precaution, Vestas also reviewed its entire fleet of V112 wind turbines and concluded that the rest of the units were operating as intended.

The V112 wind turbine - a 3 MW machine - is Vestas' largest onshore wind turbine, and it is unclear whether its larger capacity contributed at all to the incident. The company said it was launching a full investigation into the cause of the fire and that a third party has been engaged in the analysis.

A spokesperson for Vestas told ***NAW*** that the company is aiming to release the findings of the investigation by next week.

No injuries were reported in relation to the fire. However, a separate incident has resulted in the injury of a worker at the Macarthur Wind Farm, a massive 420 MW wind project jointly developed by AGL Energy and Meridian Energy.

Although Vestas did not state the source of the injury, the company said that Leighton Contractors, which manages the wind farm site, is investigating the matter. However, the company did rule out some causes.

"Vestas can confirm that the injured worker was not crushed by a wind turbine or a wind turbine blade," the company said in a statement.

Despite its recent troubles, Vestas remained the No. 1 wind turbine manufacturer in the world in 2011, capturing 12.9% global market share, according to a recent study by MAKE Consulting.

Nonetheless, more bad news may be pending. Vestas warned in January that if the production tax credit for wind energy is not extended beyond this year, the company will lay off an additional 1,600 employees in the U.S.

Photo courtesy of Vestas Wind Systems A/S

this content item is from North American Windpower
(http://www.nawindpower.com/e107_plugins/content/content.php?content.9629)

13-I, cont.

RECHARGE the global source for renewable energy news

Wind

A Vestas V112-3MW turbine.

Loose connection sparked V112 turbine blaze, says Vestas

Danish wind turbine manufacturer Vestas says it has identified the root cause of a fire in one of its V112-3.0 MW machines in Germany at the end of March.

13-I, cont.

RELATED STORIES - Published: Wednesday, April 25 2012 **Ben Backwell, London**

After an investigation, the company found that the fire started in the turbine's Harmonic Filter Cabinet as a result of a loose connection in the electrical system that created an arc flash.

"The solution to this problem has been confirmed by specialists. It involves using a different type of washer on the electrical connections in the Harmonic Filter Cabinet," Vestas says, adding that the solution is in the process of being implemented in the affected turbines and customers are being informed.

Vestas is still awaiting reports from two external experts who worked side-by-side with its own investigators. These are expected within "a few weeks".

"Vestas is confident that this final conclusion will be confirmed," it says in a statement.

At the site of the blaze – the 51MW Gross Eilstorf project in Lower Saxony – the burned nacelle has been replaced and is scheduled to be commissioned next week.

A small number of other machines were **halted** while the inquiry was held. Most of the paused V112 turbines have been restarted or are in the process of being restarted.

"As we return the paused turbines to normal operations, we have used the opportunity to reschedule and move forward on already-planned upgrades," says Vestas, adding that these are not related to the root cause of the incident.

"We are taking the opportunity to do as much work as we can on the turbines to minimize any future inconvenience to our customers," Vestas says. It still expects all of the paused turbines to be returned to normal operation by the end of the month.

north american WINDPOWER

Another Wind Turbine Blaze: Fire Breaks Out At Iowa Wind Farm

Laura DiMugno, Thursday 24 May 2012 - 12:42:30

Less than two months after a Vestas V112-3.0 MW wind turbine went up in flames in Germany, another wind turbine has caught fire - this time, in the U.S.

On May 22, emergency personnel responded to a fire at Iberdrola Renewables' Barton 2 Wind Power Project in Worth County, Iowa, company spokesperson Jan Johnson tells ***NAW***.

Iberdrola worked with the emergency crew to extinguish the fire, Johnson says, adding that no one was in the turbine at the time of the incident and that there were no injuries.

The fire occurred in the nacelle of a Gamesa G87-2.0 MW machine, which had been in operation for almost three years since the wind farm was placed in service in June 2009.

The 80 MW Barton 2 wind farm - a segment of the larger 160 MW Barton Wind Power Project - comprises 60 Gamesa G87 turbines.

Gamesa spokesperson David Rosenberg says the company has not been involved with the Barton project since May 2011, when its operations and maintenance contract expired. He would not comment on if the company is taking any quality-control measures to ensure proper performance of other G87 machines but says the turbines are "remarkably reliable."

The cause of the fire is still unknown, but Iberdrola has launched a full investigation into the matter.

13-I, cont.

Fire in Vestas turbine

Michael McGovern, Windpower Monthly, 08 June 2012, 3:37pm

SPAIN: A second Vestas turbine in as many months has caught on fire, it has emerged.

Only shortly after tackling a nacelle fire on one of its V112-3.0MW turbines in Germany in April, the Danish manufacturer has had to contend with another fire, this time on one of its V90-2MW machine in Spain.

The fire in May was due to "an electric arc flash" which took place during the performance of a service operation, a company spokeswoman told *Windpower Monthly*. "Vestas is currently carrying out investigations to find the root cause of the electric arc flash," she added. Once finalised, she said Vestas would inform its customers and take any necessary actions.

An employee, performing a service operation in the control cabinet at the nacelle, suffered burns to hands and face and was rushed to hospital in the incident. He is now back home and his recovery is progressing "satisfactorily", said the spokeswoman.

13-I, cont.

The machine was operating in the five-year-old Casa del Aire wind plant in the district of El Bonillo in the south-central province of Albacete, a hot spot for brush and forest fires. The fire brigade extinguished the flames, which also spread to the surrounding vegetation.

The plant developer, Renovalia, declined to comment, saying the full onus for comment fell on Vestas, not only as turbine supplier but also as operations and maintenance provider.

"Taking into account the information available today, the incident in Casa del Aire is an isolated case and has no connection to the V112 fire in Germany or to any other incident in a Vestas turbine," said the Vestas spokeswoman.

In the German case, the company concluded that the fire started in the harmonic filter cabinet as a result of a loose connection, which will be remedied by using a different type of washer on the electrical connections.

CAL FIRE: WIND TURBINE GENERATOR CAUSED WILDLAND FIRE THAT CHARRED 367 ACRES

Charred earth around turbine generator that caused wildland fire

13-I, cont.

By Miriam Raftery

July 31, 2012 (San Diego's East County) – With County Supervisors poised to consider approval of Tule Wind and a wind ordinance that could open much of fire-prone East County to wind energy development, a wildland fire that started at a wind turbine facility in Riverside County last month provides fuel for opponents concerned about fire risks posed by industrial-scale wind projects.

"The fire started with the windmill itself," Captain Greg Ewing with Cal Fire/Riverside Fire Department informed ECM today.

Despite extensive area cleared around the base of each turbine, Ewing said, the blaze still spread into a wildland fire that swiftly engulfed 367 acres. If not for prompt reporting by a witness, it could have been far worse.

According to Cal Fire's report on the incident, The View Fire occurred in the Whitewater area east of Cabazon in Riverside County on June 17, 2012 at a wind facility near Cottonwood Road and Desert View. A caller who dialed 911 initially reported seeing flames and "one confirmed windmill on fire" at 9:15 p.m.

By 9:33 p.m., CHP stated it had received multiple reports that there were "several windmills on fire" along with a ridgeline near I-10 and Haughen-Lehmann Way. Callers also reporting "popping loud noises" as the turbines burned. Both ground crews and aircraft battled the blaze.

Residents in the box canyon were evacuated, including 90-year-old Barbara York, who had time to grab only an overnight bag. York was "frantic," the *Desert Sun* reported at the time.

At 12:34 a.m. on June 18, Cal Fire's report on the fire indicates that a request had been made for Edison, since power lines had caught fire in the middle of the wind turbines. More than 100 firefighters fought the fire through the night.

The blaze was ultimately stopped at 367 acres, including 100 acres of public lands on Bureau of Land Management property. The final report blames "equipment", specifically a "generator" and "arcing" for the fire.

Asked directly whether the generator that caused the fire was an actual wind turbine, Captain Ewing confirmed, "Yes ma'am." He also confirmed that ground had been cleared around the base of each turbine, the blaze swiftly spread to become a wildland fire despite those precautions. Captain Ewing did not know the precise cause of the turbine malfunction. "Several companies lease the land," he noted. "Other companies own the windmills and others service them." **13-I, cont.**

Asked whether Cal Fire intends to seek compensation for the firefighting costs, Ewing replied, "I can't comment on that." He did not have the total cost of the firefighting efforts to quell the wildfire.

Wind developers have claimed that clearance around turbines, coupled with improved technology, make prospects of fires slim. Earlier this year, a representative from Iberdrola (developer of Tule Wind) assured ECM that the odds of a modern wind turbine causing a fire that escapes to become a wildland fire were infinitessimal.

It only takes one wildfire to scorch hundreds of thousands of acres, putting homes and lives at risk, as San Diegans well know. Is that a risk worth taking, for the promise or renewable energy from wind?

When comparing the viability of wind to other options such as rooftop or parking lot solar, should the potential costs of firefighting--as well as potential liabilities for damages to property and lost lives--be factored into determining projects' long-term costs and benefits?

The BLM has already approved construction of 65 wind turbines in Phase 1 of Tule Wind on BLM land in McCain Valley. On August 8, the County Supervisors will consider whether to follow planners advice to turn down an application form Iberdrola for five more turbines on County land.

The bigger issue for Supervisors will be whether or not to approve an upcoming sweeping wind ordinance that could open wide the doors for large-scale wind turbine developments, each with dozens or even hundreds of towering wind turbines in fire-prone areas of East County.

In rural East County, where 100-mile per hour gusts quickly transformed the Harris Fire into a raging inferno during the 2007 firestorms--a nightmarish repeat of the 2003 Cedar Fire. Dubbed the Santa Anas (or "devil winds") by the Spanish, the winds are common in East County during the hottest, dryest season. Thus it is prudent for County officials to give serious thought to potentially serious consequences should a turbine malfunction in a remote location.

13-I, cont.

Homeowners near the View Fire were fortunate that a witness spotted the fire and reported it promptly, before homes or lives were lost. What happens if a turbine fire occurs in a remote East County location in the middle of the night? Will flames engulf homes, or in the case of Tule Wind, campsites in the path of the fire? Could the County be held liable if wind turbines that it approves cause a devastating wildfire?

These are troubling questions that deserve satisfactory answers.

http://eastcountymagazine.org/node/10581

Item #281

STORM LAKE, Iowa (AP) -- A fire trapped two workers at the top of a 213-foot wind turbine until firefighters could reach them.

The electrical workers were working on a control panel inside the turbine's support tube last week when the fire broke out. They were treated at a local hospital and released.

Firefighters received a call about 7:35 p.m. on Nov. 30 that there was a fire in the MidAmerican Energy wind turbine, just south of Schaller.

Firefighter Armon Haselhoff said the doors to the turbine were shut to keep oxygen from feeding the fire, since the support tube could have acted like a chimney.

The workers were able to get fresh air through a hatch at the top of the tube, Haselhoff said.

Firefighters extinguished the blaze, which appeared to have started from a short circuit during testing.

Once the fire was under control, firefighters climbed to the top of tube to help the workers down, Haselhoff said.

13-I, cont.

Firefighter Jason Currie and another firefighter ran out of air in their packs before they reached the top, but kept going anyway.

``It got worse every level we went up,'' Currie said.

Firefighter Jeff Sandoff said he and Currie had zero visibility climbing inside the tube.

``Once we climbed the tower, it was just your hands reaching in front of you,'' Sandhoff said.

He said firefighters had radio contact with the trapped workers.

Mark Reinders, MidAmerican spokesman, said the turbine was still under construction. The employees were from M.A. Mortenson, a General Electric subcontractor.

The fire will not delay the project, which is scheduled to be completed by the end of this year, Reinders said.

http://cms.firehouse.com/web/online/News/Fire-Traps-Workers-at-Top-of-213-Foot-Iowa-Wind-Turbine-/46$37238

Item # 336

December 24, 2005
Credits: Sunderland Today

Description:

A HUGE wind turbine went up in smoke in a massive blaze seen for miles across Wearside.

The 200ft structure at the Nissan factory, part of a £2.3million wind farm built in August, burst into flames just after 12.30pm yesterday.

The fire was so fierce all three 75-ft long fibreglass blades eventually dropped off and thick black smoke could be seen for miles around.

Almost 200 people dialled 999 to alert emergency crews as flames engulfed the turbine.

Police closed both the A1231 and the A19 for an hour-and-a-quarter amid worries that parts of the metal tower could fall on to the busy roads.

The six turbines were bought second-hand at a cost of £1.1million, having been previously used on a wind farm in Germany. **13-I, cont.**

Graham Bagley, from Nissan, told the Echo in August it did not make financial sense to buy new ones and claimed the turbines were in "excellent condition".

A spokesman for Nissan denied the turbines are unsafe.

"It is the same design that has been used in wind farms all over the world and as far as we're aware nothing like this has happened before," he said.

"If there had been any concerns about the turbines we would never have purchased them. "We're taking this very seriously and until we know what has caused this all six turbines will be shut down."

He said engineers from Vestas, the company who manufactured the devices, had been working on the affected turbine since an oil leak was detected on Thursday.

"It was the third turbine and is the nearest one to our test track," the spokesman said.

"Engineers were repairing it yesterday morning and they had restarted it when the fire started. As far as we are aware it was oil that caught fire and the blades then burnt through. They are made of fibreglass and they burnt right down to the metal shaft before falling off. Nobody was hurt. We have now shut down all the other turbines and engineers are carrying out checks on all of them. We apologise for any inconvenience that may have been caused by this."

Both the main roads were reopened at 2pm. A spokeswoman from Tyne and Wear Fire Service said: "We had seven fire engines in attendance and because of the risk of the structure falling onto the A19 police closed the road and the A1231.

"The majority of the structure eventually fell away from the road."

13-l, cont.

Item # 353

Around $2m damage has been caused in what is believed to be the first wind turbine fire in Australia at the Lake Bonnay windfarm. This article appeared in the Adelaide Sundaail 12 February 2006.

SUNDAY MAIL www.sundaymail.com.au February 12, 2006 7

EXCLUSIVE: What happened at an SA wind farm when we needed its power during the heatwave ...

Scorched out

David Nankervis

A $3 MILLION wind farm turbine caught fire while dozens shut down at the time South Australia most needed them when a heatwave left 63,000 South Australian homes without power last month.

Adding to the drama, firefighters could not extinguish the blaze because the tower was too high at 67m.

Lack of wind and automatic shutdowns triggered by hot temperatures were to blame for the state's 180 turbines producing just 10 per cent of their maximum power capacity during the January heat wave, according to experts.

The experience proved SA could not rely on wind power to provide electricity when demand was greatest, the Electricity Supply Industry Planning Council (ESIPC) said.

"You never know if the wind will be blowing when you need it to or if wind turbines will shut down," ESIPC spokesman Brad Cowain said.

Operators of the Lake Bonney wind farm, where the turbine fire occurred on Sunday, January 22, said all of its 46 turbines had automatically shut down during the heat wave when temperatures exceeded 40C.

"We want the turbines to operate during peak demand to capture revenue but power output is limited by the automatic shut down to protect electrical instruments," wind farm operator Miles George of Babcock and Brown Wind Partners said.

He said the turbine fre – the first in Australia – had been caused by an electrical fault while maintenance crews were working on it after it had shut down.

Around 3pm, 40 CFS firefighters and six tricks rushed to the wind farm to extinguish the blaze but fire hose water couldn't reach the steel generator at the top of the tower.

Instead, the firefighters watched as fire destroyed the $3 million turbine – which weighs 75 tonnes – and extinguished spot fires ignited by ashes from the turbine blaze.

According to ESIPC, many of the European manufactured turbines used in SA shut down during extreme temperatures to avoid generator meltdown.

"Most turbines are manufactured in Europe where they don't have to worry about operating at high temperatures," Mr Cowain said.

"We are investigating which individual turbines were not operating because of a shut down or lack of wind."

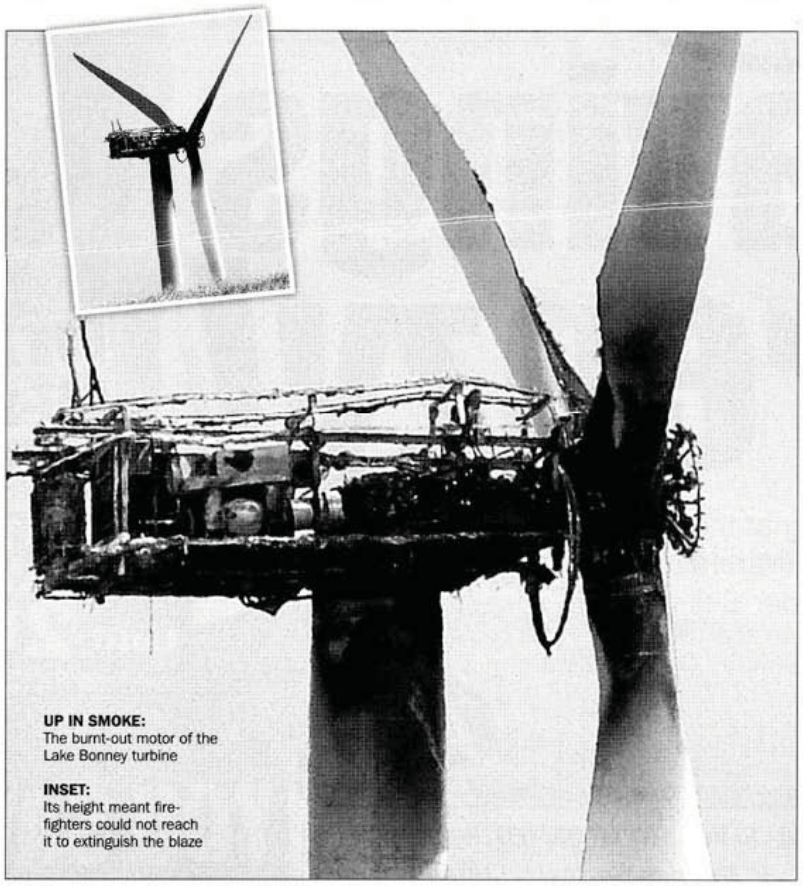
Between Thursday, January 19 and Sunday, January 22, maximum temperatures exceeded 40C throughout most of the state, creating record demands for electricity while wind farm output averaged only 10 per cent.

But during Saturday's peak power demand wind farm output plummeted to just 2 per cent of capacity, producing enough power for only 3500 homes, according to ESIPC. This compared with the maximum capacity of 318MW to power 175,000 homes. SA leads the nation in wind farm energy with five established sites - Starfish Hill, Canunda, Wattle Point, Cathedral Rocks and Lake Bonney.

There are numerous other approved wind farm developments including an AGL plan for 43 turbines at Hallet in the state's Mid North.

But AGL also plans to more than double the capacity of its nearby gas-fired plant, from 180MW to 430MW, at a cost of more than $100million to ensure peak demand during hot weather can be met.

The state's independent energy regulator Pat Walsh declined to comment about the wind farm performance during the heat wave or its implications on the state's overall energy supply.



UP IN SMOKE: The burnt-out motor of the Lake Bonney turbine

INSET: Its height meant firefighters could not reach it to extinguish the blaze

13-I, cont.

Item #362

Flames lap Oak Creek pass

The fire was caused by burning debris from a wind turbine that caught fire due to a malfunction.

June 3, 2006 in Tehachapi News

Flames that marched across the hills of Oak Creek Pass on May 26 brought firefighters from several jurisdictions to battle the area's first large-scale fire of the season.

The fire began about 2:10 p.m. west of Tehachapi-Willow Springs Road approximately one mile south of Oak Creek Road and burned approximately 900 acres of desert brush and grass. The fire was 40 percent contained by 10 p.m.

According to Kern County Fire Department inspector Tony Diffenbaugh, 241 firefighters battled the fire.

"Crews were assisted by airtankers, helicopters and bulldozers, however, the air operation was halted after about two hours due to high wind conditions," he said. Diffenbaugh also said that rugged terrain along with the high wind conditions hampered containment efforts. **13-I, cont.**

He said firefighters constructed an fire break approximately seven miles long and used Tehachapi-Willow Springs Road to stop the spread of the fire.

"Several spot fires on the east side of Tehachapi-Willow Springs Road that were started by wind blown embers were quickly extinguished by firefighters," Diffenbaugh said.

He said that several structures in the area, including homes and wind energy producing equipment, were threatened by the fire.

Cooler temperatures and higher humidity overnight aided firefighters in their efforts to secure the perimeter of the fire.

Diffenbaugh said that by 7 a.m. on May 27, the fire was 80 percent contained. He said firefighters stayed on remained on the fire until May 28 until the fire is completely controlled.

"The reduction in the final acreage of 787 is due to more accurate mapping performed

by the KCFD Geographical Information Systems (GIS) Unit," Diffenbaugh said. "Using GPS equipment, GIS personnel mapped the entire perimeter of the fire."

He said that by using a specialized computer program, the information was converted into a highly accurate map of the fire.

The fire was caused by burning debris from a wind turbine that caught fire due to a malfunction.

13-I, cont.

The firefighting operation was conducted under the command of KCFD Battalion Chief Hiedi Dinkler. California Department of Forestry, United States Forest Service, CCI fire crew and Los Angeles County Fire Department assisted with the fire.

Contributing writer Nick Smirnoff contributed to this article.

Web link: http://www.tehachapinews.com/home/viewarticle.php?...

Item #376

Taiwan Power Co seeks investigation of wind-turbine fire

dpa German Press Agency
Published: Tuesday October 17, 2006

Taipei- The Taiwan Power Co (Taipower) has asked Spain's Gamesa to investigate the cause of a fire that destroyed a Gamesa-built wind turbine in what is believed to be the world's first wind-turbine blaze, a Taipower official said Tuesday. "We have asked Gamesa to send technicians to Taiwan to investigate the cause of the fire," Chen Wu-hsiung, director of Taipower's Wind Power Department, told reporters after Monday's blaze. "Preliminary investigation points to the generator's overheating as the cause of the fire."

Firefighters needed one hour to put out the fire because the generator was 67 metres above the ground. Including its blades, the wind turbine stands 107 metres tall.

13-I, cont.

Taipower has bought six wind turbines from Gamesa, one of the world's leading wind-turbine manufacturers. The six turbines were installed in Hsinchu County on Taiwan's west coast at the end of September and have been undergoing trial run before they go into commercial operation, scheduled for next month.

Tseng Kuo-hua, a professor at Tamkang University, said the fire raised concerns about the safety of wind turbines because it's difficult to extinguish a fire about 30 storeys high.

"I am shocked and very disappointed because wind power is a mature technology and this should not have happened," Tseng told the Broadcasting Corp of China.

He said Taiwan must ensure the safety of wind power because the island plans to install 1,100 wind turbines by 2010.

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http://rawstory.com/news/2006/Taiwan_Power_Co_seeks_investigation_10172006.html

Item #438

Whitewater Canyon blaze blamed on windmill

Firefighters have fully contained a 68-acre wildfire in the Whitewater Canyon area about 1.5 miles north of Interstate 10, according to CAL FIRE.

Fire officials expect to have the blaze under control by 8 a.m. Saturday.

Whitewater Canyon Road has reopened to traffic.

The Alta Mesa fire, reported at 6:19 a.m., is not threatening homes, spokeswoman Jodi Miller said.

“It’s in a pretty remote area,” Miller said.

It was caused by an undetermined problem with a wind turbine, according to CAL FIRE.

The wildfire is isolated to the steep slopes and ridges west of Whitewater Canyon Road.

“It’s light grass; it’s sporadic and patchy,” Capt. Fernando Herrera said. “That’s a good advantage, that there’s not a lot of heavy vegetation.”

13-I, cont.

Hand crews cut fire lines that had contained most of the fire.

One inmate firefighter was taken to a local hospital for heat related injuries.

While homes seem safe, gusty winds have firefighters, and area residents, cautious.

“We’re dealing with 50 mph gusts on top of the hills, where the fire started,” Herrera said.

“We went up the road and talked to the firefighters and they said we’re in no danger at this itme,” said Anita Sampson, a Cecil Road resident in Whitewater less than a mile south of the fire.

Fellow local resident Angie Brashears said residents would remain wary of the fire all day.

“We have a neighborhood watch program where we all kind of look out for each other and keep each other informed,” she said.

Though portions of the fire were close to a line of wind turbines at the top of a hill, none of the turbines were damaged, Herrera said.

Fifteen engines, four hand crews and four aircraft are battling the blaze. By Keith Matheny and Michelle Mitchell The Desert Sun

13-I, cont.

Item #442

Wind turbine burns near Garner (update)

A wind turbine south of Garner burned Wednesday morning causing two of the blades to fall off. ...He said the fire burned for half an hour to 45-minutes before the blades fell off. "When the blades fell, there was all kinds of debris flying all over the place," he said.

October 3, 2007 by Bob Link in Globe Gazette

GARNER — Fire caused major damage to a wind turbine Wednesday morning at the Hancock County Wind Farm southwest of Garner.

The large compartment holding the gear box and electric components more than than 200 feet above the ground burned and two of the three 77-foot blades broke off, falling to the ground.

No one was injured and damage was limited to the turbine, according to a spokesman for Florida Power and Light Energy, of Juno Beach, Fla., owners of the wind farm.

The fire was reported shortly after 8 a.m., according to Hancock County Sheriff Scott Dodd.

The turbine's third blade remained connected and was hanging straight down.

13-I, cont.

The sheriff's office and Garner Fire Department were at the scene.

The fire started near the rear of the equipment housing compartment and worked its way toward the blades, according to Garner Fire Chief Terry Jass.

"We pretty much were on standby and when things fell to the ground we put them out," he said. "The blades were burning when they fell."

Ken Engstler of Engstler Construction of Garner was working on a farm near the turbine when one of his crew members saw smoke coming from the turbine.

"Smoke was rolling out of it," said Engstler. "So we got in the truck and started heading up that way."

He said the fire burned for half an hour to 45-minutes before the blades fell off.

"When the blades fell, there was all kinds of debris flying all over the place," he said.

Steve Stengel, a spokesman for Florida Power and Light, said the cause of the fire is not known.

"The damage was isolated to one turbine and the balance of the wind farm remained operational," he said.

"The turbines are all connected on different circuits," he said. "So it is possible that four or five other turbines were taken out of service because of the fire."

Stengel said no Florida Power and Light customers would have had service interrupted by the fire.

Stengel said there are 148 turbines in the 80-square-mile Hancock County Wind Farm.

The wind farm went into operation in 2002.

Web link: http://www.globegazette.com/articles/2007/10/03/la...

Description:

A turbine on a FPL wind generator caught fire near Garner.

13-I, cont.

Item #473

Mt. Storm turbine catches fire

According to NedPower Mount Storm spokesperson Tim O'Leary, a wind turbine in Mount Storm caught fire at approximately 5:15 p.m. on Tuesday afternoon. According to O'Leary, the fire occurred during routine maintenance and started in the nacelle of the wind turbine. ...NedPower is currently working on Phase 1 of the Wind Turbine Project - which consist of 82 turbines. Phase 2 will consist of 50 turbines, for a total of 132 turbines.

January 16, 2008 in Mineral Daily News-Tribune

According to NedPower Mount Storm spokesperson Tim O'Leary, a wind turbine in Mount Storm caught fire at approximately 5:15 p.m. on Tuesday afternoon.

According to O'Leary, the fire occurred during routine maintenance and started in the nacelle of the wind turbine.

The nacelle refers to the structure which houses all of the generating components, gearbox, drive train, etc.

13-I, cont.

After an assessment, it was determined that both the nacelle and one of the turbine blades sustained damage.

No injuries were reported.

"As far as my knowledge is concerned, no other fires have occurred," said O'Leary.

NedPower project staff and the Mount Storm Volunteer Fire Department responded to the scene.

The cause of the fire is yet to be determined as an investigation continues.

"NedPower appreciates the support of the Mount Storm Volunteer Fire Department," said O'Leary.

NedPower is currently working on Phase 1 of the Wind Turbine Project - which consist of 82 turbines. Phase 2 will consist of 50 turbines, for a total of 132 turbines.

The project is slated for completion by 2009.

Item #487

Fire ruins turbine at wind farm; Birds Landing blaze gutted 1 of 90

A wind turbine caught fire in Birds Landing early Monday, but investigators have yet to identify what caused the flames. The fire, on the top portion and on the blades of the 200-foot turbine, was discovered around 5:30 a.m. by employees of FPL Energy - High Winds. The turbine that caught fire was one of 90 the company maintains in the 6700 block of Birds Landing Road near Rio Vista. Van Culver, high winds plant leader for FPLE, said by early afternoon the company was still assessing the risk of climbing the tower to get a closer look.

13-I, cont.

March 11, 2008 by Danny Bernardini in The Reporter

A wind turbine caught fire in Birds Landing early Monday, but investigators have yet to identify what caused the flames.

The fire, on the top portion and on the blades of the 200-foot turbine, was discovered around 5:30 a.m. by employees of FPL Energy - High Winds. The turbine that caught fire was one of 90 the company maintains in the 6700 block of Birds Landing Road near Rio Vista. (image of burning turbine)

Van Culver, high winds plant leader for FPLE, said by early afternoon the company was still assessing the risk of climbing the tower to get a closer look.

"We're still investigating the root cause," Culver said. "We're making sure it's secure and there is no risk."

After noticing the fire atop the turbine, Culver said the company notified the fire department which ultimately decided to let the fire burn itself out. Culver said that took about three hours.

While the turbine fire was out by morning, the blades continued to burn throughout the afternoon. Those blades - which extend the height of the turbine about 120 feet - are made of fiberglass and balsa wood and dropped embers as they burned.

Culver said although the instances are rare, turbines do occasionally catch on fire. He was happy no further damage or injuries occurred. General

Manager Kevin Gordon said the estimated damage was $1.5 million.

Web link: http://www.thereporter.com/news/ci_8531662

13-I, cont.

Item #493

Turbine burns at Ewington wind farm

March 28, 2008
Credits: Worthington Daily Globe: http://www.dglobe.com/articles/rss.cfm?id=10344

Description:

Smoke pours from the top and bottom of one of the wind turbines at the Ewington Wind Farm near the Heron Lake exit north of Interstate 90 Wednesday (Mar 26) morning. The Brewster and Okabena Fire Departments responded to the scene, but upon the advice of Suzlon Wind Energy officials, the fire was allowed to burn itself out. (Brian Korthals/Daily Globe)

13-I, cont.

Item #505

May 30, 2008 in Daily Globe

The Brewster Fire Department was paged at 2:02 p.m. Thursday to a wind generator fire at the intersection of 350th Avenue and 800th Street in Jackson County. According to fire chief John Garmer, the wind turbine had a "ball of flame" on top when firefighters arrived at the scene. The fire was located at the six-turbine Ewington Wind Farm, the same site where a wind generator burned two months ago. This time, the propeller blades from the turbine came down in the fire, landing in the corn field below. Garmer said the department was at the scene for about a half hour.

Web link: http://www.dglobe.com/articles/index.cfm?id=12004

April 3, 2008

Windmill fire under investigation

Emergency calls flooded the Jackson County Law Enforcement Center last Wednesday morning as passers-by on Interstate 90 in western Jackson County witnessed huge plumes of smoke ascending to the clouds. The fire originated from one of the six power generating windmills on the Ewington Township Wind Farm, located south of Okabena just north of I-90. **13-I, cont.**

Personnel from the Jackson County sheriff's office as well as the fire departments from Okabena and Brewster quickly responded and the flames were brought under control.

The towers are operated by Suzlon Wind Energy, whose regional office is in Pipestone.

After the fire was controlled, the scene was turned over to Suzlon officials, who are conducting an investigation.

"We are still investigating a cause," said Suzlon Vice President Ken Glazier. "The fire was controlled quickly and brought to a safe stop. There were no injuries and the damage was limited to the one cell." That cell is the main operating apparatus of the turbine, said Glazier. Depending on what the investigation yields, at least the cell will have to be drastically repaired or replaced for that turbine to be functional again, he said.
The other five turbines on the site are operational and were not damaged, he said.
Suzlon operates some 10 wind farms in southwest Minnesota. A fire is unusual, said Glazier. "It's certainly unusual, but it's not the first fire we've had," he said. "On that site, we've had those six turbines in operation since 2003 without incident."
A damage estimate was not available.

By Ed Gallagher
Lakefield Standard **http://www.lakefieldstandard.com/news/article.asp?**

Item #500

Windmill fire causes $750,000 in damage

Fire caused an estimated $750,000 in damage to a windmill on Thursday, the Palm Springs Fire Department said today. ...The top portion of the windmill was on fire and several small spot fires happened because of falling debris. The fire is under investigation.

May 9, 2008 in Desert Sun

13-I, cont.

Fire caused an estimated $750,000 in damage to a windmill on Thursday, the Palm Springs Fire Department said today.

Firefighters were called out about 5:55 p.m. to Windmill Farms a mile south of Interstate 10. The top portion of the windmill was on fire and several small spot fires happened because of falling debris. The fire is under investigation.

Web link: http://www.mydesert.com/apps/pbcs.dll/article?AID=...

Item #532

Produced September 11, 2008 (Posted September 13, 2008)

Description:

News report of a wind turbine at the Aeolian Park wind energy facility in Spain destroyed by fire. According to Iberdrola, the exact cause of the fire has not been determined, but is believed to be due to mechanical failure. Firemen, police and company personnel were on the scene. A 120 meter buffer around the turbine was established to ensure the safety of people and property near the fire. The fire did not impact the operation of the Aeolian Park in spite of the spectacular visible cloud column rising from the turbine.

YouTube Video - Spain

13-I, cont.

Item #556

3 workers injured in wind farm fire

An explosion and fire at a wind farm under construction in northeast Nebraska has injured three workers. One man, who was atop a tower when a turbine exploded, received first- and second-degree burns in the fire Tuesday morning. Two others, who were nearby, were treated for smoke inhalation and released.

December 1, 2008 by The Associated Press in Journal Star

An explosion and fire at a wind farm under construction in northeast Nebraska has injured three workers.

One man, who was atop a tower when a turbine exploded, received first- and second-degree burns in the fire Tuesday morning. Two others, who were nearby, were treated for smoke inhalation and released.

Edison Mission Group Inc. is building the 80-megawatt Elkhorn Ridge wind farm north of Bloomfield.

Elkhorn Ridge Wind FarmEdison spokeswoman Susan Olavarria (OL-uh-vehr-EE-uh) says the worker who suffered serious burns was taken to a hospital, but she didn't know his current condition. **13-I, cont.**

Olavarria says all the injured employees worked for subcontractor Vestas Wind Energy. Vestas officials said they don't yet know what happened.

Web link: http://www.journalstar.com/articles/2008/12/02/news/local/doc49359f3749d5d794744628.txt

December 3, 2008 by Randy Dockendorf in Yankton Press and Dakotan

Cause of Bloomfield turbine fire still under investigation

Three investigative teams will be coordinated to learn the cause of this week's fire atop a 260-foot wind turbine north of Bloomfield, the state fire marshal's office said Thursday. The fire occurred at one of 27 turbines on the 80-megawatt Elkhorn Ridge wind farm under construction. Once completed, Elkhorn Ridge will become Nebraska's largest wind farm. ...Meanwhile, work has been suspended at the wind farm, Roberts said.

Three investigative teams will be coordinated to learn the cause of this week's fire atop a 260-foot wind turbine north of Bloomfield, the state fire marshal's office said Thursday.

The fire occurred at one of 27 turbines on the 80-megawatt Elkhorn Ridge wind farm under construction. Once completed, Elkhorn Ridge will become Nebraska's largest wind farm.

The fire resulted in the hospitalization of a Vestas Wind Energy worker who suffered burns while working atop the wind turbine. The worker's condition was showing improvement the next day, Vestas spokesman Roby Roberts said.

Another worker on the ground at the time of the fire suffered smoke inhalation but was treated and released, Roberts said.

13-I, cont.

At this point, there is no indication of how the fire started, said Sean Lindgren of the Nebraska state fire marshal's office in Albion, Neb.

"We do not know of any possible causes," he said.

Investigators have been sent to the scene by the Nebraska fire marshal; the Edison Mission Group of Irvine, Calif., which owns the wind farm; and Vestas, a Danish company with North American headquarters in Portland, Ore., that is responsible for constructing the turbines.

"We are really in a standby mode until all the team members get together from the different companies to do a collaborative effort," Lindgren said.

He was unsure of the time needed for the investigation.

"I don't have any ideas on how long it will take," he said. "It doesn't happen that often to have three (teams)."

The three investigative teams will work jointly, Lindgren said.

"We are getting the teams together and figuring out what the plan is, then move on it," he said. "It kind of depends on the resources and what they gather. We are waiting for the direction that we need to take in a safe manner."

The effort takes on a different dimension because this week's turbine fire is "very unusual," Roberts said.

Edison Mission spokeswoman Susan Olavarria agreed, saying her company has not experienced anything like it before.

"This is my first time in this business that I have ever seen a fire like this," she said. "I have never heard of a fire at a turbine."

Meanwhile, work has been suspended at the wind farm, Roberts said.

"The site is closed while the investigation goes on," he said.

For safety reasons, the site has been sealed off from the general public, Olavarria said.

"We don't feel there is any imminent danger," she said. "It's just to prevent onlookers from coming onto the site."

Bloomfield fire chief Rodger Freeman said his department responded to the call around 11:30 a.m. and remained for about an hour. While he could not confirm the cause of the fire, Freeman said the turbine's cone does contain oil.

13-I, cont.

Nebraska will triple its wind energy production upon completion of Elkhorn Ridge and the neighboring 42-megawatt Crofton Hills wind farm. The wind farms will sell their electricity to the Nebraska Public Power District.

Elkhorn Ridge was scheduled to become operational this month. However, officials say they are not rushing to put the wind farm into production until the investigation is completed surrounding this week's fire.

Web link: http://www.yankton.net/articles/2008/12/05/community/ doc4938baaa807f7721126663.txt"

Item #609

CADIZ, 7 Ene. (EUROPE PRESS)

Cash of the Partnership of Firemen of the Province of Cadiz today took part in the control and extinction of a registered fire, by causes that are not known, in an electrical substation, center of receptación and distribution of Aeolian energy located in kilometer eight of highway CA-6200, in the municipal term of Alcala of the Gazules (Cadiz).

In an official notice, Firemen explained that they had to go to the place in two occasions, although could not take part until this morning, when a technician of the responsible company cut the electrical fluid and confirmed that the operation did not have danger for the operative one.

According to he said, the fire was choked after flooding the zone affected of foam, according to establishes the action protocol. The fire took place in a center of reception and distribution of Aeolian energy and had produced a flight in the oil tank and also affected a vent? species of evacuation chimney. [The fire occurred in a wind Energy collection and distribution to center and caused to leak in the oil tank…] **13-I, cont.**

Later, the Firemen had to take part in another fire produced in the same Aeolian park of Alcala, in the control panel of a center of transformation located in kilometer 31 of a-2228. In this sense, he indicated that? everything aims at that both incidents are related. [Later, the firefighters had to respond to another fire in the same wind Park in Alcalå…] In both cases prevention workings are realised since the Firemen cannot take part until he is not confirmed, on the part of competent technicians, no whom tension are and risk in the intervention does not exist. Both fires are very confined and in inhabited zones? , it aimed. Altogether five firemen with two vehicles moved to the place, a heavy rural fire engine and a vehicle of control. In the extinction workings they used about 15 liters of foam and 1,000 liters of water.

Item #615

Wind turbine burnt out

NATASHA EWENDT

5/02/2009 12:30:00 AM

A WIND farm turbine caught fire at the Cathedral Rocks Wind Farm in the early hours of Tuesday morning.

A fishing boat reported the fire at about 1am, and about 23 MFS and CFS firefighters extinguished the blaze before it spread.

Port Lincoln CFS regional commander Kevin May said on the crews' arrival the turbine housing at the top of the tower was on fire, with some embers falling to the ground.

He said the weather was on the firefighters' side and helped in preventing the fire spreading to nearby vegetation.

The turbine housing was completely destroyed, but the rest of the turbine could be salvageable.

The company said yesterday it expects the damage bill to be about $2 million, but it would determine an exact amount when it finishes its investigation.

13-I, cont.

February 4, 2009

The Country Fire Service is being lauded for the quick response to a $6 million turbine fire at the Cathedral Rocks wind farm.
The fire virtually destroyed the turbine near Port Lincoln on Tuesday morning.
Port Lincoln Mayor, Peter Davis says the fire does not appear suspicious.
A fire cause was still to be confirmed at the time of interview.
"It's probably under heat stress or something, there may have been a crook bearing in it who knows.
"To their credit the CFS got on top of it instantly.
"I mean it's not an act of god it's probably a mechanical or an electrical failure and it's most unfortunate for the company", he said.
Occupants of a boat raised the alarm and the fire was well under way by the time CFS crews attended to the fire just before one am.
Port Lincoln CFS Captain, Greg Napier, says the fire was confined to the wind turbine and the small surrounding area.

"(It was) a couple of hundred meters if you put it all together, just various spots, the crews got out quite quickly and got onto the fire... before it had an opportunity to build or create anything of concern", he said.
Mayor Davis is concerned that similar incidents are putting extra strain on power supplies already under pressure from the State's heat wave.
"It illustrates the fragility of our electrical supply system," he said.
"You look at Port Augusta, Playford down at Port Adelaide, the Torrens Island power station, all our equipment is antiquated.
"I mean we're putting Adelaide on rationed power these days, you know, they're not even game to say which suburb or circuit area they're going to close down in the next heat wave.
"What the hell is going on?".
Fire safety authorities are still investigating the cause of the fire.

Tom Henderson
ABC North and West SA
http://www.abc.net.au/local/stories/2009/02/04/2482542.htm

13-I, cont.

Cathedral Rocks Wind Farm turbine fire

February 03, 2009 07:40am

A $6 MILLION wind turbine has caught fire near Port Lincoln, starting blazes on the ground as embers fall.
The fire, at the Cathedral Rocks Wind Farm about 30km southwest of the town, was first noticed by a boat about 1am.
The turbine is alight halfway up its 60m structure, making it difficult for the 14 Country Fire Service firefighters trying to deal with it to extinguish the blaze.
They are also busy controlling the spot fires, but consider the situation to be safe.
The cause of the blaze is as yet unknown.

http://www.news.com.au/adelaidenow/story/0,22606,25001046-2682,00.html

Turbine to be rebuilt after fire

[Alternate short URL for linking • HOME]
» Translation tools are available at the bottom of the page «

Credit: Natasha Ewendt, Port Lincoln Times, www.portlincolntimes.com.au 4 February 2010

The turbine that was burnt out in an electrical fire at the Cathedral Rocks Wind Farm will be replaced next week, a year after the fire.

Roaring 40s corporate services general manager Steve Jackman said the turbine's tower would be trucked in from Port Adelaide on or around February 12, and erected on February 13.

Two blades are due to arrive on site on February 15 or 16 and the last blade on February 17.

The Nacelle, the unit containing the generator, and the rotor hub to connect the blades, are already on site and will be fitted to the tower after February 18, with the turbine to be commissioned in early March.

13-I, cont.

Mr Jackman said the tower had been salvageable after the fire and was refurbished in Adelaide, but the rest of the parts had been destroyed and needed replacing.

He said the company would have liked to have seen the turbine replaced much sooner, but with parts having to be shipped from Denmark, it had taken longer than expected.

Having one of the 33 turbines out of operation for a year had affected wind generation and income, but Roaring 40s was looking forward to seeing an increase in energy capacity once the turbine was operating again.

Mr Jackman said the wind farm was performing well, with the turbines operating at their greatest efficiency since the farm opened in 2005.

Item #637

May 22, 2009 • Pennsylvania

Locust Ridge wind turbine fire still under investigation

The May 14 fire at the skyscraper-size Turbine 12 at the Locust Ridge I commercial wind farm in Mahanoy Township occurred during routine maintenance, according to a company official.

Jan Johnson, corporate communications director for Iberdrola Renewables in Portland, Ore., which owns the wind farm, said Thursday that Turbine 12 is still shut down. When asked how the fire started, she said, "We're still investigating."

"It damaged the top of the tower. The fire was in the nacelle, the housing up there, the tractor-trailer sized box at the top that holds the generator. We're working with the turbine manufacturer to figure out what happened and then we'll move forward," Paul Copleman, spokesman for Iberdrola Renewables, Wayne, said Thursday.

13-I, cont.

Manufactured by Gamesa Corp. in Pamplona, Spain, the 2 megawatt, Gamesa G87 turbine has a tower measuring 256 feet and three blades, each 135 feet long. With blades fully extended, it stands 407 feet high. In service since March 2007, it's one of the original 13 turbines that are part of Locust Ridge I, Joseph B. Green, Weston Place, the wind farm project manager, said previously.

The fire occurred at Turbine 12 between 1 and 1:41 p.m. May 14 while Gamesa Corp. workers were conducting a 24-month scheduled maintenance on the turbine, Johnson said.

"When they're doing maintenance, they turn the machines off. The crews climb the towers and do their work. Then they restart them," Johnson said.

The fire occurred in the gear box.

"It's kind of the guts of the machine. The fire caused substantial damage to the nacelle and rotor assembly. No personnel were in the turbine," Johnson said.

"No one was injured and no one was inside the turbine when it happened," Copleman said.

The fire was reported to the Schuylkill County Communications Center at 1:41 p.m. May 14. Firefighters from Mahanoy City responded and were assisted by tankers from Rush, East Union and Butler townships. Firefighters left the scene at 3:46 p.m., according to a supervisor at the center.

Johnson said she's not sure when Turbine 12 will be functioning again.

"A specialist team was being dispatched from Spain to assist with removal of the damaged components. We're not sure when all the parts will be in to do the repairs," she said.

Fires at commercial wind mills are "pretty rare," according to Copleman.

13-I, cont.

"There are, I think, over 25,000 modern wind turbines in operation just in the U.S. and — to our knowledge in working in the industry on a whole host of safety measures and engineering standards — this is pretty rare," Copleman said.

BY STEPHEN J. PYTAK
STAFF WRITER

The Republican-Herald

Item #660

Kent Hills Wind Turbine Fire

Elgin Fire Department and Employees of TransAlta, the power generation company that runs the farm, responded to the fire at about 9 a.m. Saturday and contained it.

Jason Edworthy, a spokesman for the Alberta-based company, said that three TransAlta employees who work on site were alerted by the turbine's sensor that there was a problem. **13-I, cont.**

They went to the scene but saw no fire and returned to their office, only to receive another automated message, which prompted them to return to the turbine again.

Edworthy said a passer-by saw smoke and called the fire department

Officials haven't been able to confirm the cause of the fire yet.

Vestas, the company that supplies the turbines, will have a team on site today to try and determine what happened.

"Apparently, this is the first time this has ever happened on this particular model of turbine, so they're obviously quite concerned," said Edworthy.

Fire Departments from Riverview and Salisbury also responded to the call.

A single turbine is estimated to cost between $4 million and $5 million dollars.

The wind farm was commissioned in Dec. 31, 2008.

The turbine closest to the burned unit will be shut down as a precaution, but the rest of the farm will remain operating, Edworthy said.

No one was injured in the fire.

Item #686

A transformer at the Maple Ridge Wind Farm's substation off Rector Road was destroyed by fire late Monday afternoon. Martinsburg firefighters were dispatched to the substation about 5 p.m. but had to wait until the facility was shut down before extinguishing the blaze, said Lewis County Fire Coordinator James M. Martin. ...The Columbus Day fire was the second transformer fire at the site, with a similar incident occurring July 4, 2007. In that case, 491 gallons of mineral oil leaked from the damaged transformer

October 14, 2009 by Steve Virkler in Watertown Daily News

WEST MARTINSBURG - A transformer at the Maple Ridge Wind Farm's substation off Rector Road was destroyed by fire late Monday afternoon.

Martinsburg firefighters were dispatched to the substation about 5 p.m. but had to wait until the facility was shut down before extinguishing the blaze, said Lewis County Fire Coordinator James M. Martin.

The fire was contained to the damaged part, located outside the control building, Mr. Martin said.

13-I, cont.

"It didn't get inside, and it didn't get into the other transformers," he said.

The Columbus Day fire was the second transformer fire at the site, with a similar incident occurring July 4, 2007. In that case, 491 gallons of mineral oil leaked from the damaged transformer and temporarily contaminated a nearby residential well. About 15 other wells also were tested, but none was affected.

Some oil also leaked into the soil Monday, although the amount hasn't been determined yet, said state Department of Environmental Conservation Region 6 spokesman Stephen W. Litwhiler. The transformer had a capacity of 550 gallons, but some of the oil burned, remained inside the unit or was recovered before it seeped into the soil.

The wind farm retained a firm Monday night to immediately begin excavation of contaminated soil, and DEC will continue to investigate and monitor the situation, Mr. Litwhiler said.

DEC officials on Tuesday were attempting to contact the homeowner whose well had been contaminated in 2007 to notify him of the incident, he said.

Attempts to reach wind farm officials for comment Tuesday afternoon were unsuccessful.

Item #693

Froidfond: aeolian one harming by a fire

News items on Thursday, October 22, 2009

In the field of aeolian having located on horseback on the villages of Garnache and Froidfond, one of her took late Wednesday evening, at about 20 h 30. Fire declared itself in the located motor everything in the top of this aeolian on the territory froidfondais. The firefighters of Challans, Saint-Etienne-du-Bois and Garnache intervened.

13-I, cont.

October 24, 2009

Further to fire of aeolian one on Wednesday in Froidfond, on the site of Espinassière, the Company of the wind wants to inform, in a press release, that this fire " did not draw away damage for the riverians and environment. It is a technical problem which seems at the origin of the disaster. The experts are on place to try to determine origin. Aeolian connecting in the post of Froidfond are going to be the object of a check deepened before being delayed in service ".

Photos: Fédération Environnement Durable (FED)

13-I, cont.

13-I, cont.

Item #727

February 15, 2010 by Darrell Cole in Amherst Daily News

AMHERST - For the third time since it went online, the wind turbine at the RCMP detachment in West Amherst is on the fritz.

"We had another fire in the electrical panel and we've shut it down," Staff Sgt. Frank Kingston of the Cumberland RCMP said Friday. "It was the same panel in which we had a fire before. It was an electrical fire."

The cause of the fire is unknown.

The centerpiece of the new detachment when it opened in 2005, the 80-foot tall turbine was expected to save the RCMP about $13,000 annually in energy costs and reduce greenhouse gases by 150 tonnes of carbon dioxide.

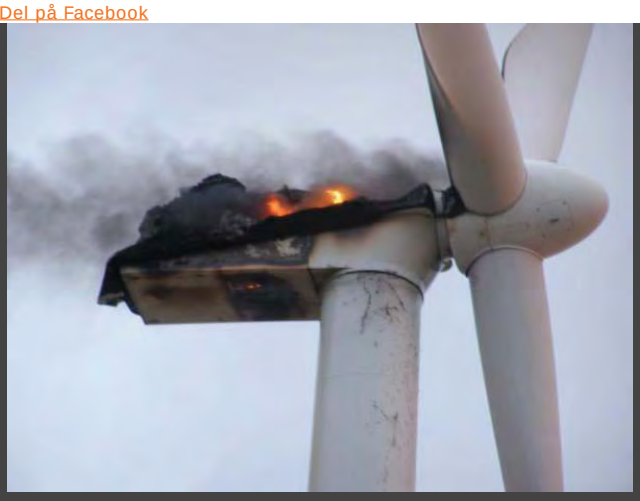
Kingston said engineers were onsite last week to review the situation and he's awaiting their report. The turbine will not go back online the repairs are complete.

The turbine, which cost $225,000 to erect, broke down during a 2007 electrical storm and failed in 2008 after a fire in an electrical panel.

13-I, cont.

Item #893

10. april 2010 09:45 - Af ALEXANDER DORNWIRTH, Fyns Amts Avis
Hold mig opdateret Print Tip en ven Del på Facebook



Seniorkonsulent Ole Andersen fra Energicenter Fyn fotograferede vindmøllen ved Nedergård, da den brændte.
Foto: PRIVATFOTO

13-I, cont.

Bøstrup: Friday at 18:15 broke a windmill at Nedergård suddenly on fire.

- All the electronic mill in the house is completely burned away, he tells of Funen county newspaper.

As the fire brigade turned up shortly after the fire, they could see that there was nothing to do.

52 recommend this article

- It burned simply too high and we decided that we just had to let it burn out. Since there was no danger to human life, "says Torben Qvist stint.

The windmill is 50 meters high and stood together with two other wind turbines of this type.

Normally, the lifetime of a turbine of the type at least 20 years.

- It is indeed very rare, there's a fire in a wind turbine, says senior consultant Ole Andersen from Energy Center Fyn, which in 2002 put the mill up.

According to Ole Andersen has served turbine costs in to the people who have invested in it.

- But it is a shame because it is only now that it would begin to be profitable, "he said.

Item #945

19/09/2010 | Updated: 11:31 Comments (208) Two wind turbines were packed and caught fire this morning in the south of Drôme, and one of them has "exploded" causing starting fire surrounding vegetation, have we learned from the firefighters. The two aircraft, 45 m high and remote from each other about 3 km, are located on the town of Rochefort-en-Valdaine, in an uninhabited area. "Obviously, they are packed, after a strong gust of wind sector", it was reported to the Area Fire and Rescue Department.

"We have established a security perimeter because there are risks of debris, but were ordered not to intervene" on the machines, the fire being in the head wind at the top of the masts, have stated the fire department.

13-I, cont.

The head and the blades of one of the two machines have been completely pulverized. According to police, these devices are equipped with "automatic hydraulic brake" that would not have served its purpose but the accidental origin of the incident would not doubt. "We know nothing about" the causes of the incident, said to her hand, a member of the Maintenance of the park, reached by telephone by AFP, "the safety systems worked on all others."

"It whistled a lot," he told AFP Jean-Marie Villard, a resident of the nearby town of Espeluche, which was quickly on scene to report the damage. "Debris was thrown, it could ignite, there is wood everywhere and there are many mistral," he added, noting that "this is the second time it happens," a similar incident s 'being' already happened on the park in 2004.

http://www.lefigaro.fr/flash-actu/2010/09/19/97001-20100919FILWWW00045-deux-eoliennes-ont-pris-feu-dans-la-drome.php

13-I, cont.

Sioux Falls utility worker dies in fall from Minnesota wind tower

Man, 26, installing turbine before fire broke out; 2 others injured

From Staff & Wire Reports

Article Published: 11/12/05

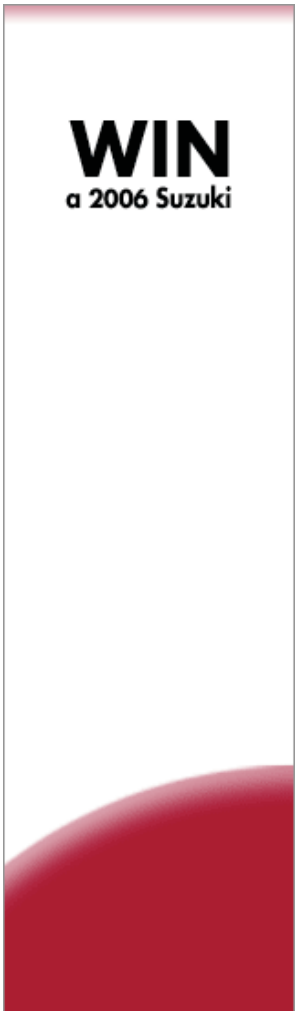
CHANDLER, Minn. - A Sioux Falls man was killed after falling more than 200 feet from a wind tower after it caught fire Friday morning near Chandler, authorities said.

Benjamin James Thovson, 26, died at the scene after falling about 210 feet, Murray County (Minn.) sheriff's deputy Randy Donahue said.

The victim was installing a Suzlon Wind Energy Corp. wind turbine, according to a statement released Friday evening by Suzlon and another company, Gary, S.D.-based Energy Maintenance Service.

13-I, cont.

ADVERTISMENT

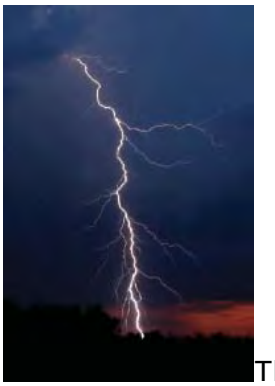


Item #601- Additional Article

December 29, 2008, *8:12 am*

When Lightning Strikes Wind Turbines

By Kate Galbraith


This has been known to fry wind turbines. (Photo: The Associated Press)

With snow, ice and frigid weather, winter creates complications for renewable energy, as I wrote last week. But for Ralph Brokaw, a Wyoming rancher with both cows and wind turbines on his land, the worst hazard is not the ice that his blades can throw off in the winter. **13-I, cont.**

Rather, it is lightning strikes on the towers, which usually occur in summer when there are more storms.

The effect is spectacular — and scary. “It will explode those blades, and they’ll throw chunks of blade several hundred feet,” Mr. Brokaw, a member of his local fire department, told me over the telephone.

As the chunks fall, the firefighters douse them with water. Otherwise, “There’s really not much you can do with a turbine that’s 200 foot tall and on fire,” he said.

Mr. Brokaw said that in the past five years he has been called to help put out two or three turbine fires. He said that “there’s oil and gearboxes and a tremendous amount of wiring” in the generator — so even though the turbines are very well-grounded, they can sometimes light up.

http://greeninc.blogs.nytimes.com/2008/12/29/when-lightening-strikes-wind-turbines/

Item #602- Additional Article

December 1, 2009

A photo made available on 02 December 2009 showing a wind turbine burning in Hanstedt II near Uelzen, Germany on 01 December 2009.

The fire caused a material damage amounting to 750,000 euro and probably developed due to a technical fault, police said.

Photo copyright by EPA/PHILIPP SCHULZE

Read more: http://www.monstersandcritics.com/blogs/theworldinpictures/2009/12/02/wind-turbine-on-fire/#ixzz0Z1iB4GKz

13-I, cont.

Item #603- Additional Article

Suzlon turbine explodes in Brazil

December 2, 2009

13-I, cont.

According to Edison over speed condition that caused a small fire in the nacelle and burned the turbine.

Turbines commissioned June 2009
50 - Suzlon 88

Description:

One of the 50 turbines that makes up the wind farm Praia Formosa (105 MW) in Brazil exploded losing one of its blades. The wind tower that failed was one of the closest to houses in the region.

Item #604- Additional Article

PSC probes wind tower collapse, fire

By **BRIAN NEARING**, Staff writer
First published in print: Thursday, March 12, 2009

State investigators from the Public Service Commission are looking into the fiery collapse of a wind power turbine at a turbine farm in Clinton County.

A preliminary examination by Nobel Environmental Power, owner of the $200 million, 65-turbine Altona Wind Park, and General Electric Co., manufacturer of the 1.5-megawatt turbines, found "wiring anomalies" prevented two turbines from shutting down as designed during a power outage.

On Friday morning, one tower collapsed and started a small fire in snow-covered woods, while the other faulty tower was damaged but remained standing, according to a statement from Noble. Debris from the collapsed tower was flung up to a quarter-mile away, according to published reports. No one was hurt.

13-I, cont.

PSC officials want Noble and General Electric to share the investigations into the towers, blades and generators, as well as any analysis of how far the debris traveled, commission spokesman James Denn said Wednesday. The state also wants to know how many turbines have been restarted since the incident, and information on wind and other weather around the turbines leading up to the collapse.

It was the first collapse of a wind turbine in New York state. The three-bladed General Electrical 1.5 SLE megawatt turbines are between 200 and 280 feet high at the hub where the rotor blades connect, and have a rotor diameter of 250 feet, according to specifications on General Electric's Web site.

Each turbine has a braking system to bring the blades to a halt, including an electromechanical pitch control for each blade, as well as an hydraulic parking brake, according to GE.

Noble spokeswoman Maggy Wisniewski declined comment when asked to describe how the braking systems are meant to function, or what happened to cause a power outage at the wind farm.

According to the National Weather Service in Burlington, Vt., there was no high-wind advisory warning in place for Clinton County on Friday.

The remaining 63 turbines at Altona shut down as designed Friday, and are being restarted once GE finishes tests to ensure the same wiring problems are not present, according to Noble's news release.

The park produces electricity to serve about 32,500 homes.

Noble, which is privately owned and based in Essex, Conn., also operates wind parks in Bellmont, Franklin County; Chateaugay, Franklin County; and Clinton and Ellenburg, Clinton County. It also operated in seven other states.

Brian Nearing can be reached at 454-5094 or by email at bnearing@timesunion.com.

13-I, cont.

Read more: http://www.timesunion.com/AspStories/story.asp?storyID=778979&category=REGION#ixzz0jIWzxFJY

Item #605- Additional Article

Can't fight the fire

BY ELIZABETH SWEETMAN

04 Nov, 2010 12:30 AM

CAPE JERVIS – Do you call the CFS in the event of a wind turbine fire?

While it might seem like the right thing to do, according to group officer for the Southern Fleurieu CFS Mr Greg Crawford, there is little to nothing the CFS can do in this situation, as officers found out at the weekend.

Last Saturday at 2.33 pm, the Southern Fleurieu CFS group was alerted to a fire at the Starfish Hill Wind Farm, near Cape Jervis, in which a turbine had caught alight.

The fire caused $3,000,000 in damage.

On arrival, CFS officers could do little but watch the blaze from half a kilometre away, as the situation was deemed too dangerous to approach.

"There was not a damn thing you could do about it," said Mr Crawford of the turbine fire.

When Work Safe arrived to the scene, CFS officers were told to retreat a further 500 metres away from the fire, as the blades continued to spin.

13-I, cont.

"There were tips of the blades flying some distance," said Mr Crawford.

"You could go no closer than a kilometre away."

CFS officers kept watch for spot fires, but were unable to extinguish those close to the turbine.

Water cannot be used to extinguish the cause of a wind turbine fire, as the turbine's hub contains a large electrical network and from ground to blade tip, the turbines stand at 100 metres tall.

In the event of a wind turbine fire during the fire season, aerial support could aid CFS by extinguishing fires caused by embers around the turbine.

Mr Crawford said the Southern Fleurieu CFS Group had received a bulletin from management detailing that little can be done in the event of a wind turbine fire due to the threat it poses to officers.

He said the Southern Fleurieu CFS Group is in ongoing discussions with the regional CFS officer and representatives from Starfish Hill Wind Farm on the issue.

MORE PAGE 7

A spokesperson for Transfield Services Infrastructure Fund, the organisation in charge of Starfish Hill Wind Farm, said the company has a huge emphasis on safety.

He said a Work Safe team are on site, monitoring operations closely and all safety measures are in place.

"As far as I'm aware, all safety precautions were taken (during the incident)," said the spokesperson.

He said the blades have now been clamped and the safety risk has been significantly alleviated.

Southern Fleurieu resident Barry Webb captured a photo of the destroyed turbine on Sunday and said he, along with many, have concerns of the high danger risks a turbine fire could pose to communities.

"They (wind turbines) are normally located in areas that are not easily accessible (to emergency crews)," said Mr Webb.

"The situation has the potential to be quite serious."

The Starfish Hill wind turbine fire is the third in South Australia since 2006, with a blaze at the Lake Bonney Wind Farm in January 2006, and another at Cathedral Rocks Wind Farm, Port Lincoln in February 2009.

Both occurred during peak fire season.

A spokesperson for the District Council of Yankalilla said while council can provide advice to landowners concerned over the issue, the Starfish Hill Wind Farm is not council's responsibility.

http://www.victorharbortimes.com.au/news/local/news/general/cant-fight-the-fire/1987235.aspx

13-I, cont.

Item #606- Only Photos (no official news report)

July 30th, 2008 at 1:30 pm - Buxtehude-Hedendorf (Lower Saxony, Germany)

[+] Click to enlarge

13-I, cont.

[+] Click to enlarge

13-I, cont.

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13-I, cont.

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13-I, cont.

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13-l, cont.

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Item #607

Wind burn: Electrical problem expected as cause in windmill fire

[Alternate short URL for linking • HOME]

» Translation tools are available at the bottom of the page «

Credit: Suann Musick, The News, www.ngnews.ca 31 January 2011

MILLSVILLE – Trenton resident Doug Stewart knew something was wrong early this morning when he pointed his binoculars towards his sister's house in Millsville and saw nothing but black smoke.

Stewart, who lives near the Trenton Airport, said he is often bird watching and looking at the windmills on Fitzpatrick Mountain, but instead of spotting blades and towers 32 kilometres away, all he saw was smoke.

"I am always looking that way and it didn't look too bright this morning," he said. "It was quite black."

Stewart called the RCMP who told him he was the second person to report the smoke. He also called his sister Donna Sutherland, who lives two kilometres away from the windmills, to see what was happening.

"I didn't notice it at first," she said. "There is a spruce tree in the way so I had to go outside and take a look. Once I walked outside, I saw the smoke."

13-I, cont.

Central West River resident Kevin Hawkes said he knew there was a problem when he saw black smoke while driving home from work early yesterday morning.

"I went home and grabbed my camera but it was about 15 or 20 minutes before I got there," he said. "By then it was pretty much out."

Scotsburn Fire Department arrived on the scene at Tower Road in Millsville about 7:30 p.m. yesterday after someone working at the site reported smoke coming from the motor compartment of the wind turbine.

The turbines are owned by Shear Wind Inc. and were constructed on Fitzpatrick Mountain about four years ago.

Ian Tillard, chief operating officer for Shear Wind, said it took about an hour for the fire to burn itself out. In such cases, he said, the turbines are designed to stop and de-energize so there is little the fire department needs to do other than keep the area clear underneath it.

Tillard said the Scotsburn Department responded in record time and provided the support the company needed, but he acknowledged the company will have to work with local firefighters in the future about responding to such situations.

"We have done a lot of work with fire departments near the Glen Dhu site and it's apparent we need to do that with the Scotsburn Fire Department," he said. "Fires like this are extremely rare on these units, but there are concerns in the summer with forest fires and public safety."

Tillard said the area around the damaged windmill has been cordoned off and the local snowmobile club has been notified since there are some trails on the site.

He suspects the fire was electrical in nature, but won't know the exact cause until it is investigated by the company. He said the components damaged by the early morning fire will be replaced.

13-I, cont.

http://www.ngnews.ca/News/Local/2011-01-31/article-2187158/Electrical-problem-expected-as-cause-in-windmill-fire/1

13-I, cont.

Response to Comment Letter 13: Ruben Grijalva (September 26, 2012)

13-A Thank you for your comments. Your participation in the public review of this document is appreciated. The commenter encourages the adoption of option 1 in Mitigation Measure 4.20-2, which discusses three options regarding fire extinguishing systems for the project. The commenter further states that he supports the ideas contained in options 2 and 3, but they should be in addition to option 1, not in lieu of it.

Thank you for your comment in support of the use of Option 1 as listed in MM 4.20-2 of the EIS.EIR. Your preference for Option 1 will be considered by the decision-makers when this project is considered at a public hearing and by the appropriate federal decision-makers.

13-B The commenter states that he is a former California State Fire Marshal and director of CAL FIRE and is a supporter of alternative energy sources. He further states that he is an advocate that local, state, and federal land use decisions not add an increased burden on the dwindling fire suppression resources of California without built-in fire protection as mitigation. The commenter states that his emphasis is on fire prevention, firefighter safety and reducing the costs of fire suppression for the taxpayers of California.

Please see Response 13-A. This comment reiterates the preference for Option 1 in MM 4.20-2 and does not express issues with the adequacy or accuracy of the analysis presented in the Draft EIS/EIR. Therefore, Kern County and the BLM determined that this comment does not address the EIS/EIR scope, analysis, or process; as stated in CFR 1503.4(c).

13-C The commenter states that he has supported new large developments to fund fire suppression resources such as fire stations, fire personnel, and fire equipment, but has never supported this at the expense of built-in fire protection. He further states that we must consider what is in the public interest for fire and life safety beyond what is in the economic interest of the developer.

This comment does not express issues with the adequacy or accuracy of the analysis presented in the Draft EIS/EIR. Kern County and the BLM determined that this comment was not substantive as it is not relevant to the EIS/EIR scope, analysis, or process as stated in CFR 1503.4(c). However, the concerns will be considered by the BLM and Kern County.

13-D The commenter states that when a fire starts in a remote location with high winds, the probability of that fire spreading beyond the capability of the first arriving fire engine increases substantially. Fires of this nature often grow quickly and firefighters will need more than a mini-pumper to fight the fire.

Chapter 4.20 of the EIS/EIR includes a complete analysis of the potential impacts of the project on wildlands and potential fires. Several Mitigation Measures are identified to reduce potential impacts from the project; including: MM 4.20-1 (Fire Safety Plan), MM 4.20-2 (Fire Truck Funding), MM 4.20-3 (Emergency Response Liaison – Fire), and MM 4.17-5 (Habitat Restoration Plan). Additionally, Section 4.11 includes several mitigation measures to address impacts to fire protection services. Section 4.11.3 concludes that implementation of Mitigation Measure 4.11-8 (Hazardous Materials Management) would reduce the potential for construction and maintenance activities to result in severe fires by requiring fire-safe construction and maintenance practices; and that Mitigation Measure 4.11-1 (Sales and Use Tax) would address any potential increase and will require that the project proponent work with County staff to determine how the receipt of sales and use taxes related to the construction of the AEWP will be maximized. The commenter does not provide suggestions for alternative or additional mitigation measures to address fire potential. No additional revisions to the EIS/EIR are required.

13-E The commenter states that there is no comparable substitute for built in fire protection, especially in remote areas. Fire equipment and personnel can complement the fire prevention technology, but without the built in fire protection, a mini-pumper and crew will not be able to handle the resulting fire scenario on their own. The commenter states that the wind turbine owner may be subjected to civil cost recovery for the cost of the fire response as well as damages to surrounding property, business loss, and injuries. If not recovered from the owner, those costs are passed on to local government, the state and taxpayers.

Kern County and the BLM note the commenter's preference for built-in fire protection within the wind turbine generators. MM 4.20-2 states that, prior to energizing the project, the project proponent shall perform one of three options to reduce fire impacts from the project. Option 1 is installation of automatic fire extinguishing systems on each turbine; Option 2 is the purpose of an Industrial Mini Pumper Trucker for the Kern County Fire Department; and Option 3 is an option for the project proponent to purchase other fire equipment identified by the Fire Department if an Industrial Mini Pumper Truck has already been purchased (presumably by other wind projects). The option for purchase of an Industrial Mini Pumper Trucker

13-F The commenter discussed that while he was in office, he argued publicly and in the legislature that local and federal land use decisions were impacting the cost of fire protection for the state. He has made several attempts at legislation and continues to this day. The commenter believes that fire prevention is the key to mitigating concerns about increased risks and costs associated with fires on federal lands based on land use decisions, locations, and lack of adequate firefighting resources.

With regard to costs associated with fire protection, please see Response to 13-D. With regard to comments regarding fire prevention, Kern County and the BLM agree that fire prevention is an important issue. Therefore, MM 4.20-1 (Fire Safety Plan) was included which requires that the project proponent develop a Fire Safety Plan in consultation with the Kern County Fire Department and the BLM. As noted in the MM, the Fire Safety Plan is required to specify the notification procedures and emergency fire precautions to be implemented during the construction and operation of the project and shall also contain maps of the project site and access roads, along with descriptions of how the following procedures will be implemented.

13-G The commenter states that his concern applies to any land use project in high fire severity zones which could adversely impact fire suppression resources. The commenter further states that he became involved in supporting the adoption of National Fire Protection Association 850 (national standard for fire protection in electrical generating sources, including wind turbines). The commenter has become concerned with incidents of fire involving wind turbines as a source of wildland fires in high wind and remote locations throughout California.

Section 3.20 (beginning on page 3.20-2) of the EIS/EIR discusses Fire Hazard Severity Zones (FHSZs) as areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors that have been mapped by the California Department of Forestry and Fire Protection (Cal Fire) under the direction of Public Resources Code (PRC) 4201-4204 and Government Code 51175-89 (Cal Fire, 2007). The section also notes that FHSZs are ranked from "moderate" to "very high" and are categorized for fire protection as within a federal responsibility area (FRA) under the jurisdiction of a federal agency, within a State responsibility area (SRA) under the jurisdiction of Cal Fire, or within a local responsibility area (LRA) under the jurisdiction of a local agency.

The section notes that the AEWP site is designated as both an FRA (under the jurisdiction of BLM) and an SRA (under the jurisdiction of Cal Fire), and the AEWP site is located in an area with both "Moderate" and "Non-Wildland/Non-Urban" fire threat ratings. Page 4.20-2 of the

EIS/EIR also notes that the probability of a wildfire to occur as a result of AEWP construction would be moderate due to the moderately risk of the site conditions and climate, and the proposed high level of heavy equipment use. As concluded in Section 4.20.3.2, implementation of AEWP BMPs and Mitigation Measures 4.20-1 (Fire Safety Plan), 4.20-2 (Fire Truck Funding), 4.20-3 (Emergency Response Liaison – Fire), and 4.17-5 (Habitat Restoration Plan) would reduce the impact to CEQA significance criterion WF-1 to a less than significant level.

13-H The commenter requests that the BLM does not consider a waiver for the Nacelle Fire protection requirements in the EIR. The commenter also would like the opportunity to inform any local and state emergency response fire agencies which could be impacted by such a decision, and other stakeholders to understand and respond to any modifications relating to fire protection contained in the EIR/EIS.

Thank you for your comment in support of the use of Option 1 as listed in MM 4.20-2 of the EIS/EIR. Your preference for the use of individual in-unit fire suppression systems will be considered by the decision-makers when this project is considered at a public hearing and by the appropriate federal decision-makers.

13-I The commenter has provided several articles related to wind turbine fires.

Thank you for your research and articles. Your materials will be considered by the BLM and Kern County.

The comments and attachments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Jacquelyn Kitchen - FW: Alta East Wind Project

From: "Childers, Jeffery K" <jchilders@blm.gov>
To: Jacquelyn Kitchen <kitchenj@co.kern.ca.us>, Negar Vahidi <nvahidi@aspeneg.com>, "Hedy Koczwara (hkoczwara@aspeneg.com)" <hkoczwara@aspeneg.com>
Date: 7/9/2012 8:45 AM
Subject: FW: Alta East Wind Project

Jeffery Childers, MPA
PM – CDD – RECO
951.697-5308 Desk
951.807.6737 Cell

From: Dave Grant [mailto:mattolecraftsman@gmail.com]
Sent: Monday, July 09, 2012 7:22 AM
To: Childers, Jeffery K
Subject: Alta East Wind Project

Dear Representative of BLM,

I strongly feel that the environmental impacts of industrial wind turbines have not fully been researched. The amount of steel, concrete, carbon fiber and even neodymium magnets in each wind turbine are atrocious. Two tons of rare earth magnets are in each turbine, to produce this material makes radioactive waste. **14-A**

Bird kills are much higher than recorded, wind farms are not open to the public and bird counts are not taken everyday. We are slaughtering our avian species for unreliable, intermittent energy that requires back up when the wind is not blowing at the proper speed. **14-B**

Turbines are meant to have only a twenty year lifespan, that is not very long considering the amount of materials that go into making a turbine. They require constant maintenance. Blades have to be regularly inspected, a dangerous job done by men two hundred and fifty feet in the air hanging by ropes. Two hundred and fifty gallons of oil must be replaced in each turbine every other year. Gear housings last about 5 years, large equipment must by brought in to replace these parts. **14-C**

The noise and low frequency sound waves from turbines have been proven to create health problems in humans. What in the world are they doing to the wildlife, the reptiles, the insects. We don't know and wind farms don't want us to find out. **14-D**

I believe that we could meet our renewable energy needs more adequately by not industrializing out wild lands. Wind turbines are a source of revenue more than a source of energy. People installing solar panels on their roofs would supply much more renewable energy to the grid and not require transmission lines and large industrial machines. Solar panels don't kill birds or any other kind of wildlife. **14-E**

Industrialization is not the answer to our energy needs, localization and independent power producers is our future.

Sincerely,

David Grant

--
David Grant
Woodworker, Craftsman,
Historic Preservation & Restoration
Petrolia, California 95558
707-629-3622

Response to Comment Letter 14: David Grant (July 9, 2012)

14-A Thank you for your comments. Your participation in the public review of this document is appreciated. The commenter states that the environmental impacts of industrial wind turbines have not fully been researched. The commenter further states that the amount of rare earth materials required to make each wind turbine is atrocious and creates radioactive waste.

This comment does not express issues with the adequacy or accuracy of the analysis presented in the Draft EIS/EIR. Kern County and the BLM determined that this comment was not substantive as it is not relevant to the EIS/EIR scope, analysis, or process as stated in CFR 1503.4(c).

14-B The commenter states that bird kills are much higher than recorded and that avian species are being killed for unreliable, intermittent energy.

Refer to Response to Comments 2-P, 8-N, 8-O, 8-Q, 8-R, 8-S, and 8-Y. Mitigation Measures have been included in Section 4.21 (Wildlife Resources) to minimize bird strikes. Specifically, Mitigation Measure 4.21-9 (Minimize Avian and Bat Turbine Strikes) requires the Applicant to provide a plan to the BLM, the CDFG, and the USFWS for review and approval for implementing full-time human observation, during daylight hours, for condor activities on the project site and a sufficient buffer outside the project to ensure that if a condor is sighted turbines may be safely shut down prior to a condor reaching the strike hazard. Additionally, Mitigation Measure 4.21-14 (Post-Construction Condor Monitoring) requires that Condor observations made within the project area and identified buffer must be reported to BLM, USFWS, and CDFG within 24 hours of the observation. Measures are also required in the event of take of a condor.

14-C The commenter discusses the lifespan and required maintenance of turbines and states that 250 gallons of oil must be replaced in each turbine every year.

The comments regarding lifespan do not express issues with the adequacy or accuracy of the analysis presented in the Draft EIS/EIR. Kern County and the BLM determined that this comment was not substantive as it is not relevant to the EIS/EIR scope, analysis, or process as stated in CFR 1503.4(c). With regard to the use of oil in the individual turbines, Kern County and the BLM note that the storage of flammable and combustible liquids is regulated by the Kern County Zoning Ordinance, the Kern County Fire Department, and the Kern County Environmental Health Division. Additionally, and materials deemed hazardous would be required to submit and obtain approval of a Business Plan from the Environmental Health Division.

14-D The commenter states that noise and low frequency sound waves from turbines have been proven to create health problems in humans, and there is uncertainty about what they are doing to wildlife, reptiles, and insects.

As noted in Section 3.11.1.5 of the EIS/EIR, Wind Turbine Syndrome (WTS) is described as an illness in certain individuals that is potentially caused by wind turbine noise and vibration resulting in sleep disturbance, nausea, tinnitus, and other symptoms. As discussed in Section 3.11.1.5, there is no known dose-response relationship between exposure to wind turbine noise/vibration and health effects. A single study prepared in 2009 (Pierpoint) reported a correlation between distance to large (1.5 to 3 MW) wind turbines and WTS, and suggested that symptoms are eliminated by siting wind turbines a minimum of 1.25 miles away from sensitive receptors. However, the small clinical case study does not support a dose-response relationship, and no additional information as been presented regarding a relation between wind turbine noise and vibration that may cause the reported symptoms. Without any recognized regulatory guidance or thresholds related to WTS, potential impacts cannot be quantified or qualified.

Noise impacts may occur to wildlife species during construction of the AEWP. Mitigation measure 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds) would reduce impacts to less than significant. Additionally, Section 4.9 of the EIS/EIR concludes that the project would result in significant and unavoidable temporary noise impacts during construction in the following two categories: NS-2 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; and NS-4 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. however, it is noted that these impacts would be temporary during construction; therefore, impacts to wildlife would be less than significant.

14-E The commenter discusses that renewable energy needs could more adequately be met by not industrializing wild lands. The commenter further states that solar panels would supply more energy to the grid and have fewer impacts to birds or any other kind of wildlife.

This comment does not express issues with the adequacy or accuracy of the analysis presented in the Draft EIS/EIR. Kern County and the BLM determined that this comment was not substantive as it is not relevant to the EIS/EIR scope, analysis, or process as stated in CFR 1503.4(c).

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 15: John Jason Chun (July 1, 2012)

www.JohnJasonChun.com

DOCUMENT DEPOSITS
Fax 888-595-6299
repo4sale@yahoo.com

Phone#1-949-254-3179 & 1-888-532-7999
Facebook & Twitter: John Jason Chun
Po Box 7249 Newport Beach Ca 92658

7-1-2012

WORLDWIDE COMMUNICATION NETWORK

1March2012,1Jan2012,1Nov2011,1Sept2011, 28 July 2011

CertMailReturnReceipt:7008-3230-0002-8039-9635 to: Horizon Wind Energy Attn: Tim Marvich Project Manager & Johnny Casana Project Developer, 1526 Blake St. #200 Denver Co 80202 **15-A**

18 July 2011 CertMailReturnReceipt:7008-3230-0002-8039-9611 (triplicate)

Kern Cty Planning & Comm. Dev. Dept. 2700 M Street #100 Bak, Ca 93301

AltaEast Wind Energy Project PP11212 & **Parcel Apn#224-450-02-00-9**

I will approve this project if I have Paved Road access to each of the ¼ parts of this property, including all Utilities. Aka, I will subdivide this property into 4 pieces and Road access to all 4 pieces must be Provided with all utilities available to all 4 pieces.

See attached parcel map with 4 parcels...

Yours truly,

JohnJasonChun
PO Box 7249
Newport Beach CA 92658
Cash4acres@Gmail.com

www.JohnJasonChun.com

DOCUMENT DEPOSITS
Fax 888-595-6299
repo4sale@yahoo.com

Phone#1-949-254-3179 & 1-888-532-7999
Facebook & Twitter: John Jason Chun
Po Box 7249 Newport Beach Ca 92658

MORE MAILINGS

WORLDWIDE COMMUNICATION NETWORK

28 July 2011 CertMailReturnReceipt:7008-3230-0002-8039-9635 to: Horizon Wind Energy Attn: Tim Marvich Project Manager & Johnny Casana Project Developer, 1526 Blake St. #200 Denver Co 80202

(3X) NOV 1, 2011

18 July 2011 CertMailReturnReceipt:7008-3230-0002-8039-9611 (triplicate)

(2X) 1 JAN 2012

Kern Cty Planning & Comm. Dev. Dept. 2700 M Street #100 Bak, Ca 93301

(2X) 2 March 2012

AltaEast Wind Energy Project PP11212 & **Parcel Apn#224-450-02-00-9**

I will approve this project if I have Paved Road access to each of the ¼ parts of this property, including all Utilities. Aka, I will subdivide this property into 4 pieces and Road access to all 4 pieces must be Provided with all utilities available to all 4 pieces.

See attached parcel map with 4 parcels...

Yours truly,

JohnJasonChun
PO Box 7249
Newport Beach CA 92658
Cash4acres@Gmail.com

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2.30
$ 6.43

7-28-2011

ABOVE HORIZON WIND ENERGY
1526 BLAKE ST #200
DENVER CO 80202

PS Form 3800, August 2006 — See Reverse for Instructions

Horizon
Johnny Casana
Project Developer

Horizon
Tim Marvich
Project Manager
1526 Blake Street, Suite 200
Denver, Colorado 80202
303.568.1700 main
303.568.1699 fax
510.292.0246 mobile
tim.marvich@horizonwind.com

www.JohnJasonChun.com

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Fax 888-595-6299
repo4sale@yahoo.com

Phone#1-949-254-3179 & 1-888-532-7999
Facebook & Twitter: John Jason Chun
Po Box 7249 Newport Beach Ca 92658

WORLDWIDE COMMUNICATION NETWORK

18 July 2011 CertMailReturnReceipt:7008-3230-0002-8039-9611 (triplicate) NOV 1, 2011

Kern Cty Planning & Comm. Dev. Dept. 2700 M Street #100 Bak, Ca 93301

AltaEast Wind Energy Project PP11212 & **Parcel Apn#224-450-02-00-9**

I will approve this project if I have Paved Road access to each of the ¼ parts of this property, including all Utilities. Aka, I will subdivide this property into 4 pieces and Road access to all 4 pieces must be Provided with all utilities available to all 4 pieces.

See attached parcel map with 4 parcels…

Yours truly,

JohnJasonChun
PO Box 7249
Newport Beach CA 92658
Cash4acres@Gmail.com

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Return Receipt Fee (Endorsement Required)	2.30
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 6.43

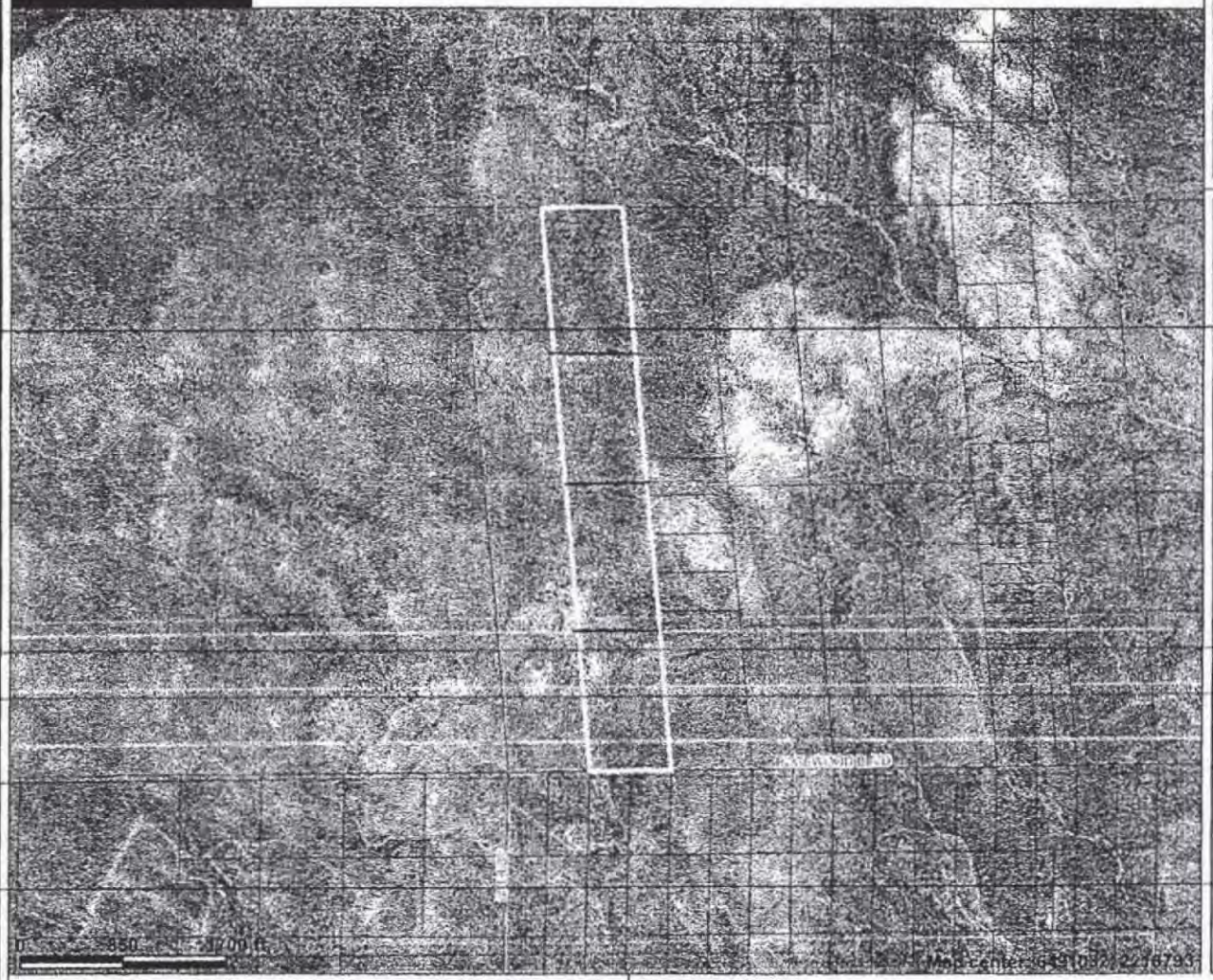
Postmark Here
7-19-2011

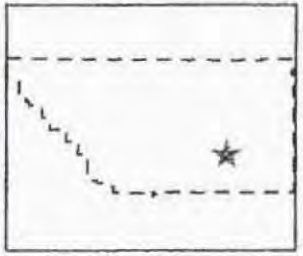
Sent To: Kern County Planning & Comm Dev Dept
Street, Apt. No.; or PO Box No. 2700 M Street #100
City, State, ZIP+4: BAK CA 93301

PS Form 3800, August 2006 See Reverse for Instructions

Kern County
Online Mapping System

70acres





Legend

Roads

Arterial

Collector

Highway

Local

Ramp

Unpaved

County of Kern

Assessment Parcels

Aerial Photo 2009

Scale: 1:14,769

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: 224-450-02-00-9
john jason chun
Po Box 7249
Newport Beach Ca 92658

PLANNING AND COMMUNITY
DEVELOPMENT DEPARTMENT

Lorelei H. Oviatt, AICP, Director
2700 "M" STREET, SUITE 100
BAKERSFIELD, CA 93301-2323
Phone: (661) 862-8600
FAX: (661) 862-8601 TTY Relay 1-800-735-2929
E-Mail: planning@co.kern.ca.us
Web Address: www.co.kern.ca.us/planning

DEVELOPMENT SERVICES AGENCY

Ted James, AICP, DSA DIRECTOR
Administrative Operations
Engineering, Surveying and Permit Services
Planning and Community Development
Roads

DATE: July 15, 2011

TO: Surrounding Property Owners within 1,000 Feet

FROM: Kern County Planning and Community Development Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301

RE: Notice of Preparation/Notice of Intent to prepare a joint Environmental Impact Report/ Environmental Impact Statement for the Rising Tree Wind Energy Project by Rising Tree Wind Farm, LLC. (PP11240)

Dear Sir or Madam:

The Kern County Planning and Community Development Department as Lead Agency (per CEQA Guidelines Section 15052) and the U.S. Bureau of Land Management (BLM), as the federal lead agency, will direct the preparation of a joint Environmental Impact Report (per CEQA Guidelines Section 15161) and an Environmental Impact Statement (EIS), referred to as an EIR/EIS, for the Alta East Wind Project proposed by Alta Windpower Development, LLC (Project Proponent). The EIR/EIS will be prepared to comply with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

The purpose of this letter is to notify surrounding property owners within 1,000 feet of the project boundaries of the preparation of the intent to prepare a Draft EIR/EIS. A copy of the Notice of Preparation (NOP)/ Notice of Intent (NOI) prepared for this project is available for viewing at the following Kern County website: http://www.co.kern.ca.us/planning/noticeprep.asp. The NOP/NOI is also available for review at the Planning and Community Development Department, located at 2700 "M" Street, Suite 100, Bakersfield, CA 93301.

The NOP/NOI is the first stage in the EIR/EIS process. The purpose of the NOP/NOI is to describe the proposed project, specify the project location, and to identify the potential environmental impacts of the project so that Responsible Agencies and interested persons can provide a meaningful response related to potential environmental concerns that should be analyzed in the EIR/EIS.

You are invited to view the NOP/NOI and submit comments regarding this project should you wish to do so. Due to the limits mandated by State law, your response must be received by **August 16, 2011 at 5pm.** In addition, comments can be submitted at a **scoping meeting** that will be held at the Kern County Mojave Veteran's Building on **August 4, 2011 at 5:00pm**. The Mojave Veterans Building is located at 15580 O Street in Mojave, CA.

Please be advised that any comments received after August 15, 2011 will still be included in the public record for this project and will be made available to decision makers when this project is scheduled for consideration at a public hearing. Please also be advised that you will receive an additional notice in the mail once a hearing date is scheduled for the project and you will have additional opportunities to submit comments at that time.

PROJECT TITLE: MDH 08-11; Rising Tree Wind Farm Project by Rising Tree Wind Farm, LLC; General Plan Amendment 2, Zone Map 180; General Plan Amendment 8, Zone Map 197; Specific Plan Amendment 1,

PROJECT LOCATION: The project is located 2 miles west of the intersection of Highway 58 and Highway 14 in the Mojave Desert and is within the Tehachapi Wind Resource Area (TWRA) of eastern Kern County; Located within in San Bernardino Base Meridian and Township 11 North, Range 13 West, Section 3; Township 12 North, Range 13 West, Section 34, Township 12 North, Range 12 West, Section 31, Township 32 South, Range 35 East, Sections 26-28, 32-35.

PROJECT DESCRIPTION: The project is a renewable energy development that would generate up to 360 megawatts (MW) of electricity through the use of wind power on a 3,200-acre project site. The project proponent is requesting: (a) a change in zone classification from the E (20) (Estate 20 acres) District and the A-1 (Limited Agriculture) District to the A (Exclusive Agriculture) District, to the A WE (Exclusive Agriculture, Wind Energy Combining) District and to the A FP (Exclusive Agriculture, Floodplain Combining) District in Map 168, (b) a change in zone classification from A-1 to A and A WE in Map 180, (c) a change in zone classification from E (20) to A and A WE in Map 180, (d) a change in zone classification from A-1 to A and A WE in Map 179, (e) a change in zone classification from A-1 to A in Map 197, (f) amendments to the Kern County General Plan to eliminate section and mid-section line road reservations within Maps 168, 168-27, 179, and 180, and (g) a conditional use permit to allow for the use of a temporary concrete batch plant during construction of the wind energy facility. The requested applications would also permit construction of wind ancillary facilities and supporting infrastructure, and a concrete batch plant to provide concrete and materials for turbine, substation, and building foundations. Permanent facilities would include up to 120 wind turbine generators, service roads, a power collection system, communication cables, overhead and underground transmission lines, electrical switchyards, project substations, meteorological towers, and operations & maintenance facilities.

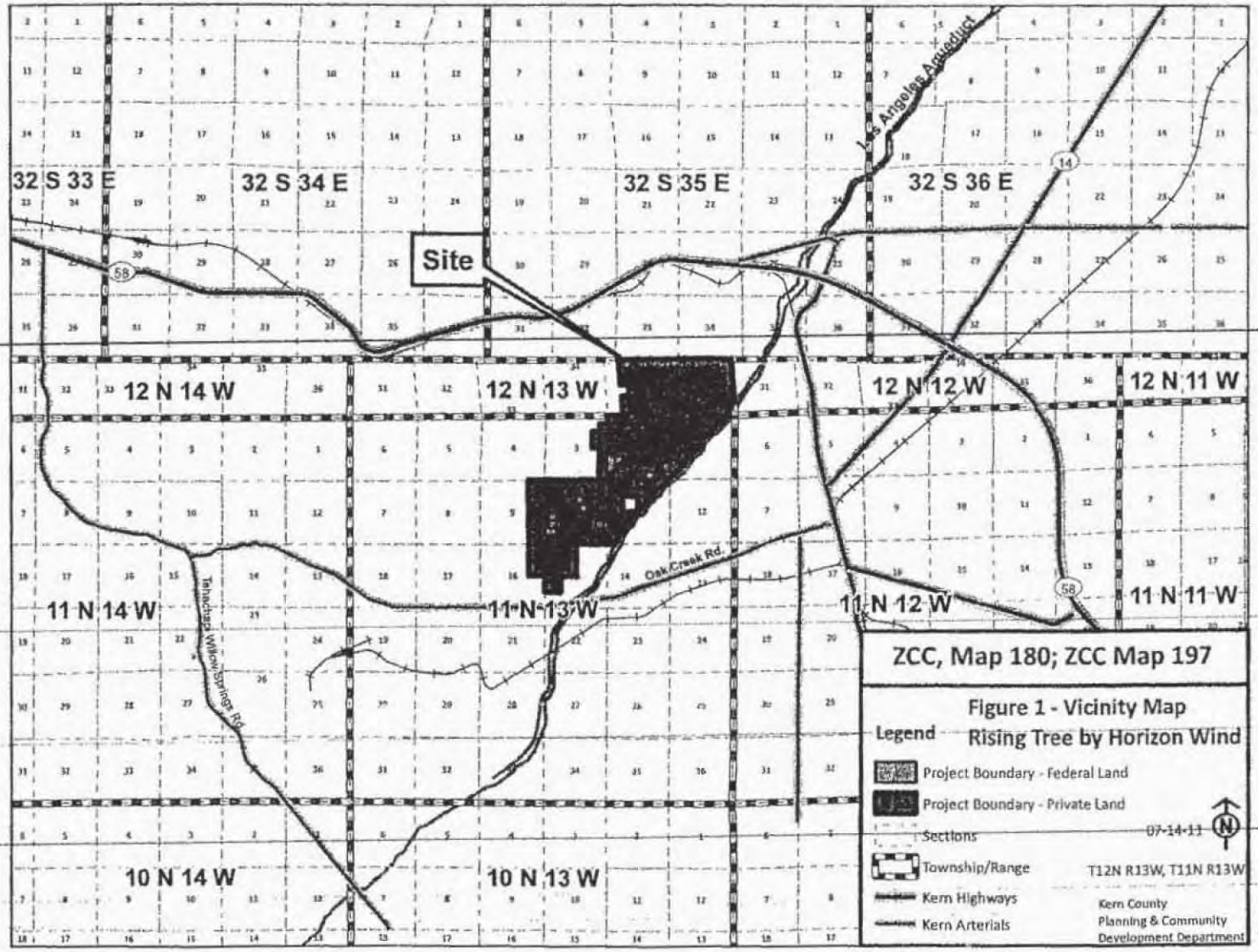
Should you have any questions regarding this project, or the NOP/NOI, please feel free to contact the project manager assigned to this case, Jacquelyn Kitchen, directly at (661) 862-8619 or email me at KitchenJ@co.kern.ca.us.

Sincerely,

Jacquelyn Kitchen

Jacquelyn Kitchen
Planner III
Advanced Planning Division

Attachment: Map showing project boundary


32 S 33 E
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10 N 13 W
Oak Creek Rd.
Tehachapi Willow Springs Rd.
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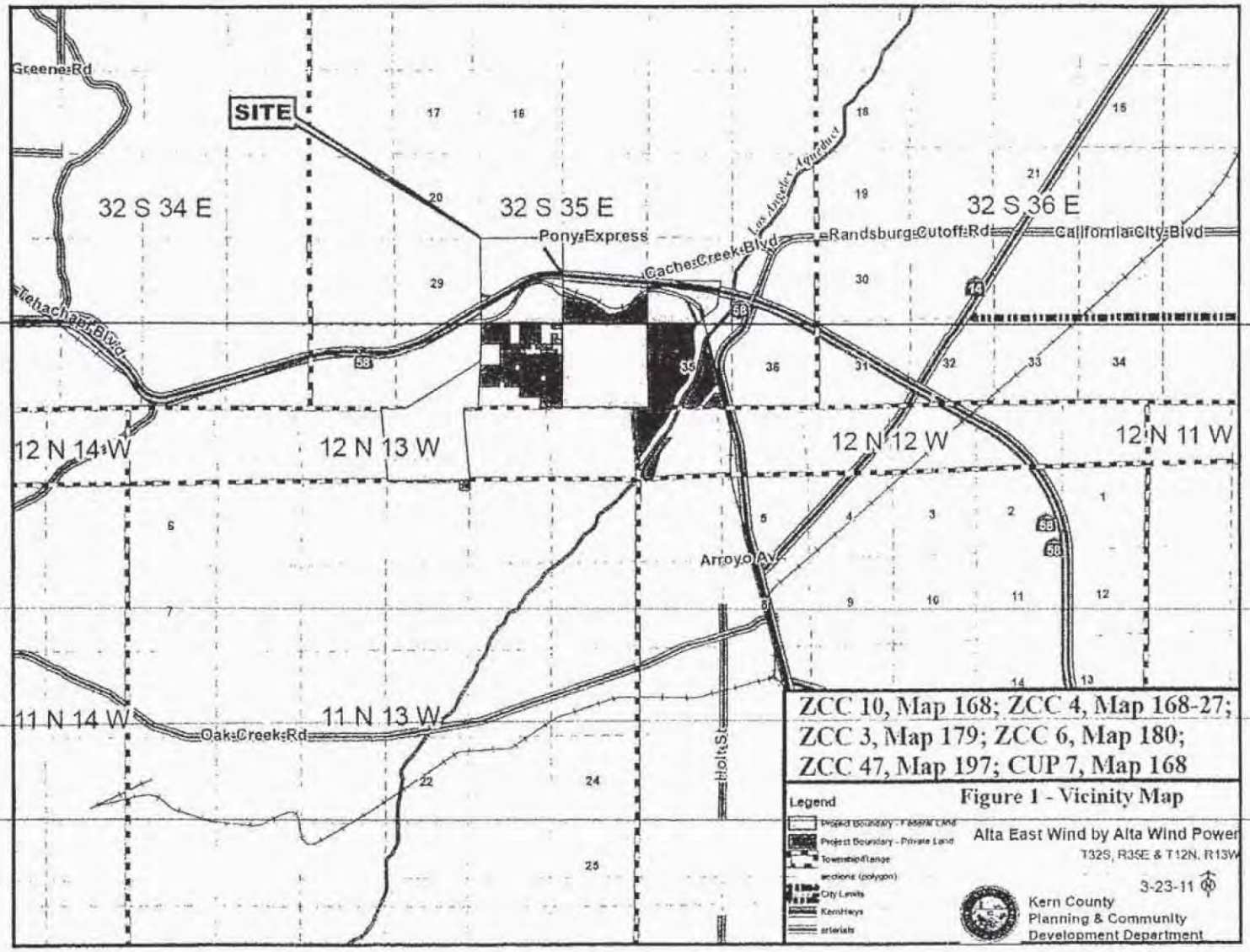
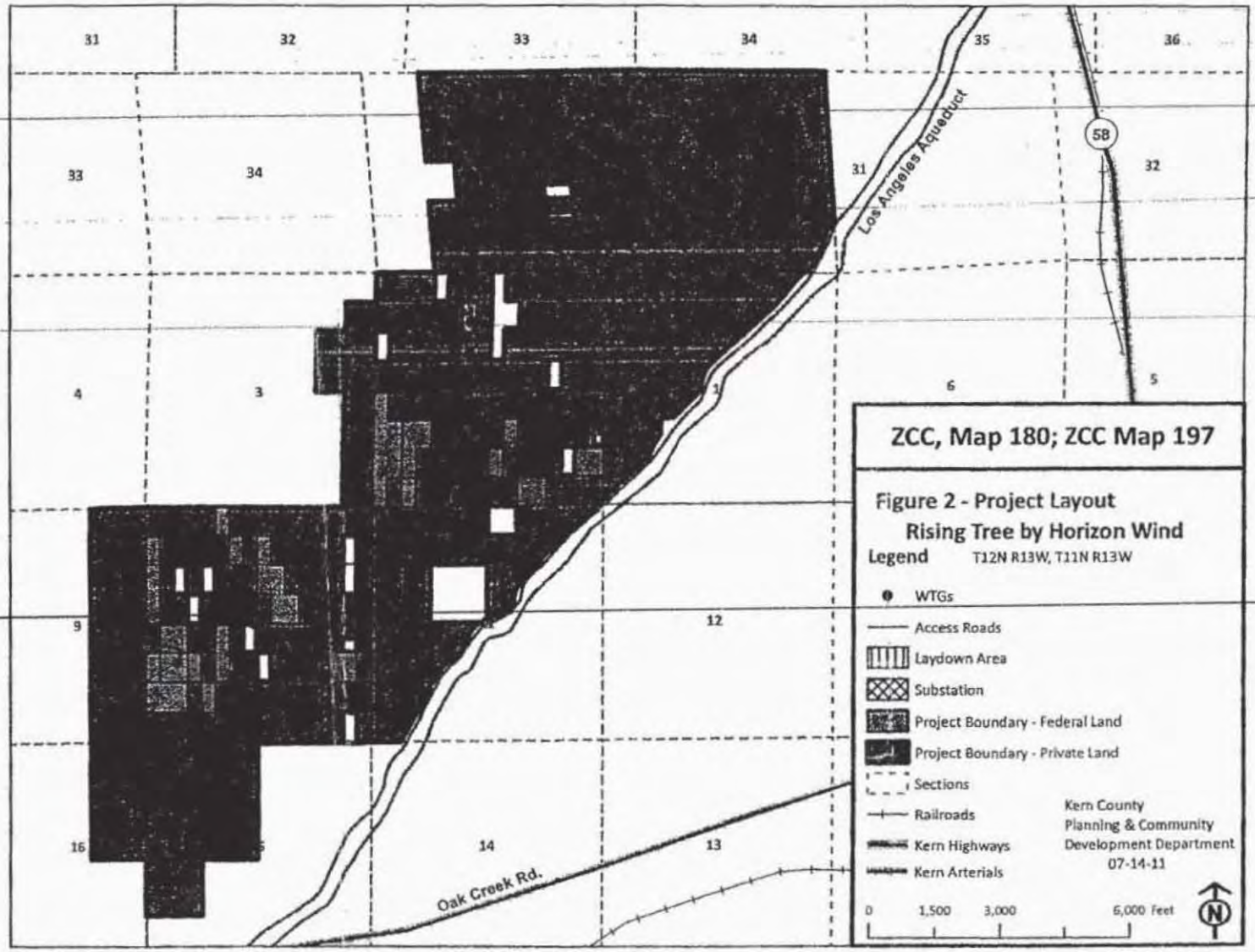
ZCC, Map 180; ZCC Map 197
Figure 1 - Vicinity Map
Rising Tree by Horizon Wind
Legend
Project Boundary - Federal Land
Project Boundary - Private Land
Sections
Township/Range
Kern Highways
Kern Arterials
07-14-11
T12N R13W, T11N R13W
Kern County
Planning & Community
Development Department


SITE
Greene Rd
32 S 34 E
32 S 35 E
32 S 36 E
Pony Express
Cache Creek Blvd
Los Angeles Aqueduct
Randsburg Cutoff Rd
California City Blvd
Tehachapi Blvd
12 N 14 W
12 N 13 W
12 N 12 W
12 N 11 W
Arroyo Av
11 N 14 W
11 N 13 W
Oak Creek Rd
Holt St
ZCC 10, Map 168; ZCC 4, Map 168-27;
ZCC 3, Map 179; ZCC 6, Map 180;
ZCC 47, Map 197; CUP 7, Map 168
Legend
Project Boundary - Private Land
Township/Range
sections (polygon)
City Limits
Kern Hwys
arterials
Figure 1 - Vicinity Map
Alta East Wind by Alta Wind Power
T32S, R35E & T12N, R13W
3-23-11
Kern County
Planning & Community
Development Department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Los Angeles Aqueduct
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Oak Creek Rd.
ZCC, Map 180; ZCC Map 197
Figure 2 - Project Layout
Rising Tree by Horizon Wind
Legend
T12N R13W, T11N R13W
WTGs
Access Roads
Laydown Area
Substation
Project Boundary - Federal Land
Project Boundary - Private Land
Sections
Railroads
Kern Highways
Kern Arterials
Kern County
Planning & Community
Development Department
07-14-11
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1,500
3,000
6,000 Feet
N

Response to Comment Letter 15: John Jason Chun (July 1, 2012)

15-A Thank you for your comments. Your participation in the public review of this document is appreciated. The commenter states he will approve the project if he receives Paved Road access to each of the ¼ parts of a 70 acre property (Parcel APN# 224-450-02-00-9; map is provided), including all utilities; and the commenter describes future intentions to subdivide the property.

The referenced 70-acre parcel is located in Section 35, 12 N, 13W., and is located approximately 665 feet east of the BLM component of the AEWP. The Kern County Surveyor's Office maintains Case Maps which illustrate recorded public access easements throughout Kern County. The Case Maps for this area, Case Map 180 and 197, do not show any public easements that provide access to this parcel. Aerial photos appear to shown that the property may take access, via a non-County maintained dirt road (Rosewood Boulevard) that runs along the south end of the parcel. The AWEP does not propose to remove any existing public access easements or utilize roads that provide the sole means of legal access to this property. Additionally, the project does not propose to pave roads to provide access to the referenced parcel. No clarifications to the EIS/EIR are required.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

September 27, 2012

Ms. Jacqueline Kitchen
Supervising Planner
County of Kern Planning and Community Development Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323

Mr. Jeffery Childers
Project Manager RECO
Bureau of Land Management
22835 Calle San Juan De Los Lagos
Moreno Valley, CA 92553

Re: **Comments on Draft Plan Amendment and Draft Environmental Impact Statement/Environmental Impact Report for the Alta East Wind Project**

Dear Ms. Kitchen / Mr. Childers,

Alta Windpower Development, LLC (AWD) has reviewed the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and is submitting comments for your review and consideration.

We are also submitting clarifying information related to the turbine model AWD expects to use for the project. The attached enclosures describe the proposed model specifications. The use of this turbine model would not change the total project acreage, number of turbines or megawatts proposed for the site. **16-A**

Please feel free to contact the project development lead, David Neilsen (email: dneilsen@terra-genpower.com; 206-658-7724) with any questions regarding this submittal. Thank you for your time and consideration.

Sincerely,

Alta Windpower Development, LLC

Randy Hoyle
Senior Vice President, Development

11512 El Camino Real Suite 100 San Diego, CA 92130
Tel (858) 764-3720 Fax (858) 794-9901 www.terra-genpower.com

Since publication of the Draft EIS/EIR, Alta Windpower Development, LLC revised the proposed project turbine specifications to the following:

- WTG Height: 142 meters (from 125 meters as stated in the EIS/EIR)
- Hub Height: 84 meters (from 80 meters as stated in the EIS/EIR)
- Rotor Diameter: 112 meters (from 90 meters as stated in the EIS/EIR)

16-B

The revised project turbine would not change the total project acreage (2,592 acres), number of turbines (106 WTGs) or megawatts (318 MW) proposed for the site. As detailed in Table 1, Project Revisions – Environmental Consequences Analysis, provided below, no new significant environmental impacts arise from these project revisions and therefore no new additional environmental analysis is required.

The revised project falls within the scope of the original project analysis included in the Draft EIS/EIR and does not 1) include substantial changes in the proposed action; 2) consist of significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; 3) or result in an increase in any impacts beyond those disclosed in the Draft EIS/EIR. No new significant environmental impacts would result from the project change and no new mitigation measures are proposed. Therefore no revisions have been made to the analysis presented within the Draft EIS/EIR and recirculation of the Draft EIS/EIR is not required under NEPA (per 40 C.F.R. § 1502.9(c)(1) or CEQA (per CEQA Guideline § 15088.5).

Table 1
Project Revisions – Environmental Consequences Analysis

DIS/DEIR Resource Area	DEIS/DEIR Section 4.0 Environmental Consequences Analysis
Air Resources	No increase in ground disturbance in beyond what is disclosed in the DEIS/DEIR or change in construction equipment would occur. In addition, the required minimum wind generator setback from an on-site residence will be maintained. Therefore the project revisions would not result in an increase in impacts and no revised analysis is required.
Climate Change and Greenhouse Gases	No change or increase in project construction or operations emissions would occur. Therefore, the project revisions would not result in an increase in impacts and no revised analysis is required.
Cultural Resources	No increase in ground disturbance beyond what is disclosed in the DEIS/DEIR would occur and the AEWP shall maintain compliance with BLM BMPs and the Section 106 process. Therefore, the project revisions would not result in an increase in impacts and no revised analysis is required.
Environmental Justice	No change in the project location would occur. Therefore, the project revisions would not result in an increase in impacts and no revised analysis is required.
Lands and Realty	Increasing the height of the turbine subsequently requires increasing the setback per the minimum wind generator setback requirements of the WE Overlay. During micrositing, the AEWP would be adjusted, if necessary, to ensure that the minimum setback requirements are met before construction plans for the AEWP are finalized. The project revisions would not result in an increase in impacts and no revised analysis is required.

16-C

Livestock Grazing	No change in grazing activities within the BLM-designated grazing allotments would occur. Therefore, the project revisions would not result in an increase in impacts and no revised analysis is required.
Mineral Resources	No increase in ground disturbance beyond what is disclosed in the DEIS/DEIR or change in sources of sand and gravel required for project construction would occur. Therefore, the project revisions would not result in an increase in impacts and no revised analysis required.
Noise	No increase or change in noise impacts are anticipated from project revisions. A technical memo discussing noise is included with this submittal (Attachment A).
Paleontological Resources	No increase in ground disturbance and no change to the total wind energy development area would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required.
Public Health and Safety	No change in type, increase in amount, or manner in which hazardous materials would be used during project construction and operation would occur. As the total WTG height would not exceed 500 feet, the AEWP remains in conformance with the Kern County Zoning Ordinance and the AEWP would maintain compliance with FAA requirements, No increase in impacts to aircraft operations would occur. In addition, no increase in the amount of solid waste or change in emergency response or access to the site would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required.
Recreation	No increase in the number of workers required for project construction or operation would occur. In addition, no change to OHV use of the site as analyzed in Section 4.12, Recreation, would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required.
Social and Economic Setting	No change in the distance from which construction and operation workers would commute to the AEWP site would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required.
Geology and Soil Resources	No changes in facility micrositing methods or increase in soil disturbing activities would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required.
Special Designations and Agriculture	No change or increase in ground disturbance, fugitive dust, or construction equipment or construction duration would occur. With regards to visual impacts, please refer to Visual Resources discussion below. The project revisions would not result in increased impacts and no revised analysis is required.
Transportation and Public Access	No change in the duration of construction, required work force, work hours, or construction/operation vehicle trips would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required.
Vegetation Resources	No increase in vegetation clearing, grading, or other surface disturbance would occur, beyond what is disclosed in the DEIS/DEIR. Therefore, the project revisions would not result in increased impacts and no revised analysis is required.
Visual Resources (including Shadow Flicker)	No increase or change in visual or shadow flicker impacts are anticipated from project revisions.
Water Resources	No increase in water demand or change in water supply source during

16-C, cont.

	construction or operation would occur. In addition, no increase or change in discharge, erosion, sedimentation, and/or polluted runoff would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required.
Wildland Fire Ecology	No increase in wildfire hazards would occur as the AEWP would continue to comply with vegetation clearance requirements onsite and implementation of the identified BMPs during construction and operation.
Wildlife Resources	No increase in ground disturbance or change in temporary or permanent impacts beyond what is disclosed in the DEIS/DEIR would occur. In addition, a larger turbine with an assumed rotor diameter of 117 meters was used to analyze project impacts to the golden eagle in order to analyze the greatest take risk, and to yield the highest take estimate with the U.S. Fish and Wildlife Service model. The project revisions do not include use of a turbine with a larger rotor swept area. Therefore, the project revisions would not result in increased impacts and no revised analysis is required. The Golden Eagle Risk Analysis (June 2012), which analyses a 117-meter rotor diameter turbine, is included with this submittal (Attachment B).

16-C, cont.

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Section	Page	DEIS/DEIR Text	Proposed Changes to Text	Discussion	
Executive Summary					
ES.1	ES-2	The information contained in this Draft EIS/EIR will be considered by the BLM in its deliberations regarding approval of the ROW grant, the Land Use Plan Amendment, the Specific Plan Amendment, and by the County to consider authorization of a change in zone classification to include the Wind Energy (WE) Combing District for certain private lands and a conditional use permit (CUP) for the use of a temporary concrete batch plant during construction of the AWEP.	The information contained in this Draft EIS/EIR will be considered by the BLM in its deliberations regarding approval of the ROW grant, the Land Use Plan Amendment~~, the Specific Plan Amendment~~, and by the County to consider authorization of amendments to the Circulation Element of the Kern County General Plan, ~~of~~ a change in zone classification to include the Wind Energy (WE) ~~Combing~~ Combining District for certain private lands and a conditional use permit (CUP) for the use of a temporary concrete batch plant during construction of the AWEP.	Revisions to text are proposed to make this description consistent with description of authorizations in Introduction.	16-D
Chapter 1 – Introduction					
1	1-2	After publication of the Notice of Intent (NOI) and Notice of Preparation (NOP) on July 15, 2011 and April 5, 2012…….	After publication of the Notice of Intent (NOI) and Notice of Preparation (NOP) on July 15, 2011 ~~and April 5, 2012~~…	Both the NOI and NOP were published in July 2011.	16-E
1.4	1-5	**1.4 Major Authorizing Laws and Regulations**	**1.4.5 Lahontan Regional Water Quality Control Board** The project is located in the southwestern portion of the South Lahontan Hydrologic Region. Therefore, any excavation or fill placement within waters of the State may require authorization under waste discharge requirements to be issued by the Lahontan Regional Water Quality Control Board. For construction projects having small dredge/fill impacts to non-federal waters of the State, and that are not required to obtain a National Pollutant Discharge Elimination System (NPDES) permit (i.e., the General Construction Permit adopted by the State Board), coverage under general WDRs may be obtained from the Lahontan RWQCB	Suggest inclusion of a discussion of the Lahontan Regional Water Quality Control Board's authority over the project and the potential need for waste discharge requirements within Section 1.4.	16-F

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			(R6T-2003-0004). Discharges of fill into waters of the State have been authorized under these WDRs for other wind energy projects in the project vicinity.		16-F, cont.
1.4.2	1-5	Throughout the Draft PA and Draft EIS/EIR process, the BLM has provided information to the ACOE to assist them in making a determination regarding their jurisdiction and need for a Section 404 permit.	Throughout the Draft PA and Draft EIS/EIR process, the BLM has provided information to the ACOE to assist them in making a determination regarding their jurisdiction and need for a Section 404 permit. The ACOE has determined that the Project does not include any waters of the United States or other jurisdictional features per their letter dated May 24, 2012. **Note: The May 24, 2012 letter has been provided as Attachment C to this comment table.	Additional text to clarify that the Corps has determined the project site lacks any jurisdictional features. The May 24, 2012 letter has been provided as Attachment A to this comment table.	16-G
1.6.2	1-10	**1.6.2 Relationship to State and Local Laws, Plans, Policies, and Programs.**	**Porter-Cologne Water Quality Control Act** Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect waters of the State to file a report of waste discharge (an application for waste discharge requirements)" (Water Code §13260(a)(1)). The term "waters of the State" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code §13050(e)). Under Porter-Cologne, dischargers must notify the regional water board when a project will result in the discharge of dredged or fill material to waters of the State, and the RWQCB is required to issue or waive waste discharge requirements (WDRs) whenever it receives a report of discharge. *The regional board, after any necessary hearing, shall prescribe requirements as to*	Suggest inclusion of the provided discussion of the Porter-Cologne Water Quality Control Act within Section 1.6.2.	16-H

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			the nature of any proposed discharge, existing discharge, or material change in an existing discharge… with relation to the conditions existing in the disposal area or receiving waters upon, or into which the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose …(Water Code § 13263(a)).		**16-H, cont.**
Chapter 2 – Project and Alternatives					
2.1.2.3	2-4	The total height of the WTG at the highest point of the rotor blade rotation would be 125 meters (410 feet). The ground clearance for the rotor blades at their lowest point of rotation would be 35 meters (115 feet). The turbines are designed to withstand wind speeds over 120 miles per hour, exceeding the recorded and projected maximum wind speeds at the AEWP site. **Tower**. The tower portion of the WTG would consist of a tubular steel monopole that extends from the top of its concrete foundation at ground level to its connection with the nacelle. The tower would support the nacelle, hub, and three-bladed rotor and has internal access ladders for turbine maintenance. The total height of the tower to the hub of the rotor blades would be 80 meters (262 feet) tall on a 3-meter (10-foot) diameter base.	The total height of the WTG at the highest point of the rotor blade rotation would be 142 meters (465 feet) ~~125 meters (410 feet)~~. The ground clearance for the rotor blades at their lowest point of rotation would be 28 meters (98 feet) ~~35 meters (115 feet)~~. The turbines are designed to withstand wind speeds over 120 miles per hour, exceeding the recorded and projected maximum wind speeds at the AEWP site. **Tower**. The tower portion of the WTG would consist of a tubular steel monopole that extends from the top of its concrete foundation at ground level to its connection with the nacelle. The tower would support the nacelle, hub, and three-bladed rotor and has internal access ladders for turbine maintenance. The total height of the tower to the hub of the rotor blades would be 85 meters (279 feet) ~~80 meters (262 feet)~~ tall on a 3-meter (10-foot) diameter base.	Changes made to reflect the applicant changes to the proposed project. This is a global comment that applies to all turbine descriptions in the DEIS/DEIR.	**16-I**
2.1.2.3	2-5	**Blades/Rotor.** WTGs would have three blades bolted to the hub; the blades and hub are collectively called the rotor. The WTG rotors	**Blades/Rotor.** WTGs would have three blades bolted to the hub; the blades and hub are collectively called the rotor. The	Changes made to reflect the Applicant Changes to the Proposed Project. This is a global comment that applies to all turbine	**16-J**

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		would be 90 meters (295 feet) in diameter. The blades are long, tapered, small-chord airfoils that resemble airplane wings. They vary in thickness (thinnest at the tip and thickest where they attach to the hub) and use aerodynamic lift, similar to an airplane wing, to provide the driving force for spinning the rotor. Each rotor would be equipped with a braking system to prevent rotors from dislocating from the turbine. **Wind Turbine Foundations and Pad Areas** Each WTG would be supported by a steel-reinforced concrete foundation. The AEWP could include several WTG foundation types depending on geotechnical constraints, wind pattern, and other factors onsite: • **Patrick and Henderson Inc. (P&H) foundation.** This patented foundation type would be drilled or dug to between 15 and 35 feet deep, depending on geotechnical conditions and loadings, and would be 18 feet in diameter. The foundation would be in the configuration of an annulus — two concentric steel cylinders. The central core of the smaller, inner cylinder would be filled with soil removed during excavation. In the cavity between the rings, bolts would be used to anchor the tower to the foundation, and the cavity would be filled with concrete. Bolting the tower to the foundation would provide post-tensioning to the concrete. • **Rock anchor.** For each foundation, six to 20 holes, depending on geotechnical data, would be drilled 35 feet into the bedrock, and steel anchors would be epoxy-grouted in place. A reinforced concrete cap containing the anchor bolts would be poured on the top of the steel anchors to	WTG rotors would be up to 112 meters (367 feet) ~~90 meters (295 feet)~~ in diameter. The blades are long, tapered, small-chord airfoils that resemble airplane wings. They vary in thickness (thinnest at the tip and thickest where they attach to the hub) and use aerodynamic lift, similar to an airplane wing, to provide the driving force for spinning the rotor. Each rotor would be equipped with a braking system to prevent rotors from dislocating from the turbine. **Wind Turbine Foundations and Pad Areas** Each WTG would be supported by a steel-reinforced concrete foundation. The AEWP could include several WTG foundation types depending on geotechnical constraints, wind pattern, and other factors onsite: • **Patrick and Henderson Inc. (P&H) foundation.** This patented foundation type would be drilled or dug to between 15 and 35 feet deep, depending on geotechnical conditions and loadings, and would be 18 feet in diameter. The foundation would be in the configuration of an annulus — two concentric steel cylinders. The central core of the smaller, inner cylinder would be filled with soil removed during excavation. In the cavity between the rings, bolts would be used to anchor the tower to the foundation, and the cavity would be filled with concrete. Bolting the tower to the foundation would provide post-tensioning to the concrete. • **Rock anchor.** For each foundation, six to 20 holes, depending on geotechnical data, would be drilled 35 feet into the bedrock, and steel anchors would be epoxy-grouted in place. A reinforced concrete cap	descriptions in the DEIS/DEIR.

16-J, cont.

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		support the tower structure. • **Spread-footing.** This foundation would be square or octagonal and formed with reinforcing steel and concrete. Depending on geotechnical data, this type of foundation may be as large as 35-by-35 feet and 6 to 10 feet thick.	containing the anchor bolts would be poured on the top of the steel anchors to support the tower structure. • **Spread-footing.** This foundation would be square or octagonal and formed with reinforcing steel and concrete. Depending on geotechnical data, this type of foundation may be as large as 60-by-60 ~~35-by-35 feet~~ and 6 to 10 feet thick.		**16-J, cont.**
2.3	2-18	Existing General Plan Designations and General Plan/Specific Plan Amendment Request	Existing General Plan Designations and General Plan~~/Specific Plan Amendment~~ Request	No SPA is required.	**16-K**
2.5.1	2-23	Under this alternative, the BLM and County would not approve the AEWP. BLM approval is limited to activities occurring within BLM administered lands, while County approval would apply to private lands. As such, the BLM would not amend the CDCA Plan County, while the County would not amend the KCGP, make any zoning changes, amend the Mojave Specific Plan, or issue a CUP.	Under this alternative, the BLM and County would not approve the AEWP. BLM approval is limited to activities occurring within BLM administered lands, while County approval would apply to private lands. As such, the BLM would not amend the CDCA Plan or grant the ROW ~~County~~, while the County would not amend the KCGP, make any zoning changes, ~~amend the Mojave Specific Plan,~~ or issue a CUP.	No SPA is required.	**16-L**
2.6.1	2-24	While the County would not approve the AEWP under this alternative, and would not amend the KCGP, make any zoning changes, amend the Mojave Specific Plan, or issue a CUP, AEWP or future wind development within the private land portion of the AEWP site could be approved by the County.	While the County would not approve the AEWP under this alternative, and would not amend the KCGP, make any zoning changes, ~~amend the Mojave Specific Plan,~~ or issue a CUP, AEWP or future wind development within the private land portion of the AEWP site could be approved by the County.	No SPA is required.	**16-M**
2.6.2	2-24	While the County would not approve the AEWP under this alternative, and would not amend the KCGP, make any zoning changes, amend the Mojave Specific Plan, or issue a CUP, AEWP or future wind development within the private land portion of the AEWP site could be approved by the County.	While the County would not approve the AEWP under this alternative, and would not amend the KCGP, make any zoning changes, ~~amend the Mojave Specific Plan,~~ or issue a CUP, AEWP or future wind development within the private land portion of the AEWP site could be approved by the County.	No SPA is required.	**16-N**

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2.8	2-25	In accordance with NEPA (40 CFR §1502.14(e)), the BLM has identified its preferred alternative as Alternative C, Reduced Project North.	In accordance with NEPA (40 CFR §1502.14(e)), the BLM has identified its preferred alternative as Alternative C, Reduced Project North. The BLM's ultimate decision as to the alternative selected will be set forth in its record of decision pursuant to 40 CFR § 1505.2.	Additional text clarifies that BLM's decision will be reflected in the Record of Decision (ROD).	16-O
Chapter 3 - Affected Environment					
3.21.3.2	3.21-37	**3.21.3.2 State Law and Regulations**	***Porter-Cologne Water Quality Control Act*** Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect waters of the State to file a report of waste discharge (an application for waste discharge requirements)" (Water Code §13260(a)(1)). The term "waters of the State" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code §13050(e)). Under Porter-Cologne, dischargers must notify the regional water board when a project will result in the discharge of dredged or fill material to waters of the State, and the RWQCB is required to issue or waive waste discharge requirements (WDRs) whenever it receives a report of discharge (Water Code § 13263(a). Any excavation or fill placement within these features would require authorization under WDRs to be issued by the Lahonton RWQCB. For construction projects having small dredge/fill impacts to non-federal waters of the State, and that are not required to obtain a National Pollutant Discharge Elimination System (NPDES) permit (i.e., the General Construction Permit	Suggest inclusion of the provided discussion of the Porter-Cologne Water Quality Control Act within Section 3.21.3.2.	16-P

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			adopted by the State Board), coverage under general WDRs may be obtained from the Lahontan RWQCB (R6T-2003-0004). Discharges of fill into waters of the State have been authorized under these WDRs for other wind energy projects in the project vicinity.		**16-P, cont.**
3.21.1.1	3.21-5	Due to its location, the AEWP area likely provides connectivity for a number of terrestrial and avian species, both resident and migratory.	Due to its location, the AEWP area likely provides connectivity for a number of terrestrial and avian species, both resident and migratory; however, the connective functionality is compromised by roadways and intervening development as described above.	Suggest revision to clarify condition of connectivity.	**16-Q**
Table 3.21-1	3.21-10	**(Swainson's Hawk)** **Present.** This species was observed within the AEWP area during avian use studies. The entire project area supports suitable foraging habitat. Potential nesting habitat occurs over much of the site, including Joshua tree woodlands.	**(Swainson's Hawk)** **Present.** This species was observed within the AEWP area during avian use studies. ~~The entire project area supports suitable foraging habitat.~~ Foraging habitat, if present, is limited within the project area; however, one migrant was documented during avian use studies on April 2, 2011. Nesting surveys were completed for this species in 2011 and no nests were documented within 5 miles of the AEWP. Potential nesting habitat occurs over much of the site, including Joshua tree woodlands.	See suggested revisions. The preceding "Habitat" column says that SWHA "Forages in adjacent grasslands and agricultural fields and pastures", none of which is present onsite. Therefore if foraging habitat is considered grassland and agricultural land, this conclusion is incorrect. However, P.3.21-4 defines SWHA foraging habitat as: "relatively open stands of grass-dominated vegetation and relatively sparse shrublands". One definition of foraging habitat should be used for consistency and accuracy. Also, this species was only observed 1x, as a migrant, on April 1, 2011 (in 2 yrs of study).	**16-R**
Table 3.21-1	3.21-18	**(Mohave Ground Squirrel)** **High**. The nearest record for this species is from 1987 and is located less than 1 mile east of the AEWP site, 1.5 miles east of the junction of SR 58 and the Randsburg Cutoff near Cache Creek. A record from 1998 occurs 3 miles east of the project site, and 2 records	**(Mohave Ground Squirrel)** ~~High~~Low. The nearest record for this species is from 1987 and is located less than 1 mile east of the AEWP site, 1.5 miles east of the junction of SR 58 and the Randsburg Cutoff near Cache Creek. A record from 1998 occurs 3 miles east of the project site, and 2	Applicant recommends characterizing Mojave ground squirrel as "low" because negative surveys have indicated "absence" and the two most recent sightings are 14 and 25 years ago.	**16-S**

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		from 2006 are located less than 2 miles south and 4.5 miles southwest of the AEWP site (0.5mile east and 0.2 mile east of the transmission line centerline, respectively). The AEWP site and transmission line route supports suitable habitat for this species. Trapping studies have been conducted for this species in 2006 (AEWP site), 2010 (adjacent project, near portions of transmission line), and 2011 (AEWP site), but were negative. Recent trapping studies conducted in nearby and adjacent project areas such as the Alta–Oak Creek Mojave Project and Infills have also been negative for this species.	records from 2006 are located less than 2 miles south and 4.5 miles southwest of the AEWP site (0.5mile east and 0.2 mile east of the transmission line centerline, respectively). The AEWP site and transmission line route supports suitable habitat for this species. Trapping studies have been conducted for this species in 2006 (AEWP site), 2010 (adjacent project, near portions of transmission line), and 2011 (AEWP site), but were negative. Recent trapping studies conducted in nearby and adjacent project areas such as the Alta–Oak Creek Mojave Project and Infills have also been negative for this species. Further, the AEWP is located outside the bounds of the species' currently accepted core areas and movement corridors (Leitner, 2008).		**16-S, cont.**
3.21.2	3.21-21/22	No condors were observed during any surveys conducted on and near the site, including aerial raptor nest surveys and two (2) years of fixed-point avian use surveys. USFWS data since 2005 indicate that the nearest documented condor was located in the Tehachapi Mountains, 4.3 miles northeast of the AEWP and a historic location was recorded 2.3 miles west of the AEWP.	**Surveys and Results:** No condors were observed during any surveys conducted on and near the site, including aerial raptor nest surveys and two (2) years of fixed-point avian use surveys. USFWS data since 2005 indicate that the nearest documented condor was located in the Tehachapi Mountains, 4.3 miles northeast of the AEWP and a historic location was recorded 2.3 miles west of the AEWP.	No "Surveys and Results" section is included in this write-up on condor, as is presented for the other species. Recommend inserting "Surveys and Results" heading prior to last paragraph of this section.	**16-T**
3.21.2	3.21-22	In 2009/2010, 11 golden eagle observations were recorded at the AEWP (one each in spring and summer, three in fall, and six in winter).	~~In 2009/2010, 11 golden eagle observations were recorded at the AEWP (one each in spring and summer, three in fall, and six in winter).~~ A total of 7 golden eagle groups with 11 individual sightings were recorded during the first year of surveys in 2009/2010. However, all observations occurred off the project area at survey points 4, 5, and 6. Observations were recorded during all seasons (spring, n=1	Please see suggested revision and clarification. The Draft EIR's representation of the avian data is inaccurate. The eagles recorded in year 1 were off site, not within the AEWP.	**16-U**

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			eagle; summer, n= 1; fall, n= 3; winter, n= 6) and suggested potentially higher use of these areas in winter (CH2M HILL, 2012. *Draft No. 2 Conservation Plan for the Avoidance and Minimization of Potential Impacts to Golden Eagles Alta East Wind Project*. March 2012. [see also Appendix D-30 in the EIR/EIS]).		**16-U, cont.**
Chapter 4 – Affected Environment					
4.2.11	4.2-23	**MM 4.2-1 Construction Fugitive Dust Emissions Reduction.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall develop a Fugitive Dust Control Plan that will be implemented during project construction. The Plan shall be prepared in compliance with Eastern Kern Air Pollution Control District (EKAPCD) Rule 402 to reduce PM10 and PM2.5 emissions during construction. At minimum, the Fugitive Dust Control Plan shall include the following: 1. Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission, and implementation of the plan; 2. Description and location of the construction operation(s); 3. Listing of all fugitive dust emissions sources included in the construction operations; 4. In addition to compliance with all applicable EKAPCD and California Air Resources Board (CARB) requirements, the following dust control measures shall be implemented:			**16-V**

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Section	Page	DEIS/DEIR Text	Proposed Changes to Text	Discussion	
		a. All onsite unpaved roads shall be effectively stabilized using soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board registered soil stabilizers, and that shall not increase any other environmental impacts including loss of vegetation.	a. All onsite unpaved roads shall be effectively stabilized using water or soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board registered soil stabilizers, and that shall not increase any other environmental impacts including loss of vegetation.	Applicant requests option to use water as a soil stabilizer for fugitive dust control, because of its availability as well as success on previous adjacent projects.	
		b. All material excavated or graded will be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. During the duration of construction, all excavated soil piles shall be watered periodically or covered with temporary coverings.			
		c. Construction activities that occur on unpaved surfaces will be discontinued during windy conditions when activities cause visible dust plumes. Construction activities may continue if dust suppression measures are used that follow the Eastern Kern Air Pollution Control District's Reasonably Available Control Measures (Rule 402, Table I); or more stringent measures. At minimum, the measures shall ensure that: (1) the visible dust plumes are not transported off the Project site or within 400-feet of any regularly occupied structure not owned by the Project Proponent; and, (2) that the visible dust plumes generated from linear construction are not transported more than 200-feet beyond the centerline of the linear facilities and do not cause a traffic obscuration hazard on public roads.	c. Construction activities that occur ~~on unpaved surfaces will be discontinued~~ during windy conditions (winds exceeding 25 mph) ~~when activities cause visible dust plumes. Construction activities~~ may continue if dust suppression measures are used that follow the Eastern Kern Air Pollution Control District's Reasonably Available Control Measures (Rule 402, Table I); or more stringent measures. At minimum, the measures shall ensure that: (1) the visible dust plumes are not transported off the Project site or within 400-feet of any regularly occupied structure not owned by the Project Proponent; and, (2) that the visible dust plumes generated from linear construction are not transported more than 200-feet beyond the centerline of the linear facilities and do not cause a traffic obscuration hazard on public roads.	Applicant suggests text revision to define windy conditions by wind speed, and to make measure consistent with other Kern County environmental documents.	**16-V, cont.**

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4.2.11	4.2-25	**MM 4.2-2 Construction Equipment Emissions Reduction.** The project proponent shall continuously comply with the following during construction: 2. To control Nitrogen Oxides (NOx) emissions from on-road heavy-duty diesel haul vehicles that are contracted for use to haul equipment and materials for the project: a. 2007 engines or pre-2007 engines with California Air Resources Board certified Level 3 diesel emission controls will be used to the extent possible.	2. To control Nitrogen Oxides (NOx) emissions from on-road heavy-duty diesel haul vehicles that are contracted for use on a continual basis to haul equipment and materials for the project:	Some special purpose haul vehicles may not comply with these requirements. Suggest text revision noting that this measure would apply to only those haul vehicles which are used on a continual basis.	16-W

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		b. All on-road construction vehicles, except those vehicles with California Air Resources Board certified Level 3 diesel emissions controls, shall meet all applicable California on-road emission standards and shall be licensed in the State of California. This does not apply to worker personal vehicles. c. All equipment shall be turned off when not in use. Engine idling of all equipment shall be minimized. **d.** The construction contractor shall ensure that all on-road construction vehicles are properly tuned and maintained in accordance with the manufacturers' specifications.	b. All on-road construction vehicles, except those vehicles with California Air Resources Board certified Level 3 diesel emissions controls, shall meet all applicable California on-road emission standards ~~and shall be licensed in the State of California~~. This does not apply to worker personal vehicles.	b. Requiring licensing in CA is impracticable given the regional, even national nature of the vehicle fleet used in wind energy construction.	**16-W, cont.**
4.2.11	4.2-25	**MM 4.2-3 Operation Fugitive Dust and Equipment Emissions Reduction.** The project proponent shall continuously comply with the following during project operation: 1. To control fugitive dust emissions from the use of unpaved roads on the site: a. The main access road for employees and deliveries to the O&M complex and to the onsite substation shall be paved or effectively stabilized using soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board registered soil stabilizers, and that shall not increase any other environmental impacts including loss of vegetation. b. The other unpaved roads at the site shall be stabilized using soil stabilizers so that vehicle travel on these roads does not cause visible dust plumes. c. Traffic speeds on unpaved roads shall be limited to no more than 15 miles per hour.	**MM 4.2-3 Operation Fugitive Dust and Equipment Emissions Reduction.** The project proponent shall continuously comply with the following during project operation: 1. To control fugitive dust emissions from the use of unpaved roads on the site: a. The main access road for employees and deliveries to the O&M complex and to the onsite substation shall be paved or effectively stabilized using water or soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board registered soil stabilizers, and that shall not increase any other environmental impacts including loss of vegetation. ~~b. The other unpaved roads at the site shall be stabilized using soil stabilizers so that vehicle travel on these roads does not cause visible dust plumes.~~ c. Traffic speeds on unpaved roads shall be limited to no more than 15 miles per hour.	Applicant requests option to use water as a soil stabilizer for fugitive dust control, because of its availability as well as success on previous adjacent projects. Using soil stabilizers or water on unpaved roads is unnecessary due to applicant-enforced driving speeds, and potentially wasteful given the limited use of these roads.	**16-X**

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		Traffic speed signs shall be displayed prominently at all site entrances and at egress point(s) from the O&M facility and onsite substation. 2. To control particulate emissions from onsite dedicated equipment exhaust: a. All on-site off-road equipment and on-road vehicles for operation/maintenance shall be new equipment that meets the recent California Air Resources Board engine emission standards or alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, as appropriate. b. All equipment shall be turned off when not in use. Engine idling of all equipment shall be minimized. c. All equipment engines shall be maintained in good operating condition and in proposed tune per manufacturers' specification.	Traffic speed signs shall be displayed prominently at all site entrances and at egress point(s) from the O&M facility and onsite substation. 2. To control particulate emissions from onsite dedicated equipment exhaust: a. All on-site ~~off-road equipment and~~ on-road vehicles for operation/maintenance shall be new equipment that meets the recent California Air Resources Board engine emission standards or alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, as appropriate. b. All equipment shall be turned off when not in use. Engine idling of all equipment shall be minimized. c. All equipment engines shall be maintained in good operating condition and in proposed tune per manufacturers' specification.	Applicant recommends text deletion. Off-road equipment required for this project is highly specialized and compliance with CARB emissions guidelines is unknown, and would be subject to availability.	**16-X, cont.**
4.4.12	4.4-23	**MM 4.4-4** Prior to the issuance of grading or building permits by the County or a Notice to Proceed by the BLM, the project proponent shall submit verification to the BLM and Kern County Planning and Community Development Department which demonstrates that exclusion fencing has been installed around the archaeological sites that are located within 60-feet of project facilities and planned ground-disturbing activities	**MM 4.4-4** Prior to the issuance of grading or building permits by the County or a Notice to Proceed by the BLM, the project proponent shall submit fencing plans ~~verification~~ to the BLM and Kern County Planning and Community Development Department which demonstrate~~s~~ that exclusion fencing will be ~~has been~~ installed around the archaeological sites that are located within 60-feet of project facilities and planned ground-disturbing activities. Upon completion of fence installation, the project proponent shall submit verification that the exclusion fencing has been installed by letter from the project operator.	It is the Applicant's understanding that fencing cannot be installed prior to issuance of grading or building permits. The suggested revisions provide for a fencing plan to be submitted.	**16-Y**

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4.6.3	4.6-4	The AEWP would not directly impact any individual Bakersfield cactus meeting the federal definition of the listed taxon. Eight (8) such plants were identified in the AEWP area during 2010 and 2011 rare plant surveys, and all would be avoided by the AEWP. However, a total of 112 individuals of Bakersfield cactus were mapped within the AEWP site in 2010. All of the O. basilaris plants classified under the 2011 CDFG guidelines as Bakersfield cactus occur in the hills in the northern portion of the AEWP area. It is likely that some of these individuals cannot be calculated at this time pending final engineering.	The AEWP would not directly impact any individual Bakersfield cactus meeting the federal definition of the listed taxon. Eight (8) such plants were identified in the AEWP area during 2010 and 2011 rare plant surveys, and all would be avoided by the AEWP. However, a total of 112 individuals of Bakersfield cactus meeting the 2011 CDFG guidelines were mapped within the AEWP site in 2010. All of the O. basilaris plants classified under the 2011 CDFG guidelines as Bakersfield cactus occur in the hills in the northern portion of the AEWP area. It is likely that some of these individuals cannot be calculated at this time pending final engineering.	Modified to clarify 112 individuals were mapped using the 2011 CDFG guidelines.	16-Z
4.6.11	4.6-18	**MM 4.6-1 Notice to Proceed.** Prior to the issuance of grading or building permits and/or a Notice to Proceed from the BLM, the project proponent shall submit a final project design to the authorized officer of Edwards Air Force Base and China Lake Naval Air Weapons Station. Said final project design, shall be in the form of a detailed plot plan as required by Section 19.64.140 (Detailed Plot Plan Required – Contents) of the Kern County Zoning Ordinance and shall include final specifications on the height and location of the wind turbine generators to be installed as well as the anticipated schedule of each construction phase.	**MM 4.6-1 Notice to Proceed.** Prior to the issuance of grading or building permits and/or a Notice to Proceed from the BLM, the project proponent shall submit a final project design to the authorized officer of Edwards Air Force Base and China Lake Naval Air Weapons Station. Said final project design, shall be in the form of a detailed plot plan as required by Section ~~19.64.140~~ 19.64.130 (Detailed Plot Plan Required – Contents) of the Kern County Zoning Ordinance and shall include final specifications on the height and location of the wind turbine generators to be installed as well as the anticipated schedule of each construction phase.	Incorrect citation; revised accordingly.	16-A2
4.6.11	4.6-18	**MM 4.6-2 Notification to Property Owners.** At least 30 days prior to the commencement of grading or building and/or a Notice to Proceed, the project proponent shall mail a copy of the construction schedule to property owners within 1,000 feet of the project site.	**MM 4.6-2 Notification to Property Owners.** At least ~~30~~ 7 days prior to the commencement of grading or building and/or a Notice to Proceed, the project proponent shall mail a copy of the construction schedule to property owners	See suggested text revision. Thirty-days advance notice is prohibitive in meeting construction schedule. Suggested revision reflects typical notification of seven days.	16-B2

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		The purpose of this notification shall be so that property owners are informed as to the time and location of disturbance. Updates shall be provided as necessary.	within 1,000 feet of the project site. The purpose of this notification shall be so that property owners are informed as to the time and location of disturbance. Updates shall be provided as necessary.		**16-B2, cont.**
4.9.11	4.9-22	**MM 4.9-2 Final Noise Report Plan.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall submit the following to the BLM and Kern County Planning and Community Development Department for review and approval: 1. The project proponent shall submit a final *Noise Report* for residences located within one (1) mile in a prevailing wind direction, or within one-half (1/2) mile in any other direction of the project boundaries. The Noise Report shall demonstrate compliance with County Code Chapter 19.64 (Section 19.64.140.J) Wind Energy (WE) Combining District performance standards, and the Kern County General Plan Noise Element policies regarding outdoor and interior noise levels of sensitive receptors. 2. The Noise Report shall include evidence which demonstrates that one of the following methods will be implemented to reduce low frequency noise impacts to a less than significant level: a. Demonstration that limits on the cut-on speed of the wind turbine generators, and how those limits will reduce noise impacts to levels within Kern County performance thresholds; b. Showing that using a mix of turbine models and megawatts will reduce noise levels to a less than significant level (to be confirmed during the final review of the	**MM 4.9-2 Final Noise Report Plan.** In the event the Project Proponent proposes to locate any turbine(s) closer to the Project boundary than the location(s) analyzed in the Alta East Noise Study completed by WZI, Inc (May 2011), or if waivers from the affected property owners are not obtained, prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall submit the following to the BLM and Kern County Planning and Community Development Department for review and approval: 1. The project proponent shall submit a final *Noise Report* for residences located within one (1) mile in a prevailing wind direction, or within one-half (1/2) mile in any other direction of the project boundaries. The Noise Report shall demonstrate compliance with County Code Chapter 19.64 (Section 19.64.140.J) Wind Energy (WE) Combining District performance standards, and the Kern County General Plan Noise Element policies regarding outdoor and interior noise levels of sensitive receptors. 2. The Noise Report shall include evidence which demonstrates that one of the following methods will be implemented to reduce low frequency noise impacts to a less than significant level: a. Demonstration that limits on the cut-on speed of the wind turbine generators, and	See suggested revisions. Added clarification that the final noise plan would be required only if the final turbine layout deviates from original analysis, and allows Applicant to secure noise waivers, as needed.	**16-C2**

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		plot plan). c. Set back turbines to the maximum extent feasible from any designated habitable structure. 3. The Noise Report shall show final routing of all transmission lines and ensure that any corona discharge noise from these lines shall not increase ambient noise conditions at any sensitive receptors by 5 dBA or more.	how those limits will reduce noise impacts to levels within Kern County performance thresholds; b. Showing that using a mix of turbine models and megawatts will reduce noise levels to a less than significant level (to be confirmed during the final review of the plot plan). c. Set back turbines to the maximum extent feasible from any designated habitable structure. 3. The Noise Report shall show final routing of all transmission lines and ensure that any corona discharge noise from these lines shall not increase ambient noise conditions at any sensitive receptors by 5 dBA or more.		**16-C2, cont.**
4.9.11	4.9-22	**MM 4.9-3 Construction and Operation Noise Reduction Methods**. The project proponent shall continuously comply with the following during construction, operation, and decommissioning of the project: All construction equipment shall be equipped with mufflers and other suitable noise attenuation devices, that equipment engines are enclosed, and that all construction equipment is in good working order. The project proponent shall comply with all elements of the Kern County Ordinance, Chapter 8.36 (Section 8.36.020, Prohibited Sounds), such that no construction will occur at construction sites within 1,000 feet of an occupied residential dwelling between 9:00 p.m. and 6:00 a.m. weekdays and 9:00 p.m. and 8:00 a.m. on weekends. A noise disturbance coordinator shall be established. The disturbance coordinator shall be responsible for responding to any	The project proponent shall comply with all elements of the Kern County Ordinance, Chapter 8.36 (Section 8.36.020, Prohibited Sounds), such that no construction will occur at construction sites within 1,000 feet of an occupied residential dwelling between 9:00 p.m. and 6:00 a.m. weekdays and 9:00 p.m. and 8:00 a.m. on weekends unless an exception is granted by the County.	See suggested text revision.	**16-D2**

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		local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable measures to resolve the complaint. Signs posted at the construction site shall list the telephone number for the disturbance coordinator.			**16-D2, cont.**
4.10.11	4.10-12	**MM 4.10-1 Develop Paleontological Resource Monitoring and Mitigation Plan.** Prior to the issuance of grading or building permits by Kern County or a Notice to Proceed by the BLM, the project proponent shall submit a *Paleontological Resource Management Plan* that details how paleontological resources located within the project site will be avoided and/or treated. The *Paleontological Resource Management Plan* shall be prepared, at the sole expense of the project proponent, and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements. The plan shall be submitted for review and approval by the BLM and the Kern County Planning and Community Development Department. The *Paleontological Resource Management Plan* shall include the following information: 1. Identification and mapping of impact areas of moderate to high sensitivity that will be monitored during construction; 2. A coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbances in sediments determined to	**MM 4.10-1 Develop Paleontological Resource Monitoring and Mitigation Plan.** Prior to the issuance of grading or building permits by Kern County or a Notice to Proceed by the BLM, the project proponent shall submit a *Paleontological Resource Management Plan* that details when and where paleontological monitoring will occur and how paleontological resources located within the project site will be avoided and/or treated. The *Paleontological Resource Management Plan* shall be prepared, at the sole expense of the project proponent, and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements. The plan shall be submitted for review and approval by the BLM and the Kern County Planning and Community Development Department. The *Paleontological Resource Management Plan* shall include the following information: 1. Identification and mapping of impact areas of ~~moderate to~~ high sensitivity that will be monitored during construction; 2. A coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbances in sediments determined to	See suggested text revisions. Full and part time monitoring in "moderate" sensitivity units is not necessary nor typical.	**16-E2**

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		have a moderate to high sensitivity. Sediments of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the Qualified Paleontologist);	have a ~~moderate to~~ high sensitivity. Sediments of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the Qualified Paleontologist);		
		3. The significance criteria to be used to determine which resources will be avoided or recovered for their data potential;	3. The significance criteria to be used to determine which resources will be avoided or recovered for their data potential;		
		4. Procedures for the discovery, recovery, preparation, and analysis of paleontological resources encountered during construction, in accordance with standards for recovery established by the SVP;	4. Procedures for the discovery, recovery, and salvage ~~preparation, and analysis~~ of paleontological resources encountered during construction, in accordance with standards for recovery established by the SVP;		
		5. Provisions for verification that the project proponent has an agreement with a recognized museum repository (e.g., the Buena Vista Museum of Natural History or the Raymond Alf Museum), for the disposition of recovered fossils and that the fossils shall be prepared prior to submittal to the repository as required by the repository (e.g., prepared, analyzed at a laboratory, curated, or cataloged);	5. Provisions for verification that the project proponent has an agreement with a recognized museum repository ~~(e.g., the Buena Vista Museum of Natural History or the Raymond Alf Museum)~~, for the disposition of recovered fossils and that the fossils shall be prepared prior to submittal to the repository as required by the repository (e.g., prepared, analyzed at a laboratory, curated, or cataloged);	Suggest that repositories not be listed specifically The important point is that the agreement obtained by the project proponent be with an accredited museum.	**16-E2, cont.**
		6. Specifications that all paleontological work undertaken by the Project Proponent on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to a Paleontological Resources Use Permit (for work on public lands administered by BLM) and a Paleontological Collecting Permit (for work on lands administered by California Department of Parks and Recreation); and,	6. Specifications that all paleontological work undertaken by the Project Proponent on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to a Paleontological Resources Use Permit (for work on public lands administered by BLM) and a Paleontological Collecting Permit (for work on lands administered by California Department of Parks and Recreation); and,		
		7. Description of monitoring reports that will be prepared, which shall include daily logs and a final monitoring report with an itemized list of specimens found to be	7. Description of monitoring reports that will be prepared, which shall include daily logs and a final monitoring report with an	See revised text.	

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		submitted to Kern County Planning and Community Development Department, the project proponent, the Buena Vista Museum of Natural History, and the Natural History Museum of Los Angeles County within 90 days of the completion of monitoring.	itemized list of specimens found to be submitted to Kern County Planning and Community Development Department, the project proponent, proponent, and an accredited museum into which any recovered fossil specimens are accessioned into ~~the Buena Vista Museum of Natural History, and the Natural History Museum of Los Angeles County~~ within 90 days of the completion of monitoring.		**16-E2, cont.**
4.6.10.4	4.6-16	Construction of the AEWP is anticipated to commence in 2012 and require 9 to 12 months to complete. Of the projects listed in Table 4.1-1, construction of the following projects may occur at the same times as the AEWP:		Please confirm whether projects listed in Table 4.-1- are still under construction. **This is a global comment.**	**16-F2**
4.10.11	4.10-12	**MM 4.10-2 Train Construction Personnel.** Prior to grading or building permits by Kern County or a Notice to Proceed by the BLM, the project proponent shall submit evidence of compliance with the following: 1. The project proponent shall provide for a paleontologist to provide all construction personnel training on implementation of the *Paleontological Resource Management Plan* and specifically procedures to be followed in the event that a fossil site or fossil occurrence is encountered during construction. An information package shall be provided for construction personnel not present at the initial preconstruction briefing. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws and violations will be grounds for removal from the project. Unauthorized resource collection or			**16-G2**

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		disturbance may constitute grounds for the issuance of a stop work order. 2. The project proponent shall retain a paleontologist to conduct a site survey to determine if there are any Quaternary deposits present within the project boundary that would be impacted by ground-disturbing activities. If present, those deposits shall be examined for their fossil potential in order to focus monitoring efforts.	~~2. The project proponent shall retain a paleontologist to conduct a site survey to determine if there are any Quaternary deposits present within the project boundary that would be impacted by ground-disturbing activities. If present, those deposits shall be examined for their fossil potential in order to focus monitoring efforts.~~	Recommend deletion of (2) because 1) Quaternary deposits have already been identified as underlying the project. As an example, page 3, section 4.10.3.1, paragraph 2: "...there are portions of Alternative A that is underlain by undetermined-sensitivity (PFYC Class 3b) Older Pleistocene Alluvium (1,262 acres)"; 2) the Paleo management plan already calls for part-time monitoring in units with low and undetermined sensitivity...such as Quaternary units; 3) the geology at the project site has been mapped and Quaternary units identified; and 4) part time monitoring in Quaternary units with low and/or undetermined sensitivity will reveal the paleontological potential.	**16-G2, cont.**
4.10.11	4.10-13	**MM 4.10-3 Monitor Construction for Paleontology.** The project proponent shall continuously comply with the following during all ground-disturbing activities and during project operations: 1. Based on the paleontological sensitivity assessment and *Paleontological Resource Management Plan*, the project proponent shall conduct full-time construction monitoring by the qualified paleontological monitor in areas determined to have moderate to high paleontological sensitivity. Sediments of low, marginal, or undetermined sensitivity shall be monitored by a paleontological monitor on a part-time basis (as determined by the Paleontologist). Construction activities shall be diverted when data recovery of significant fossils is warranted, as determined by the Paleontologist. Monitoring shall be conducted as follows:	**MM 4.10-3 Monitor Construction for Paleontology.** The project proponent shall continuously comply with the following during all ground-disturbing activities and during project operations: 1. Based on the paleontological sensitivity assessment and *Paleontological Resource Management Plan*, the project proponent shall conduct full-time construction monitoring by the qualified paleontological monitor in areas determined to have ~~moderate to~~ high paleontological sensitivity. Sediments of low, marginal, or undetermined sensitivity shall be monitored by a paleontological monitor on a part-time basis (as determined by the Paleontologist). Construction activities shall be diverted when data recovery of significant fossils is warranted, as determined by the Paleontologist. Monitoring shall be conducted as follows:	Full-time monitoring in "moderate" sensitivity units is not necessary. The modification is to make this consistent with BLM standards.	**16-H2**

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		a. Monitoring of ground disturbance shall consist of the surface collection of visible vertebrate and invertebrate fossils within the project site. Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be diverted and the Project Proponent's paleontologist notified. Once the find has been inspected and a preliminary assessment made, the project proponent's paleontologist will notify the BLM and Kern County Planning and Community Development Department of the discovery. If recovery of a large or unusually productive fossil occurrence is warranted, earthmoving activities shall be diverted temporarily around the fossil site, and a recovery crew shall be mobilized to remove the material as quickly as possible. The monitor shall be permitted to photograph and/or draw stratigraphic profiles of cut surfaces and take samples for analysis of microfossils, dating, or other specified purposes, in accordance with the research design. b. Recovered specimens shall be prepared to a point of identification, including washing of sediments to recover smaller fossil remains. Once excavation has reached specified depths, salvage of fossil material from the side walls of the cut shall resume. Specimens shall be identified and curated into a museum repository with a retrievable storage. c. All significant fossil specimens recovered from the project site as a result of the paleontological mitigation program shall be treated (prepared, identified, curated, and cataloged) in accordance with designated museum repository requirements. Samples		

16-H2, cont.

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		shall be submitted to a laboratory, acceptable to the selected museum, for identification, dating, and microfossil and pollen analysis. d. Daily logs shall be kept by the paleontological monitor during field monitoring and shall be submitted weekly to Kern County. A complete set of the daily monitoring logs shall be kept on-site throughout the earthmoving activities and be available for inspection. The daily monitoring log shall be keyed to a location map to indicate the area monitored, the date, the assigned personnel, and the results of the monitoring activities, including rock unit encountered, fossil specimens recovered, and associated specimen data, as well as corresponding geologic and geographic site data. Within 90 days of the completion of the paleontological monitoring, a monitoring report, with an appended, itemized inventory of specimens, shall be submitted to Kern County, the project proponent, and the Buena Vista Museum of Natural History.			**16-H2, cont.**
4.11.11	4.11-31	**MM 4.11-1 Sales and Use Tax**. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall work with County staff to determine how the receipt of sales and use taxes related to the construction of the project will be maximized. This process shall include, but is not necessarily limited to: the Project Operator obtaining a street address within the unincorporated portion of Kern County for acquisition, purchasing and billing purposes, registering this address with the State Board of Equalization, using this address for acquisition, purchasing and billing purposes associated with the project. The project	**MM 4.11-1 Sales and Use Tax**. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall work with County staff to determine how the receipt of sales and use taxes related to the construction of the project will be maximized except for as otherwise approved by Kern County. This process shall include, but is not necessarily limited to: the Project Operator obtaining a street address within the unincorporated portion of Kern County for acquisition, purchasing and billing purposes, registering this address with the State Board of Equalization, using this address for acquisition, purchasing and	See suggested revision.	**16-I2**

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		proponent shall allow the County to use this sales tax information publicly for reporting purposes.	billing purposes associated with the project. The project proponent shall allow the County to use this sales tax information publicly for reporting purposes.		16-I2, cont.
4.11.11	4.11-32	**MM 4.11-6 Spill Prevention, Control, and Countermeasures Plan**. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall prepare and submit a Spill Prevention, Control, and Countermeasures Plan to the U.S. Environmental Protection Agency, the California Environmental Protection Agency, the BLM, the Kern County Planning and Community Development Department, and to the Kern County Environmental Health Services Department for review. The Plan will be for the storage and use of transformer oil, gasoline, or diesel fuel at the site in quantities of 660 gallons or greater. The purpose of the plan will be to mitigate the potential effects of a spill of transformer oil, gasoline, or diesel fuel. The Plan shall include design features of the project that will contain accidental releases of petroleum and transformer oil products from onsite fuel tanks and transformers.	**MM 4.11-6 Spill Prevention, Control, and Countermeasures Plan**. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall prepare and submit a Spill Prevention, Control, and Countermeasures Plan to ~~the U.S. Environmental Protection Agency, the California Environmental Protection Agency,~~ the BLM, the Kern County Planning and Community Development Department, and to the Kern County Environmental Health Services Department for review. The Plan will be for the storage and use of transformer oil, gasoline, or diesel fuel at the site in quantities of 660 gallons or greater. The purpose of the plan will be to mitigate the potential effects of a spill of transformer oil, gasoline, or diesel fuel. The Plan shall include design features of the project that will contain accidental releases of petroleum and transformer oil products from onsite fuel tanks and transformers.	USEPA and CalEPA are not typical recipients of SPCC Plans.	16-J2
4.11.11	4.11-33	**MM 4.11-7 Aviation and Hazardous Materials Storage**. Prior to issuance of building permits, the project proponent shall submit documentation of the following: 1. The project proponent shall submit documentation to the Kern County Planning and Community Development Department and the BLM demonstrating receipt of a Determination of No Hazard to Air Navigation from the Federal Aviation Administration (FAA) of Form 7460 1 (Notice of Proposed	**MM 4.11-7 Aviation and Hazardous Materials Storage**. Prior to issuance of building permits, the project proponent shall submit documentation of the following: 1. The project proponent shall submit documentation to the Kern County Planning and Community Development Department and the BLM demonstrating receipt of a Determination of No Hazard to Air Navigation from the Federal Aviation Administration (FAA) of Form 7460 1 (Notice		16-K2

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		Construction or Alteration). Documentation shall also be furnished to the Kern County Planning and Community Development Department and the BLM demonstrating that a copy of the approved form(s) has been provided to the United States Department of Defense, Edwards Air Force Base, and the Mojave Air and Space Port. All project components shall have lighting and marking required by the Federal Aviation Administration so not to create a hazard to air navigation. 2. No wind turbine generators shall be constructed within the boundaries of the Kern County Airport Land Use Compatibility Plan. 3. The project proponent shall provide evidence that all fueling, hazardous materials storage areas, and operation and maintenance activities involving hazardous materials will be sited at least 100 feet away from blue-line drainages, as identified on U.S. Geological Survey topography maps and wetlands.	of Proposed Construction or Alteration). Documentation shall also be furnished to the Kern County Planning and Community Development Department and the BLM demonstrating that a copy of the approved form(s) has been provided to the United States Department of Defense, Edwards Air Force Base, and the Mojave Air and Space Port. All project components shall have lighting and marking ~~required~~ as recommended by the Federal Aviation Administration so not to create a hazard to air navigation. 2. No wind turbine generators shall be constructed within the boundaries of the Kern County Airport Land Use Compatibility Plan that would conflict with provisions of that plan.	Please revise (2) because WTGs could be constructed within Plan area if that construction does not conflict with the Plan.	**16-K2, cont.**
4.11.11	4.11-33	**MM 4.11-8 Hazardous Materials Management and Property Taxes.** The project proponent shall continuously comply with the following during construction and operation of the project: 1. In order to eliminate the risk of generating disease vectors at the site, the Project proponent shall ensure that trash is stored in closed containers and removed from the site at regular intervals. Open containers shall be inverted and construction ditches shall not be allowed to accumulate water. Construction and maintenance operations shall not generate standing water. Naturally occurring	**MM 4.11-8 Hazardous Materials Management and Property Taxes.** The project proponent shall continuously comply with the following during construction and operation of the project: 1. In order to eliminate the risk of generating disease vectors at the site, the Project proponent shall ensure that trash is stored in closed containers and removed from the site at regular intervals. Open containers shall be inverted and construction ditches shall not be allowed to accumulate water. Construction and maintenance operations shall not generate		**16-L2**

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		depressions, drainages, and pools at the site shall not be drained or filled without consulting with the appropriate resource agency (BLM, Kern County, U.S. Army Corps of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG)) and obtaining the appropriate permits. The environmental monitor will ensure that standing water and large quantities of trash do not accumulate on site. Project compliance shall be verified by the Kern County Building Inspection Department during any on-site inspections. 2. Should any additional abandoned or unrecorded wells be uncovered or damaged during excavation or grading, the project proponent shall immediately contact the Department of Oil, Gas, and Geothermal Resources. The project proponent shall comply with established Federal, State, or local procedures for the handling and disposal of any discovered hazardous wastes. 3. If, during grading or excavation work, the contractor observes visual or olfactory evidence of contamination or if soil contamination is otherwise suspected, work near the excavation site shall be terminated, the work area cordoned off, and appropriate health and safety procedures implemented for the location by the contractor's Health & Safety Officer. Samples shall be collected by an Occupational Safety and Health Administration-trained individual with a minimum of 40-hours hazardous material site worker training. Laboratory data from suspected contaminated material shall be reviewed by the contractor's Health and Safety Officer. If the sample testing determines that contamination is not	standing water. Naturally occurring depressions, drainages, and pools at the site shall not be drained or filled without consulting with the appropriate resource agency (BLM, Kern County, U.S. Army Corps of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG)) and obtaining the appropriate permits. The environmental monitor will ensure that standing water and large quantities of trash do not accumulate on site. Project compliance shall be verified by the Kern County Building Inspection Department during any on-site inspections. 2. Should any additional abandoned or unrecorded wells be uncovered or damaged during excavation or grading, the project proponent shall immediately contact the Department of Oil, Gas, and Geothermal Resources. The project proponent shall comply with established Federal, State, or local procedures for the handling and disposal of any discovered hazardous wastes. 3. If, during grading or excavation work, the contractor observes visual or olfactory evidence of contamination or if soil contamination is otherwise suspected, work near the excavation site shall be suspended ~~terminated~~, the work area cordoned off, and appropriate health and safety procedures implemented for the location by the contractor's Health & Safety Officer. Samples shall be collected by an Occupational Safety and Health Administration-trained individual with a minimum of 40-hours hazardous material site worker training. Laboratory data from suspected contaminated material shall be	See suggested revisions. Modified text provides for work to resume.

16-L2, cont.

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		present, work may proceed at the site. However, if contamination is detected above regulatory limits, the BLM and the Kern County Public Health Division shall be notified. All actions related to encountering unanticipated hazardous materials at the site shall be documented and submitted to the BLM for federal lands and the Kern County Public Health Division for County lands. 4. Payment of property taxes has been determined to be sufficient to mitigate impacts to fire, sheriff and emergency services for the wind component of the project.. Written verification of ownership of the project shall be submitted to the Kern County Planning and Community Development Department by April 30 of each calendar year. If the project is sold to a city, county, or utility company that pays assessed taxes that equal less than $5,000 per turbine per year, then they will pay those taxes plus an amount necessary to equal the equivalent of $5,000 per turbine. The amount shall be paid for all years of operation. That amount shall be adjusted annually for inflation using the U.S Cities Average -All Urban Consumers (CPI-U) Consumer Price Index provided by the U.S Bureau of Labor Statistics. The fee shall be paid to the Kern County Auditor/Controller by April 30 of each calendar year. 5. During construction activities, the project proponent shall reduce construction waste transported to landfills by recycling solid waste construction materials to the extent feasible, such as taking materials to recycling and reuse locations listed in the brochure on recycling construction and demolition materials available on the Kern County Waste	reviewed by the contractor's Health and Safety Officer. If the sample testing determines that contamination is not present, work may proceed at the site. However, if contamination is detected above regulatory limits, the BLM and the Kern County Public Health Division shall be notified and a plan for remediation shall be developed so that work may be continued. All actions related to encountering unanticipated hazardous materials at the site shall be documented and submitted to the BLM for federal lands and the Kern County Public Health Division for County lands. 4. Payment of property taxes has been determined to be sufficient to mitigate impacts to fire, sheriff and emergency services for the project ~~for the wind component of the project.~~. Written notification of change of ownership shall be submitted to Kern County within 30 days of occurrence. ~~verification of ownership of the project shall be submitted to the Kern County Planning and Community Development Department by April 30 of each calendar year.~~ If the project is sold to a city, county, or utility company that pays assessed taxes that equal less than $5,000 per turbine per year, then they will pay those taxes plus an amount necessary to equal the equivalent of $5,000 per turbine. The amount shall be paid for all years of operation. That amount shall be adjusted annually for inflation using the U.S Cities Average -All Urban Consumers (CPI-U) Consumer Price Index provided by the U.S Bureau of Labor Statistics. The fee shall be paid to the Kern County Auditor/Controller	See suggested revisions. Annual reports are onerous; the Applicant will provide written notification of change of ownership within 30 days.	**16-L2, cont.**

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		Management Department Web site. 6. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall provide a fenced storage area for recyclable materials that is clearly identified for recycling. This area shall be maintained on the site during construction and operations. A site plan showing the recycling storage area shall be submitted to the Kern County Planning and Community Development Department and Kern County Waste Management Department.	by April 30 of each calendar year.		**16-L2, cont.**
4.14.11	4.14-15	**MM 4.14-1 Geotechnical Study**. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall conduct a full *Geotechnical Study* to evaluate soil conditions and geologic hazards on the project site. The Study shall be prepared and signed by a California-registered professional engineer and shall be submitted for review to: (1) the BLM for federal lands; and, (2) the Kern County Engineering, Surveying, and Permit Services Department for County lands. The Study shall identify the following: 1. Location of fault traces and potential for surface rupture; 2. Maximum considered earthquake and associated ground acceleration; 3. Potential for seismically induced ground shaking, liquefaction, landslides, differential settlement, and mudflows; 4. Stability of existing cut-and-fill slopes; 5. Collapsible or expansive soils; 6. Foundation material type;	**MM 4.14-1 Geotechnical Study**. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall conduct a ~~full~~ construction-appropriate *Geotechnical Study* to evaluate soil conditions and geologic hazards on the project site. The Study shall be prepared and signed by a California-registered professional engineer and shall be submitted for review to: (1) the BLM for federal lands; and, (2) the Kern County Engineering, Surveying, and Permit Services Department for County lands. The Study shall identify the following: 1. Location of fault traces and potential for surface rupture; 2. Maximum considered earthquake and associated ground acceleration; 3. Potential for seismically induced ground shaking, liquefaction, landslides, differential settlement, and mudflows; 4. Stability of existing cut-and-fill slopes;	See suggested clarification. Clarified text to reflect that a construction-appropriate study, which is typical for projects such as AEWP, would be conducted.	**16-M2**

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		7. Potential for wind erosion, water erosion, sedimentation, and flooding; 8. Location and description of unprotected drainages that could be impacted by the Project; and, 9. Recommendations for placement and design of facilities, foundations, and remediation of unstable ground. 10. Identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures for protection of reinforcement, concrete, and metal-structural components against corrosion shall be utilized, such as use of corrosion-resistant materials and coatings, increased thickness of Project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems.	5. Collapsible or expansive soils; 6. Foundation material type; 7. Potential for wind erosion, water erosion, sedimentation, and flooding; 8. Location and description of unprotected drainages that could be impacted by the Project; and, 9. Recommendations for placement and design of facilities, foundations, and remediation of unstable ground. 10. Identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures for protection of reinforcement, concrete, and metal-structural components against corrosion shall be utilized, such as use of corrosion-resistant materials and coatings, increased thickness of Project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems.		**16-M2, cont.**
4.14.11	4.14-15	**MM 4.14-2 Conduct Studies to Assess Soil Characteristics and Aid in Appropriate Foundation Design.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall demonstrate compliance with the following: 1. The final siting of project facilities based on the results of the geotechnical study and implement measures to minimize geologic hazards. The Project proponent shall not locate project facilities on or immediately adjacent to a fault trace. The BLM and Kern County Engineering, Surveying, and Permit Services Department will evaluate any final facility siting design developed prior to the			**16-N2**

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		issuance of any grading or building permits or Notices to Proceed to verify that geological constraints have been avoided. 2. The project proponents shall design cut-and-fill slopes for an adequate factor of safety, considering material type and compaction, identified during the site-specific geotechnical study. The slope of cut surfaces shall be no steeper than 2:1 (horizontal to vertical), unless the project proponents furnish a soils engineering or an engineering geology report, or both, stating that the site has been investigated and given an opinion that a cut at a steeper slope will be stable, if acceptable stabilization methods are employed and it will not create a hazard to public or private property. Other potential considerations would include structures set back from the slopes, and subsequent design recommendations. 3. The project proponents shall avoid locating roads and structures near landslide and mudflow areas. Where avoidance of landslide areas is not feasible, the project proponents shall construct relatively flat cut-and-fill slopes not to exceed 2:1 (horizontal to vertical), or 26 percent, or flatter. 4. The project proponents will not locate turbines, transmission lines, and/or associated structures across faults, lineaments, or unstable areas. 5. That the utility lines have been designed to withstand vertical and horizontal displacement. If determined necessary by the findings of the site-specific geotechnical study, the project proponent shall remove and replace shrink-swell soils with a non-expansive or non-collapsible soil material.	5. That the utility lines crossing potentially active faults shall be ~~have been~~ designed to withstand vertical and horizontal displacement. If determined necessary by the findings of the site-specific geotechnical study, the project proponent shall remove and replace shrink-swell soils with a non-	Revised to clarify that this MM applies to utility lines crossing active fault lines.

16-N2, cont.

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			expansive or non-collapsible soil material.		16-N2, cont.
4.15.11	4.15-11	**MM 4.15-1 Grazing Plan for Private Lands.** Prior to issuance of grading permits, the Project Proponent shall work together with the area grazing permittees to develop Best Management Practices for grazing activities which occur on private lands, and submit a guidance document to Kern County Planning and Community Development Department for review.	~~**MM 4.15-1 Grazing Plan for Private Lands.** Prior to issuance of grading permits, the Project Proponent shall work together with the area grazing permittees to develop Best Management Practices for grazing activities which occur on private lands, and submit a guidance document to Kern County Planning and Community Development Department for review.~~	Recommend deletion of this measure. There is no private land grazing on the AEWP site.	16-O2
4.16.11	4.16-16	**MM 4.16-1 Construction Traffic Control Plan.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall prepare and submit a *Construction Traffic Control Plan* to the Kern County Roads Department and to the California Department of Transportation for review. The Construction Traffic Control Plan must be prepared in accordance with both the Caltrans Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook (WATCH) Manual and shall include detailed information on the following: 1. Timing and schedule of heavy equipment and building materials deliveries; 2. Directing construction traffic with a flag person; 3. Placement of temporary signing, lighting, and traffic control device placement as required; including, but not limited to: appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic; 4. Determination of the need for construction work hours and arrival/departure times outside peak traffic			16-P2

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		periods; 5. Ensure access for emergency vehicles to the project site; 6. Temporary closure of travel lanes or disruptions to street segments and intersections during materials delivery, transmission line stringing activities, or any other utility connections; 7. Maintain access to adjacent property; 8. Specification of both construction-related vehicle travel and oversize load haul routes, the minimization of construction traffic during the A.M. and P.M. peak hour, distributing construction traffic flow from State Routes 14 and 58 across alternative routes to access the project site, minimizing use of Oak Creek Road, and avoiding residential neighborhoods to the maximum extent feasible; and 9. Identification of vehicle safety procedures for entering and exiting site access roads. 10. Provisions for the establishment of a traffic control coordinator. The traffic control coordinator shall be responsible for responding to any local complaints about project construction and operational traffic concerns. The traffic control coordinator shall determine the cause of the traffic complaint and shall be required to implement reasonable measures to resolve the complaint. Signs posted along the project construction and operations access routes shall list the telephone number for the traffic control coordinator.	10. Provisions for the establishment of a traffic control coordinator. The traffic control coordinator shall be responsible for responding to any local complaints about project construction and operational traffic concerns. The traffic control coordinator shall determine the cause of the traffic complaint and shall be required to implement reasonable measures to resolve the complaint. Signs posted at the entry to the jobsite ~~along the project construction and operations access routes~~ shall list the telephone number for the traffic control coordinator.	See suggested revisions. Revised text clarifies locations of where signs will be posted. Signs posted on access routes can be confusing since there are multiple projects under construction in the project area.	**16-P2, cont.**
4.16.11	4.16-2	**MM 4.16-2 Pavement Index Assessment**. Prior to the issuance of grading or building	~~**MM 4.16-2 Pavement Index Assessment.** Prior to the issuance of grading or building~~	Applicant suggests deleting. The load bearing capacities of the County's roadways	**16-Q2**

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		permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall conduct a pavement index assessment and load rating analysis to ensure all access points can accommodate construction related truck traffic. The traffic index assessment shall determine the required pavement structure required to accommodate the additional truck trips and then implement pavement repairs to achieve save passage of construction-related truck traffic. The project proponent shall implement all recommendations of the pavement including roadway rehabilitation or other structural improvements. The project proponent shall coordinate with all applicable affected jurisdictions (such as the Los Angeles Department of Water and Power and Caltrans) and shall obtain any required permits prior to construction of improvements. The project proponent shall implement appropriate wheel load weight distribution and/or physical improvements to aqueduct crossings to ensure such crossings are adequately protected.	~~permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall conduct a pavement index assessment and load rating analysis to ensure all access points can accommodate construction related truck traffic. The traffic index assessment shall determine the required pavement structure required to accommodate the additional truck trips and then implement pavement repairs to achieve save passage of construction-related truck traffic. The project proponent shall implement all recommendations of the pavement including roadway rehabilitation or other structural improvements. The project proponent shall coordinate with all applicable affected jurisdictions (such as the Los Angeles Department of Water and Power and Caltrans) and shall obtain any required permits prior to construction of improvements. The project proponent shall implement appropriate wheel load weight distribution and/or physical improvements to aqueduct crossings to ensure such crossings are adequately protected.~~	are already classified.	**16-Q2, cont.**
4.16.11	4.16-17	**4.14-3 Obtain Applicable Permits.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall obtain all applicable permits from the California Department of Transportation, Kern County, and any other applicable agencies pertaining to vehicle sizes, weights, roadway encroachment, and travel routes needed for the first phase of construction. The project proponent shall also obtain any additional permits needed for each remaining phase of construction prior to delivery and acceptance of materials for that phase. The project	**4.16~~4~~-3 Obtain Applicable Permits.** ~~Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, t~~The project proponent shall obtain all applicable transportation permits from the California Department of Transportation, Kern County, and any other applicable agencies pertaining to vehicle sizes, weights, roadway encroachment, and travel routes needed for the first phase of construction. The project proponent shall also obtain any additional permits needed for each remaining phase of construction prior to delivery and acceptance of materials	Error in Mitigation numbering. See revised text. Obtaining transportation permits before building and grading permits would require the applicant to obtain transportation permits much earlier in the sequence of construction than is practical or typical. For example, transportation permits for certain components such as towers or blades may occur months after issuance of grading permits.	**16-R2**

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		proponent shall continuously adhere to all conditions of said permits throughout implementation of the project.	for that phase. The project proponent shall continuously adhere to all conditions of said permits throughout implementation of the project.		**16-R2, cont.**
4.16.11	4.16-18	**MM 4.16-5 Coordinate With Railroad.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall develop and coordinate with Union Pacific Railroad and the California Public Utility Commission Rail Crossings Engineering Section a crossing safety plan for all phases of project construction to address foot traffic as well as construction-related vehicle crossing and the transport of heavy/oversize loads that may occur over Union Pacific rail line as well as obtaining all required permits.	**MM 4.16-5 Coordinate With Railroad.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall develop and coordinate with Union Pacific Railroad ~~and the California Public Utility Commission Rail Crossings Engineering Section~~ a crossing safety plan for all phases of project construction to address foot traffic as well as construction-related vehicle crossing and the transport of heavy/oversize loads that may occur over Union Pacific rail line as well as obtaining all required permits.	CPUC typically is involved for modification to or creation of a new crossing.	**16-S2**
4.17.3.2	4.17-2	Construction activities associated with the AEWP would result in direct temporary and permanent losses of native vegetation (Figure 4.17-1).	Construction activities associated with the AEWP would result in direct temporary and permanent losses of native vegetation ~~(Figure 4.17-1)~~.	Suggest deleting reference to Figure 4.17-1 since there is no figure included in Appendix A. Should the correct reference be to Table 4.17-1?	**16-T2**
4.17.3.2	4.17-3	Permanent impacts to desert wash and riparian habitat would be mitigated at 3:1, while all other native habitats non-native habitats supporting burrowing owl and/or desert tortoise would be mitigated at 1:1.	Permanent impacts to desert wash and riparian habitat would be mitigated at 3:1 or as identified in the California Department of Fish and Game Streambed Alteration Agreement. ~~, while a~~All other native habitats supporting burrowing owl and/or desert tortoise shall be mitigated at a 1:1 ratio for permanent impacts, or as otherwise identified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion. ~~non-native habitats supporting~~	See suggested revision. Text was revised to mirror MM 4.17-1 text.	**16-U2**

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			~~burrowing owl and/or desert tortoise would be mitigated at 1:1.~~		16-U2, cont.
4.17.11	4.17-23	**MM 4.17-2 Joshua Tree Preservation Plan.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall develop and submit a *Joshua Tree Preservation Plan* to the Kern County Planning and Community Development Department for review. The Plan shall be prepared by a qualified biologist or botanist and shall include provisions for the following: 1. Documentation of the location and acreage of Joshua tree woodland that would be subject to permanent disturbance and a description of the field methods used to delineate acreage of Joshua tree woodland. Specific methods shall be specified for avoiding Joshua tree woodlands and suitable candidates for translocation identified. 2. Specific efforts that will be made to minimize vegetation removal and permanent loss at construction sites. If necessary, native vegetation should be flagged for protection. When non-native vegetation is removed or disturbed, then native vegetation shall be the replacement. 3. Disclosure of the amount of acres of Joshua tree woodland to be removed. This quantification shall be used for compensation purposes. 4. The plan shall specify that a qualified biologist shall monitor construction and all Joshua trees removed or damaged shall be recorded and replaced at appropriate mitigation ratios as specified below. 5. Compensatory mitigation strategy, based	**MM 4.17-2 Joshua Tree ~~Preservation~~ Woodland Protection Plan.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall develop and submit a *Joshua Tree Preservation Plan* to the Kern County Planning and Community Development Department for review. The Plan shall be prepared by a qualified biologist or botanist and shall include provisions for the following: 5. Compensatory mitigation strategy, based	See suggested revisions. Text was revised to mirror similar mitigation measures in other Kern County environmental documents.	16-V2

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		on one or both of the following options: a. *Preservation*. On-site or off-site preservation of Joshua tree woodland habitat shall occur on parcels within Kern County that contain, at minimum, the number of individual Joshua trees impacted by the project. The project proponent may mitigate all or part of the project's impacts to Joshua trees, as follows: Delineate and designate one or more parcels for dedication for permanent conservation management; establish a conservation easement on those parcels, the easement to be held and managed by a suitable management entity as determined by the Director of the Kern County Planning and Community Development Department; prepare and implement a Habitat Management Plan to maintain habitat conditions on the site in perpetuity; and provide a non-wasting endowment sufficient to implement the habitat management plan in perpetuity. The mitigation lands shall provide habitat at a 1:1 ratio for impacted lands, comparable to habitat to be impacted by the project (i.e., similar abundance and size of Joshua trees, similar dominant vegetation community, similar levels of disturbance or habitat degradation). Suitable mitigation lands provided for other species may be used for Joshua tree woodland mitigation, at a 1:1 ratio. The Plan shall specify maintenance and monitoring requirements for each parcel, which shall include but shall not be limited to fencing and access control; signage; security and enforcement; weed control; control measures for feral	on one or both of the following options: a. *Preservation*. On-site or off-site preservation of Joshua tree woodland habitat shall occur on parcels ~~within Kern County~~ that contain, at minimum, the number of individual Joshua trees impacted by the project. The project proponent may mitigate all or part of the project's impacts to Joshua trees, as follows: Delineate and designate one or more parcels for dedication for permanent conservation management; establish a conservation easement on those parcels, the easement to be held and managed by a suitable management entity as determined by the Director of the Kern County Planning and Community Development Department; prepare and implement a Habitat Management Plan to maintain habitat conditions on the site in perpetuity; and provide a non-wasting endowment sufficient to implement the habitat management plan in perpetuity. The mitigation lands shall provide habitat at a 1:1 ratio for impacted lands, comparable to habitat to be impacted by the project (i.e., similar abundance and size of Joshua trees, similar dominant vegetation community, similar levels of disturbance or habitat degradation). Suitable mitigation lands provided for other species may be used for Joshua tree woodland mitigation, at a 1:1 ratio. The Plan shall specify maintenance and monitoring requirements for each parcel, which shall include but shall not be limited to fencing and access control; signage; security and enforcement; weed control; control measures for feral animals or pets;	On adjacent wind projects, the Applicant has not been limited to preservation to just within Kern County.	**16-V2, cont.**

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		animals or pets; native habitat enhancement; fire prevention and management; and other long-term habitat considerations as appropriate. b. *In lieu monetary funding*. The project proponent(s) may mitigate all or part of the project's impacts to Joshua tree woodlands by funding the acquisition and management in perpetuity of Joshua tree woodland habitat or habitats similar to those that contain impacted Joshua trees on site. Funding and management shall be provided through an existing mitigation bank (e.g., as managed by the City of Lancaster Parks, Recreation and Arts Department) or through a third-party entity such as the Wildlife Conservation Board or a regional Land Trust. The in-lieu fee shall provide sufficient funds to acquire appropriate lands to provide habitats containing Joshua trees at a 1:1 ratio for impacted lands, comparable to habitat to be impacted by the project (i.e., similar abundance and size of Joshua trees, similar dominant vegetation community, similar levels of disturbance or habitat degradation). Suitable mitigation lands provided for other species may be used for Joshua tree woodland mitigation, at a 1:1 ratio. 6. The creation or restoration of all habitats, as mitigation for both temporary and permanent impacts, shall be monitored until established success criteria are met, to assess progress and identify potential problems with the restoration site. Remedial activities (e.g., additional planting, weeding, or erosion control) shall be taken during the monitoring period if necessary to ensure the success of	native habitat enhancement; fire prevention and management; and other long-term habitat considerations as appropriate.	

16-V2, cont.

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		the restoration effort. If the mitigation fails to meet the established performance criteria within the established maintenance and monitoring period, monitoring shall extend beyond the initial period until the criteria are met or unless otherwise approved by Kern County and the California Department of Fish and Game.			**16-V2, cont.**
4.17.3.2	4.17-6	Given the anticipated impacts to CDFG jurisdictional areas, the project proponent would be required to obtain a Streambed Alteration Agreement from the CDFG in accordance with Section 1600 of the California Fish and Game Code.	Given the anticipated impacts to CDFG jurisdictional areas, the project proponent would notify the CDFG if there are impacts to waters of the state and ~~be required to~~ obtain a Streambed Alteration Agreement from the CDFG in accordance with Section 1600 of the California Fish and Game Code.	See suggested modification, which clarifies permitting process.	**16-W2**
4.17.11	4.17-25	**MM 4.17-3 Pre-Construction Surveys and Minimization Measures for Special-Status Plants.** Prior to issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, a qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species (i.e., state and federally listed Threatened and Endangered, Proposed, Petitioned, and Candidate plant species, Bureau of Land Management Sensitive species, and California Rare Plant Rank 1B, 2, 3, and 4 species) within 100-feet of all surface-disturbing activities. Surveys shall be conducted according to protocols established by the United States Fish and Wildlife Service, California Department of Fish and Game, Bureau of Land Management, and the California Native Plant Society. Populations of special-status plants must be flagged and mapped prior to construction. A report of the special-status plants observed during the referenced surveys shall be prepared and	~~**MM 4.17-3 Pre-Construction Surveys and Minimization Measures for Special-Status Plants.** Prior to issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, a qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species (i.e., state and federally listed Threatened and Endangered, Proposed, Petitioned, and Candidate plant species, Bureau of Land Management Sensitive species, and California Rare Plant Rank 1B, 2, 3, and 4 species) within 100-feet of all surface-disturbing activities. Surveys shall be conducted according to protocols established by the United States Fish and Wildlife Service, California Department of Fish and Game, Bureau of Land Management, and the California Native Plant Society. Populations of special-status plants must be flagged and mapped prior to construction. A report of the special-status plants observed during the referenced~~	Suggest deletion. All necessary surveys have been completed and rare plants have been mapped.	**16-X2**

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		submitted to the Bureau of Land Management's Authorized Officer, the Kern County Planning and Community Development Department, and the appropriate resource agencies prior to the start of construction. Impacts to non-listed special-status plant species shall first be avoided where feasible, and, where not feasible, impacts shall be compensated through reseeding with locally collected seed stock. If AEWP activities will result in loss of more than 10 percent (10%) of the known individuals within an existing population of a California Native Plant Society List 1B, 2, 3, or 4 plant species, the project proponent shall preserve existing on- or off-site occupied habitat that is not already part of the public lands in perpetuity at a 1:1 mitigation ratio for California Rare Plant Rank 1B and 2 species and California Rare Plant Rank 3 and 4 species. The preserved habitat shall be occupied by the plant species impacted, and be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by the qualified biologist. If Bakersfield cactus is identified within the construction area, the project proponent shall submit written documentation to the Kern County Planning and Community Development Department and the Bureau of Land Management to demonstrate how the following measures to reduce impacts to the Bakersfield cactus shall be implemented: 1. The project proponent(s) shall work with the designated biologist(s) to identify all known Bakersfield cactus and to establish	~~surveys shall be prepared and submitted to the Bureau of Land Management's Authorized Officer, the Kern County Planning and Community Development Department, and the appropriate resource agencies prior to the start of construction. Impacts to non-listed special-status plant species shall first be avoided where feasible, and, where not feasible, impacts shall be compensated through reseeding with locally collected seed stock.~~ ~~If AEWP activities will result in loss of more than 10 percent (10%) of the known individuals within an existing population of a California Native Plant Society List 1B, 2, 3, or 4 plant species, the project proponent shall preserve existing on- or off-site occupied habitat that is not already part of the public lands in perpetuity at a 1:1 mitigation ratio for California Rare Plant Rank 1B and 2 species and California Rare Plant Rank 3 and 4 species. The preserved habitat shall be occupied by the plant species impacted, and be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by the qualified biologist.~~ ~~If Bakersfield cactus is identified within the construction area, the project proponent shall submit written documentation to the Kern County Planning and Community Development Department and the Bureau of Land Management to demonstrate how the following measures to reduce impacts to the Bakersfield cactus shall be implemented:~~ ~~1. The project proponent(s) shall work with the designated biologist(s) to identify all~~		**16-X2, cont.**

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		"avoidance areas." All Bakersfield cacti found within the WE-corridor shall be avoided by a buffer of 25 feet through micro-siting activities within the project area. Sturdy, highly visible, orange plastic construction fencing shall be installed around all Bakersfield cactus avoidance areas and shall be located in accordance with direction from the designated biologist(s). The fence shall be securely staked and installed in a durable manner that would be reasonably expected to withstand wind and weather events and last at least through the construction period. Fencing shall be removed upon completion of the project construction. 2. *Bakersfield Cactus Translocation*. Any Bakersfield cactus that cannot feasibly be avoided during construction shall be translocated according to the California Department of Fish and Game's "Cactus Translocation (Revegetation)" guidelines, or as otherwise identified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion. Cacti shall be translocated to a suitable, California Department of Fish and Game-approved site.	~~known Bakersfield cactus and to establish "avoidance areas." All Bakersfield cacti found within the WE-corridor shall be avoided by a buffer of 25 feet through micro-siting activities within the project area. Sturdy, highly visible, orange plastic construction fencing shall be installed around all Bakersfield cactus avoidance areas and shall be located in accordance with direction from the designated biologist(s). The fence shall be securely staked and installed in a durable manner that would be reasonably expected to withstand wind and weather events and last at least through the construction period. Fencing shall be removed upon completion of the project construction.~~ ~~2. Bakersfield Cactus Translocation. Any Bakersfield cactus that cannot feasibly be avoided during construction shall be translocated according to the California Department of Fish and Game's "Cactus Translocation (Revegetation)" guidelines, or as otherwise identified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion. Cacti shall be translocated to a suitable, California Department of Fish and Game-approved site.~~		**16-X2, cont.**
4.17.11	4.17-26	**MM 4.17-4 Best Management Practices for Activities In or Near Ephemeral Drainages.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall implement all mitigation measures and conditions contained within the Streambed Alteration Agreement obtained from the California Department of Fish and Game for	**MM 4.17-4 Best Management Practices for Activities In or Near Ephemeral Drainages.** ~~Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall implement all mitigation measures and conditions contained within the Streambed Alteration Agreement obtained from the California Department of Fish and Game for~~	Suggest modifying because there are likely to be measures in the SAA that cannot be implemented prior to the issuance of building and grading permits.	**16-Y2**

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		impacts to jurisdictional areas. In addition, the following Best Management Practices shall be implemented during all construction activity in or near ephemeral drainages: 1. Vehicles and equipment shall not be operated in ponded or flowing water except as described in the Streambed Alteration Agreement. 2. The project proponent shall minimize road building, construction activities, and vegetation clearing within ephemeral drainages to the extent feasible. 3. The project proponent shall not allow water containing mud, silt, or other pollutants from grading or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows. 4. Spoil sites shall not be located within 30 feet from the boundaries of drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages. 5. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering ephemeral drainages. 6. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.	~~impacts to jurisdictional areas. In addition,~~ ~~t~~The following Best Management Practices shall be implemented during all construction activity in or near ephemeral drainages: 1. Vehicles and equipment shall not be operated in ponded or flowing water except as described in the Streambed Alteration Agreement. 2. The project proponent shall minimize road building, construction activities, and vegetation clearing within ephemeral drainages to the extent feasible. 3. The project proponent shall not allow water containing mud, silt, or other pollutants from grading or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows. 4. Spoil sites shall not be located within 30 feet from the boundaries of drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages. 5. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering ephemeral drainages. 6. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.	

16-Y2, cont.

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		7. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.	7. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.		**16-Y2, cont.**
4.18.3.3	4.18-3 through4.18-4	Concluding sentence for KOPs 2-5, and 7: "....., overall AEWP contrast was considered moderate."	Concluding sentence for KOPs 2-5, and 7: "....., overall AEWP contrast was considered ~~moderate~~ strong."	Please see suggested revisions. The most recent VRM analysis (Feb 2012), which reflects and responds to all previous comments provided by BLM, concludes that the contrast resulting from the project would be "strong" in views from KOPs 1-6, and "moderate" in KOP 7.	**16-Z2**
4.18.11	4.18-20	**MM 4.18-1 Reduction of Visual Contrast, Light, and Glare.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall provide evidence of the following: a. The project proponent shall identify construction laydown areas using already disturbed and/or are in locations of low visual sensitivity. b. For overhead transmission lines, tubular steel poles shall be used instead of lattice steel towers. Tubular steel poles shall be painted light-gray colors or shall be dulled galvanized steel or other non-reflective surface. All aboveground structures (tubular steel poles, cross-arms, insulators, etc.) specified for this project shall be made of materials that do not reflect or refract light. All conductors specified for the project shall be non-specular, that is, they shall be treated at the factory to dull their surfaces to reduce their potential to reflect light. c. The Project Proponent shall submit to the BLM for review and approval a lighting	**MM 4.18-1 Reduction of Visual Contrast, Light, and Glare.** Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall provide evidence of the following: a. The project proponent shall identify construction laydown areas using already disturbed and/or are in locations of low visual sensitivity. b. For overhead transmission lines lattice towers should not be used. ~~, tubular steel poles shall be used instead of lattice steel towers. Tubular steel~~ Transmission poles shall be painted light-gray colors or shall be dulled galvanized steel or other non-reflective surface. All aboveground structures (~~tubular steel~~ transmission poles, cross-arms, insulators, etc.) specified for this project shall be made of materials that do not reflect or refract light. All conductors specified for the project shall be non-specular, that is, they shall be treated at the factory to dull their surfaces to reduce their potential to reflect light.	Overhead transmission lines should not be limited to tubular steel poles; this measure should allow for flexibility for other types of structures, including wooden poles, concrete poles, or steel and concrete hybrid poles.	**16-A3**

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		mitigation plan that includes the following: 1. Location and direction of light fixtures that take the lighting mitigation requirements into account; 2. Lighting design that considers setbacks of project features from the site boundary to aid in satisfying the lighting mitigation requirements; 3. Lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated; 4. Light fixtures that are visible from beyond the project boundary shall have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the Project boundary, except where necessary for security; 5. All lighting shall be of minimum necessary brightness consistent with operational safety and security; and 6. Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) shall have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied.	c. The Project Proponent shall submit to the BLM for review and approval a lighting mitigation plan that includes the following: 1. Location and direction of light fixtures that take the lighting mitigation requirements into account; 2. Lighting design that considers setbacks of project features from the site boundary to aid in satisfying the lighting mitigation requirements; 3. Lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated; 4. Light fixtures that are visible from beyond the project boundary shall have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the Project boundary, except where necessary for security; 5. All lighting shall be of minimum necessary brightness consistent with operational safety and security; and 6. Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) shall have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied. 7. None of the above measures shall be applied in conflict with any FAA lighting requirements.	Applicant suggests addition of #7, to clarify that none of the previous measures can conflict with FAA lighting requirements.

16-A3, cont.

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4.18.11	4.18-21	**MM 4.18-5 Evaluate and Implement PCT Route Enhancement.** Prior to the issuance of a Notice to Proceed by the BLM, the project proponent shall consult and coordinate with the U.S. Forest Service, the BLM, and the Pacific Crest Trail Association to develop a route enhancement plan for the Pacific Crest Trail. The plan shall be submitted for review and approval to the BLM and U.S. Forest Service prior to commissioning of the wind turbines. The report shall identify feasible PCT options, developed under the direction of the federal agencies, which provide for trail relocations, enhancements, or additions that will benefit visitors. The provisions shall be designed to apply to those areas where the project would be most visible from the existing trail. If directed by the BLM, the project proponent shall be responsible for constructing those new trail segments, enhancements, or modifications and restorations as identified in the final approved plan. All construction, restoring and disturbance activities shall be conducted in manner acceptable to the BLM and U.S. Forest Service. Any Trail construction, restoration, enhancement or modifications shall be completed within one year of issuance of the first wind turbine	~~**MM 4.18-5 Evaluate and Implement PCT Route Enhancement.** Prior to the issuance of a Notice to Proceed by the BLM, the project proponent shall consult and coordinate with the U.S. Forest Service, the BLM, and the Pacific Crest Trail Association to develop a route enhancement plan for the Pacific Crest Trail. The plan shall be submitted for review and approval to the BLM and U.S. Forest Service prior to commissioning of the wind turbines. The report shall identify feasible PCT options, developed under the direction of the federal agencies, which provide for trail relocations, enhancements, or additions that will benefit visitors. The provisions shall be designed to apply to those areas where the project would be most visible from the existing trail.~~ ~~If directed by the BLM, the project proponent shall be responsible for constructing those new trail segments, enhancements, or modifications and restorations as identified in the final approved plan. All construction, restoring and disturbance activities shall be conducted in manner acceptable to the BLM and U.S. Forest Service. Any Trail construction, restoration, enhancement or modifications shall be completed within one~~	The Applicant suggests deletion. The PCT is not located within the project area and is not directly impacted by the project.	16-B3

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		generator building permit.	~~year of issuance of the first wind turbine generator building permit.~~		16-B3, cont.
4.19.11	4.19-35	**MM 4.19-2 Submit a Road Plan to the BLM and Kern County for Review.** Prior to the issuance of grading/building permits from the County and/or a Notice to Proceed from the BLM, the project proponent shall submit a *Road Plan* to the BLM and the Kern County Engineering, Surveying, and Permit Services Department for review. The Road Plan shall include the following components: 1. A map/plot plan that identifies the precise location of all planned access roads and spur roads, as well as any planned improvements to existing roads. 2. A list and description of the specific improvements/modifications that would be undertaken at each location or road segment, including the planned width of each completed segment, the engineered limits of cut and fill, the location of any drainage and/or sensitive habitat within 100-feet of either edge of the planned access or spur road, and the location and construction details of any new or modified stream crossings or drainage diversion structures. 3. Should the road plan propose a "cut" or "fill" of more than twelve (12) inches, or the movement of more than fifty (50) cubic yards of material, the road plan shall be submitted in the form of a grading permit application to the BLM and the Kern County Engineering, Surveying, and Permit Services Department for review.	**MM 4.19-2 Submit a Road Plan to the BLM and Kern County for Review.** Prior to the issuance of grading/building permits from the County and/or a Notice to Proceed from the BLM, the project proponent shall submit a *Road Plan* to the BLM and the Kern County Engineering, Surveying, and Permit Services Department for review. The Road Plan shall include the following components: 1. A map/plot plan that identifies the precise location of all planned onsite access roads and spur roads, as well as any planned improvements to existing roads. 2. A list and description of the specific improvements/modifications that would be undertaken at each onsite location or road segment, including the planned width of each completed segment, the engineered limits of cut and fill, the location of any drainage and/or sensitive habitat within 100-feet of either edge of the planned onsite access or spur road, and the location and construction details of any new or modified stream crossings or drainage diversion structures. 3. Should the road plan propose a "cut" or "fill" of more than twelve (12) inches, or the movement of more than fifty (50) cubic yards of material, the road plan shall be submitted in the form of a grading permit application to the BLM and the Kern County Engineering, Surveying, and Permit Services Department for review.	See suggested revisions, which clarify that the measure applies to onsite roads only.	16-C3
4.19.11	4.19-37	**MM 4.19-5 Develop a Water Supply Contingency Plan.** Prior to the issuance of	~~**MM 4.19-5 Develop a Water Supply Contingency Plan.** Prior to the issuance of~~	A Water Supply Assessment was completed as part of DEIS/DEIR and shows no	16-D3

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		building permits from the County and/or a Notice to Proceed from the BLM, the project proponent shall develop and submit a *Water Supply Contingency Plan* to the BLM and the Kern County Planning and Community Development Department for review. The Plan shall be prepared by a hydrogeologist and shall include results from a groundwater investigation of any groundwater resources to be used during project operation and maintenance; groundwater would not be pumped by the Proponent to support project construction or decommissioning. The purpose of the groundwater investigation shall be to determine whether the identified groundwater resource(s) is in overdraft conditions; the investigation may include review of historic groundwater well data, groundwater monitoring, hydrologic modeling, and/or interviews with private well owners. Groundwater resources from basin(s) determined to be in long-term overdraft conditions shall not be used to meet project water supply requirements. Additionally, the plan shall contain provisions for ongoing monitoring of water supply well(s) used during project related operation and maintenance activities, as deemed necessary by Kern County.	~~building permits from the County and/or a Notice to Proceed from the BLM, the project proponent shall develop and submit a *Water Supply Contingency Plan* to the BLM and the Kern County Planning and Community Development Department for review. The Plan shall be prepared by a hydrogeologist and shall include results from a groundwater investigation of any groundwater resources to be used during project operation and maintenance; groundwater would not be pumped by the Proponent to support project construction or decommissioning. The purpose of the groundwater investigation shall be to determine whether the identified groundwater resource(s) is in overdraft conditions; the investigation may include review of historic groundwater well data, groundwater monitoring, hydrologic modeling, and/or interviews with private well owners. Groundwater resources from basin(s) determined to be in long-term overdraft conditions shall not be used to meet project water supply requirements. Additionally, the plan shall contain provisions for ongoing monitoring of water supply well(s) used during project related operation and maintenance activities, as deemed necessary by Kern County.~~	significant impact to groundwater. Suggest deletion of this MM. (CH2M HILL. 2011. *Alta East Wind Project Water Supply Assessment*. March 22, 2011. Included as Appendix I-1 of the EIS/EIR).	**16-D3, cont.**
4.20.11	4.20-12	**MM 4.20-3 Emergency Response Liaison – Fire**. The project proponent shall continuously comply with the following during implementation of the project: When a Red Flag Warning is issued by the National Weather Service for the project area, all non-emergency construction and maintenance activities shall cease. This provision shall be clearly stated in the Fire Safety Plan. The Emergency Response Liaison shall ensure	**MM 4.20-3 Emergency Response Liaison – Fire**. The project proponent shall continuously comply with the following during implementation of the project: When a Red Flag Warning is issued by the National Weather Service for the project area, all high-fire risk construction and maintenance activities, such as off-road vehicle travel through heavily vegetated areas, blasting or grinding, shall cease. This provision shall be	See suggested text revision to clarify that low-fire construction activities can continue during red flag warning.	**16-E3**

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		implementation of a system that allows for immediate receipt of Red Flag Warning information from the Los Angeles/Oxnard office of the National Weather Service.	clearly stated in the Fire Safety Plan. The Emergency Response Liaison shall ensure implementation of a system that allows for immediate receipt of Red Flag Warning information from the Los Angeles/Oxnard office of the National Weather Service.		**16-E3, cont.**
4.21.3.2	4.21-5	Permanent impacts to desert wash and riparian habitat would be mitigated at 3:1, while all other native habitats non-native habitats supporting burrowing owl and/or desert tortoise would be mitigated at 1:1.	Permanent impacts to desert wash and riparian habitat would be mitigated at 3:1 or as identified in the California Department of Fish and Game Streambed Alteration Agreement, whichever is greater. ~~, while a~~All other native habitats ~~non-native habitats~~ supporting burrowing owl and/or desert tortoise shall be mitigated at a 1:1 ratio for permanent impacts, or as otherwise identified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion, whichever is greater. ~~would be mitigated at 1:1.~~	See suggested revision; Text was revised to mirror MM 4.17-1 text.	**16-F3**
4.21.3.2	4.21-6	As described above, these measures would require biological monitoring during construction activities, moving ground-dwelling special-status species such as coast horned lizard and silvery legless lizard out of harm's way, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	As described above, these measures would require biological monitoring during construction activities, moving ground-dwelling special-status species such as coast horned lizard and silvery legless lizard out of harm's way, worker environmental awareness training, ~~restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio,~~ minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	Text should be deleted because mitigation measures described above do not include restoration or compensation for these species.	**16-G3**
4.21.3.2	4-21-6	It is possible that condors could occasionally forage on or pass through the site, especially as the range of the condor expands with continued population growth; even potentially occupying most or all of its	It is possible that condors could occasionally forage on or pass through the site, especially ~~as~~ if the range of the condor expands with continued population growth; even potentially occupying most or all of its	Text should be modified to make text consistent with rest of discussion.	**16-H3**

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		historic range in California.	historic range in California.		16-H3, cont.
4.21.3.2	4.21-6 to 4.21-7	As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, ~~compensation for permanently impacted habitat at a minimum 1:1 ratio ,~~ minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	Text should be deleted because mitigation measures described above do not include compensation for this species.	16-I3
4.21.3.2	4.21-7	This species was observed foraging in the project area during fixed-point bird use surveys in all four (4) seasons.	This species was observed foraging in the project area during fixed point bird surveys in ~~all four (4) seasons~~ fall of 2010 and winter of 2010/11.	Text should be modified to clarify that this species was observed off site in year 1 surveys.	16-J3
4.21.3.2	4.21-7	Indirect impacts to golden eagles could include the loss of foraging habitat due to the establishment of invasive weeds. Night lighting during construction could also result in indirect impacts to golden eagles.	Indirect impacts to golden eagles could include the loss of foraging habitat due to the establishment of Invasive weeds potentially resulting in a decline in prey density. Night lighting during construction could also result in indirect impacts to golden eagles.	See suggested modification to clarify why establishment of invasive weeds may result in loss of foraging habitat.	16-K3
4.21.3.2	4.21-9	**(Swainson's Hawk)** The AEWP's direct and indirect construction-related impacts to foraging Swainson's hawks would be reduced by implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). As	**(Swainson's Hawk)** The AEWP's direct and indirect construction-related impacts to foraging Swainson's hawks would be reduced by implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission	Text should be deleted because mitigation measures described above do not include compensation for this species.	16-L3

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		described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, and control of fugitive dust.	reduction). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, ~~compensation for permanently impacted habitat at a minimum 1:1 ratio~~, minimization of impact areas, and control of fugitive dust.		**16-L3, cont.**
4.21.3.2	4.21-10	**(Nesting Birds)** Direct and indirect construction-related impacts to nesting bird species, including special-status species, would be reduced through implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, minimization of construction night lighting, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, and control of fugitive dust.	**(Nesting Birds)** Direct and indirect construction-related impacts to nesting bird species, including special-status species, would be reduced through implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, minimization of construction night lighting, restoration of temporarily impacted areas, ~~compensation for permanently impacted habitat at a minimum 1:1 ratio~~, minimization of impact areas, and control of fugitive dust.	Text should be deleted because mitigation measures described above do not include compensation for this species.	**16-M3**
4.21	4.21-10		***Wintering Birds*** The AEWP could result in indirect impacts to wintering bird species protected under California Fish and Game Code sections 3503.5 and 3511 and the Migratory Bird Treaty Act. Construction activities could	The Environmental Setting Section (3.21) in Chapter 3 discusses/describes wintering bird species that have the potential to exist in the project area (also listed in Table 3.21-1); however, the Impacts Section (4.21) does not address potential impacts to wintering	**16-N3**

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			cause destruction of winter foraging and roosting habitat and temporary displacement of individuals due to noise and human activity during construction. Several special-status bird species have been documented during winter on the AEWP, including golden eagle, loggerhead shrike, northern harrier peregrine falcon, and prairie falcon. No direct impact to wintering birds, in the form of take, is anticipated during construction. Indirect construction-related impacts to wintering bird species, including special-status species, would be reduced through implementation of Mitigation Measures 4.2-1 (Construction fugitive dust emission reduction), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.21-1 (Designated Biologist), and 4.21-2 (Wildlife Impact Avoidance and Minimization). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, minimization of construction night lighting, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, and control of fugitive dust.	bird species. Please consider this suggested text in a new section entitled Wintering Birds, inserted after the Nesting Birds discussion in Section 4.21.3.2 on page 4.21-10 in Chapter 4.	**16-N3, cont.**
4.21.3.2	4.21-11	**(Bats)** The AEWP's direct and indirect construction-related impacts to special-status bats would be reduced by implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation	**(Bats)** The AEWP's direct and indirect construction-related impacts to special-status bats would be reduced by implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and	Text should be deleted because mitigation measures described above do not include compensation for this species.	**16-O3**

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		Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, ~~compensation for permanently impacted habitat at a minimum 1:1 ratio~~, minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust.		**16-O3, cont.**
4.21.3.2	4.21-11	**(American Badger and Desert Kit Fox)** As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	**(American Badger and Desert Kit Fox)** As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, ~~compensation for permanently impacted habitat at a minimum 1:1 ratio,~~ minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	Text should be deleted because mitigation measures described above do not include compensation for this species.	**16-P3**
4.21.3.2	4.21-12	**(Special Status Mice)** As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	**(Special Status Mice)** As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, ~~compensation for permanently impacted habitat at a minimum 1:1 ratio,~~ minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	Text should be deleted because mitigation measures described above do not include compensation for this species.	**16-Q3**

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4.21.3.2	4.21-12	**(Mohave Ground Squirrel)** .As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	**(Mohave Ground Squirrel)** .As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, ~~compensation for permanently impacted habitat at a minimum 1:1 ratio,~~ minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust.	Text should be deleted because mitigation measures described above do not include compensation for this species.	**16-R3**
4.21.3.3	4.21-14	The project proponent would consult with CDFG and USFWS to obtain take authorization for potential impacts to listed species through the context of a 2081 take permit from CDFG and a Biological Opinion from the USFWS.	The project proponent would consult with CDFG and USFWS to obtain any necessary take authorization if take of listed species is anticipated ~~for potential impacts to listed species~~ through the context of a 2081 take permit from CDFG and/or a Biological Opinion from the USFWS.	Text should be modified to reflect fact take authorization may or may not be required.	**16-S3**
4.21	4.21-17		***Wintering Birds*** O&M activities could result in direct and indirect impacts to nesting bird species protected under the California Fish and Game Code and Migratory Bird Treaty Act. Indirect impacts to wintering birds could occur during vegetation management or regarding of access roads, which could cause temporary displacement of wintering birds from adjacent wintering habitats. Direct impacts to wintering birds may result from collision with project features. Indirect and direct impacts to wintering bird species would be mitigated through implementation of Mitigation Measures 4.21-6 (Avian and Bat Protection Plan) which requires the preparation of an Avian and Bat Protection Plan (APP) or equivalent document. To	The Environmental Setting Section (3.21) in Chapter 3 discusses/describes wintering bird species that have the potential to exist in the project area (also listed in Table 3.21-1); however, the Impacts Section (4.21) does not address potential impacts to wintering bird species. Please consider this suggested text in a new section entitled Wintering Birds, inserted after the Nesting Birds discussion in Section 4.21.3.3 on page 4.21-17 in Chapter 4.	**16-T3**

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			further reduce this potential impact, Mitigation Measure 4.21-2 (Wildlife Impact Avoidance and Minimization) requires preparation of a WEAP, which includes actions and reporting procedures for impacts to wintering birds. Impacts associated with night lighting during O&M would be minimized through implementation of Mitigation Measures 4.18-1 (Reduction of Visual Contrast, Light, and Glare) and 4.18-4 (Comply with Lighting Standards) as described above. As with construction, increases in invasive plant species would be indirect impacts to wintering bird species. Impacts associated with invasive plant species during O&M would be minimized through implementation of Mitigation Measure 4.17-5 (Weed Control Plan) as described in Section 4.21.3.2.		**16-T3, cont.**
4.21.3.3	4.21-23		The applicant has been in on-going discussions with the USFWS to demonstrate and determine the effectiveness of the Monitoring and Avoidance Plan. Field trials performed on July 9, 10, and 11, 2012, at Bitter Creek Wildlife Refuge where condors were present, indicated that the system had a 100 percent success rate for detecting condors. The objective of the test was to evaluate the detection system against a human observer. In every case the VHF detection system recorded a condor occurrence before the human observer could detect it and in many cases, detected the occurrence of a condor that a human observe did not detect. Because almost all free flying condors are fitted with VHF transmitters, detection of a condor by the system is highly dependable. This system	Please include additional information on the effectiveness on the condor monitoring system. Suggest insertion of the proposed text prior to the 1st bullet on page 4.21-23.	**16-U3**

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			and its protocol will ensure that condor mortality can be avoided. The results at the Bitter Creek Wildlife Refuge suggest that the system will be 100 percent effective at the project site, as well. Nonetheless, another demonstration of the VHF detection system for the County and FWS is planned for October 3 and 4, 2012 at the project site. The VHF detection system will be installed in early 2013 in order to monitor a large area in all directions from the AEWP to maximize response times should a condor be detected. By design, the detection system will monitor for and report a condor before it can reach the AEWP and as such, it will most often detect a condor that is not headed toward nor threatened by the AEWP but rather traveling to other locations in the surrounding mountainous areas. These other locations may be occupied by operational wind facilities that, if not watched, could pose a threat to condors. Since the detection system is designed to notify a team of observes that will respond and visually track the condor and act accordingly; observers can inform other wind farm operators within the area that a condor is in the vicinity and thereby avoid turbine collisions at other project sites. Over time, the Applicant believes that the VHF detection system has the potential to assist in the avoidance of lethal take of condors from wind projects throughout the region.		**16-U3, cont.**
Table 4.21-1	4.21-28	**Table 4.21-1. Summary of CEQA Significance Determinations**	Add species listed below to Table 4.21-1 (to correctly mirror those species listed in Table 3.21-1): Amphibians	The Environmental Setting Section (3.21) in Chapter 3 discusses/describes all of the species that have the potential to exist in the project area (also listed in Table 3.21-1); however, the Impacts Section (4.21; Table	**16-V3**

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			Wintering Birds California Horned Lark Bendire's thrasher Le Conte's thrasher	4.21-1) does not list all of the Chapter 3 species. Please include. In addition, reference to Wintering birds should be included in Table 4.21-1.	**16-V3, cont.**
4.21.11	4.21-43	**4.21.11 Mitigation Measures** The AEWP will require incidental take authorization for impacts to listed species through a Biological Opinion (BO) from the USFWS and a 2081 Incidental Take Permit (ITP) from CDFG. The terms and conditions of these authorizations will supersede the mitigation measures identified below. For items that are addressed in the mitigation measures identified below as well as provisions of the BO and/or ITP, the most conservative measure will apply (for example, the highest mitigation ratio would apply). Nonetheless, in compliance with the requirements identified in CEQA, the project proponent will be required to comply with the reporting and documentation standards addressed in the mitigation measures ultimately approved by the Lead Agencies.	**4.21.11 Mitigation Measures** If required, the AEWP will obtain ~~require~~ incidental take authorization for impacts to listed species through a Biological Opinion (BO) from the USFWS and/or a 2081 Incidental Take Permit (ITP) from CDFG. The terms and conditions of these authorizations will supersede the mitigation measures identified below. For items that are addressed in the mitigation measures identified below as well as provisions of the BO and/or ITP, the most conservative measure will apply (for example, the highest mitigation ratio would apply). Nonetheless, in compliance with the requirements identified in CEQA, the project proponent will be required to comply with the reporting and documentation standards addressed in the mitigation measures ultimately approved by the Lead Agencies.	Suggested modification to reflect that take authorization may or may not be required.	**16-W3**
4.21.11	4.21-44	**MM 4.21-2 Wildlife Impact Avoidance and Minimization.** Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit written documentation to the Kern County Planning and Community Development Department and the Bureau of Land Management of the following: 5. Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit a *Wildlife Mortality Reporting Program* to the Bureau of Land Management	5. Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit a *Wildlife Mortality Reporting Program* to the Bureau of Land	Modification to specify special-status species because intent of MM is to demonstrate compliance with measures relative to special status species, and to provide for	**16-X3**

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		and Kern County Planning and Community Development Department for review. This program shall be implemented during construction and operation, and shall require the identification and reporting of any dead or injured animals (both special-status and common species) observed by personnel conducting construction and operation activities. Reporting is necessary during construction and operation to demonstrate compliance with the avoidance and minimization measures, to assess the effectiveness of the measures, and to make recommendations, if necessary, for future compliance. The program shall also include provisions to stop work within the immediate vicinity if a dead special-status species is encountered. An appropriate reporting format shall be developed in coordination with the Bureau of Land Management, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game. 6. A speed limit of 15 miles per hour will be maintained on all dirt access/maintenance roads, and all vehicles must remain on designated access/maintenance roads. 7. Night lighting required during construction shall be directed toward the interior of the disturbance area or at the specific location being constructed in order to minimize adverse effects to wildlife in off-site areas.	Management and Kern County Planning and Community Development Department for review. This program shall be implemented during construction and operation, and shall require the identification and reporting of any dead or injured special-status species ~~animals (both special-status and common species)~~ observed by personnel conducting construction and operation activities. Reporting is necessary during construction and operation to demonstrate compliance with the avoidance and minimization measures, to assess the effectiveness of the measures, and to make recommendations, if necessary, for future compliance. The program shall also include provisions to stop work within the immediate vicinity if a dead special-status species is encountered. The project proponent shall notify the BLM, Kern County Planning Department, the on-call biologist, and the appropriate resources agency (e.g., USFWS or CDFG) before construction is allowed to resume. An appropriate reporting format shall be developed in coordination with the Bureau of Land Management, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game. 6. A speed limit of 15 miles per hour will be maintained on all dirt access/maintenance roads, and all vehicles must remain on designated access/maintenance roads. 7. Night lighting required during construction shall be directed toward the interior of the disturbance area or at the specific location being constructed in order to minimize adverse effects to wildlife in off-site areas.	notification in order to resume work.

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4.21.11	4.21-46	**MM 4.21-3 Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds.** Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit written documentation to the Kern County Planning and Community Development Department, the Bureau of Land Management, the California Department of Fish and Game, and/or the United States Fish and Wildlife Service, that the following pre-construction surveys have been prepared: 1. Pre-construction surveys for nesting birds if construction, ground disturbance, and/or vegetation trimming/removal activities are scheduled to occur during the breeding season (February 1 to August 31). A qualified biologist shall conduct the breeding bird surveys within three (3) days prior to the start of construction, ground disturbance, or vegetation trimming/removal activities to identify the presence of breeding birds protected by the Migratory Bird Treaty Act, California Fish and Game Code Sections 3503 and 3503.5, the Bald and Golden Eagle Protection Act, and the California and federal Endangered Species Acts. Should riparian habitats be encountered on the site, pre-construction nesting surveys for southwestern willow flycatcher, gray vireo, and western yellow-billed cuckoo following the most current United States Fish and Wildlife Service protocols for each species will be conducted. If a nesting listed riparian	1. Pre-construction surveys for nesting birds if construction, ground disturbance, and/or vegetation trimming/removal activities are scheduled to occur during the breeding season (February 1 to August 31). A qualified biologist shall conduct the breeding bird surveys ~~within three (3) days~~ no more than 30 days prior to the start of construction, ground disturbance, or vegetation trimming/removal activities to identify the presence of breeding birds protected by the Migratory Bird Treaty Act, California Fish and Game Code Sections 3503 and 3503.5, the Bald and Golden Eagle Protection Act, and the California and federal Endangered Species Acts. Should riparian habitats be encountered on the site, pre-construction nesting surveys/sweeps for southwestern willow flycatcher, gray vireo, and western yellow-billed cuckoo ~~following the most current United States Fish and Wildlife Service protocols for each species~~ will be	Suggested text modifications to reflect typical requirements of pre-construction surveys sweeps.	**16-Y3**

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		bird is detected, a 500-foot disturbance-free buffer will be established and Kern County, California Department of Fish and Game, and/or the United States Fish and Wildlife Service (as appropriate) shall be notified. If nesting birds are encountered during preconstruction nesting surveys and/or sweeps, a 300 foot disturbance-free buffer shall be established around each nest, and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. Buffer sizes may be modified in consultation with the California Department of Fish and Game and/or the United States Fish and Wildlife Service. If nesting golden eagles are identified, a 1/4-mile no-activity buffer will be implemented when nests have a direct line of sight to the work area. If the work area is not within direct view of the nest, the no-disturbance buffer shall be 660 feet. Nest buffers for eagles and other nesting birds may be adjusted to reflect existing conditions including ambient noise, topography, and species' disturbance tolerance with the approval of the appropriate resource agencies (California Department of Fish and Game and/or United States Fish and Wildlife Service). Should project construction or operation result in an anticipated need to move a bird nest during nesting season, the project proponent shall first obtain written documentation providing concurrence from the United States Fish and Wildlife Service and the California Department of Fish and Game authorizing the nest relocation. The project proponent shall provide a written report to the Kern County Planning and	conducted. If a nesting listed riparian bird is encountered, the project proponent shall consult with CDFG and/or USFWS to identify appropriate measures to prevent impacts to the species, such as establishing a buffer around occupied nests.~~detected, a 500-foot disturbance-free buffer will be established and Kern County, California Department of Fish and Game, and/or the United States Fish and Wildlife Service (as appropriate) shall be notified.~~ If nesting birds are encountered during preconstruction nesting surveys and/or sweeps, a 300 foot disturbance-free buffer shall be established around nesting birds ~~each nest~~, and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. Buffer sizes may be modified in consultation with the California Department of Fish and Game and/or the United States Fish and Wildlife Service.	

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		Community Development Department, the United States Fish and Wildlife Service, and the California Department of Fish and Game documenting the relocation efforts. The report shall include what actions were taken to avoid moving the nest, the location of the nest, what species is being relocated, the number and condition of the eggs taken from the nest, the location of where the eggs are incubated, the survival rate, the location of the nests where the chicks are relocated, and outcome (whether or not the chicks survived and fledged). Should any applicable Agency determine that the nests cannot be moved, the project proponent shall not move the nests.		
		2. Pre-construction nesting surveys will be conducted within one-half (1/2) mile of areas with potentially suitable nesting habitat for Swainson's hawks no more than 30 days prior to commencement of construction. If a nest site is found, consultation with California Department of Fish and Game and the United States Fish and Wildlife Service shall be required to ensure project construction will not result in nest disturbance. No new disturbances or other project-related activities that may cause nest abandonment or forced fledging shall be initiated within one-half (1/2) mile of an active nest between March 1 and September 15, or unless otherwise authorized by the California Department of Fish and Game and the United States Fish and Wildlife Service, as required. These buffer zones may be adjusted as appropriate in consultation with a qualified ornithologist, the California Department of Fish and Game and the United States Fish and Wildlife Service. If impacts to nesting	2. Pre-construction nesting surveys will be conducted within ~~one-half (1/2)~~ 0.25-mile of areas with potentially suitable nesting habitat on lands accessible to the project operator for Swainson's hawks no more than 30 days prior to commencement of construction. If a nest site is found, consultation with California Department of Fish and Game and the United States Fish and Wildlife Service shall be required to ensure project construction will not result in nest disturbance. No new disturbances or other project-related activities that may cause nest abandonment or forced fledging shall be initiated within ~~one-half (1/2)~~ 0.25-mile of an active nest between March 1 and September 15, or unless otherwise authorized by the California Department of Fish and Game and the United States Fish and Wildlife Service, as required. These buffer zones may be adjusted as appropriate in consultation with a qualified ornithologist, the California Department of Fish and Game	**16-Y3, cont.**

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		Swainson's hawks cannot be avoided, the California Department of Fish and Game and the United States Fish and Wildlife Service shall be consulted regarding the potential for incidental take authorization. 3. Pre-construction surveys for the Mohave ground squirrel will be conducted within all suitable habitat prior to initial ground-disturbing activities, including along the transmission line route. Surveys shall include a map of all potentially suitable habitat within the project area and along the transmission line route. The name and phone number of the biologist(s) proposed for the survey effort shall be provided to the California Department of Fish and Game and to the United States Fish and Wildlife Service at least 14 days before the initiation of ground-disturbing activities. If a Mohave ground squirrel is found on the construction site, work shall be halted and redirected to areas not supporting this species unless an incidental take authorization from the California Department of Fish and Game and/or the United States Fish and Wildlife Service directs otherwise. A written report shall be sent to California Department of Fish and Game and the United States Fish and Wildlife Service within five (5) calendar days of the sighting. The report will include the date, time of the finding or incident (if known), and location of the animal. If a dead Mohave ground squirrel is encountered the remains shall be collected, frozen as soon as possible, and California Department of Fish and Game and the United States Fish and Wildlife Service shall be contacted to	and the United States Fish and Wildlife Service. If impacts to nesting Swainson's hawks cannot be avoided, the California Department of Fish and Game and the United States Fish and Wildlife Service shall be consulted regarding the potential for incidental take authorization. 3. Pre-construction project surveys/sweeps for the Mohave ground squirrel will be conducted within all suitable habitat prior to initial ground-disturbing activities, including along the transmission line route. Surveys shall include a map of all potentially suitable habitat within the project area and along the transmission line route. The name and phone number of the biologist(s) proposed for the survey effort shall be provided to the California Department of Fish and Game and to the United States Fish and Wildlife Service at least 14 days before the initiation of ground-disturbing activities. If a Mohave ground squirrel is found on the construction site, work shall be halted and redirected to areas not supporting this species ~~unless an incidental take authorization from the California Department of Fish and Game and/or the United States Fish and Wildlife Service directs otherwise~~ and project operator shall consult with California Department of Fish and Game and United States Fish and Wildlife Service prior to resuming construction. A written report shall be sent to California Department of Fish and Game and the United States Fish and Wildlife Service within five (5) calendar days of the sighting. The report will include the date, time of the finding or incident (if known), and location of the animal. If a dead Mohave ground squirrel is encountered the	

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		determine where the remains will be sent. If Mohave ground squirrels are detected during any project surveys, the project proponent shall provide the Kern County Planning and Community Development Department and the Bureau of Land Management with a map of all occupied habitat associated with the project. The project proponent shall also consult with the California Department of Fish and Game and the United States Fish and Wildlife Service regarding the potential for incidental take authorization. 4. Pre-construction surveys for American badger will be conducted within suitable habitat no more than 30 days prior to the start of construction activities. If present, occupied badger dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer established. Maternity dens shall be flagged for avoidance, identified on construction maps, and a Biological Monitor shall be present during construction. If avoidance of a non-maternity den is not feasible, the project proponent shall consult with the California Department of Fish and Game, Bureau of Land Management, the United States Fish and Wildlife Service and the Designated Biologist regarding relocation procedures. 5. Pre-construction surveys for desert kit fox will be conducted within suitable habitat no more than 30 days prior to the start of construction activities. If present, occupied kit fox dens shall be flagged and ground-disturbing activities avoided within 50 feet of	remains shall be collected, frozen as soon as possible, and California Department of Fish and Game and the United States Fish and Wildlife Service shall be contacted to determine where the remains will be sent. If Mohave ground squirrels are detected during any pre-construction project surveys/sweeps, the project proponent shall provide the Kern County Planning and Community Development Department and the Bureau of Land Management with a map of all occupied habitat associated with the project. The project proponent shall also consult with the California Department of Fish and Game and the United States Fish and Wildlife Service regarding the potential for incidental take authorization. 4. Pre-construction surveys/sweeps for American badger will be conducted within suitable habitat no more than 30 days prior to the start of construction activities. If present, occupied badger dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer established. Maternity dens shall be flagged for avoidance, identified on construction maps, and a Biological Monitor shall be present during construction. If avoidance of a non-maternity den is not feasible, the project proponent shall consult with the California Department of Fish and Game, Bureau of Land Management, the United States Fish and Wildlife Service and the Designated Biologist regarding relocation procedures. 5. Pre-construction surveys/sweeps for desert kit fox will be conducted within	

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		the occupied den avoided. Maternity dens shall be flagged for avoidance, identified on construction maps, and a biological monitor shall be present during construction. If an occupied desert kit fox den is encountered, all work in the immediate vicinity shall stop until the California Department of Fish and Game,the United States Fish and Wildlife Service, and the Designated Biologist are consulted for the appropriate course of action. 6. Surveys for roosting bats shall be conducted during the maternity season (March 1 to July 31) for any project area that is located within 300 feet of rocky outcrops or other habitat capable of supporting bat nursery colonies. These areas shall be surveyed by a qualified bat biologist. Surveys shall include a minimum of one (1) day and one (1) evening visit. If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed). If avoidance of the roost is not feasible, the bat biologist shall survey (through the use of radio telemetry or other methods approved by California Department of Fish and Game) for nearby alternative maternity colony sites. If the bat biologist determines, in consultation with and with the approval of the California Department of Fish and Game, that there are alternative roost sites used by the maternity colony and young are not present, then no further action is required. However, if there are no alternative roost sites used by the maternity colony, provision of substitute roosting bat habitat is required. If active maternity roosts are absent, but a hibernaculum (i.e., a non-maternity roost) is	suitable habitat no more than 30 days prior to the start of construction activities. If present, occupied kit fox dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den avoided. Maternity dens shall be flagged for avoidance, identified on construction maps, and a biological monitor shall be present during construction. If an occupied desert kit fox den is encountered, all work in the immediate vicinity shall stop until the California Department of Fish and Game, the United States Fish and Wildlife Service, and the Designated Biologist are consulted for the appropriate course of action. 6. Pre-construction project ~~S~~surveys/sweeps for roosting bats shall be conducted during the maternity season (March 1 to July 31) for any project area that is located within 300 feet of rocky outcrops or other habitat capable of supporting bat nursery colonies. These areas shall be surveyed by a qualified bat biologist. Surveys shall include a minimum of one (1) day and one (1) evening visit. If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed). If avoidance of the roost is not feasible, the bat biologist shall survey (through the use of radio telemetry or other methods approved by California Department of Fish and Game) for nearby alternative maternity colony sites. If the bat biologist determines, in consultation with and with the approval of the California Department of Fish and Game, that there are alternative roost sites used by the maternity colony and young are not present, then no further action is required. However,	**16-Y3, cont.**

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		present, then exclusion of bats prior to demolition of roosts is required. a. If a maternity roost will be impacted by the project, and no alternative maternity roosts are in use within one (1) mile of the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the project site no less than three (3) months prior to the eviction of the colony. Alternative roost sites will be constructed in accordance with the specific bats' requirements in coordination with California Department of Fish and Game, the Bureau of Land Management, and Kern County Planning and Community Development Department. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. The California Department of Fish and Game shall also be notified of any hibernacula or active nurseries within the construction zone. b. If non-breeding bat hibernacula are found in rocky outcrops scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, according to timing and under the direction of the qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). In situations requiring one-way doors, a minimum of one (1) week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost. This action should allow all bats to leave during the course of one (1) week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in	if there are no alternative roost sites used by the maternity colony, provision of substitute roosting bat habitat is required. If active maternity roosts are absent, but a hibernaculum (i.e., a non-maternity roost) is present, then exclusion of bats prior to demolition of roosts is required.	

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		the judgment of the qualified bat biologist shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (i.e., there shall be no less or more than one (1) night between initial disturbance and the grading or tree removal). If an active maternity roost is located in an area to be impacted by the project, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., prior to 1 March) or after young are flying (i.e., after 31 July) using the exclusion techniques described above. 7. Pre-construction surveys for burrowing owls shall be conducted in conformance with the California Department of Fish and Game's *Staff Report on Burrowing Owl Mitigation* (CDFG, 2012), within all suitable habitat within a 150-meter(492-foot) buffer zone of each work area, or as otherwise authorized by the California Department of Fish and Game. The project proponent shall submit the results of the pre-construction survey to the Bureau of Land Management's Authorized Officer, the Kern County Planning and Community Development Department, the California Department of Fish and Game, and the United States Fish and Wildlife Service. The project proponent shall also submit evidence of conformance with federal and State regulations regarding the protection of the burrowing owl by demonstrating compliance with the following: a. Occupied burrows shall not be disturbed		

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		during the nesting season (February 1 through August 31); unless a qualified biologist approved by California Department of Fish and Game verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Eviction outside the nesting season may be permitted pending evaluation of eviction plans (developed in accordance with California Department of Fish and Game protocol for burrowing owls) by California Department of Fish and Game and receipt of formal written approval from the California Department of Fish and Game authorizing the eviction. b. Any damaged or collapsed burrow will be replaced with artificial burrows in adjacent habitat. c. Unless otherwise authorized by California Department of Fish and Game, a 250-foot buffer, within which no activity will be permissible, will be maintained between project activities and nesting burrowing owls during the nesting season (February 1 through August 31). This protected area will remain in effect until August 31 or at California Department of Fish and Game's discretion and based upon monitoring evidence, until the young owls are foraging independently. A 160-foot disturbance-free buffer will be maintained around all occupied burrows during the non-breeding season (September 1 through January 31). Disturbance-free buffers may be modified based on site-specific conditions in consultation with the California Department of Fish and Game.	b. Any damaged or collapsed burrow that shows evidence of use by burrowing owl will be replaced with artificial burrows in adjacent habitat.	Modification to clarify intent of MM to cover burrowing owl burrows.	**16-Y3, cont.**

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		d. If accidental take (disturbance, injury, or death of owls) occurs, the Designated Biologist will be notified immediately. e. Impacts to burrowing owl territories shall be mitigated through a combination of off-site habitat compensation and/or off-site restoration of disturbed habitat capable of supporting this species. The acquisition of occupied habitat off-site shall be in an area where turbines would not pose a mortality risk. Acquisition of habitat shall be consistent with the California Department of Fish and Game's *Staff Report on Burrowing Owl Mitigation* (CDFG, 2012). The preserved habitat shall be occupied by burrowing owl and shall be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by a qualified ornithologist. The site shall be approved by the California Department of Fish and Game. Land shall be purchased and/or placed in a conservation easement in perpetuity and managed to maintain suitable habitat. The offsite area to be preserved can coincide with off-site mitigation lands for permanent impacts to sensitive vegetation communities, with the approval of the Bureau of Land Management and the California Department of Fish and Game. 8. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall submit written documentation to the Kern County Planning and Community Development Department and to the Bureau of Land Management demonstrating how the following desert		

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		tortoise mitigation will be implemented during construction activities: a. Temporary tortoise-proof fencing shall be erected and maintained between the project construction areas and suitable desert tortoise habitat before initiating clearance surveys for desert tortoise and construction on the project site. Installation of fencing will be monitored by a Biological Monitor. Fencing shall be maintained with oversight from a Biological Monitor and/or the Designated Biologist. b. Continuous weekly verification by a Biological Monitor shall occur to ensure that a tortoise has not been trapped within the fence and the fence remains intact. c. Two desert tortoise clearance surveys shall be conducted immediately after constructing the tortoise-proof fence. The surveys shall cover 100 percent of the exclusion area. d. Trash receptacles at the work site will have self-locking lids to prevent entry by opportunistic predators such as common ravens and coyotes. e. Whenever a vehicle or any construction equipment is parked longer than 15 minutes within desert tortoise habitat, the ground around and underneath the vehicle will be inspected for desert tortoises prior to moving the vehicle. If a desert tortoise is observed, a Biological Monitor shall be contacted. The tortoise shall be left to move on its own. Tortoises shall not be handled unless otherwise authorized by the Biological Opinion and 2081 take authorization. f. A Biological Monitor shall be on site to survey for tortoises immediately in front of vegetation clearance activities including, but	b. Continuous ~~weekly verification~~ bi-weekly inspections by a Biological Monitor shall occur throughout construction to ensure that a tortoise has not been trapped within the fence and the fence remains intact. c. Two desert tortoise clearance surveys shall be conducted immediately after constructing the tortoise-proof fence. The surveys shall cover 100 percent of the exclusion area, unless directed otherwise in the Biological Opinion.	Modification to make consistent with typical inspection requirements for Biological Monitors and to acknowledge survey requirements in the biological opinion may be different.	**16-Y3, cont.**

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		not limited to, construction sites, staging areas, and access routes in the event a tortoise was inadvertently missed during clearance surveys. g. Potential desert tortoise burrows found in the construction zone, whether occupied or not, shall be avoided by realignment of the construction path. If realignment is not feasible, then the United States Fish and Wildlife Service and the California Department of Fish and game shall be consulted to determine whether burrow excavation is feasible, and to obtain authorization for excavation and relocation of tortoise(s) and/or egg(s), if applicable. Desert tortoise burrows and pallets that fall outside of, but within 50 feet of, the construction work area shall be flagged for avoidance. h. Construction pipe, culvert, or similar structures with a diameter greater than three (3) inches and stored less than eight (8) inches above ground on the construction site for one or more nights shall be inspected for tortoises and other special-status wildlife before the material is moved, buried, or capped. As an alternative, structures may be capped before being stored on the construction site. i. Open trenches shall be fenced with temporary tortoise-proof fencing or inspected by authorized personnel periodically, at the beginning and at the end of each day, and immediately before backfilling. Any tortoise that is found in a trench shall be promptly removed by authorized personnel in accordance with the Biological Opinion. If the biologist is not allowed to enter the trench for safety reasons, the United States Fish and Wildlife		

16-Y3, cont.

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		Service will be contacted immediately for authorization to proceed with alternative methods. j. Within 90 days of completion of project activities, the Designated Biologist shall submit a report to the Bureau of Land Management's Authorized Officer, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game documenting the numbers and locations of desert tortoises encountered, their disposition, effectiveness of protective measures, practicality of protective measures, and recommendations for future measures that allow for better protection or more workable implementation. k. The Designated Biologist shall notify the Bureau of Land Management, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game within 24 hours upon locating a dead or injured desert tortoise during the construction phase of the project. The notification shall be made by telephone and in writing to the Bureau of Land Management's Authorized Officer, United States Fish and Wildlife Service, California Department of Fish and Game, and Kern County Planning and Community Development Department. The report shall include the date and time of the finding or incident (if known), location of the carcass, a photograph, cause of death (if known), and other pertinent information. Tortoises fatally injured during project-related activities shall be submitted for necropsy.		

16-Y3, cont.

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		l. The Designated Biologist and/or Biological Monitor shall be present during maintenance outside the established tortoise exclusion areas to assist in the implementation of protection measures for the desert tortoise and to monitor compliance. m. If any operation and maintenance activity must be conducted during the desert tortoise active period (March 15 to May 31 and September 1 to October 31) that may result in ground disturbance, such as weed management or vehicular access off of a designated access/maintenance road, a Biological Monitor shall be present during such activity to ensure that no desert tortoise mortality results.	m. If any ~~operation and~~ maintenance activity during construction must be conducted during the desert tortoise active period (March 15 to May 31 and September 1 to October 31) that may result in ground disturbance, such as weed management or vehicular access off of a designated access/maintenance road, a Biological Monitor shall be present during such activity to ensure that no desert tortoise mortality results.	m) This MM requires documentation demonstrating how the desert tortoise mitigation will be implemented during construction activities; therefore, revised to allow for compliance during construction.	**16-Y3, cont.**
4.21.11	4.21-51	**MM 4.21-4 Raven Management Plan.** Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, a *Raven Management Plan* shall be developed for the project site in consultation with the United States Fish and Wildlife Service and California Department of Fish and Game. Implementation of the Raven Management Plan only applies to areas that are desert tortoise habitat. The Raven Management Plan will require measures such as annual nest removal by a qualified biologist in consultation with the California Department of Fish and Game and the United States Fish and Wildlife Service, removal of carrion at the base of wind turbine generators, storage of garbage in raven-proof containers, and installation of anti-nesting devices on structures where raven nests could be built. In addition, to offset the cumulative contributions of the project to desert tortoise from increased raven	**MM 4.21-4 Raven Management Plan.** Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, a *Raven Management Plan* shall be developed for the project site in consultation with the United States Fish and Wildlife Service and California Department of Fish and Game. Implementation of the Raven Management Plan only applies to areas that are desert tortoise habitat. The Raven Management Plan will require measures such as annual nest removal by a qualified biologist in consultation with the California Department of Fish and Game and the United States Fish and Wildlife Service, removal of carrion at the base of wind turbine generators, storage of garbage in raven-proof containers, and installation of anti-nesting devices on structures where raven nests could be built. In addition, to offset the cumulative contributions of the project to desert	Revised to reflect correct number.	**16-Z3**

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		numbers, the project proponent shall also contribute to the United States Fish and Wildlife Service Regional Common Raven Management Program through the payment of fees not to exceed $150 per disturbed acre. This number shall be verified utilizing the formula established by the Desert Managers Group.	tortoise from increased raven numbers, the project proponent shall also contribute to the United States Fish and Wildlife Service Regional Common Raven Management Program through the payment of fees not to exceed ~~$150~~ $105 per disturbed acre. This number shall be verified utilizing the formula established by the Desert Managers Group.		**16-Z3, cont.**
4.21.11	4.21-52	**MM 4.21-5 California Condor.** Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit written documentation to the Bureau of Land Management's Authorized Officer, the Kern County Planning and Community Development Department, California Department of Fish and Game, and the United States Fish and Wildlife Services of the following regarding the California condor: 1. A qualified biologist with demonstrated knowledge of California condor identification will be on site to monitor all construction activities within the project area and assist the project proponent in the implementation of the monitoring program. 2. Workers will be trained on the issue of microtrash and its potential effects to California condors. In addition, daily sweeps of the work area will occur to collect and remove trash. All spills of ethylene glycol will be cleaned up immediately and a report documenting the actions taken to remediate the spill will be provided to Bureau of Land Management, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game			**16-A4**

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		within five (5) calendar days of the incident. 3. As part of the Worker Education Awareness Program, the project proponent shall develop a flier that will be distributed to all workers on the project concerning information on the California condor. Information to be included consists of the following: species description with photos and/or drawings indicating how to identify the California condor and how to distinguish condors from turkey vultures and golden eagles; protective status and penalties for violation of the federal and California Endangered Species Acts; avoidance measures being implemented on the project; and contact information for communicating condor sightings. A copy of the flier shall be submitted to the Bureau of Land Management's Authorized Officer and Kern County Planning and Community Development Department to demonstrate compliance with this mitigation. 4. All California condor sightings in the project area during construction will be reported directly to the United States Fish and Wildlife Service, California Department of Fish and Game, Bureau of Land Management, and Kern County within 24 hours. 5. The project proponent shall provide written documentation to the Kern County Planning and Community Development Department and the Bureau of Land Management showing implementation of the following additional measures: a. Bird flight diverters shall be installed on all temporary meteorological tower guy wires constructed as part of the project. All permanent meteorological towers shall be free-standing and not contain guy wires.	a. ~~Bird flight diverters shall be installed on all temporary meteorological tower guy wires constructed as part of the project. All permanent meteorological towers shall be free-standing and not contain guy wires.~~ All meteorological towers shall be un-guyed,	Applicant proposes suggested revision to be consistent with other Kern County environmental documents.

16-A4, cont.

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		b. During periods of livestock grazing, a full-time monitor shall be present to ensure immediate removal of carcasses on the project site. These practices shall include a full-time monitor during periods of livestock grazing that will be present to ensure immediate removal of carcasses from the project site to an off-site location far enough from wind developments so as not to present a risk to condors foraging on the carcasses. The monitor shall also assist in designating an area for burial of carcasses or, alternatively, assist the rancher in removing the carcasses to the nearest County landfill site that accepts dead livestock. The project proponent shall also ensure that the monitor is verifying that all watering troughs are inaccessible to wildlife (covered, empty, etc.) during periods when grazing is not occurring. c. The applicant shall work together with the area grazing permittees to develop Best Management Practices to minimize attraction of condors to the project area d. Funding for conservation measures such as radio telemetry, condor feeding programs, or other such measures as deemed appropriate shall be provided to the California Condor Recovery Program. Funding shall be calculated at six (6) units per one hundred (100) turbines installed as part of the project. Prior to the issuance of any building or grading permits for the first (1st) turbine, the project proponent shall fund six telemetry units in the amount of $188,100 ($4,150 per unit plus an "endowment" of $163,200 to be used for tracking data over an eight-year period). Prior to the issuance of any building or grading permits for the one-hundred-and-first (101st) turbine, the project proponent	unless evidence is provided that topography, safety, access and/or climate conditions prohibit free standing towers. If guy wires are necessary, bird deterrents shall be used. Temporary MET towers shall only be permitted for three years. A maximum of two Wind Resource Reference Towers may be permitted permanently with guy wires and bird diverters. b. During periods of livestock grazing, a full-time monitor shall be present to ensure immediate removal of carcasses on the project site. These practices shall include a full-time monitor during periods of livestock grazing that will be present to ensure immediate removal or on-site burial of carcasses. ~~from the project site to an off-site location far enough from wind developments so as not to present a risk to condors foraging on the carcasses. The monitor shall also assist in designating an area for burial of carcasses or, alternatively, assist the rancher in removing the carcasses to the nearest County landfill site that accepts dead livestock. The project proponent shall also ensure that the monitor is verifying that all watering troughs are inaccessible to wildlife (covered, empty, etc.) during periods when grazing is not occurring.~~ d. Funding for conservation measures such as radio telemetry, condor feeding programs, or other such measures as deemed appropriate shall be provided to the California Condor Recovery Program. Funding shall be calculated at six (6) units per one hundred (100) turbines installed as part of the project. Prior to the issuance of any building or grading permits for the first	Onsite burial is sufficient to dispose of carcass.

16-A4, cont.

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		shall fund six additional telemetry units in the amount of $188,100 ($4,150 per unit plus an endowment of $163,200 to be used for tracking data over an eight year period). The total funding to be provided shall not exceed $376,200.	(1st) turbine, the project proponent shall fund six telemetry units in the amount of $188,100 ($4,150 per unit plus an "endowment" of $163,200 to be used for tracking data over an eight-year period). Prior to the issuance of any building or grading permits for the one-hundred-and-first (101st) turbine, the project proponent shall fund six additional telemetry units in the amount of $188,100 ($4,150 per unit plus an endowment of $163,200 to be used for tracking data over an eight year period). The total funding to be provided shall not exceed $376,200 or funding requirements in the Biological Opinion, whichever is greater.		**16-A4, cont.**
4.21.11	4.21-55	**MM 4.21-10 Post-Construction Breeding Monitoring**. Once the project is operational, the project proponent shall conduct Post-Construction Breeding Monitoring in the first, second, and third years following the initial operation of the project. Additional years of monitoring may be required by an appropriate Agency such as the United States Fish & Wildlife Service. The purpose of this monitoring would be to demonstrate whether sensitive resident birds are compatible with operation of wind turbine generators, and to show that the level of incidental injury and mortality does not result in a long-term decline in sensitive resident bird species in the region. Post-construction Breeding Monitoring shall include a Nesting Analysis that shall be conducted as follows: 1. The project proponent shall provide to the Kern County Planning and Community Development Department, the Bureau of Land Management, the California Department of Fish and Game, and the United States Fish and Wildlife Service the	**MM 4.21-10 Post-Construction Breeding Monitoring**. Once the project is operational, the project proponent shall conduct Post-Construction Breeding Monitoring in the first~~, second,~~ and third years following the initial operation of the project. Additional years of monitoring may be required by an appropriate Agency such as the United States Fish & Wildlife Service. The purpose of this monitoring would be to demonstrate whether sensitive resident birds are compatible with operation of wind turbine generators, and to show that the level of incidental injury and mortality does not result in a long-term decline in sensitive resident bird species in the region. Post-construction Breeding Monitoring shall include a Nesting Analysis that shall be conducted as follows:	Text modified to reflect typical monitoring program.	**16-B4**

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		results of a study and comparative data analysis. A qualified ornithologist shall conduct the study of nesting raptors. 2. Nesting raptor surveys shall be conducted throughout the project site between February 15 and August 15. 3. Directed field surveys for nesting raptors shall be conducted during the breeding season by vehicle and on foot to determine the presence or absence of raptor nests, especially mid-sized to large raptor nests within suitable habitat areas. 4. If at the end of the second round of monitoring (three years following the initial operation of the project), the operation of wind turbine generators has been determined to result in a level of incidental injury and mortality to nesting birds that constitutes a significant adverse impact on a breeding population, the project proponent shall undertake supplemental compensatory measures to support regional conservation of migratory birds. 5. The results of the Nesting Analysis shall be made available to regional entities involved in research related to the conservation of nesting birds such as the Audubon Society.			**16-B4, cont.**
4.21.11	4.21-56	**MM 4.21-11 Post-Construction Avian and Bat Mortality Monitoring.** Once the project is operational, the project proponent shall perform Post-Construction Avian and Bat Mortality Monitoring in the first, second, and third years following the initial operation of the project to demonstrate the level of incidental injury and mortality to populations of avian or bat species in the vicinity of the project site. Additional years of monitoring may be required by an appropriate Agency	**MM 4.21-11 Post-Construction Avian and Bat Mortality Monitoring.** Once the project is operational, the project proponent shall perform Post-Construction Avian and Bat Mortality Monitoring in the first, ~~second, and~~ third, and fifth years following the initial operation of the project to demonstrate the level of incidental injury and mortality does not result in an unanticipated long-term decline in ~~to~~ populations of avian or bat species in the vicinity of the project site.	Text modified to reflect typical monitoring program.	**16-C4**

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		such as the United States Fish & Wildlife Service. Post-Construction Avian and Bat Mortality Monitoring shall include a Mortality Analysis, which shall be conducted as follows: 1. The project proponent shall provide to the Kern County Planning and Community Development Department, the Bureau of Land Management, the California Department of Fish and Game, and the United States Fish and Wildlife Service the results of the mortality monitoring for avian and bat species on an annual basis. A qualified wildlife biologist shall conduct mortality monitoring using a statistically significant sample size of operational turbines within the wind energy development project. 2. The Mortality Monitoring Analysis shall note species number, location, and distance from the turbine for each recovered bird or bat, availability of bird and bat prey species, and apparent cause of avian or bat mortality. The project proponent shall provide all results to the Wildlife Response and Reporting System database within 90 days of completion of the annual study. 3. The Mortality Monitoring shall follow standardized guidelines outlined by the California Energy Commission and California Department of Fish and Game (CEC and CDFG, 2007) and the United States Fish and Wildlife Service (USFWS, 2010b) or more current guidance from the United States Fish and Wildlife Service, and shall include carcass scavenging and searcher efficiency trials. 4. At a minimum, the Mortality Monitoring Analysis shall consider four factors: a. Number of annual avian and bat mortalities per turbine,	Additional years of monitoring may be required by an appropriate Agency such as the United States Fish & Wildlife Service. Post-Construction Avian and Bat Mortality Monitoring shall include a Mortality Analysis, which shall be conducted as follows: 1. The project proponent shall provide to the Kern County Planning and Community Development Department, the Bureau of Land Management, the California Department of Fish and Game, and the United States Fish and Wildlife Service the results of the mortality monitoring for avian and bat species on an annual basis. A qualified wildlife biologist shall ~~conduct~~ supervise mortality monitoring using a statistically significant sample size of operational turbines within the wind energy development project. 2. The Mortality Monitoring Analysis shall note species number, location, and distance from the turbine for each recovered bird or bat, availability of bird and bat prey species, and apparent cause of avian or bat mortality. The project proponent shall provide all results to the Wildlife Response and Reporting System database within 90 days of completion of the annual study. 3. The Mortality Monitoring shall follow standardized guidelines outlined by the California Energy Commission and California Department of Fish and Game (CEC and CDFG, 2007) and the United States Fish and Wildlife Service (USFWS, 2010b) or more current guidance from the United States Fish and Wildlife Service, and shall include carcass scavenging and searcher efficiency	

16-C4, cont.

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		b. Disproportionate representation of a particular species, and c. Comparison to existing data on wind farm mortality. d. Comparison to existing data on wind farm mortality from the Tehachapi Wind Resource area and the western United States. 5. In addition to Mortality Monitoring described above, starting in year 1 of project operation and continuing for the life of the project, annual Post-Construction Mortality Monitoring for golden eagle shall be conducted by the project proponent, in conjunction with other monitoring, and submitted to the Kern County Planning and Community Development Department, the Bureau of Land Management, the United States Fish and Wildlife Service, and the California Department of Fish and Game.	trials. 4. At a minimum, the Mortality Monitoring Analysis shall consider four factors: a. Number of annual avian and bat mortalities per turbine, b. Disproportionate representation of a particular species, and c. Comparison to existing data on wind farm mortality from the Tehachapi Wind Resource Area and the western United States. d. Comparison to existing data on wind farm mortality from the Tehachapi Wind Resource area and the western United States. 5. In addition to Mortality Monitoring described above, starting in year 1 of project operation and continuing for the life of the project, annual Post-Construction Mortality Monitoring for golden eagle shall be conducted by the project proponent, in conjunction with other monitoring, and submitted to the Kern County Planning and Community Development Department, the Bureau of Land Management, the United States Fish and Wildlife Service, and the California Department of Fish and Game.		**16-C4, cont.**
4.21.11	4.21-57	**MM 4.21-13 Avian Power Line Interaction Committee Standards.** Prior to issuance of approval for final occupancy by Kern County, the project proponent shall submit written documentation to the Bureau of Land Management and Kern County Planning and Community Development Department demonstrating that all power lines are engineered and constructed to the most current Avian Power Line Interaction	**MM 4.21-13 Avian Power Line Interaction Committee Standards.** Prior to issuance of approval for final occupancy by Kern County, the project proponent shall submit written documentation to the Bureau of Land Management and Kern County Planning and Community Development Department demonstrating that all power lines are engineered and constructed to the most current Avian Power Line Interaction	Text modified to reflect standards.	**16-D4**

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		Committee standards, at the time of construction. The project proponent shall conform to the latest practices to protect birds from electrocution and collision on the transmission line.	Committee standards (at the time power lines are designed), at the time of construction. The project proponent shall conform to the latest practices (as outlined in the 2006 Avian Power Line Interaction Committee standards) to protect birds from electrocution and collision on the transmission line.		**16-D4, cont.**
4.21.11	4.21-57	**MM 4.21-14 Post-Construction Condor Monitoring.** Condor observations made within the project area and identified buffer must be reported to Kern County, BLM, USFWS, and CDFG within 24 hours of the observation. Behavior of the birds, meteorological conditions at the time, and any subsequent curtailment must be reported. Additionally, all such individual reports shall also be provided in quarterly reports on condor activity to the BLM and Kern County Planning and Community Development Department for the term of the grant. The reports shall include all condor sightings, conditions at the time condors are within the project area (e.g. time, duration, temperature, wind speed, and direction), curtailments, duration of curtailments, and number of turbines affected. In the event of take (including harassment or harm) of California condor beyond the habitat removal authorized in the project's Biological Opinion, the project proponent shall: 1) Within 24 hours, the holder shall notify the BLM authorized officer, the USFWS, and the Kern County Planning and Development Department. 2) If take in the form of harassment occurs, all turbines shall be restricted to nighttime operations only, curtailing daylight	**MM 4.21-14 Post-Construction Condor Monitoring.** Condor observations made within the project area and identified buffer must be reported to Kern County, BLM, USFWS, and CDFG within 24 hours of the observation. Behavior of the birds, meteorological conditions at the time, and any subsequent curtailment must be reported. Additionally, all such individual reports shall also be provided in quarterly reports on condor activity to the BLM and Kern County Planning and Community Development Department for the term of the grant. The reports shall include all condor sightings, conditions at the time condors are within the project area (e.g. time, duration, temperature, wind speed, and direction), curtailments, duration of curtailments, and number of turbines affected. In the event of take (including harassment or harm) of California condor beyond the habitat removal authorized in the project's Biological Opinion, the project proponent shall: 1) Within 24 hours, the holder shall notify the BLM authorized officer, the USFWS, and the Kern County Planning and Development Department. 2) If take in the form of harassment occurs, all turbines shall be restricted to nighttime	Applicant requests inclusion of suggested text.	**16-E4**

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		operations for two weeks. 3) Continuous daylight observations shall be made for the two-week curtailment period. 4) After the two-week period, the project proponent shall provide reports (including condor observations and meteorological conditions) to the BLM, USFWS, and Kern County Planning and Development Department. 5) The BLM and the USFWS and CDFG shall determine if conditions of increased risk to condors continue to exist, and therefore nighttime-only operations should continue, or if the conditions have changed such that risk to condors is again low and daylight operations may resume. 6) Steps 3, 4, and 5 will continue until such time that daylight operations have been allowed to resume. In the event of a condor mortality the applicant shall: 1) Immediately cease all turbine operations. 2) Notify the BLM authorized officer, USFWS, CDFG, and the Kern County Planning and Community Development Department. 3) In preparation for reinitiation of formal Endangered Species Act consultation for the project, submit a plan for review and approval to the BLM, the USFWS, and CDFG along with the Kern County Planning and Development Department for developing and implementing additional specific condor avoidance and minimization measures including, but not limited to, radar and telemetry curtailment measures. Turbine operations shall not resume until reinitiated Section 7 consultation is complete and a	operations only, curtailing daylight operations for two weeks. 3) Continuous daylight observations shall be made for the two-week curtailment period. 4) After the two-week period, the project proponent shall provide reports (including condor observations and meteorological conditions) to the BLM, USFWS, and Kern County Planning and Development Department. 5) The BLM and the USFWS and CDFG shall determine if conditions of increased risk to condors continue to exist, and therefore nighttime-only operations should continue, or if the conditions have changed such that risk to condors is again low and daylight operations may resume. 6) Steps 3, 4, and 5 will continue until such time that daylight operations have been allowed to resume. In the event of a condor mortality the applicant shall: 1) Immediately cease all turbine operations. 2) Notify the BLM authorized officer, USFWS, CDFG, and the Kern County Planning and Community Development Department. 3) In preparation for reinitiation of formal Endangered Species Act consultation for the project, submit a plan for review and approval to the BLM, the USFWS, and CDFG along with the Kern County Planning and Development Department for developing and implementing additional specific condor avoidance and minimization measures including, but not limited to, radar and telemetry curtailment measures. Turbine operations shall not resume until reinitiated	**16-E4, cont.**

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		revised project Biological Opinion is issued.	Section 7 consultation is complete and a revised project Biological Opinion is issued. Or, in lieu of all of the above measures, the Applicant shall adhere to the take provisions through procedures identified in the USFWS Biological Opinion.		16-E4, cont.
4.21.12	4.21-59	With the implementation of Mitigation Measures 4.21-1 through 4.21-13, 4.17-1 and 4.17-5, 4.2-1, 4.2-3, 4.18-1, and 4.18-4, the residual impacts to wildlife resources would be: 1. The net loss of habitat on the project site for the duration of AEWP O&M and for some period after ultimate site restoration after decommissioning; 2. The fragmentation and impaired connectivity of wildlife habitat in the upper Chuckwalla Valley over the life of the AEWP; 3. The effects of noise, lighting, dust, and other disturbances to adjacent offsite habitat during construction, O&M, and decommissioning; 4. The effects to displaced wildlife (finding and establishing new home ranges, intra- and/or interspecific competition for food and other resources, etc.); and 5. The potential, but unquantified loss of birds during AEWP O&M.	With the implementation of Mitigation Measures 4.21-1 through 4.21-13, 4.17-1 and 4.17-5, 4.2-1, 4.2-3, 4.18-1, and 4.18-4, the residual impacts to wildlife resources would be: 1. The net loss of habitat on the project site for the duration of AEWP O&M and for some period after ultimate site restoration after decommissioning; 2. The fragmentation and impaired connectivity of wildlife habitat ~~in the upper Chuckwalla Valley~~ over the life of the AEWP; 3. The effects of noise, lighting, dust, and other disturbances to adjacent offsite habitat during construction, O&M, and decommissioning; 4. The effects to displaced wildlife (finding and establishing new home ranges, intra- and/or interspecific competition for food and other resources, etc.); and 5. The potential, but unquantified loss of birds during AEWP O&M.	Please delete Chuckwalla reference because it is not relevant to this project.	16-F4

WZI INC.

Draft for Discussion Only

September 26, 2012

Mr. David Nielsen
Alta Windpower Development, LLC
11682 El Camino Real, Suite 320
San Diego, CA 92130

RE: Alternative WTG Selection

Mr. Nielsen:

As requested WZI has reviewed the alternative WTGs that you have identified as candidate WTGs for the Alta East project for which we supplied a noise assessment dated May, 2011. The listed alternative engines are in the below table:

Turbine	Hub Height	Rotor Diameter
Vesta V-112	84m	112m
Siemens 2.3 MW	80m	108m
Siemens 3.0MW	80m	108m
GE 1.85MW	80m	82.5m
GE 2.85MW	85m	103m
GE 1.72MW	80m	100m
GE 1.62 MW	80m	100m

16-G4

For its original noise assessment, WZI used the representative Vestas V90 data and the proposed design locations for WTG centerlines. WZI understands that WTG locations were based on the preliminary sites selected based on the general turbine manufacturers requirements. The original project description specified the basis for the noise analysis;

> *Turbine locations were modeled based on the preliminary sites selected based on the general turbine manufacturers requirements. Depending upon WTG manufacturer(s) and model(s) chosen, the WTGs will be approximately 80 to 152 meters (265 to 500 feet) in total height, measured from the top of the foundation to blade tip with a blade in the vertical position, and the power output of the individual WTGs will be 3 MW (Nom.). The modeling analysis used profile data for the Vestas 3.0 MW unit; all power and noise outputs are nominal and vary by wind speed.*

1717 28th Street Bakersfield, California 93301 (661) 326-1112 FAX: (661) 326-0191

The modeling analysis used profile data for the 3.0 MW (Nom.) Vestas V90 unit; all power and noise outputs are nominal and vary by wind speed, up to the cut out speed, we selected the maximum noise generating hub wind speed for the maximum hub noise and used varying wind conditions at 10m for impacts. As part of our overall assessment, we investigated WTGs as large as 5MW and found that the basic modern WTG design is similar between units with minor modifications related to rotor diameter, airfoil and blade positioning. Noise levels generated by various WTGs setting on typical banks of multiple units are relatively similar. Larger units with greater rotor diameter require additional spacing between the units in any specific cluster, while the smaller units with smaller diameter can be set slightly closer.

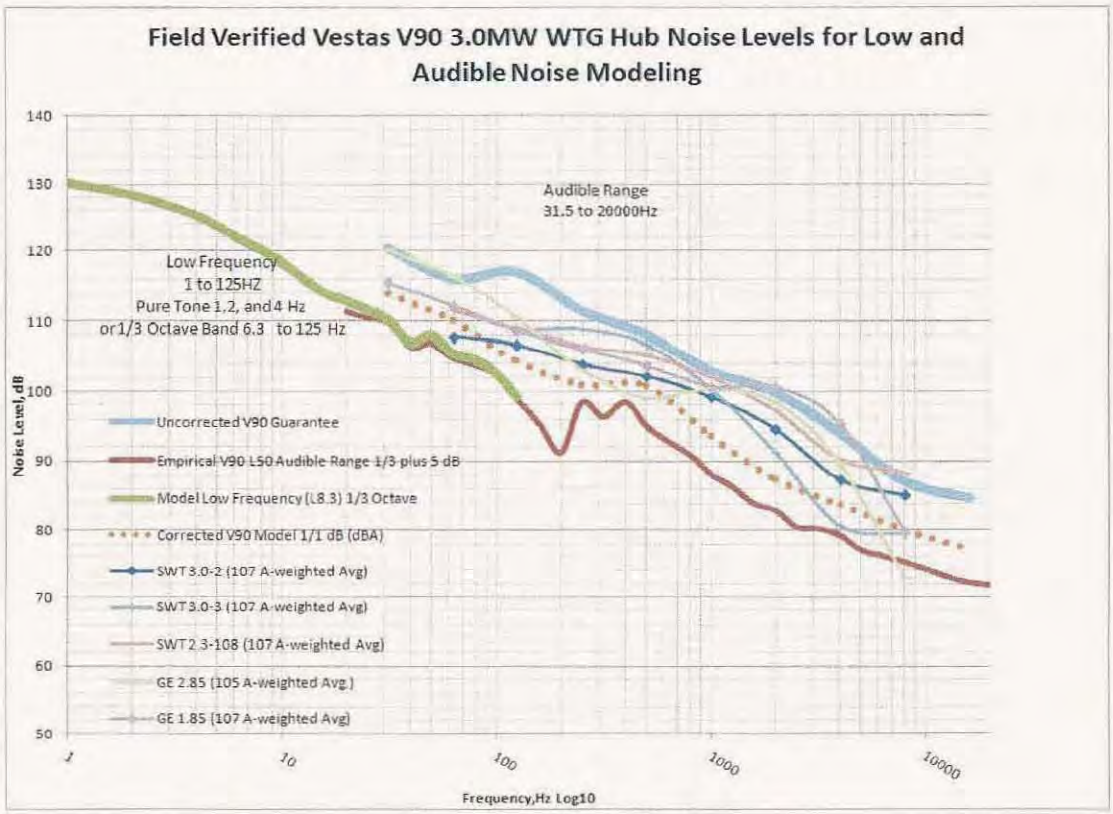
Our analysis of empirical data (used to calibrate the finite element noise model to the 3MW Vesta which had a manufacturer guaranteed not to exceed hub noise level of 108 dB(A)) showed that the manufacturer value carried design margins requiring an adjustment to the noise spectrum to achieve a far-field modeling result that tied to the empirical data gathered at various test locations near a single test unit under varying wind conditions.

16-G4, cont.

In this instance the additional WTG models that you propose for consideration and installation are similar or slightly smaller than the typical 3.0 MW (Nom.) WTG used in the design-based analysis. As far as the low frequency noise impacts are concerned, the same correction study previously mentioned developed a low frequency curve for the 3.0 MW three bladed, upwind airfoil design.

> *Conservatively, low frequency $L_{8.3}$ data were sorted for the range of operation of the WTGs to ensure only WTG noise was being used and there was no low wind speed bias (i.e., 3 m/s and greater). $L_{8.3}$ data were selected since will return higher values as opposed to L_{eq}. The results were then extrapolated from 6.3 Hz to 1 Hz using a polynomial curve fit from 31.5 Hz. These far-field values were then used to back-calculate the Sound Pressure Level at the Hub accounting for radiative effect, air attenuation and the wind effect.*

Below please find a plot of the alternative engine manufacturer data on a figure with the calibrated model data. The Vestas 112 unit is not plotted; the manufacturer only supplied the A-weighted average in the data sheet. However, we have concluded that the impacts related to the Vestas 112 will not have different impacts since the manufacturer's A-weighted value (106.5 dB(A)) is below the modeled V90's manufacturer's value (108 dB(A)).



16-G4, cont.

As you can see the plotted spectral audible range data are very similar to the original data that was verified with empirical L_{50} noise data from various locations temporally correlated to the wind conditions (speed and direction), The data at the low frequency range (125 Hz down to 16Hz) was used to correct other low frequency trended data as discussed in the Noise Assessments Attachment 5, "Modeling Corrections Based on Field Data." The WTG manufacturer values are consistently below the blue line which is the original Vesta WTG data (108 dB(A) case- Lin profile in 1/1 Octave bands) that was adjusted using field verified data (red line). These data were used in the finite element test model as a noise source (dotted line) which resulted in correlation with the field data. These data were then used to ensure accurate modeling of actual impacts for the EIR. This implies that any correction would result in source noise levels that are lower than those in the original model (used in the Noise Assessment) which was field verified. Because each of the proposed alternative noise profiles are below the original design model and because the units will be properly spaced in the original cluster arrangements along selected ridgelines so as to conform to any manufacturer blade-diameter-based spacing requirements, we have no reason to believe that additional modeling will alter the results in WZI's Noise Assessment, including Supplemental Analyses for the Alta East Study Area.

If you have any questions, please do not hesitate to contact me at (661) 326-1112.

Very Truly Yours

Jesse D. Frederick
Vice President

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TECHNICAL MEMORANDUM

Golden Eagle Fatality Predictions for the Proposed Alta East Wind Resource Area Kern County, California

Submitted by:
Western EcoSystems Technology, Inc.

May 25, 2012

16-G4, cont.

INTRODUCTION

From May 11, 2009 through June 1, 2011Western EcoSystems Technology, Inc. (WEST) conducted baseline avian studies at the proposed Alta East Wind Resource Area (AEWRA) in Kern County, California. These surveys were designed to document avian use patterns, identify potential risk issues, and assist with siting turbines to minimize impacts to avian resources. Because use of the AEWRA and adjacent areas by golden eagles (*Aquila chrysaetos*) was documented, and golden eagle nests were located in the surrounding landscape, the proposed project's potential impacts to eagles are important to understand in regard to developing a defensible risk characterization, which may (or may not) lead to an Eagle Conservation Plan and application for a programmatic take permit. The purpose of this document is to utilize the two years of site-specific baseline avian use data to provide golden eagle fatality predictions for the AEWRA. The results of these analyses indicate that the proposed wind energy facility at the AEWRA would potentially take eagles at a rate of less than one per year. This memorandum summarizes the golden eagle fatality prediction approaches and results for two models of wind turbine generators (WTGs) with potential to be used at the site: Vestas V90-3.0 megawatt (MW) and Nordex N117 2.4 MW WTGs which would generate up to 254.4 MW.

STUDY AREA

The proposed AEWRA is located in southeastern Kern County, approximately two miles (3.2 kilometers [km]) north-northwest of the unincorporated city of Mojave, and 10 miles (16 km) east of the city of Tehachapi. The study area comprises undeveloped rangeland on a combination of privately-owned land and land administered by the Bureau of Land Management.

The AEWRA falls within the high desert plains and hills on the western edge of the Mojave Desert. The Tehachapi Mountains are located to the north and west of the study area and transition into Mojave Desert towards the south and east. Elevations within the study area range from approximately 3,100 to 4,200 feet (ft; 940 to 1,280 meters [m]) above sea level, with the highest elevations occurring in the northern portion of the study area (Figure 1). The habitat ranges from lowland creosote (*Larrea tridentata*) scrub and Joshua tree (*Yucca brevifolia*) woodland in the southeast to juniper (*Juniperus* spp.) shrubland on the steeper, rocky slopes in the north. Water within the AEWRA is limited to a network of ephemeral drainages; there are no perennial surface water sources within the study area. Highway 58 bisects the AEWRA, an underground portion of the Los Angeles Aqueduct runs along the southeast corner of the study area, and a network of dirt roads and off-highway vehicle (OHV) trails run throughout the study area (Figure 1).

16-G4, cont.

The project will consist of up to 106 WTGs and ancillary facilities. Two possible types of WTGs are planned for the AEWRA: Vestas V90-3.0 MW WTGs which would provide a total project nameplate capacity of 318 MWs, or Nordex N117 2.4 MW WTGs which would generate up to 254.4 MW. The Vestas WTGs have a wind-swept rotor diameter of 295 feet (90 m). The highest point of the rotor blade rotation is 410 feet (125 m) and the ground clearance for the rotor blades at their lowest point of rotation is 115 feet (35 m). The Nordex 2.4 MW WTGs have a rotor diameter of 384 feet (117 m). The highest point of the rotor blade rotation is approximately 492 ft (150 m), and the ground clearance for the rotor blades is 108 ft (33 m). Although the Nordex has a larger rotor swept area and extends higher in the air than the Vestas, it has a lower maximum velocity (blade tip speed) and generates less power on a per turbine basis, resulting in reduced overall project output than the same number of Vestas 3.0 MW WTGs.

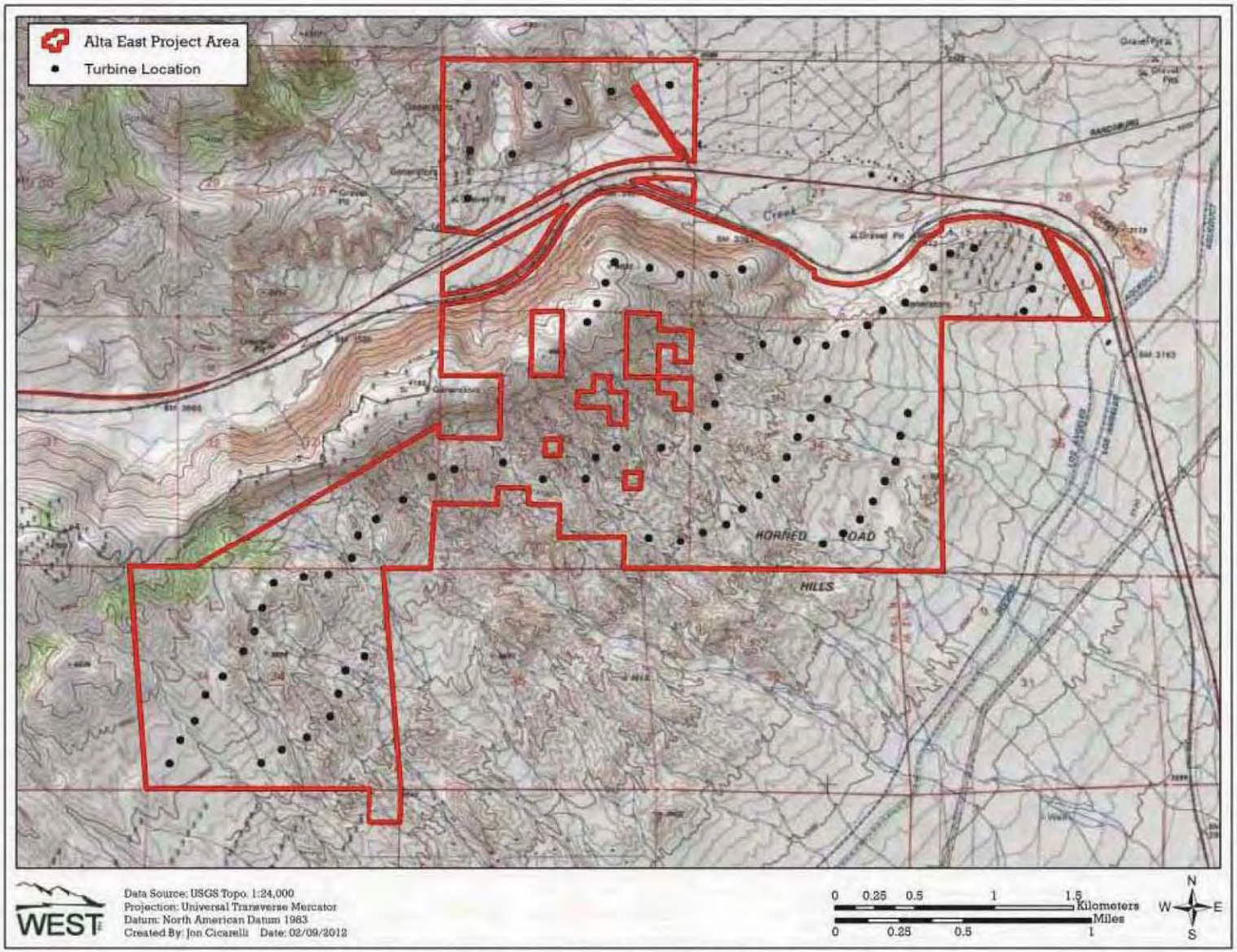


Figure 1. Map of the Alta East Wind Resource Area showing proposed turbine layout.

16-G4, cont.

SITE-SPECFIC AVIAN USE SURVEYS

This golden eagle risk assessment is based on golden eagle observational data collected over two years of fixed-point avian use surveys conducted at the AEWRA in 2009/2010 and 2010/2011. The objective of the surveys was to estimate the seasonal and spatial use of the study area by birds, particularly diurnal raptors, defined here as kites, accipiters, buteos, harriers, eagles, falcons, and ospreys. The methods for those surveys are briefly described below. See Chatfield et al. (2010, 2011) for a more detailed explanation of how avian use data were collected and analyzed.

Survey Plots

Fixed-point avian use surveys (variable circular plots) were conducted using methods described by Reynolds et al. (1980). During both years of the study, six points were selected to survey representative habitats and topography of the study area while providing relatively even coverage (Figure 2). Each survey plot was an 800-m (2,625-ft) radius circle centered on the point. To the extent possible, survey stations were selected to be consistent between the two years of study; however, due to changes to land access and changes to the project boundary, points 4, 5, and 6 were relocated for the second year of surveys to more accurately assess the area currently planned for wind turbine installation (Figure 2). For the purposes of this risk assessment, golden eagle use data collected at survey points 5 and 6 during the first year of study (2009/10; see Chatfield et al. 2010) were not used in the fatality predictions because the survey plots and viewsheds lie entirely outside of the current project boundary. **16-G4, cont.**

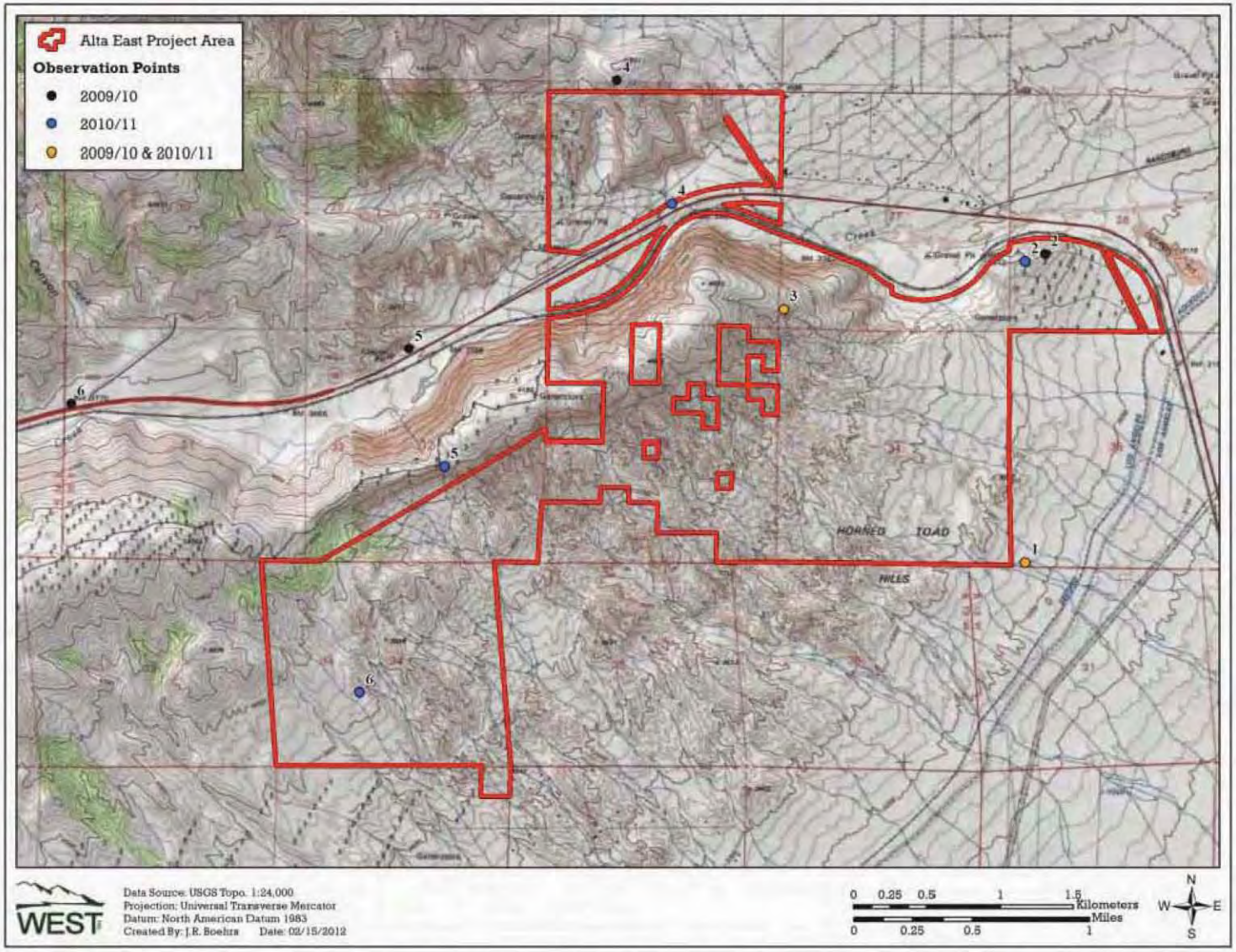


Figure 2. Locations of fixed-point bird use survey stations during the 2009/10 and 2010/11 survey periods at the Alta East Wind Resource Area.

16-G4, cont.

Survey Methods

All species of birds observed during each 30-min fixed-point survey were recorded. Observations of large birds beyond the 800-m radius were recorded, but were not included in the statistical analyses. For small birds, observations beyond a 100-m (328-ft) radius were excluded from the analysis. The date, start, and end time of the survey period, and weather information, such as temperature, wind speed, wind direction, and cloud cover, were recorded for each survey. Species or best possible identification, number of individuals, sex and age class (if possible), distance from plot center when first observed, closest distance, altitude above ground, activity (behavior), and habitat(s) were recorded for each observation. Behavior and habitat type were recorded based on the point of first observation. Approximate flight height and flight direction at first observation were recorded to the nearest 5-m (16-ft) interval. Other information recorded included whether or not the observation was auditory only and the 10-min interval of the 30-min survey in which the observation was initially noted.

Observation Schedule

Sampling intensity was designed to document seasonal bird use within the AEWRA. Fixed-point surveys were conducted from May 11, 2009 through May 6, 2010 and from July 10, 2010 through June 1, 2011. Surveys were conducted approximately once per week during each season: spring (March 1 to May 31), summer (June 1 to August 31), fall (September 1 to November 15), and winter (November 16 to February 28). Surveys were carried out during daylight hours, and survey periods varied to approximately cover all daylight hours during a season. To the extent practical, each point was surveyed about the same number of times. **16-G4, cont.**

Survey Results

The two years of avian use surveys completed at the AEWRA in 2009/2010 and 2010/2011 (Chatfield et al. 2010, 2011) resulted in a combined diurnal raptor use estimate of 0.09 birds per 800-m plot per 20-minute survey period (Table 1). For golden eagles, the estimated use was 0.02 birds/plot/20-min survey (Table 1). Seasonal mean use for golden eagles ranged from zero eagles/plot/20-min survey during the spring and summer of 2011 to 0.05 during the winters of 2010 and /2011. Although each point was surveyed for 30 minutes during each visit, diurnal raptor and golden eagle use estimates have been adjusted to 20 minutes to allow for comparison to data collected at other wind energy projects by using only the first 20 minutes of each 30 minute survey period. It should be noted that no eagle observations were excluded via this adjustment.

Mapped flight paths for all golden eagles observed during the surveys are presented in Figure 2. Golden eagles observed at survey points 5 and 6 from the 2009/10 survey period were excluded from the analysis as these survey plots and their viewsheds lie entirely outside of the current project boundary. While eagles observed from point 4 during the 2009/10 study, and from points 1 and 5 during the 2010/11 study were outside of the current project boundary, these observations were included in the risk assessment due to their proximity to the study area and to allow for a more conservative estimate of take.

Table 1. Seasonal and overall mean use (observations per 800-m plot per 20-min survey) by year based on fixed-point observations of diurnal raptors and golden eagles at the Alta East Wind Resource Area.

Season	Year	Diurnal Raptors	Eagles
Spring	2010	0.05	0.01
	2011	0.13	0
	Mean	*0.09*	*0.01*
Summer	2010	0.03	0.01
	2011	0.03	0
	Mean	*0.03*	*0.01*
Fall	2010	0.03	0
	2011	0.12	0.01
	Mean	*0.08*	*0.01*
Winter	2010	0.17	0.05
	2011	0.18	0.05
	Mean	*0.17*	*0.05*
Overall	2010	0.07	0.02
	2011	0.12	0.02
	Mean	*0.09*	*0.02*

16-G4, cont.

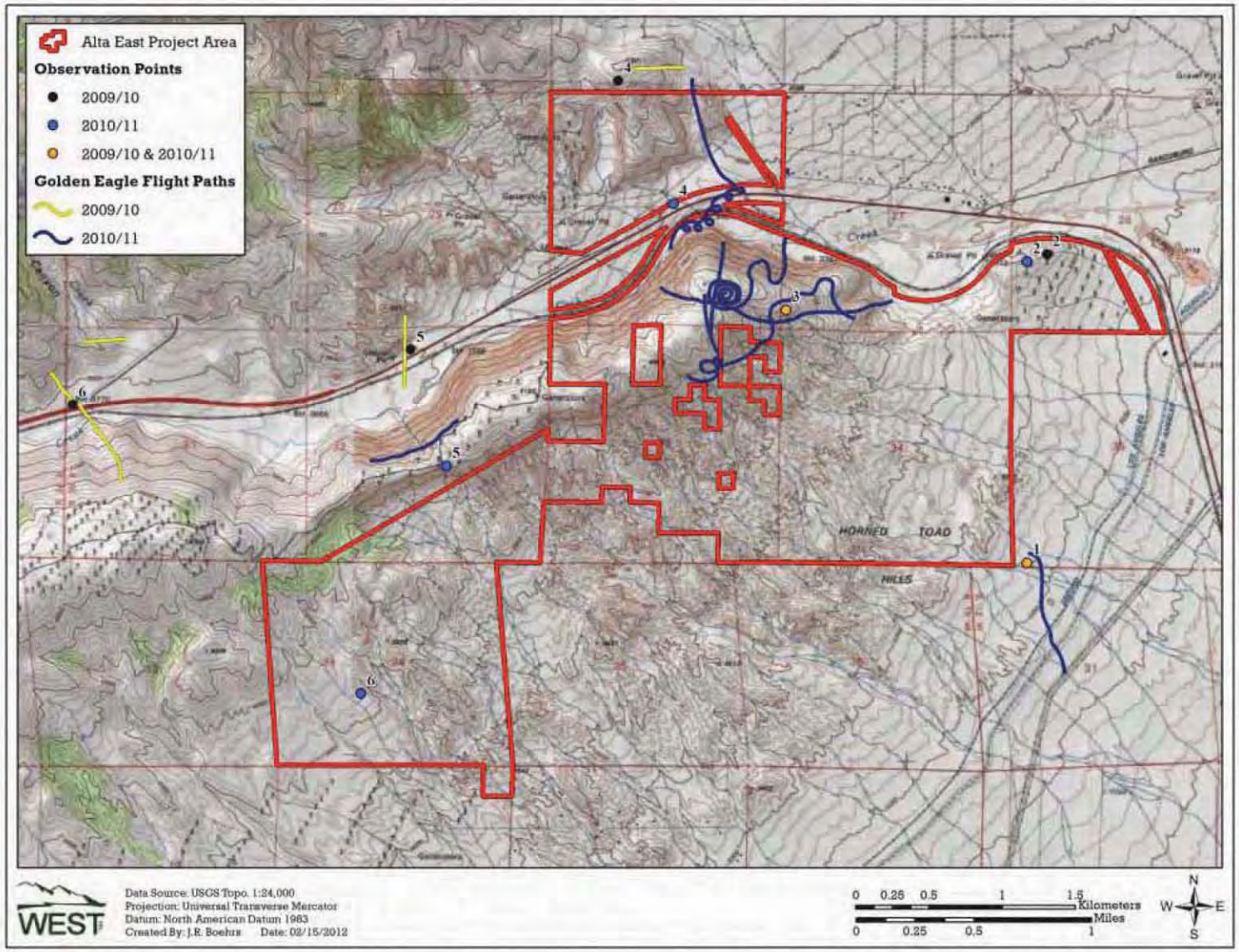


Figure 3. Approximate flight paths of golden eagles observed during the 2009/10 and 2010/11 bird use surveys at the Alta East Wind Resource Area.

16-G4, cont.

FATALITY PREDICTIONS

In this report, we present three different approaches for predicting the expected level of annual golden eagle mortality at the AEWRA. The first approach examines the level of mortality observed at other wind projects in the western and Midwestern US in comparison to the level of golden eagle use at those projects, and correlates with these findings the golden eagle use observed at the AEWRA during two years of site-specific baseline avian use surveys (see Chatfield et al. 2010, 2011). This approach is general, in that it does not consider differences in specific turbine models or rotor diameters, but relies on preconstruction eagle use and post construction fatality data gathered using methods consistent methods across proposed wind energy projects. The second approach to estimating potential golden eagle mortality involves estimating site-specific mortality predictions for all raptors, as described in Chatfield et al. (2010, 2011), and then looking at the proportion of those raptor observations that were golden eagles. This approach is also general, and does not consider differences in specific turbine models or rotor diameters, however, the analysis generates a take estimate on a per MW basis and therefore can be used to predict eagle fatality rates at the AEWRA using the two proposed turbine models. The third approach applies the collision risk modeling technique prescribed in the USFWS Draft Eagle Conservation Plan Guidance (USFWS 2011) and directly takes into account the differences in the two proposed WTG models in generating WTG-specific take estimates.

16-G4, cont.

Approach 1: Eagle Use / Mortality Rate Comparisons

This approach compares golden eagle use of the AEWRA with golden eagle use at currently operating wind energy facilities in the western and Midwestern US and the level of eagle mortality observed at those facilities. In Figure 4 below, golden eagle use at 13 western and Midwestern wind energy projects is presented in two columns: projects with no recorded golden eagle mortality and projects where eagle mortality has been documented. The data reported in Figure 4 are from wind energy facilities that implemented similar protocols to the avian use surveys conducted at the AEWRA, and have survey results for at least four seasons. Overall mean golden eagle use recorded at the AEWRA during the two years of study (0.02 eagles/800-m plot/20-min survey) is closer to the mean golden eagle use observed at facilities on the left side of Figure 4, where no recorded fatalities have been reported, than to the right side where golden eagle fatalities have been recorded. This suggests that low, if any, golden eagle mortality would be expected in any given year at the AEWRA. However, the actual level of use and the likelihood of mortality in a given year may be influenced by whether or not territories near the AEWRA are occupied and nests are successful. Based on seasonal use of the AEWRA by eagles during the two years of study, risk of mortality is expected to be highest in the winter (Table 1).

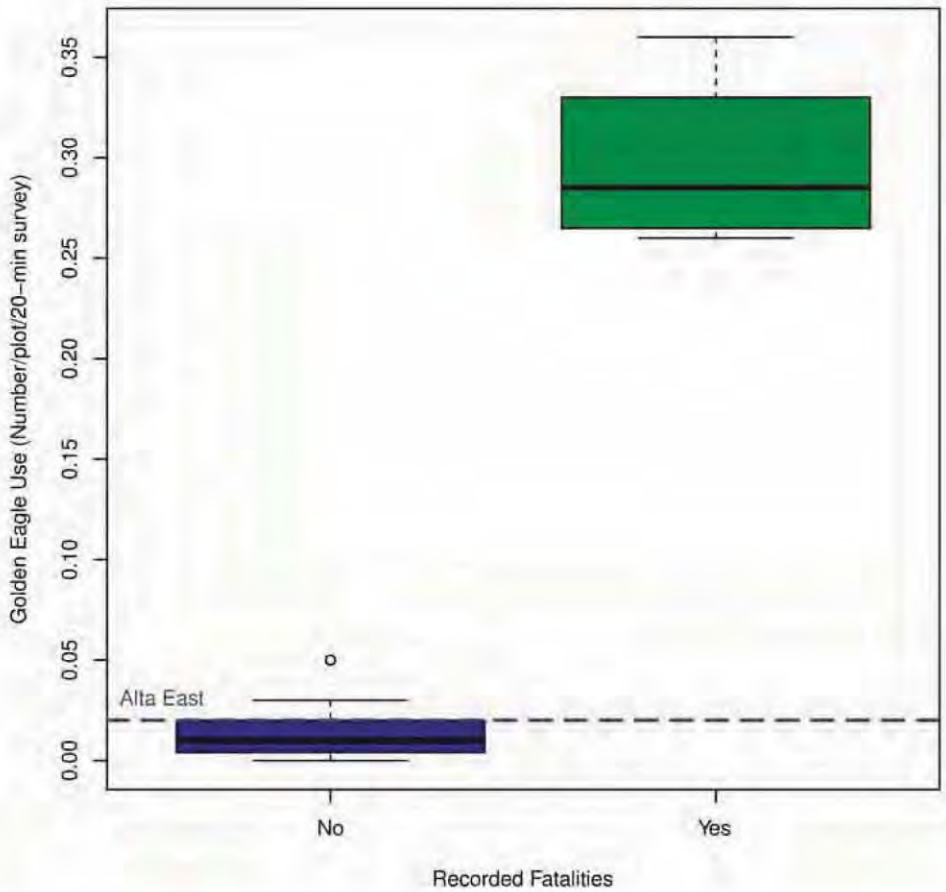


Figure 4. Average pre-construction golden eagle use values for wind energy facilities with and without observed golden eagle fatalities.

Data from the following sources:

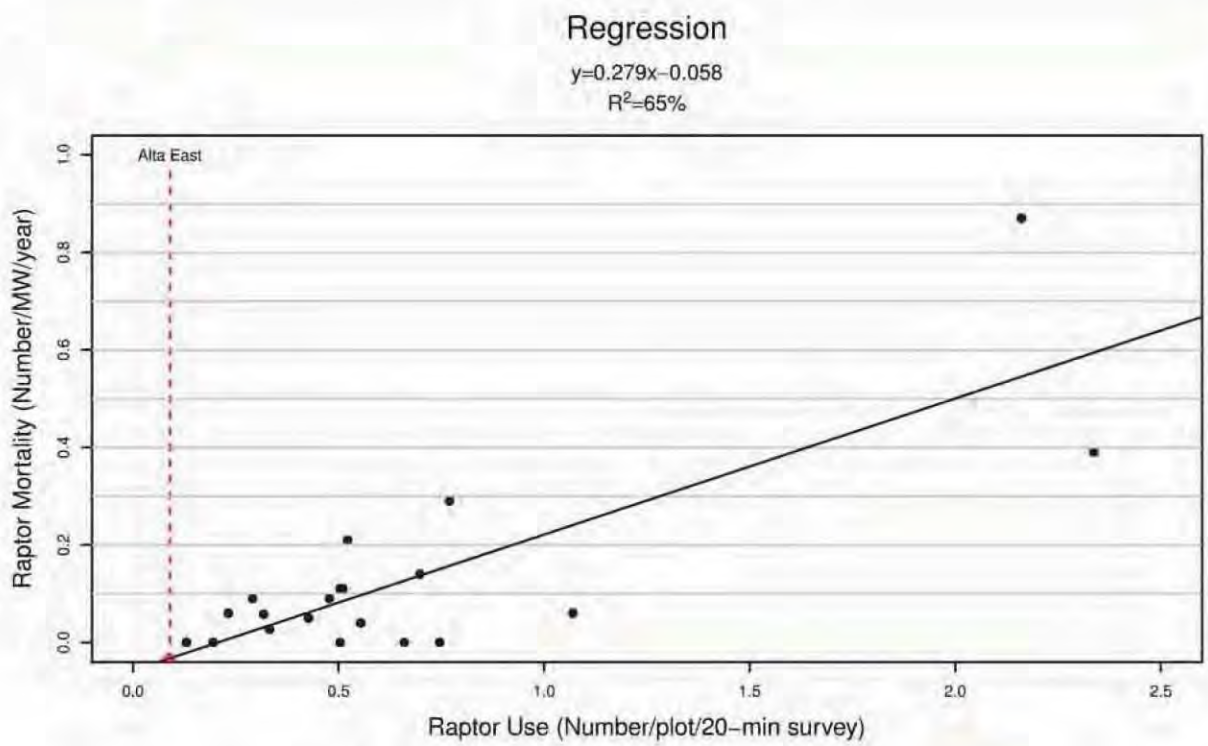
Wind Energy Facility	Golden Eagle Use	Use Reference	Golden Eagle Fatality	Fatality Reference
Alta East, CA	0.02	Chatfield et al. 2010, 2011		
Campbell Hill, WY	0.36	Taylor et al. 2008	Yes	Taylor et al. 2011 In Press
Diablo Winds, CA	0.3	WEST 2006	Yes	WEST 2006, 2008
Elkhorn, OR	0.27	WEST 2005a	Yes	Enk et al. 2011 In Press
Foot Creek Rim, WY	0.26	Johnson et al. 2000b	Yes	Young et al. 2003b
Wild Horse, WA	0.05	Erickson et al. 2003c	No	Erickson et al. 2008
Combine Hills, WA	0.03	Young et al. 2003c	No	Young et al. 2006
Leaning Juniper, OR	0.02	Kronner et al. 2005	No	Kronner et al. 2007; Gritski et al. 2008
Hopkins Ridge, WA	0.01	Young et al. 2003	No	Young et al. 2007
Stateline, OR/WA	0.01	Erickson et al. 2002b	No	Erickson et al. 2004b
Vansycle, OR	0.01	Erickson et al. 2002b	No	Erickson et al. 2000
Klondike, OR	>0.01	Johnson et al. 2002	No	Johnson et al. 2003
Nine Canyon, WA	>0.01	Erickson et al. 2001	No	Erickson et al. 2003b
Grand Ridge, IL	0	Derby et al. 2009	No	Derby et al. 2010b

16-G4, cont.

Approach 2: Eagle Mortality as a Proportion of Overall Raptor Mortality

Another approach to estimating potential annual eagle mortality at the AEWRA is to estimate site-specific mortality predictions for all raptors, and then look at the proportion of the overall raptor use attributed to golden eagles. Using methods described in Chatfield et al. (2010, 2011), a regression analysis of raptor use and mortality for 20 new-generation wind energy facilities, where similar methods were used to estimate raptor use and mortality, found that there was a significant correlation between use and mortality (R^2 = 65%; Figure 5). Using this regression to predict overall raptor collision mortality at the AEWRA (based on an adjusted mean raptor use of 0.09 raptors/800-m/20-min survey; Table 1) yields an estimated fatality rate of less than 0.01 fatalities/MW/year or less than one raptor fatality per year for each 100-MW of wind-energy development. A 90% prediction interval around this estimate is zero to 0.19 raptor fatalities per MW per year.

Golden eagle use accounted for approximately 22.2% of the observed raptor use at the AEWRA during the two years of study. Assuming the proportion of eagles observed is related to the proportion of eagle mortality that would be expected, golden eagle use at the AEWRA translates to an eagle mortality rate of 0.0022 eagles/MW/year. The current turbine layout includes 106 WTGs (Figure 1). Using this per MW fatality estimate, yields project-wide eagle mortality estimates of 0.70 eagle fatalities/year (0.0066 fatalities/turbine) if Vestas V90-3.0 MW WTGs are used (318 MW for the entire project), and 0.56 eagle fatalities per year (0.0053 fatalities/turbine) if Nordex N117-2.4 MW WTGs are used (254.4 MW for the entire project) (Table 2). This approach is likely conservative because golden eagles are easier to detect than other raptor species; therefore, the proportion of raptor use attributed to golden eagles is likely overestimated due to higher detectability, resulting in higher fatality estimates using this approach. It is also probable that collision risk for eagles is different than for other raptors, which may influence and/or bias the fatality estimate in either direction. Because it is based on a per MW estimate that does not consider turbine specifications (rotor speed, diameter, height, etc.), it potentially mischaracterizes the actual risk each turbine may present to golden eagles; however, these are likely reasonable estimates given the strength of the correlation in the data used to evaluate raptor use and corresponding raptor fatality at wind energy projects. **16-G4, cont.**



Overall Raptor Use: 0.09 raptors/800-m plot/20-min survey
Predicted Fatality Rate < 0.01 fatalities/MW/year
90.0% Prediction Interval (0, 0.19 fatalities/MW/year)

16-G4, cont.

Figure 5. Regression analysis comparing raptor use estimations versus estimated raptor mortality.

Data from the following sources:

Wind Energy Facility	Raptor Use (birds/plot /20-min survey)	Reference	Raptor Fatality Rate (fatalities/MW/yr)	Reference
Diablo Winds, CA	2.16	WEST 2006	0.87	WEST 2006, 2008
High Winds, CA	2.34	Kerlinger et al. 2005	0.39	Kerlinger et al. 2006
Tuolumne, WA	0.77	Johnson et al. 2006	0.29	Enz and Bay 2010
Leaning Juniper, OR	0.52	Kronner et al. 2005	0.21	Kronner et al. 2007
Hopkins Ridge, WA	0.70	Young et al. 2003a	0.14	Young et al. 2007
Bighorn, WA	0.51	Johnson and Erickson 2004	0.11	Kronner et al. 2008
Klondike II, OR	0.50	Johnson 2004	0.11	NWC and WEST 2007
Stateline, OR/WA	0.48	Erickson et al. 2003a	0.09	Erickson et al. 2004
Wild Horse, WA	0.29	Erickson et al. 2003c	0.09	Erickson et al. 2008
Elkhorn, OR	1.07	WEST 2005a	0.06	Jeffrey et al. 2009b
Wessington Springs, SD	0.23	Derby et al. 2008	0.06	Derby et al. 2010a
Biglow Canyon, WA	0.32	WEST 2005b	0.06	Jeffrey et al. 2009a
Zintel Canyon, WA	0.43	Erickson et al. 2002a	0.05	Erickson et al. 2003b
Foote Creek Rim, WY	0.55	Johnson et al. 2000b	0.04	Young et al. 2003b
Buffalo Ridge, MN	0.33	Johnson et al. 2000a	0.03	Johnsonet al. 2000a
Combine Hills, OR	0.75	Young et al. 2003c	0	Young et al. 2006
Dry Lake, AZ	0.13	Thompson et al. 2011	0	Thompsonet al. 2011
Grand Ridge, IL	0.20	Derby et al. 2009	0	Derby et al. 2010b
Klondike, OR	0.50	Johnson et al. 2002	0	Johnson et al. 2003
Vansycle, OR	0.66	WCIA and WEST 1997	0	Erickson et al. 2000

Table 2. Regression method to predict golden eagle fatality at the Alta East Wind Resource Area.

Variables	Site-Specific Raptor and Eagle Use Data	
Raptor use (birds/plot/20-min survey)	0.09	
Predicted raptor fatality per MW (Less than 0.01)	0.01	
Eagle use (birds/plot/20-min survey)	0.02	
Proportion of eagle use to raptor use	0.222	
Predicted eagle fatality per MW	0.0022	
	Project-wide Risk based on Specific Turbine Model	
Variables	**Vestas V90-3MW**	**Nordex N117-2.4MW**
MW/turbine	3.0	2.4
Number of turbines	106	106
Total MW	318.0	254.4
Eagle fatalities per year	0.700	0.560

16-G4, cont.

Approach 3: Risk Collision Modeling

The final method for estimating eagle mortality applies the modeling approach prescribed in the USFWS Draft Eagle Conservation Plan Guidance (USFWS 2011). Tables 3, 4, and 5 contain parameters used to calculate a model of collision risk. Separate fatality estimates were developed for the two types of WTGs proposed for the AEWRA: Vestas V90-3.0 MW and Nordex N117-2.4 MW. An avoidance rate of 99% was used in the models following Whitfield (2009), as well as a more conservative avoidance rate of 95% to provide more conservative fatality predictions.

Table 3. Values of parameters used to generate an eagle fatality estimate for the Alta East Wind Resource Area.

Exposure Rate Calculations	Value
Eagle Use (birds/plot/20-minute survey)	0.02
Use Survey Plot Radius (m)	800
Average flight time of eagles observed during surveys (min)	3
Survey Length (min)	20
Exposure Rate (flight minutes/minutes surveyed/survey area km^2)	0.00149
# minutes daylight hours	262,800
# turbines	106
Total risk area around turbines (Danger Zone) (km^2)	3.33
Exposure within the Danger Zone (min)	**1,305.78**

Table 4. Input values and calculations for the probability of collision/min flight in danger zone.

Exposure Time in RSA or RSV	Vestas V90-3MW	Nordex N177-2.4MW
Rotor Radius (m)	45.0	58.5
Area of Rotor Swept Zone (m^2)	6,361.73	10,751.32
Area of Risk Zone (m^2)	35,000	35,000
Proportion of flight minutes below turbine height	0.88	0.88
Exposure minutes in Rotor Swept Zone	**207.6765**	350.9733

Table 5. Variables for Probability of Collision (Tucker 1996).

Model Variables	Vestas V90-3MW	Nodex N117-2.4MW
# Blades per turbine	3	3
Rotor Radius	45.0	58.5
Rotor RPM (Maximum Operating Speed)	18.4	13.2
Rotor Angular Speed	1.93	1.38
Wind Velocity (Maximum Operating Speed)	15	20
Axial Induction Factor	0.25	0.25
Average Adult Bird Wingspan (m)	2.1	2.1
Length of Birds (m)	0.9	0.9
Bird Aspect Ratio	2.33	2.33
Bird Air Velocity (m/s)	14	14
Tangential Threshold Speed (m/s)	25	25
P(Collision)[1]	0.055	0.037

16-G4, cont.

Using this modeling approach for Vestas V90-3.0 MW turbines, we estimate a project-wide fatality rate of 0.114 eagles per year (one golden eagle fatality every 8.8 years) at a 99% avoidance rate, and 0.569 eagles per year (one fatality every 1.8 years) based on the more conservative 95% avoidance rate (Table 6). For the Nordex N117-2.4 MW turbines, we estimate a fatality rate of 0.130 eagles per year (one fatality every 7.7 years) at a 99% avoidance rate, and 0.652 eagles per year (one fatality every 1.5 yrs) at the 95% avoidance rate (Table 6).

[1] While the Nordex WTGs have a considerably larger rotor radius than the Vestas WTGs (58.5 m versus 45.0 m, respectively; Table 4), the probability of collision (P) is lower for the Nordex WTGs than for the Vestas due to the slower maximum operating speed (rotor RPM) of the Nordex WTGs (13.2 versus 18.4, respectively; Table 4). Despite having a lower probability of collision (per m^2 of rotor swept area), the Nordex WTGs result in larger eagle fatality estimates due to the importance of rotor radius (i.e., size of rotor swept area) in the models.

Table 6. Predicted annual eagle mortality based on 99% and 95% avoidance rates at the Alta East Wind Resource Area using the USFWS (2011) modeling approach.

Mortality Variables	Vestas V90-3MW	Nordex N117-2.4MW
Eagle fatalities per year w/ 99% avoidance rate	0.114	0.130
Eagle fatalities per year w/ 95% avoidance rate	0.569	0.652

CONCLUSIONS

The three approaches to evaluating eagle take risk suggest that eagle fatalities may occur, but at very low levels. The analyses generate project-wide fatality estimates for golden eagles ranging from zero to 0.70 eagle fatalities/year. Although some golden eagle fatalities may occur, based on the use data and prediction models currently available to assess risk, it appears that the number of fatalities would likely be small. Based on the variation in seasonal use of the AEWRA by golden eagles observed during two years of study, particularly in the year two dataset, risk of mortality is expected to be highest during the winter, but is unlikely that eagles would be killed at a rate exceeding one eagle every 1.43 years (based on the maximum project-wide estimate generated by these analyses of 0.70 eagle fatalities/year).

While use estimates (i.e., abundance) have shown promise at predicting raptor fatalities in general, use alone may not be a good predictor of eagle mortality. High raptor and eagle mortalities at wind energy facilities have been attributable to multiple factors including: high eagle densities, high prey densities, high turbine densities, and wind turbine/tower design (Erickson et al. 2002b, Hunt 2002). Topographic features that may concentrate eagle activity, such as ridge tops, upwind sides of slopes, and canyons where eagles can take advantage of wind currents that are favorable for soaring, hunting and travelling, as well as for migratory flights, may also increase the risk of collisions with wind turbines (Curry and Kerlinger 1998, NWCC 2010). Therefore, micrositing of project features in response to the baseline data may reduce or eliminate the likelihood of take suggested by these analyses. **16-G4, cont.**

The site-specific information collected to date and the golden eagle fatality predictions suggest that the AEWRA is reasonably likely to take eagles if no avoidance measures are implemented, but it is unclear if that take would be at a rate greater than is consistent with maintaining a stable or increasing population. It is unclear to what degree any eagle mortality at the AEWRA would adversely impact the local population due to lack of information on the population in the region, and a lack of understanding of what level of mortality, if any, could be sustained. At Altamont Pass, where eagle mortalities have been documented to be relatively high, few breeding-age eagles are killed. Most of the fatalities are sub-adults and floaters (non-breeding adult birds; Hunt 2002); however, even with these annual fatalities recorded over a 15-year period at the site, the regional population was estimated to be stable (Hunt 2002). Recent raptor nest surveys continue to show all territories near Altamont Pass to be occupied by breeding golden eagles (100% occupancy, Hunt and Hunt 2006). If there is a delayed impact on the nesting or floating population at Altamont Pass, it has not been documented in the 20 years that the wind energy

facility has been in operation. Furthermore, it might be considered unlikely that the fatalities from Altamont Pass would affect any one local population, but over time the loss of sub-adult and non-breeding adults could lead to broader population level effects, even if undetectable in localized populations. Because golden eagles are a long-lived species with relatively low reproductive output, adult survival is likely a key driver in population stability; hence, the loss of non-breeders and sub-adults may not be evident for many years.

The predicted fatality rates for eagles associated with the AEWRA are extremely low in comparison to Altamont Pass, and although Tehachapi area eagles may be affected differently than those in Altamont Pass, the weight of evidence suggests that the small number of eagle fatalities anticipated for the AEWRA is unlikely to cause an unstable or declining population in the region.

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16-G4, cont.

DEPARTMENT OF THE ARMY
VENTURA REGULATORY FIELD OFFICE
2151 ALESSANDRO DRIVE, SUITE 110
VENTURA, CA 93001

May 24, 2012

REPLY TO
ATTENTION OF
Regulatory Division

Mark Casper
Terra-Gen Power, LLC
11512 El Camino Real, Suite 100
San Diego, California 92130

SUBJECT: Approved Jurisdictional Determination for the Alta East Wind Energy Project

Dear Mr. Casper:

Reference is made to the request (Corps File No. SPL-2011-00558-BAH) dated August 22, 2011 for an approved Department of the Army jurisdictional determination (JD) for the Alta East Wind Energy Project site located near the western boundary of the town of Mojave, Kern County, California. Based on information you provided and our prior knowledge of the region, we have determined there are no waters of the United States on the project site as depicted on the enclosed figure (Figure 3, Surface Water Features and Hydrology). The basis for our determination can be found in the enclosed JD form. **16-G4, cont.**

The aquatic resources identified on Figure 3 are intrastate isolated waters with no apparent interstate or foreign commerce connection. As such, they are not currently regulated by the Corps of Engineers. This disclaimer of jurisdiction is only for Section 404 of the Clean Water Act. Other Federal, State, and local laws may apply to your activities. In particular, you may need authorizations from the California State Water Resources Control Board and/or the U.S. Fish and Wildlife Service.

This letter contains an approved jurisdictional determination for the Alta East Wind Energy Project site. If you object to this decision, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet (Appendix A) and Request for Appeal (RFA) form. If you request to appeal this decision you must submit a completed RFA form to the Corps South Pacific Division Office at the following address:

Tom Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division, CESPD-PDS-O, 2042B
1455 Market Street, San Francisco, California 94103-1399

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. Part 331.5, and that it has been received by the Division Office within 60 days of the date on the NAP. Should you decide to submit an RFA form, it must be received at the above address by July 23, 2012. It is not necessary to submit an RFA form to the Division office if you do not object to the decision in this letter.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. If you wish to submit new information regarding the approved jurisdictional determination for this site, please submit this information to me at the letterhead address by July 23, 2012. The Corps will consider any new information so submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior determination. A revised or reissued jurisdictional determination can be appealed as described above.

This determination has been conducted to identify the extent of the Corps' Clean Water Act jurisdiction on the particular project site identified in your request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work. **16-G4, cont.**

If you have any questions, please contact me at 805-585-2145 or via e-mail at Bruce.A.Henderson@usace.army.mil. Please be advised that you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at: http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

Bruce Henderson

Bruce Henderson
Sr. Project Manager
North Coast Branch
Regulatory Division

Enclosures

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Kevin Martin, Terra-Gen Power, LLC	File Number: SPL-2011-00558-BAH	Date: 05/24/2012

Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

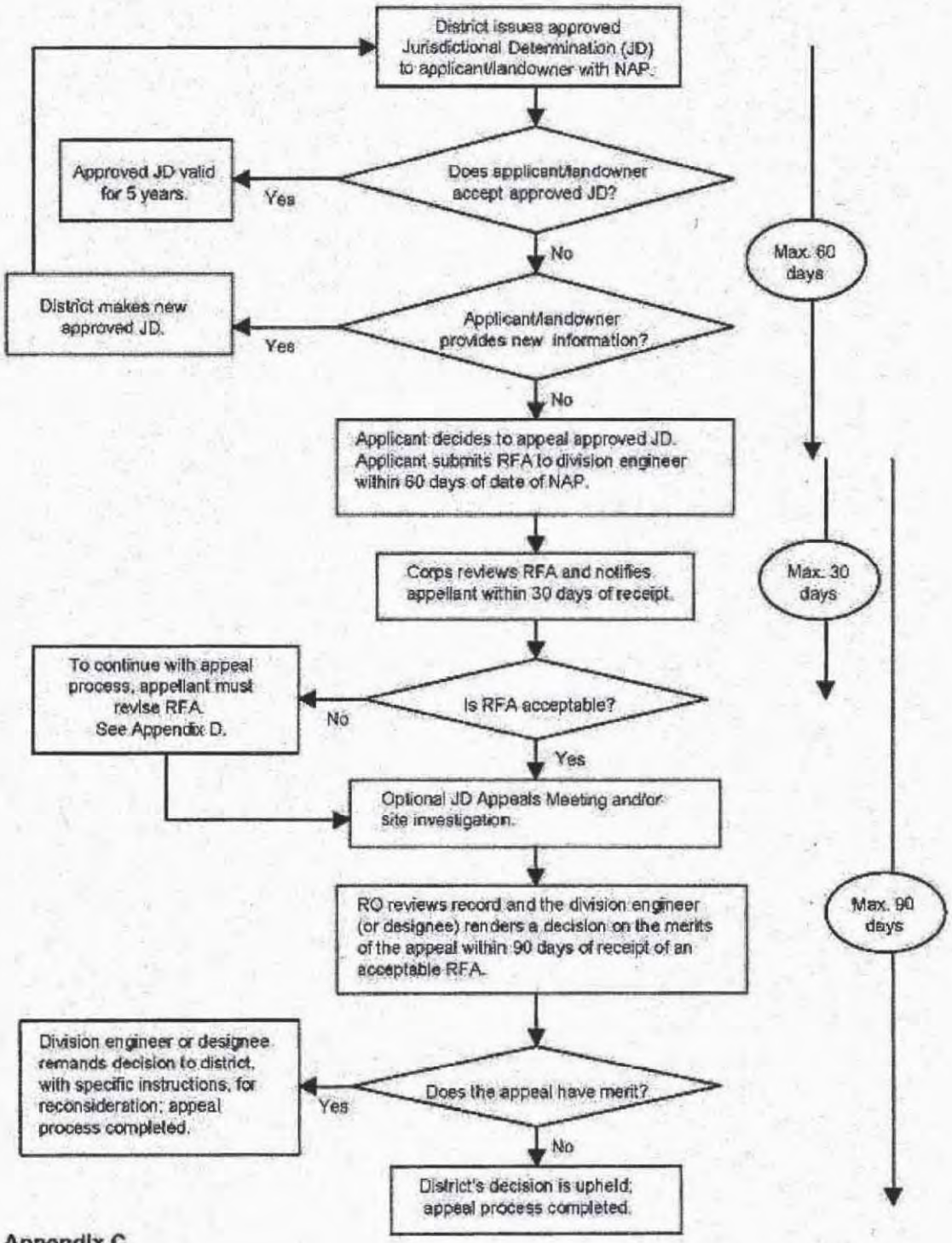
POINT OF CONTACT FOR QUESTIONS OR INFORMATION

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
DISTRICT ENGINEER Los Angeles District, Corps of Engineers ATTN: Chief, Regulatory Division P.O. Box 532711 Los Angeles, CA 90053-2325 Tel. (213) 452-3425	DIVISION ENGINEER South Pacific Division, Corps of Engineers Attn: Tom Cavanaugh Administrative Appeal Review Officer South Pacific Division, CESPD-PDS-O, 2052B 1455 Market Street, San Francisco, California 94103-1399 Phone: (415) 503-6574 Fax: (415) 503-6646 Email: thomas.j.cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
Signature of appellant or agent.		

Administrative Appeal Process for Approved Jurisdictional Determinations



Appendix C

16-G4, cont.

Response to Comment Letter 16: Alta Windpower Development, LLC (September 27, 2012)

16-A Thank you for your comments. The participation of Alta Windpower Development, LLC in the public review of this document is appreciated. The commenter provides an introduction to the comment letter and contact information for questions.

Thank you for your comment.

16-B The commenter states that project turbine specifications have been modified and that the modifications do not result in new significant environmental impacts and no new additional environmental analysis is required.

Kern County and the BLM agree with your conclusion.

16-C The commenter provides a table stating why new impacts would not result from the project modifications for each environmental issue area discussed in the Draft EIS/EIR.

Kern County and the BLM agree with your conclusion.

16-D The commenter requests text changes for Page ES-2.

The proposed text changes have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-E The commenter requests text changes for Page 1-2.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-F The commenter requests text changes for Page 1-5.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-G The commenter requests text changes for Page 1-5.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-H The commenter requests text changes for Page 1-10.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-I The commenter requests text changes for Page 2-4.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-J The commenter requests text changes for Page 2-5.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR). The increase in foundation size does not result in any change to the impact analysis or conclusions presented within the Final EIS/EIR.

16-K The commenter requests text changes for Page 2-18.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-L The commenter requests text changes for Page 2-23.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-M The commenter requests text changes for Page 2-24.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-N The commenter requests text changes for Page 2-24.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-O The commenter requests text changes for Page 2-25.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-P The commenter requests text changes for Page 3.21-37.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-Q The commenter requests text changes for Page 3.21-5.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-R The commenter requests text changes for Page 3.21-10 regarding Swainson's Hawk.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-S The commenter requests text changes for Page 3.21-18 regarding Mohave Ground Squirrel.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-T The commenter requests text changes for Page 3.21-21 and 22.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-U The commenter requests text changes for Page 3.21-22.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-V The commenter requests text changes for Page 4.2-23.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-W The commenter requests text changes for Page 4.2-25.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-X The commenter requests text changes for Page 4.2-25.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-Y The commenter requests text changes for Page 4.4-23.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-Z The commenter requests text changes for Page 4.6-4.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-A2 The commenter requests text changes for Page 4.6-18.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-B2 The commenter requests text changes for Page 4.6-18.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-C2 The commenter requests text changes for Page 4.9-22.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-D2 The commenter requests text changes for Page 4.9-22.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-E2 The commenter requests text changes for Page 4.10-12.

Please see Section 7.3 (Errata to the Project Draft EIS/EIR) for the proposed revisions that have been incorporated into the Final EIS/EIR.

16-F2 The comment requests confirmation of the status of the cumulative projects listed in Table 4.1-1 of the Draft EIS/EIR.

Cumulative project status identified in Table 4.1-1 has been coordinated and reviewed by the Kern County Planning and Community Development Department and represents the best available information. Based on recent review, the information provided in Table 4.1-1 of the Draft EIS/EIR remains valid and best available.

16-G2 The commenter requests text changes for Page 4.10-12.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-H2 The commenter requests text changes for Page 4.10-13.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-I2 The commenter requests text changes for Page 4.11-31, Mitigation Measure 4.11-1.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-J2 The commenter requests text changes for Page 4.11-32.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-K2 The commenter requests text changes for Page 4.11-33, Mitigation Measure 4.11-7.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-L2 The commenter requests text changes for Page 4.11-33, Mitigation Measure 4.11-8.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-M2 The commenter requests text changes for Page 4.14-15, Mitigation Measure 4.14-1.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-N2 The commenter requests text changes for Page 4.14-15, Mitigation Measure 4.14-2.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-O2 The commenter requests text changes for Page 4.15-11, Mitigation Measure 4.15-1.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-P2 The commenter requests text changes for Page 4.16-16, Mitigation Measure 4.16-1.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-Q2 The commenter requests text changes for Page 4.16-16, Mitigation Measure 4.16-2.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-R2 The commenter requests text changes for Page 4.16-17, Mitigation Measure 4.16-3.

The Draft EIS/EIR erroneously had Mitigation Measure 4.16-3 numbered as 4.14-3. This correction has been incorporated into Section 7.3. The proposed revisions beyond correcting the incorrect mitigation numbering, as provided in Section 7.3 have not been incorporated into the Final EIS/EIR

16-S2 The commenter requests text changes for Page 4.16-18, Mitigation Measure 4.16-5.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-T2 The commenter requests text changes for Page 4.17-2.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-U2 The commenter requests text changes for Page 4.17-3.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-V2 The commenter requests text changes for Page 4.17-23.

Some of the proposed changes have been incorporated. The proposed revision to the title of the mitigation has not been incorporated into the Final EIS/EIR. The proposed change will cause a large ripple effect (this title is used in many locations throughout the document) and there is no benefit to changing the title, just semantics.

16-W2 The commenter requests text changes for Page 4.17-6.

The proposed revisions have not been incorporated into the Final EIS/EIR. Given the anticipated impacts to CDFG jurisdictional areas, no further action beyond the project proponent obtaining a Streambed Alteration Agreement from the CDFG in accordance with Section 1600 of the California Fish and Game Code is necessary.

16-X2 The commenter requests text changes for Page 4.17-25.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-Y2 The commenter requests text changes for MM 4.17-1(Habitat Restoration and Revegetation Plan).

Some of the proposed changes have been incorporated. The proposed revisions to the mitigation measure is shown in Section 7.2.

16-Z2 The commenter requests text changes for Pages 4.18-3 and 4.18-4.

Two of the three proposed revisions have been incorporated into the Final EIS/EIR. On proposed revision is incorrect. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-A3 The commenter requests text changes for Page 4.18-20, Mitigation Measure 4.18-1.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-B3 The commenter requests text changes for Page 4.18-21.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-C3 The commenter requests text changes for Page 4.19-35, Mitigation Measure 4.19-2.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-D3 The commenter requests text changes for Page 4.19-37.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-E3 The commenter requests text changes for Page 4.20-12, Mitigation Measure 4.20-3.

The proposed revisions have not been incorporated into the Final EIS/EIR

16-F3 The commenter requests text changes for Page 4.21-5.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-G3 The commenter requests text changes for Page 4.21-6.

The proposed revisions have not been incorporated into the Final EIS/EIR. Restoration and compensation mitigate for impacts to native vegetation in and of itself, as well as for impacts to

vegetation in the context of wildlife habitat. It is in part because of the habitat mitigation that impacts to most special-status species can be reduced to less than significant.

16-H3 The commenter requests text changes for Page 4.21-6.

The proposed revisions have not been incorporated into the Final EIS/EIR. Condors will occasionally forage on or pass through the site, especially as the range of the condor expands with continued population growth.

16-I3 The commenter requests text changes for Page 4.21-6 and 7.

The proposed revisions have not been incorporated into the Final EIS/EIR. Restoration and compensation mitigate for impacts to native vegetation in and of itself, as well as for impacts to vegetation in the context of wildlife habitat. It is in part because of the habitat mitigation that impacts to most special-status species can be reduced to less than significant.

16-J3 The commenter requests text changes for Page 4.21-7.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-K3 The commenter requests text changes for Page 4.21-7.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-L3 The commenter requests text changes for Page 4.21-9.

The proposed revisions have not been incorporated into the Final EIS/EIR. Restoration and compensation mitigate for impacts to native vegetation in and of itself, as well as for impacts to vegetation in the context of wildlife habitat. It is in part because of the habitat mitigation that impacts to most special-status species can be reduced to less than significant.

16-M3 The commenter requests text changes for Page 4.21-10.

The proposed revisions have not been incorporated into the Final EIS/EIR. Restoration and compensation mitigate for impacts to native vegetation in and of itself, as well as for impacts to vegetation in the context of wildlife habitat. It is in part because of the habitat mitigation that impacts to most special-status species can be reduced to less than significant.

16-N3 The commenter requests text changes for Page 4.21-10.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-O3 The commenter requests text changes for Page 4.21-11 related to bats.

The proposed revisions have not been incorporated into the Final EIS/EIR. Restoration and compensation mitigate for impacts to native vegetation in and of itself, as well as for impacts to vegetation in the context of wildlife habitat. It is in part because of the habitat mitigation that impacts to most special-status species can be reduced to less than significant.

16-P3 The commenter requests text changes for Page 4.21-11 related to the American Badger and Desert Kit Fox.

The proposed revisions have not been incorporated into the Final EIS/EIR. Restoration and compensation mitigate for impacts to native vegetation in and of itself, as well as for impacts to vegetation in the context of wildlife habitat. It is in part because of the habitat mitigation that impacts to most special-status species can be reduced to less than significant.

16-Q3 The commenter requests text changes for Page 4.21-12 related to Special Status Mice.

The proposed revisions have not been incorporated into the Final EIS/EIR. Restoration and compensation mitigate for impacts to native vegetation in and of itself, as well as for impacts to vegetation in the context of wildlife habitat. It is in part because of the habitat mitigation that impacts to most special-status species can be reduced to less than significant.

16-R3 The commenter requests text changes for Page 4.21-12 related to the Mohave Ground Squirrel.

The proposed revisions have not been incorporated into the Final EIS/EIR. Restoration and compensation mitigate for impacts to native vegetation in and of itself, as well as for impacts to vegetation in the context of wildlife habitat. It is in part because of the habitat mitigation that impacts to most special-status species can be reduced to less than significant.

16-S3 The commenter requests text changes for Page 4.21-14.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-T3 The commenter requests text changes for Page 4.21-17.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.2 (Revisions to the Project Draft EIS/EIR).

16-U3 The commenter requests text changes for Page 4.21-23.

Please see Section 7.2 (Revisions to the Project Draft EIS/EIR) for the proposed revisions that have been incorporated into the Final EIS/EIR.

16-V3 The commenter requests changes to Table 4.21-1 on Page 4.21-28.

Table 4.21-1 reflects the impact analysis presented in Section 4.21. Some species were not carried forward for analysis, or were grouped into general impact categories, and were not added to the table.

Amphibians - none were likely to occur; not carried forward for analysis. Therefore, not added to the table; **Wintering Birds** - Added to table per commenter's added section; **California Horned Lark** - Considered under nesting birds, avian collisions, and displacement. Therefore, not added to the table; **Bendire's thrasher** - Not present or with high potential to occur on site. Therefore, not added to the table; **Le Conte's thrasher** - Considered under nesting birds, avian collisions, and displacement. Therefore, not added to the table.

16-W3 The commenter requests text changes for Page 4.21-43.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-X3 The commenter requests text changes for Page 4.21-44.

Please see Section 7.3 (Errata to the Project Draft EIS/EIR) for the proposed revisions that have been incorporated into the Final EIS/EIR.

16-Y3 The commenter requests text changes for Page 4.21-46.

see Section 7.2 (Revisions to the Project Draft EIS/EIR) for the proposed revisions that have been incorporated into the Final EIS/EIR.

16-Z3 The commenter requests text changes for Page 4.21-51.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-A4 The commenter requests text changes for Page 4.21-52.

Please see Section 7.2 (Revisions to the Project Draft EIS/EIR) for the proposed revisions that have been incorporated into the Final EIS/EIR.

16-B4 The commenter requests text changes for Page 4.21-55.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-C4 The commenter requests text changes for Page 4.21-56.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-D4 The commenter requests text changes for Page 4.21-57.

The proposed text changes were not very clear. Proposed revisions in line with the intent of the commenter's changes have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-E4 The commenter requests text changes for Page 4.21-57.

The proposed revisions have not been incorporated into the Final EIS/EIR.

16-F4 The commenter requests text changes for Page 4.21-59.

The proposed revisions have been incorporated into the Final EIS/EIR. Please see Section 7.3 (Errata to the Project Draft EIS/EIR).

16-G4 Three attachments were provided to support the basis for proposed changes to the Draft EIS/EIR.

Thank you for the attachment. They will be added to the administrative record for the EIS/EIR.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 17: Kern Valley Indian Council (October 2, 2012)

KERN VALLEY INDIAN COMMUNITY

P.O. Box 1010, Lake Isabella, CA 93240

Historic Preservation Office

October 2, 2012

Applied Earth Works
Joan George
3292 East Florida Ave., Suite A
Hemet, CA 92544

RE: Draft Environmental Impact Statement for the Proposed Alta East Wind Project, Kern County California (CEQ # 20120204)

Ms. Joan George,

The Council for the Kern Valley Indian Community would like to take this opportunity to comment on the proposed Alta East Wind Project. I have not had the opportunity to personally survey the sites but I do know the area in question has been heavily occupied for a very long time by Native Americans in the past 12,000 plus years and inadvertent discovery of prehistoric cultural resources not identified by CH2M Hill are a distinct possibility. Surface deposits in such a heavily populated area would have been picked up by pot hunters a long time ago. Vigilant monitoring by a trained archaeologist and culturally affiliated, trained, experienced Native American cultural resource monitors during ground disturbing activity is imperative to protect cultural resources from damage. CH2M Hill surveyed the North Sky River Project Area and I believe they located 14 eligible sites. To date nearly a hundred eligible sites are recorded, all but a few being prehistoric. Over 10,000 prehistoric artifacts have been collected. 2 prehistoric grave sites and 1 prehistoric cemetery have been disturbed and required reburial. The Tribe has little confidence in the ability of CH2M Hill to conduct adequate cultural resource surveys of projects in our tribal area. **17-A** **17-B**

The areas in which the Alta East Wind Project is being developed lies in the middle of an ancient trail system connecting the Southern Sierra, San Joaquin Valley and the central coast with the Colorado River Tribes that traded extensively for millenniums. The Kawaiisu people occupied the surrounding mountains and desert areas. The Kern Valley Indian Community Tribal Members are descendants of both Kawaiisu and Tubatulabal ancestry still live throughout the area and have an acute interest in protecting our cultural and spiritual sites. **17-C**

Ground Disturbing activity related to the installation operation and maintenance of the wind energy project should be modified when necessary to avoid cultural resources and in the event terrain, property boundaries etc. prevent modification of routes, capping of cultural resources deep enough to prevent any possible trenching for connector lines from violating the site. In the event a site cannot be avoided and the situation does not allow for capping, data recovery of the site will be conducted. In the event a suspected grave site is identified all work will stop, the coroner will be contacted and will make a determination if the remains are human, and if they are Native American. If the remains are identified as Native American the coroner will contact the Native American Heritage Commission who will **17-D** **17-E**

contact the Most Likely Descendent who will then make recommendations to the project owner on how to proceed. **17-E, cont.**

The Kern Valley Indian Council, Historic Preservation Office has trained, experienced culturally affiliated Native American monitors available to assist with these projects during ground disturbing activities. A list can be made available upon request. **17-F**

Thank you for this opportunity to comment on the Alta East Wind Project.

Sincerely,

Robert Robinson
Co-Chairman, Historic Preservation Officer Kern Valley Indian Council

Cc: June Walker Price, Chairman KVIC
Kathy Smith, Vice Chairman, KVIC
Julie Turner, Secretary, KVIC
Dolores Rossback, Treasurer KVIC
Marjorie Albitre, Public Relations Coordinator, KVIC

Bcc:
Jeffery Childers, Project Manager, BLM
Donald Storm, Archaeologist, BLM
Jacquelyn Ketchen, Kern County Planning and Community Planning Department
Kathleen Martyn Goforth, Manager Communities and Ecosystems Division, USEPA
Ray Bransfield, Senior Biologist, US Fish and Wildlife Service
Craig Bailey, Environmental Scientist, California Department of Fish and Game

Response to Comment Letter 17: Kern Valley Indian Council (October 2, 2012)

17-A Thank you for your comments. The participation of the Kern Valley Indian Council in the public review of this document is appreciated. The commenter requests monitoring by a trained archaeologist and culturally affiliated, trained, experienced Native American cultural resource monitor during ground disturbing activity.

Mitigation Measure 4.4-1 will require full-time monitoring by a professional archaeologist during ground-disturbing activities at all locations identified in the Historic Property Treatment Plan (HPTP) prepared for the project.

17-B The commenter states that the cultural resource surveys of the project area are inadequate.

Systematic Class III cultural resources surveys were conducted for the project. The BLM reviewed and approved all survey reports of the project area submitted for compliance review. Additionally, as noted in Section 3.4, the cultural analysis was based on the cultural resources records searches and inventories conducted by CH2MHILL and discussed in the *Cultural Resources Inventory Report for the Alta East Wind Project* (CH2MHILL, 2010a) and their *Addendum No. 1 to the Cultural Resources Inventory Report for the Alta East Wind Project* (CH2MHILL, 2011i). The cultural evaluations were conducted pursuant to Section 106 of the National Historic Preservation Act (NHPA) (36 CFR 800) and in compliance with Section 5024.1 of the California Public Resources Code (PRC) to determine the presence of historic properties within the AEWP Area of Potential Effect (APE). In addition, the Bureau of Land Management (BLM) has initiated consultation with Native American tribes to identify resources of cultural or religious significance.

17-C The commenter states that the project sites lies within an ancient trail system connecting the Southern Sierra, San Joaquin Valley and the central coast with the Colorado River Tribes. The commenter states that Kern Valley Indian Community Tribal Members have an acute interest in protecting their cultural and spiritual sites.

It is noted that the Tribal Members are descendants of Kawaiisu people who have occupied the areas in which the project is proposed and that the Tribal Members are strongly interested in protecting their cultural and spiritual sites. Final EIS/EIR Section 3.4.1.2 (Identified Cultural Resources) explains the methods and Native American consultation activities conducted to identify all cultural resources within the project site and surrounding area. As discussed in Response to Comment 2-U, continued Native American consultation is occurring.

Mitigation Measure 4.4-1 will require full-time monitoring by a professional archaeologist during ground-disturbing activities at all locations identified in the Historic Property Treatment Plan (HPTP) prepared for the project. The HPTP would include details how historic resources located within the project area will be treated. The HPTP will also contain a site plan that shall illustrate how the project will avoid and protect identified historical resources. Additionally, Mitigation Measure 4.4-2 requires that an archaeologist review the final site plan; Mitigation Measure 4.4-3 requires additional surveys prior to disturbance of any area within the project area that has not previously been surveyed; and Mitigation Measure 4.4-4 requires that exclusionary fencing be placed around archaeological sites located within 60 feet of any project-related facilities and ground disturbing activities. As discussed within Draft EIS/EIR Section 4.4, with the implementation of these measures, the project was determined to not result in adverse impacts under the NHPA/Section 106 process and to have a less than significant impact under CEQA.

17-D The commenter states that ground disturbing activities related to the project should be modified when necessary to avoid cultural resources, if avoidance is not feasible, then cultural resources should be capped.

Mitigation Measure MM 4.4-1 would require that a HPTP be developed and implemented for the project. The HPTP would include details how historic resources located within the project area will be treated and will include a final site plan that demonstrates how the project will utilize existing roads and utility corridors to the maximum extent feasible to minimize the number and length/size of new roads, lay-down areas, and borrow areas. The site plan shall also include a separate sheet which illustrates how the project will avoid and protect identified historical resources. In addition in connection with its review of the Project BLM initiated consultation pursuant to Section 106 of the National Historic Preservation Act (NHPA) with Indian Tribal governments early in the planning process to identify issues regarding the project, including the presence of cultural properties, access rights, disruption to traditional cultural practices, and impacts to visual resources important to the Tribe(s).

17-E The commenter states that, in the event a site cannot be avoided or capped, then data recovery of the site should be conducted. In the event a suspected grave site is identified all work must stop, the coroner must be contacted to make a determination if the remains are human, and if they are Native American. If the remains are identified as Native American the coroner will contact the Native American Heritage Commission who will contact the Most Likely Descendent who will then make recommendations to the project owner on how to proceed.

Mitigation measure 4.4-1 through 4.4-3 would require that all State and federal laws and regulations be followed regarding the treatment of human remains. MM 4.4-1 requires that he HPTP identify an Unanticipated Discovery Protocol for recording and treating human remains or other potentially significant cultural resources that are discovered during construction and/or operation activities. This Protocol shall be developed in accordance with applicable laws, regulations and guidelines and shall state that in-place preservation and protection from further disturbance is preferred. If human remains are discovered during construction, all work shall be diverted from the area of the discovery and the BLM shall be informed immediately. Avoidance and protection of inadvertent discoveries which contain human remains shall be the preferred protection strategy.

17-F The commenter states that the Kern Valley Indian Council has trained, experienced, and culturally affiliated Native American Monitors available to assist with this project.

It is noted that the Council has trained, experienced, and culturally affiliated Native American Monitors available to assist with the project. MM 4.4-1(5) requires that the project proponent notify all applicable tribes of the time and duration of construction activities near culturally sensitive sites, if applicable. The measure states that the purpose of this notification is to allow for the applicable tribes, at their sole expense, to arrange for a tribe representative, and/or cultural monitor, to be present on site to observe earth-moving activities. The project proponent is also required consult with the applicable tribes regarding site treatment during construction. The mitigation measure also requires that the HPTP shall include provisions for full documentation of the consultation process, including records of all contacts and meetings.

The comments have been noted for the record and will be provided to the Kern County Planning Commission and Board of Supervisors for consideration.

Comment Letter 18: OVR Watch Kern County

ORV Watch Kern County
http://www.orvwatchkerncounty.com
661-878-7838

Jacquelyn R. Kitchen, Supervising Planner
Kern County Planning Department
2700 "M" Street, Suite 100
Bakersfield, Ca. 93301

Subject: Comment Submission re Alta East Wind Project

Dear Jacquelyn;

We would like to point out that Kern County Planning Department is utilizing the promise of "green jobs" as a facade to promote industrial wind. The Alta East Wind project EIR states that when completed, the 106 Turbine project will ultimately employ up to 15 people. Sky River boasts 342 turbines and employs a full time crew of 9, so it is obvious that Alta East Wind will fall short of their bloated projection.

The EIR goes on to say, "Few employees, if any, would relocate to the area permanently." Taxpaying residents who have put down roots in the county are subject to disruption of their lives from noise and flashing red turbine lights for a handful of so-called "green jobs". This is shameful and a slap in the face to Kern County residents.

The California Condor is finding its way east and Alta East poses a threat to this majestic endangered bird. This project is in a migratory pathway, guaranteed to slaughter Golden Eagles, bats, and other avian species. What is being done to protect the Condor from these turbines?

The EIR states that this project will displace off-highway vehicle riders who may seek illegal routes and create new illegal routes as they look for more riding opportunities. What measures will be taken to protect private and public lands, such as Horse Canyon ACEC, from illegal riders? The public must have these assurances: **18-A**

1. Full-time law enforcement officers must patrol the area to ensure the safety and security of Pacific Crest Trail hikers and equestrians. Additional law enforcement personnel can be funded by Terra-Gen Power and the Bureau of Land Management.

2. Educational handouts and maps must be available to off-roaders so that they can be guided to legal riding opportunities like California City and Jawbone Canyon.

3. Electronic signage, available from CHP, must be installed along access routes such as Highway 58 and Highway 14 directing off-road recreationists to legal riding sites.

4. Public service announcements on radio, TV, and periodicals must be issued for the counties of Los Angeles, Ventura, San Bernardino, and Kern, so that off-roading visitors can amend their travel plans in advance.

5. OHV clubs and groups must be apprised of the impact Alta East construction will have on legal riding opportunities so that members and followers can make other arrangements.

We object to this project, and any more industrial wind projects slated for Eastern Kern County. **18-A, cont.**

Outdoor recreation has been adversely impacted by the overwhelming amount of so-called "green energy" projects accepted by Kern County Planning Department. Enough is enough.

Sincerely,
ORV WATCH KERN COUNTY
http://www.orvwatchkerncounty.com
661-878-7838

Steering Committee
Jan Alford
Diana Palmer
Sandi Tardiff

Response to Comment Letter 18: OVR Watch Kern County

18-A Thank you for your comments. The participation of the ORV Watch Kern County in the public review of this document is appreciated. The commenter raises concerns regarding the number of jobs produced by the project, potential impacts to the California Condor, and asks what measures will be taken to protect private and public lands from illegal off-highway vehicle riders. The commenter requests that there be full time law enforcement officers to patrol the area for safety and security of Pacific Crest Trail users; educational handouts made available for off-roaders; signage to riding areas; public service announcements for riders and public notice of the impacts that the project may have on legal riding opportunities.

Please see response to Comment 1 (U.S. Department of Agriculture, Forest Service) and Comment 11 (Pacific Crest Trail Association) for responses to the comments regarding the Pacific Crest Trail.

Regarding the comments pertaining to jobs, Section 2.1.2.1 of the EIS/EIR notes that one of the project objectives is to create temporary and permanent jobs in the County. Section 2.1.2.4 notes that construction of the project will require 9-12 months to complete; and during that time, up to 262 workers will be employed. Due to the nature of construction work, it is acknowledged that these jobs would be temporary in nature; however, the project would provide temporary jobs for up to 262 workers. Section 2.1.2.5 also notes that the project would employ up to 15 full and part time staff members during operation. The commenter indicates that this number varies from another wind energy project; however, it is noted that the other project sited by the commenter is operated by a different renewable energy company that may have different operational, hiring, and personnel practices than the project proponent. Therefore, it is concluded that the project will offer up to 15 full and part time permanent jobs.

Regarding the comments on safety, it is noted that Section 3.11.1.4 of the EIS/EIR describes the emergency services that are available to the project area. The section states that the project is within the jurisdiction of the Inland Division of the CHP, which would provide service to the project and surrounding areas. Additionally, the Kern County Sheriff's Department (KCSO) provides police protection services to the unincorporated portions of the County. The KCSO's headquarters is located in Bakersfield and consists of 15 substations that provide patrol services to remote areas of Kern County, such as the desert and mountainous regions, as well as to other areas that need law enforcement services. The Mojave substation, located at 1771 Highway 58 in Mojave, would be the primary substation to service the AEWP area. The substation is 4 miles southeast of the AEWP site.

It is also noted that page 4.12-3 of the EIS/EIR states the following: "Since there is a concentration of OHV use in the vicinity of the AEWP site, it is possible that in reaction to existing OHV routes being restricted during AEWP construction, some OHV recreationists may choose to utilize illegal OHV routes or create new, unauthorized OHV routes, thereby contributing to unmanaged or unauthorized recreational uses. Impacts associated with illegal OHV use include disturbances to surrounding desert lands that may be preserved or under management plans due to resources such as biological, cultural, or geologic resources. However, as discussed above, as part of the ROW grant the BLM may require measures to maintain public access to the onsite routes, and implementation of Mitigation Measure 4.12-1 (Coordinate Construction Activities to Minimize Impacts to Recreation Area) would minimize impacts to recreation areas during the construction period. As a result, these measures would also avoid the use of unauthorized lands for recreation activities."

Regarding the comments on public notification, educational hand-outs, and signage, section 3.12.1.2 of the EIS/EIR provides a complete listing of the recreational resources that are surrounding the project site. Additionally, the BLM administers an online website dedicated to public notification of OHV and other recreational activities on BLM lands. This website can be found at: http://www.blm.gov/ca/st/en/prog/recreation/ohv.html. The BLM also prepares a number of hard copy educational hand-outs and publications that are available to the public; including trail and map guides, wildlife guides, recreational programs, etc. A listing of field offices is also available; as well as recommended locations to visit and for OHV uses.

Comment Letter 19: Arnold Mednick

The following comment letter was received after the comment period closed. Responses to comments contained in this letter are not included in this document.

Arnold William Mednick
6412 Orange Street, #7
Los Angeles, CA 90048
FAX (323) 852-4725 E MAIL AWMedn@AOL.COM PH: (323) 653-9682

January 9, 2013

BOARD OF SUPERVISORS, COUNTY OF KERN
VIA FAX ONLY (661) 862-8601

Re: Objections to Alta East Wind Project by Terra-Gen Power, LLC (PP11212 , EIR and related approvals) - **Set for Board Hearing on January 22, 2013.**

To Kern County and Its Officials;

I own (with others), interests in Kern County real property to be directly impacted by this project, including 20.1 acres known as Assessor parcel numbers 474-040-18 and 17, adjacent to Tehachapi-Willow Springs Road, in the Northwest quarter of Section 1, Township 10 North, Range 14 West, SBBM.

The use and enjoyment of my property will be directly effected by the Project's negative environmental impacts, including, inter alia, views from the property, increase in fire risk, injury to native wildlife in the area, transmission of noise, vibration, and flicker over the property from the Alta Wind Project's operations and cumulative wind farm operations in and planned for the area.

In enacting CEQA, our Legislature established a policy directed at the maintenance, development, and enhancement of a high quality environment for the people of this state. Recognizing this to be the intent of the Legislature, our Supreme Court has declared that the provisions of CEQA should "be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." See Friends of Mammoth v. Board of Supervisors, 8 Cal. 3d 247 (1972).

At the heart of CEQA is the EIR requirement. See County of Inyo v. Yorty, 32 Cal. App. 3d 795 (1973). An EIR is defined in Public Resources Code section 21061 as "an informational document." the purpose of which "is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project." The Supreme Court has observed that an EIR also serves "to demonstrate to an apprehensive citizenry that the [responsible public] agency has in fact analyzed and considered the ecological implications of its action." See No Oil, Inc. v. City of Los Angeles, 13 cal. 3d 68, 86; see also People ex rel. Dept. Pub. Wks. v. Bosio, 47 Cal. App. 3d 495 (1975).

Indeed, full compliance with the EIR process has been recognized as necessary to enable the Kern County voters "to determine the environmental and economic values of their elected and appointed officials, thus allowing for appropriate action come election day should a majority of the voters disagree." See People v. County of Kern, 39 Cal. App. 3d 830 (1974).

CEQA violations include, but are not limited to, the following matters:

1. The EIR Contained An Inadequate Project Description Under CEQA.

The project desciption is incomplete and misleading, with only 'hypothetical" locations for construction of the towers, the essential structures to be errected on a wind farm, the impacts on proximate sensitive receptors adjacent to the project boundaries, and sandwiched between wind farms, are merely guesswork and speculation. The exact impacts on biological resources are likewise merely guesswork and speculation. The exact impacts on historic and cultural resources are likewise merely guesswork and speculation. The evaluation of fire impact and mitigation, such as evacuation routes, are also merely guesswork and speculation.

2. The Significant Negative Impacts On Biological Resources Have Not Been Sufficiently Addressed Or Mitigated.

CEQA requires application of all feasible mitigation measures. One major source of mitigation has been ignored. There are numerous possible alternative tower placements. All potential IWT sites should have first been identified and ranked according to their degree of impact; and selections should be made at this time and in this light. Applicant cannot credibly claim that the impact is identical for any given acre.

3. The EIR Sound Study Was Fatally Flawed By Use Of Inadequate Measuring Equipment, Improper Modeling Of Sound Attenuation and Improper Assessment Of Ambient Noise.

The computer model used to determine disipation of sound waives from the hypothetical "location" of the IWTs to the proximate sensitive receptors is not designed to compute low frequency waves with frequencies below 63 Hz. Also, the device used to measure background noise was not designed to be sensitive enough to detect background sounds in quiet rural community – below 40 dBA. Further, ANSI industry standards for determining ambient background noise level require that natural wind noise be excluded in measurement of ambient noise level, not included as was done here.

4. The EIR Included An Inadequate Analysis Of Alternative Projects As Required By CEQA

Cal. Public Resources Code Section 21002 makes clear that superior alternatives cannot be overridden unless there are "specific economic, social or other conditions {that} make infeasible such project alternatives or such mitigation measures." See also Cal. Public Resources cCode Section 21081. For example, the proposal that applicant compare different potential tower construction sites, and the relative environmental impacts of each, within the same outer wind farm boundaries, should have been explored.

5. The EIR Included An Inadequate Analysis Of Significant Impacts In Violation Of CEQA

The EIR did not address at all the signifcant impacts from inaudible infra sound/airborne vibration (from wave frequencies below 20 Hz). Further, the EIR included an inadequate analysis of the significant health impacts from audible high and low frequency noise

(from wave frequencies above 20 Hz). The EIR also included an inadequate analysis of fire hazards, and failed to consider incremental and indirect impacts on fire safety. The EIR included an inadequate analysis of traffic circulation as it relates to indirect impacts on fire safety. The EIR also failed to address the significant unmitigated environmental impacts from allowing existing residential and mobile home uses to be sandwiched between wind farms. The EIR did not even attempt to address potential impacts to adjoining uses that allow for future residential development or other human use.

6. The Project Improperly Deferred Mitigation In Violation Of CEQA

The projects delayed and deferred studies and mitigation are improper. For example, the proposed later selection of tower construction sites, with consequent deferred studies of noise, biological impact, cultural studies, is an impermissible piece-mealing of the Wind Project, a failure to adequately consider feasible project alternatives with lesser impacts, and, alternatively an improper deferral of mitigation measures.

7. The EIR Failed To Describe/Evaluate, And The Project Failed To Incorporate, Reasonable Mitigation Measures That Could Substantially Lessen Impacts, In Violation Of CEQA

The project failed to incorporate feasible mitigation measures. For example, as detailed above, the proposed later selection of IWT models and tower construction sites is an impermissible piece-mealing of the Project, a failure to adequately consider project alternatives, and, alternatively an improper deferral of mitigation measures. The EIR failed to address feasible buffer zones around the "hypothetical" tower construction sites which have been shown to provide substantial mitigation. The common practice mitigation measure of bonding to assure performance of mitigation measures, such as removal of derelict IWT structures was ignored. The EIR did not even attempt to address potential impacts to adjoining uses that allow for future residential development or other human use, that may be sandwiched between windfarms.

8. Respondents Failed To Adopt Legally Adequate Findings Of Fact As Required By Law

The findings are inadequate and unsupported. They fail to identify all significant unmittigated impacts, they are not supported by substantial evidence and they fail to show logical footsteps from the evidence to the findings. For example, the finding that fire hazard has been mitigated to insignificance is unsupported. Further, as explained at length above, the findings regarding the insignificance of audible operations noise are unsupported. There is no finding regarding air-born vibration from unheard infra sound below 20 Hz.

9. Respondents Failed To Adopt A Legally Adequate Statement Of Overriding Considerations.

Overriding considerations are required to be found for each and every significant unmitigated impact. For each of those impacts erroneously found to be mitigated to insignificance (eg. audible low frequency sound, fire danger), or impacts not discussed at all (eg. inaudible infra sound airborne vibration, zoning inconsitancies, impacts to engulfed and adjacent properties that allow future residential use or other human occupation) there has been no such finding made. The findings of overriding concerns are not supported by substantial evidence. For example, there are no guarantees that those few jobs created by the project will use local work force. The estimates of increased property tax revenues appear highly inflated.

10. The Amendments Of the General Plan, Specific Plans and Zoning Ordinances Are In Violation Of Law.

The proposed planning and zoning actions are contrary to law and policy. For example, such zoning amendments constitute illegal Spot Zoning. Also, under zoning law and due process, down zoning amendments require the informed consent of all the downzoned property owners, which was not shown here.

In conclusion, there is compelling evidence that, notwithstanding mitigation measures, the Project would still have significant impacts in the areas of human health from high and low frequency heard noise, air carried unheard low frequency sound-vibration, fire safety, Planning/Zoning inconsistencies, among others. Significant secondary/indirect and cumulative impacts were ignored. There is compelling evidence that the Noise Study prepared for the Project is deficient and defective. There is compelling evidence that the Project would be inconsistent with applicable planning and zoning laws and policies designed to mitigate or avoid environmental effects. Mitigation measures have been improperly deferred or ignored, and ineffective mitigation proposed. Feasible mitigation measures and project alternatives that could substantially lessen Project impacts, have been ignored. Project elements have been identified that were not adequately described in the Project description, thus eviscerating the environmental review process. The findings are not legally adequate. The statement of overriding considerations is not legally adequate. All of which are in violation of CEQA's mandates.

Sincerely yours,

Arnold Mednick

Arnold Mednick

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Attachment A

Potential Visual Effects of Using Larger Wind Turbine Generators on the Alta East Wind Project

Prepared by CH2MHill, October 5, 2012

Potential Visual Effects of Using Larger Wind Turbine Generators on the Alta East Wind Project

PREPARED FOR: David Neilsen, Alta Windpower Development, LLC

COPY TO: Aarty Joshi, CH2M HILL
Tom Priestley, CH2M HILL

PREPARED BY: Josh Hohn

DATE: October 5, 2012

This memorandum addresses the potential visual effects of installing wind turbine generators (WTGs, or "turbines") larger in dimension than those previously analyzed for the Alta East Wind Project. Table 1 summarizes the general difference in dimensions between the two WTGs. As discussed below, the difference in appearance between these two types of turbines would be nominal, and therefore conclusions related to visual effects made in the Draft Environmental Impact Statement/Draft Environmental Impact Report for the Alta East Wind Power Project would remain the same.

TABLE 1
Comparison of General Dimensions between Previously Analyzed and Currently Proposed WTGs

	Previously Analyzed	Currently Proposed
Overall Height	125 meters (approximately 410 feet)	142 meters (approximately 466 feet)
Hub Height	80 meters (approximately 262 feet)	84 meters (approximately 276 feet)
Rotor Diameter	90 meters (approximately 295 feet)	112 meters (approximately 367 feet)

Key Observation Point 4 (KOP 4) is an appropriate and representative viewpoint from which to assess the appearance of the currently proposed WTGs compared with those previously analyzed, because this viewpoint depicts both turbine models relative to a roadway and a residential area, which provides the turbines a better sense of context and scale. Figure 1 shows the location of KOP 4 relative to the proposed project, and Figure 2 shows the existing view toward the project site from KOP 4. Figure 3A shows the view with the project as previously simulated and Figure 3B shows the view from KOP 4 with the currently considered WTGs. This viewpoint, located along the westbound lane of State Route 58 (SR 58) at the eastern entrance to Tehachapi Pass, was selected for this analysis because of its proximity to the project and because this vantage point would show two distinct backdrops: proposed turbines south of SR 58 would appear atop a ridgeline, and would be seen against the sky; turbines north of SR 58 would be seen against the slopes of the mountain immediately to the west of them. In addition, KOP 4 represents views from the rural residential area north of SR 58 and from the highway itself. Highway drivers are likely to constitute the largest number of viewers of the proposed project in this area.

Previous visual analyses of the proposed project concluded that there would be substantial effects to views from KOP 4. CH2M HILL prepared a technical memorandum in February 2012, evaluating the project using the Bureau of Land Management (BLM) Visual Resource Management (VRM) methodology. This analysis concluded that the degree of contrast in this view with the project was strong, based on the prominence of the turbines and their proximity to the KOP. The KOP is within an area that was classified on an interim basis as VRM Class IV, which allows for strong contrast. The subsequent *Draft Plan Amendment & Draft Environmental Impact Statement / Draft Environmental Impact Report for the Alta East Wind Project*, prepared by Kern County in June 2012, incorporated the analysis from the technical memorandum, and concluded that because the project would result

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in significant changes to the visual environment that may result in potentially adverse effects on visual quality throughout the project area, impacts would be significant and unavoidable.

Comparison of the two simulations in Figure 3 indicates that the conclusions reached in these previous assessments would remain the same. While the taller hub heights and longer blade lengths are noticeable in the view showing currently considered WTGs, neither the strength of contrast nor degree of impact assessed previously would be substantially intensified by the change. With the currently considered turbines, visual contrast from this location would remain equally strong and the impact to the existing visual character or quality of the site and its surroundings (Impact VIS-3) would remain significant and unavoidable.

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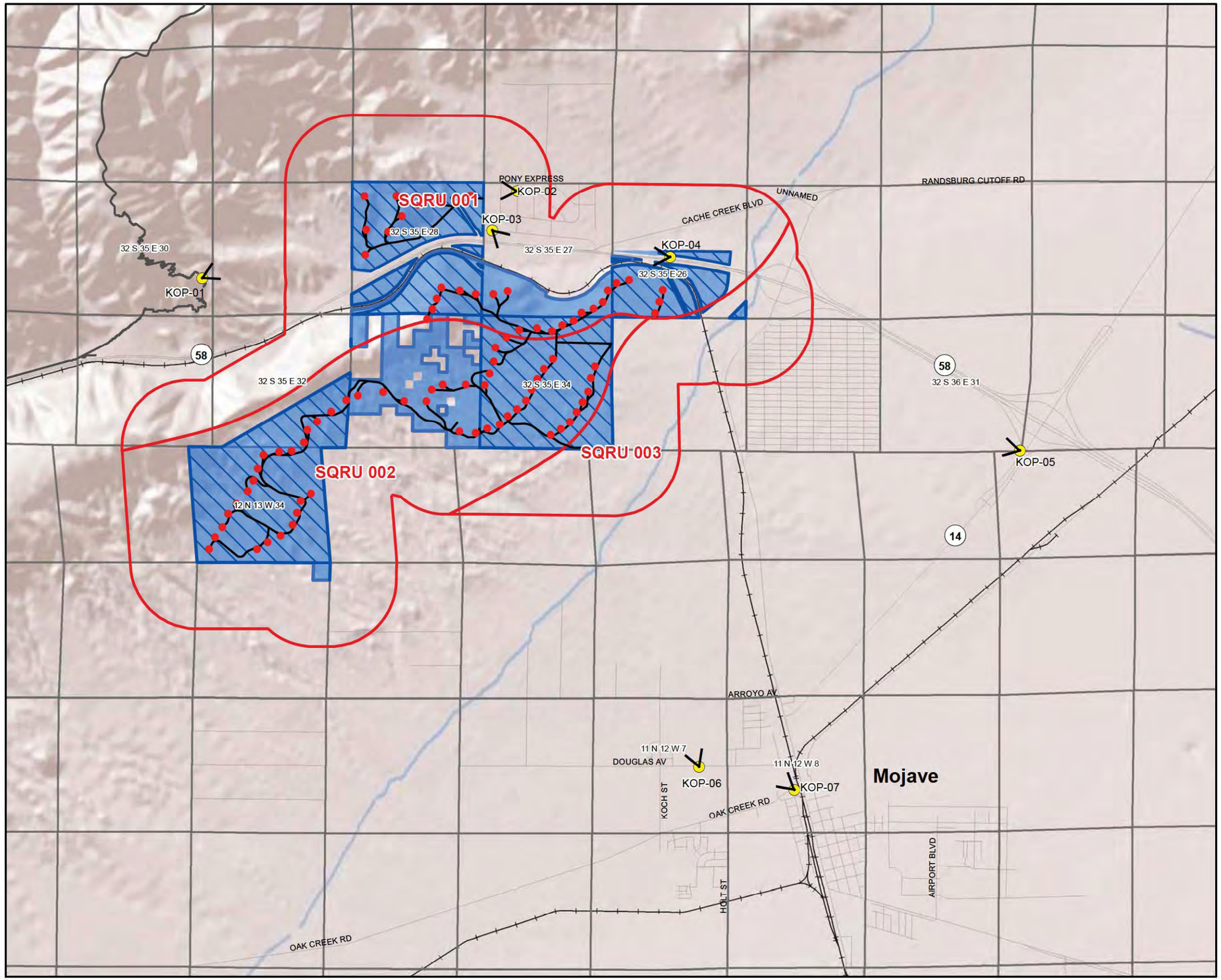
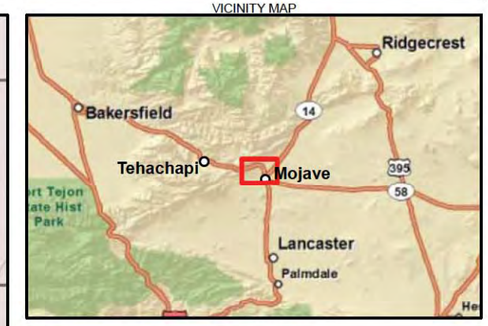


VICINITY MAP



- Key Observation Point (KOP) and View Orientation
- Proposed Wind Turbine Layout
- Proposed Access Road
- Scenic Quality Rating Units
- Federal Lands
- Project Area
- Pacific Crest Trail

N

0 0.75 1.5
Miles

FIGURE 1
Key Observation Points
Alta East Wind Project
Alta Wind Energy Center Project

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IS111510093937SAC Figure_1.ai 10.02.12 / ez

Existing View from KOP 4. View to the west from the westbound lane of SR 58, east of Randsburg Cutoff Road. This view is toward the eastern entrance to the Tehachapi Pass, and the southern portion of the rural residential area is visible along the highway in the middle-ground. Portions of the project site visible from this location include private lands and lands managed by BLM.

FIGURE 2
View from KOP 4
Alta East Wind Project
Alta Wind Energy Center Project

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A. View from KOP 4 as previously simulated. The overall height of the wind turbine generators simulated in these views is 125 meters (approximately 410 feet), with a hub height of 80 meters (approximately 262 feet) and a rotor diameter of 90 meters (approximately 295 feet).

B. View from KOP 4 with currently proposed wind turbine generators, which have an overall height of 142 meters (approximately 466 feet), with a hub height of 84 meters (approximately 276 feet) and a rotor diameter of 112 meters (approximately 367 feet).

FIGURE 3
View from KOP 4
Alta East Wind Project
Alta Wind Energy Center Project

Attachment B

Alta East Wind Project

Revised Shadow Flicker Analysis,

Prepared by CH2MHill, October 5, 2012

Alta East Wind Project - Revised Shadow Flicker Analysis

PREPARED FOR: Alta Windpower Development, LLC

PREPARED BY: Dana West/CH2M HILL
Thomas Priestley, Ph.D./CH2M HILL

COPIES: Aarty Joshi/CH2M HILL
Amy Fuller/CH2M HILL

DATE: October 5, 2012

Methods

CH2M HILL conducted a revised shadow flicker analysis for the proposed Alta East Wind Project (project) using the SHADOW calculation module of the WindPRO software to evaluate the effects of two changes in project design. The first change is in the turbine model being considered for installation on the site, and the second alteration is the removal of 14 turbines that had been previously planned along the easternmost edge of the original project site. When the shadow flicker analysis was originally completed in May 2011, the assumption was that the project would be developed using Vestas V90-3.0MW turbines. These turbines have a hub height of 80 meters and a rotor diameter of 90 meters. This revised shadow flicker analysis evaluated the effects of Vestas V112-3.0MW turbines, which have a hub height of 84 meters and a rotor diameter of 112 meters. The revised analysis was based on the original Option A layout, revised to reflect the removal of a 14 turbine string previously located along the project site's eastern edge.

The revised model domain extended 2,000 meters (1.2 miles) in each direction from the proposed wind turbine locations. The shadow flicker model made use of topographic data to account for elevation differences and topographic features in the line of sight when turbines are viewed from a residence. United States Geological Survey (USGS) seamless digital elevation model (DEM) files with 10-meter (33-foot) resolution were again used to create 3-meter increment contour data.

The distance threshold defining the area within which 20 percent or more of the sun is covered is determined by the WindPRO program based on the width of the rotor blades. In the revised case, 1,625 meters (1.0 mile), as opposed to the 1,425 meters (0.88 mile) from the original analysis, was used as the maximum distance from the turbine within which shadows would fall that would entail coverage of 20 percent or more of the sun's surface.

The orientation of each residence was maintained on "greenhouse mode" for the revised model run.

Two runs of the WindPro model were again made: a "worst case" assessment; and the "adjusted case assessment". The same assumptions for the worst case model run were applied, and the same information (i.e. probability of sunshine using Edwards Air Force

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Base meteorological data and predicted turbine operation and rotation) was applied to the adjusted case model run.

Results

The results of the revised shadow flicker modeling conducted for the revised Option A layout are presented in Table 1. The table includes a list of the residences located within 2,000 meters of the proposed turbines. These residences are identified with a number that corresponds to the residence locations labeled on the project area map presented as Figure 1. For each residence, the table presents the modeling results in terms of:

- The total potential shadow flicker during all daylight hours (in hours per year) based on the adjusted case assessment, which take overcast conditions, turbine availability, and wind speeds into account;
- The predicted maximum minutes per day of shadow flicker. To be conservative, these figures are based on the worst case assessment, and thus do not take overcast conditions, turbine availability, or wind speed into account.
- Identification of the turbines that would contribute to shadow flicker effects at that residence;
- The distance to the nearest turbine that contributes to shadow flicker effects at the residence; and
- The months in which shadow flicker occurs.

Table 2 presents a residence by residence comparison of the number of hours of shadow flicker likely to be experienced under the original Option A (with Vestas V90-3.0MW turbines) and revised Option A (with Vestas V112-3.0MW turbines).

Table 3 provides a list of the turbines proposed under revised Option A that would create shadow flicker effects at nearby residences and indicates the total numbers of hours of shadow experienced at residences that would be generated by that particular turbine.

The revised results of the modeling are also communicated in graphic form on the map presented as Figure 1. The information on this map consists of butterfly diagrams that indicate the distribution of annual hours of potential shadow flicker effect around each turbine and the locations of the residences in the area in relationship to these shadow flicker patterns.

The modeling results indicate that under the revised Option A layout, of the 51 residences located within 1,625 meters of the proposed turbines, 47 have the potential to experience shadow flicker effects, as opposed to 43 residences under the original Option A layout.

Under both the original and revised Option A scenarios, the amount of time residences would be likely to experience shadow flicker effects would be relatively low. Under the original Option A, a review of the annual shadow flicker exposure data indicates that residences could potentially experience anywhere from one minute to 24 hours of shadow flicker per year. The range of the results for revised Option A is generally similar, but with a minor increase, with residences potentially experiencing anywhere from nine minutes to 34 hours of shadow flicker per year. Under the revised Option A scenario, 21 of the 47 affected

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residences (45 percent) would experience more than 10 hours of flicker on an annual basis, as compared to the original Option A scenario, in which nine of the 43 affected residences (21 percent) would experience more than 10 hours of flicker on an annual basis.

The approximate number of flashes per second caused by the Vestas V112-3.0MW turbines can be estimated with the following assumptions:

- 1 flash = 1 revolution per blade
- 3 blades/rotor
- Revolution per minute (for the Vestas V112-3.0MW turbine) = 12.8
- Revolutions per second = 0.21

Using the above assumptions, it is estimated that in the worst case scenario, residences within the shadow path of a turbine on a sunny day could experience shadow flicker at a frequency of less than one flash per second (0.64 flashes per second). This is well below the frequency of flashes considered most likely to trigger seizures (i.e., 5 to 30 flashes per second) by the Epilepsy Foundation. Therefore, even with installation of the slightly larger Vestas V112-3.0MW turbines, shadow flicker effects of the project would not be expected to induce seizures in photosensitive individuals near the project area.

Based on the analysis above, the revised Option A scenario would not result in any new or substantially more severe impacts related to shadow flicker.

Although the adjusted case assessment results take a number of real world factors into account, there are many attenuating variables which could lessen the amount of shadow flicker that are not accounted for in the analysis model; therefore, the data generated by the adjusted case assessment represent an overestimation of the likely potential hours and minutes of shadow flicker effect. The actual levels of shadow flicker exposure at residences likely would be lower than the modeling results indicate.

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TABLE 1
Modeled Shadow Flicker Impacts – Revised Option A
Alta East Wind Project

Residence ID	Total Potential Shadow Flicker Adjusted for Overcast Conditions & Operational Hours (hrs:min per year)	Maximum Daily Shadow Flicker (hrs:min per day)*	Turbines Contributing to Shadow Flicker	Distance to Nearest Turbine (meters)	Months that Shadow Flicker Occurs
Residence 1	3:43	0:18	AE-024, AE-110	770	Jan, Apr, Aug, Nov, Dec
Residence 2	3:40	0:20	AE-023, AE-024, AE-110	776	Jan, Apr, May, Aug, Dec
Residence 3	5:21	0:22	AE-023, AE-024, AE-025, AE-110	741	Jan, Apr, May, Aug, Nov, Dec
Residence 4	10:41	0:39	AE-023, AE-024, AE-025, AE-108, AE-110	681	Jan, May, Jul, Aug, Nov, Dec
Residence 5	9:32	0:33	AE-022, AE-023, AE-024, AE-108, AE-110	765	Jan, Feb, May, Jul, Aug, Oct, Nov, Dec
Residence 6	10:08	0:38	AE-022, AE-023, AE-024, AE-070, AE-108, AE-110	775	Jan, Feb, May, Jun, Jul, Aug, Oct, Nov, Dec
Residence 7	12:27	0:49	AE-022, AE-023, AE-024, AE-070, AE-108, AE-110	804	Jan, Feb, May, Jun, Jul, Oct, Nov, Dec
Residence 8	10:49	0:38	AE-008, AE-022, AE-023, AE-024, AE-070, AE-108, AE-110	838	Jan, Feb, Apr, May, Jun, Jul, Aug, Nov, Dec
Residence 9	15:44	0:29	AE-008, AE-021, AE-022, AE-070, AE-107, AE-108, AE-110	921	Jan, Feb, Apr, May, Jun, Jul, Aug, Oct, Nov, Dec
Residence 10	16:07	0:29	AE-008, AE-021, AE-022, AE-070, AE-108, AE-110	948	Jan, Feb, Apr, May, Jun, Jul, Aug, Oct, Nov, Dec
Residence 11	18:03	0:44	AE-008, AE-020, AE-021, AE-022, AE-070, AE-107, AE-108, AE-110	911	Jan, Feb, Apr, May, Jun, Jul, Aug, Oct, Nov, Dec
Residence 12	20:42	0:56	AE-007, AE-008, AE-019, AE-020, AE-021, AE-022, AE-069, AE-070	809	Jan, Feb, Apr, May, Jul, Aug, Nov, Dec
Residence 13	19:53	0:54	AE-007, AE-008, AE-019, AE-020, AE-021, AE-022, AE-069, AE-070	820	Jan, Feb, Apr, May, Jul, Aug, Nov, Dec
Residence 14	18:10	0:35	AE-003, AE-005, AE-006, AE-007, AE-008, AE-021, AE-068, AE-069, AE-070	643	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Nov, Dec
Residence 15	18:08	0:33	AE-003, AE-005, AE-006, AE-007, AE-008, AE-021, AE-068, AE-069, AE-070	605	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Nov, Dec

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TABLE 1
Modeled Shadow Flicker Impacts – Revised Option A
Alta East Wind Project

Residence ID	Total Potential Shadow Flicker Adjusted for Overcast Conditions & Operational Hours (hrs:min per year)	Maximum Daily Shadow Flicker (hrs:min per day)*	Turbines Contributing to Shadow Flicker	Distance to Nearest Turbine (meters)	Months that Shadow Flicker Occurs
Residence 16	15:53	0:33	AE-003, AE-005, AE-006, AE-007, AE-008, AE-021, AE-068, AE-069	561	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Nov, Dec
Residence 17	9:01	0:28	AE-001, AE-002, AE-003, AE-004, AE-005, AE-006, AE-007, AE-008, AE-068, AE-069	482	All months
Residence 18	10:34	0:34	AE-001, AE-002, AE-003, AE-004, AE-005, AE-006, AE-007, AE-008	422	Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct
Residence 19	7:57	0:31	AE-001, AE-002, AE-003, AE-004, AE-005, AE-006, AE-007	421	Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct
Residence 20	9:46	0:39	AE-001, AE-002, AE-003, AE-005, AE-006, AE-007, AE-008, AE-068	403	Jan, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Dec
Residence 21	10:48	0:34	AE-003, AE-005, AE-006, AE-007, AE-008, AE-068, AE-069	499	Jan, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec
Residence 22	18:36	0:47	AE-007, AE-008, AE-020, AE-021, AE-022, AE-070, AE-110	965	Jan, Feb, Apr, May, Jun, Jul, Aug, Sep, Nov, Dec
Residence 23	6:01	0:25	AE-008, AE-022, AE-110	1,071	Jan, Apr, May, Aug, Sep, Nov, Dec
Residence 24	8:33	0:29	AE-007, AE-008, AE-021, AE-110	925	Jan, Apr, May, Jul, Aug, Sep, Nov, Dec
Residence 25	14:03	0:41	AE-003, AE-006, AE-007, AE-008, AE-070, AE-110	666	Jan, Mar, Apr, May, Jun, Jul, Aug, Sep, Nov, Dec
Residence 26	8:14	0:45	AE-001, AE-002, AE-003, AE-004, AE-005, AE-006, AE-007, AE-008	266	Feb, Mar, Apr, May, Jul, Aug, Sep, Oct, Nov
Residence 27	16:35	1:04	AE-001, AE-002, AE-003, AE-004, AE-005, AE-006, AE-007, AE-008, AE-110	244	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov
Residence 28	33:54	1:42	AE-001, AE-002, AE-003, AE-005, AE-006, AE-007, AE-008, AE-110	250	Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct
Residence 29	4:38	0:52	AE-003, AE-005, AE-006, AE-007, AE-008, AE-110	495	Feb, Mar, Apr, May, Aug, Sep, Oct

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TABLE 1
Modeled Shadow Flicker Impacts – Revised Option A
Alta East Wind Project

Residence ID	Total Potential Shadow Flicker Adjusted for Overcast Conditions & Operational Hours (hrs:min per year)	Maximum Daily Shadow Flicker (hrs:min per day)*	Turbines Contributing to Shadow Flicker	Distance to Nearest Turbine (meters)	Months that Shadow Flicker Occurs
Residence 30	2:47	0:42	AE-003, AE-006, AE-007, AE-008, AE-110	618	Mar, Apr, May, Aug, Sep, Oct
Residence 31	1:26	0:32	AE-007, AE-008, AE-110	807	Mar, Apr, Aug, Sep
Residence 32	0:21	0:21	AE-008, AE-110	1,130	Mar, Apr, Aug, Sep
Residence 33	0:09	0:24	AE-008, AE-110	1,095	Mar, Apr, Sep
Residence 34	0:34	0:24	AE-008, AE-110	1,087	Mar, Sep, Oct
Residence 35	0:46	0:27	AE-007, AE-008, AE-110	973	Mar, Sep, Oct
Residence 36	0:34	0:29	AE-007, AE-008, AE-110	894	Mar, Apr, Sep, Oct
Residence 37	0:39	0:32	AE-007, AE-008, AE-110	797	Mar, Apr, Sep, Oct
Residence 38	1:11	0:32	AE-007, AE-008, AE-110	814	Mar, Sep, Oct
Residence 39	0:35	0:34	AE-003, AE-007, AE-008, AE-110	736	Mar, Apr, Sep, Oct
Residence 40	1:51	0:36	AE-003, AE-007, AE-008, AE-110	722	Feb, Mar, Sep, Oct
Residence 41	2:57	0:42	AE-003, AE-006, AE-007, AE-008, AE-110	639	Feb, Mar, Sep, Oct
Residence 42	18:31	1:53	AE-001, AE-002, AE-003, AE-005, AE-006, AE-007, AE-008, AE-110	246	Feb, Mar, Apr, Aug, Sep, Oct, Nov
Residence 43	32:12	2:18	AE-001, AE-002, AE-003, AE-005, AE-006, AE-007, AE-008, AE-110	202	Jan, Feb, Mar, Apr, May, Aug, Sep, Oct, Nov
Residence 44	25:53	1:34	AE-001, AE-003, AE-005, AE-006, AE-007, AE-008, AE-110	328	Jan, Feb, Mar, Sep, Oct, Nov
Residence 45	9:18	0:32	AE-027, AE-028, AE-044, AE-045	842	May, Jun, Jul, Aug
Residence 46	9:25	0:28	AE-028, AE-029, AE-044, AE-045, AE-046	858	Apr, May, Jun, Jul, Aug
Residence 47	0:00	0:00	--		--
Residence 48	0:00	0:00	--		--

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TABLE 1
Modeled Shadow Flicker Impacts – Revised Option A
Alta East Wind Project

Residence ID	Total Potential Shadow Flicker Adjusted for Overcast Conditions & Operational Hours (hrs:min per year)	Maximum Daily Shadow Flicker (hrs:min per day)*	Turbines Contributing to Shadow Flicker	Distance to Nearest Turbine (meters)	Months that Shadow Flicker Occurs
Residence 49	0:33	0:08	AE-044	1,411	Jun
Residence 50	0:00	0:00	--	1,679	--
Residence 51	0:00	0:00	--	1,836	--

* Not adjusted for overcast conditions or operational hours.

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TABLE 2
Comparison of Predicted Shadow Flicker per Residence (Original Option A vs. Revised Option A)
Alta East Wind Project

Residence ID	Total Potential Shadow Flicker Adjusted for Overcast Conditions & Operational Hours – Original Option A (hrs:min per year)	Total Potential Shadow Flicker Adjusted for Overcast Conditions & Operational Hours – Revised Option A (hrs:min per year)
Residence 1	0:00	3:43
Residence 2	0:00	3:40
Residence 3	0:00	5:21
Residence 4	5:22	10:41
Residence 5	5:08	9:32
Residence 6	5:17	10:08
Residence 7	5:12	12:27
Residence 8	2:47	10:49
Residence 9	9:15	15:44
Residence 10	9:46	16:07
Residence 11	10:40	18:03
Residence 12	10:49	20:42
Residence 13	10:22	19:53
Residence 14	11:15	18:10
Residence 15	11:30	18:08
Residence 16	9:02	15:53
Residence 17	3:58	9:01
Residence 18	5:54	10:34
Residence 19	4:10	7:57
Residence 20	5:35	9:46
Residence 21	5:34	10:48
Residence 22	7:43	18:36
Residence 23	1:30	6:01
Residence 24	2:25	8:33
Residence 25	9:23	14:03
Residence 26	4:43	8:14
Residence 27	3:06	16:35
Residence 28	23:56	33:54
Residence 29	2:44	4:38
Residence 30	1:42	2:47
Residence 31	1:02	1:26
Residence 32	0:14	0:21

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TABLE 2
Comparison of Predicted Shadow Flicker per Residence (Original Option A vs. Revised Option A)
Alta East Wind Project

Residence ID	Total Potential Shadow Flicker Adjusted for Overcast Conditions & Operational Hours – Original Option A (hrs:min per year)	Total Potential Shadow Flicker Adjusted for Overcast Conditions & Operational Hours – Revised Option A (hrs:min per year)
Residence 33	0:01	0:09
Residence 34	0:20	0:34
Residence 35	0:29	0:46
Residence 36	0:19	0:34
Residence 37	0:22	0:39
Residence 38	0:45	1:11
Residence 39	0:24	0:35
Residence 40	1:11	1:51
Residence 41	1:39	2:57
Residence 42	12:27	18:31
Residence 43	21:37	32:12
Residence 44	17:55	25:53
Residence 45	5:50	9:18
Residence 46	5:35	9:25
Residence 47	0:00	0:00
Residence 48	0:00	0:00
Residence 49	0:00	0:33
Residence 50	0:00	0:00
Residence 51	0:00	0:00
TOTAL	**258:58**	**477:23**

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TABLE 3
Potential Shadow Flicker per Wind Turbine – Original Option A vs. Revised Option A
Alta East Wind Project

Turbine ID	Total Potential Shadow Flicker Adjusted for Overcast Conditions & Operational Hours – Original Option A (hrs:min per year)	Total Potential Shadow Flicker Adjusted for Overcast Conditions & Operational Hours – Revised Option A (hrs:min per year)
AE-001	0:00	2:44
AE-002	0:00	2:04
AE-003	4:43	6:56
AE-004	0:00	1:57
AE-005	3:15	4:19
AE-006	3:04	4:22
AE-007	9:06	13:13
AE-008	20:43	25:38
AE-019	0:00	3:35
AE-020	0:00	8:15
AE-021	7:59	17:22
AE-022	9:14	14:45
AE-023	2:17	7:01
AE-024	6:00	9:03
AE-025	2:48	4:20
AE-027	0:00	1:09
AE-028	0:00	4:29
AE-029	0:00	3:25
AE-044	2:33	4:40
AE-045	5:59	8:35
AE-046	2:56	4:25
AE-068	0:52	2:18
AE-069	3:01	4:49
AE-070	5:01	8:23
AE-107	0:00	0:08
AE-108	1:00	2:33
AE-110	66:29	87:11
TOTAL	**157:00**	**257:39**

Note: Only the original and revised Option A wind turbines that are predicted to potentially cause shadow flicker at potential residences are listed in this table.

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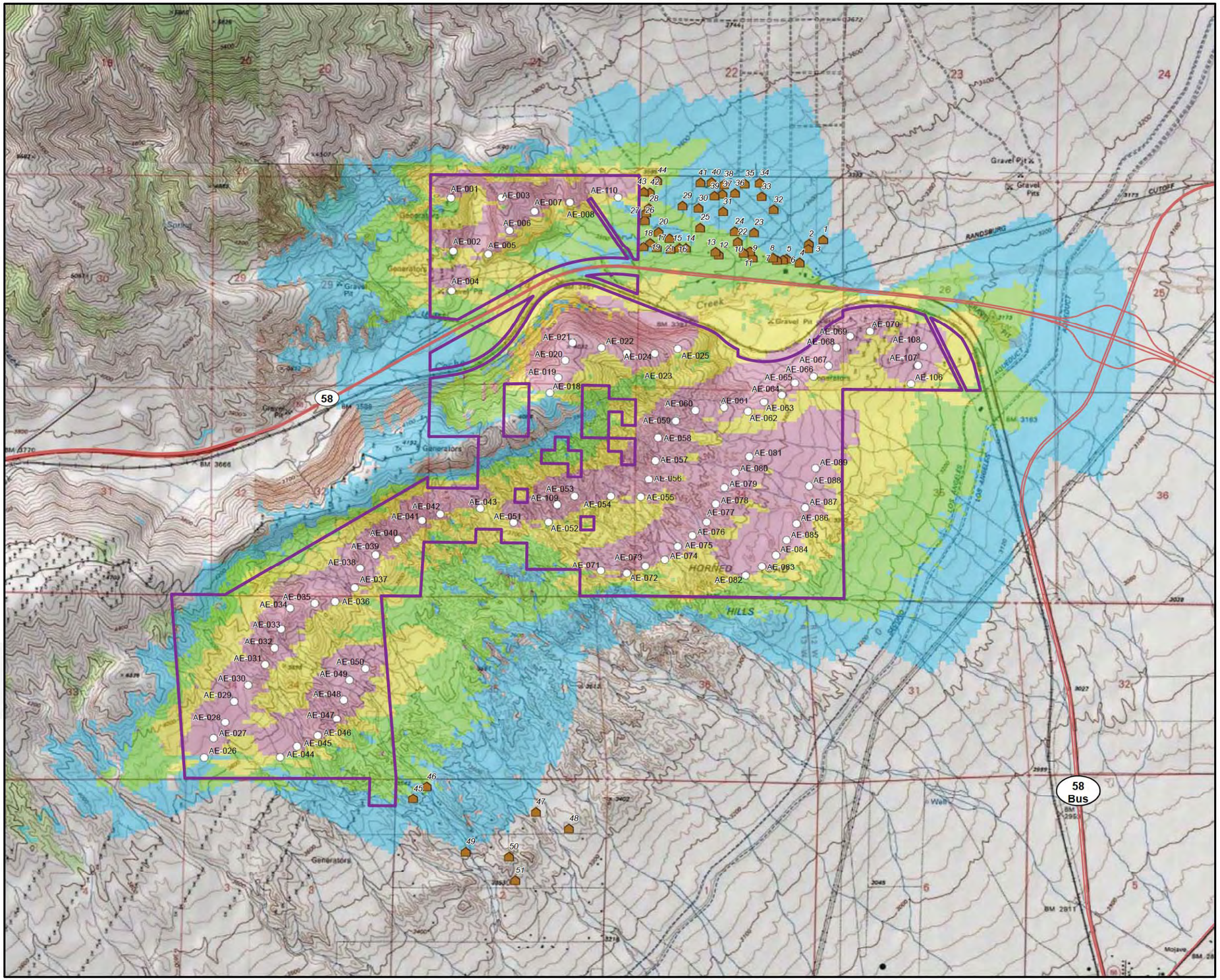
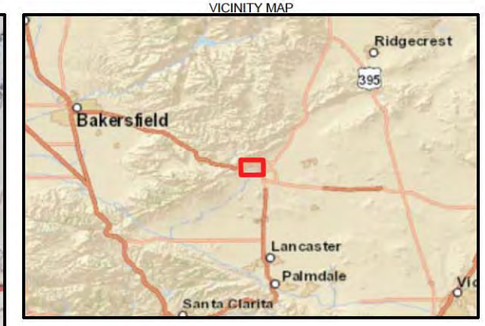


VICINITY MAP



LEGEND

- Alta East Project Area
- Proposed Turbine Location
- Potential Residence

Total Potential Hours of Shadow Flicker Based on the Adjusted Case Assessment

Hours per Year

- 0.01 - 10
- 10 - 30
- 30 - 100
- 100+

N

0 0.5 1
Miles

FIGURE 1
Shadow Flicker Results
October 2012
Alta East Wind Project
Alta Wind Energy Center Project

8. Glossary

— A —

Adjacent: Defined by ASTM E1527-00 as any real property the border of which is contiguous or partially contiguous with that of the Site or would be contiguous or partially contiguous with that of the Site but for a street, road, or other public thoroughfare separating them.

Air Basin: A regional area defined for state air quality management purposes based on considerations that include topographic features that influence meteorology and pollutant transport patterns, and political jurisdiction boundaries that influence the design and implementation of air quality management programs.

Air Quality Control Region: A regional area defined for federal air quality management purposes based on considerations that include topographic features that influence meteorology and pollutant transport patterns, and political jurisdiction boundaries that influence the design and implementation of air quality management programs.

Alluvium: a fine-grained fertile soil consisting of mud, silt, and sand deposited by flowing water on flood plains, in river beds, and in estuaries.

Alluvial Fan: Fan shaped material of water deposited sediments.

Ambient Air Quality Standards: A combination of air pollutant concentrations, exposure durations, and exposure frequencies that are established as thresholds above which adverse impacts to public health and welfare may be expected. Ambient air quality standards are set on a national level by the U.S. Environmental Protection Agency. Ambient air quality standards are set on a state level by public health or environmental protection agencies as authorized by state law.

Ambient Air: Outdoor air in locations accessible to the general public.

American Reinvestment and Recovery Act of 2009: Abbreviated ARRA (Pub.L. 111-5) and commonly referred to as the Stimulus or The Recovery Act. An economic stimulus package signed into law on February 17, 2009 by President Barack Obama to respond to the late-2000s recession. The primary objective for ARRA was to save and create jobs almost immediately. Secondary objectives were to provide temporary relief programs for those most impacted by the recession and invest in infrastructure, education, health, and 'green' energy, including wind generation projects.

Applicant: Alta Windpower Development LLC

Archaeological district: A significant concentration, linkage, or continuity of sites, buildings, or features important in history or prehistory. There can be discontiguous districts composed of resources that are not in close proximity to one another

Area of Critical Environmental Concern (ACEC): A designated area on public lands where special management attention is required: (1) to protect and prevent irreparable damage to fish and wildlife; (2) to protect important historic, cultural, or scenic values, or other natural systems or processes; or (3) to protect life and safety from natural hazards.

Attainment Area: An area that has air quality as good as or better than a national or state ambient air quality standard. A single geographic area may be an attainment area for one pollutant and a non-attainment area for others.

— B —

Basic Elements: The four design elements (form, line, color, and texture), which determine how the character of a landscape is perceived.

Bioremediation: The use of biological agents, such as bacteria or plants, to remove or neutralize contaminants, as in polluted soil or water.

— C —

Calcareous Substrates: Substances, often cemented and of a chalky appearance, containing calcium carbonate.

Cancer: A class of diseases characterized by uncontrolled growth of somatic cells. Cancers are typically caused by one of three mechanisms: chemically induced mutations or other changes to cellular DNA; radiation induced damage to cellular chromosomes; or viral infections that introduce new DNA into cells.

Carbon Monoxide (CO): A colorless, odorless gas that is toxic because it reduces the oxygen-carrying capacity of the blood.

Characteristic: A distinguishing trait, feature, or quality.

Characteristic Landscape: The established landscape within an area being viewed. This does not necessarily mean a naturalistic character. It could refer to an agricultural setting, an urban landscape, a primarily natural environment, or a combination of these types.

Climate: A statistical description of daily, seasonal, or annual weather conditions based on recent or long-term weather data. Climate descriptions typically emphasize average, maximum, and minimum conditions for temperature, precipitation, humidity, wind, cloud cover, and sunlight intensity patterns; statistics on the frequency and intensity of tornado, hurricane, or other severe storm events may also be included.

Community Noise Equivalent Level (CNEL): A 24-hour average noise level rating with a 5 dB penalty factor applied to evening noise levels and a 10 dB penalty factor applied to nighttime noise levels. The CNEL value is very similar to the Day-Night Average Sound Level (Ldn) value, but includes an additional weighting factor for noise during evening hours.

Contrast: Opposition or unlikeness of different forms, lines, colors, or textures in a landscape.

Contrast Rating: A method of analyzing the potential visual impacts of proposed management activities.

Cretaceous: In geologic history the third and final period of the Mesozoic era, from 144 million to 65 million years ago, during which extensive marine chalk beds formed.

Criteria Pollutant: An air pollutant for which there is a national ambient air quality standard (carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, inhalable particulate matter, fine particulate matter, or airborne lead particles).

Critical Habitat: Habitat designated by the U.S. Fish and Wildlife Service under Section 4 of the Endangered Species Act and under the following criteria: (1) specific areas within the geographical area occupied by the species at the time it is listed, on which are found those physical or biological features essential to the conservation of the species and that may require special management of protection; or (2) specific areas outside the geographical area by the species at the time it is listed but that are considered essential to the conservation of the species.

Cryptocrystalline silicate: Cryptocrystalline silicates are rocks such as flint, chert, chalcedony, or jasper that contain a high percentage of silica (SiO_2), the primary compound that composes quartz.

Cultural Modification: Any man-caused change in the land form, water form, vegetation, or the addition of a structure which creates a visual contrast in the basic elements (form, line, color, texture) of the naturalistic character of a landscape.

Cultural Resource: A location of human activity, occupation, or use identifiable through field inventory, historical documentation, or oral evidence. Cultural resources include archaeological and historical sites, structures, buildings, objects, artifacts, works of art, architecture, and natural features that were important

in past human events. They may consist of physical remains or areas where significant human events occurred, even though evidence of the events no longer remains. And they may include definite locations of traditional, cultural, or religious importance to specified social or cultural groups.

Cultural Resource Data: Cultural resource information embodied in material remains such as artifacts, features, organic materials, and other remnants of past activities. An important aspect of data is context, a concept that refers to the relationships among these types of materials and the situations in which they are found.

Cultural Resource Data Recovery: The professional application of scientific techniques of controlled observation, collection, excavation, and/or removal of physical remains, including analysis, interpretation, explanation, and preservation of recovered remains and associated records in an appropriate curatorial facility used as a means of protection. Data recovery may sometimes employ professional collection of such data as oral histories, genealogies, folklore, and related information to portray the social significance of the affected resources. Such data recovery is sometimes used as a measure to mitigate the adverse impacts of a ground-disturbing project or activity.

Cultural Resource Integrity: The condition of a cultural property, its capacity to yield scientific data, and its ability to convey its historical significance. Integrity may reflect the authenticity of a property's historic identity, evidenced by the survival or physical characteristics that existed during its historic or prehistoric period, or its expression of the aesthetic or historic sense of a particular period of time.

Cultural Resource Inventory (Survey): A descriptive listing and documentation, including photographs and maps of cultural resources. Included in an inventory are the processes of locating, identifying, and recording sites, structures, buildings, objects, and districts through library and archival research, information from persons knowledgeable about cultural resources, and on-the-ground surveys of varying intensity.

Cultural Resource Values: The irreplaceable qualities that are embodied in cultural resources, such as scientific information about prehistory and history, cultural significance to Native Americans and other groups, and the potential to enhance public education and enjoyment of the Nation's rich cultural heritage.

Cultural Site: A physical location of past human activities or events, more commonly referred to as an archaeological site or a historic property. Such sites vary greatly in size and range from the location of a single cultural resource object to a cluster of cultural resource structures with associated objects and features.

Cumulative Impacts: Two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The following statements also apply when considering cumulative impacts: (1) the individual impacts may be changes resulting from a single project or separate projects; (2) the cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

— D —

Day/Night Average Sound Level (Ldn): A 24-hour average noise level rating with a 10 dB penalty factor applied to nighttime noise levels. The Ldn value is very similar to the CNEL value, but does not include any weighting factor for noise during evening hours.

Decibel (dB): A generic term for measurement units based on the logarithm of the ratio between a measured value and a reference value. Decibel scales are most commonly associated with acoustics (using air pressure fluctuation data); but decibel scales sometimes are used for ground-borne vibrations or various electronic signal measurements.

Desert Pavement: A surface covering developed over time, of closely packed rock fragments of pebble or cobble size found on desert soils.

Distance Zones: A subdivision of the landscape as viewed from an observer position. The subdivision (zones) includes foreground-middleground, background, and seldom seen.

Drought condition: A hydrologic condition during a defined period when rainfall and runoff are much less than average.

— E —

Enhancement: A management action designed to improve visual quality.

Environment: The physical conditions that exist in the area and that would be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is where significant direct or indirect impacts would occur as a result of the project. The environment includes both natural and artificial conditions.

Equivalent Average Sound Pressure Level (Leq): The decibel level of a constant noise source that would have the same total acoustical energy over the same time interval as the actual time-varying noise condition being measured or estimated. Leq values must be associated with an explicit or implicit averaging time in order to have practical meaning.

Excavation: The scientific examination of an archaeological site through layer-by-layer removal and study of the contents within prescribed surface units, e.g. square meters.

— F —

Fluvial: Of, relating to, or occurring in a river.

Form: The mass or shape of an object or objects which appear unified, such as a vegetative opening in a forest, a cliff formation, or a water tank.

— G —

Geomorphic Province: Naturally defined geologic regions that display a distinct landscape or landform.

Greenhouse Gas: A gaseous compound that absorbs infrared radiation and re-radiates a portion of hat back toward the earth's surface, thus trapping heat and warming the earth's atmosphere.

Groundwater Overdraft: The condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years during which water supply conditions approximate average conditions.

— H —

Habitat: A specific set of physical conditions that surround a single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

Hazardous Air Pollutant (HAP): Air pollutants which have been specifically designated by relevant federal or state authorities as being hazardous to human health. Most HAP compounds are designated due to concerns related to: carcinogenic, mutagenic, or teratogenic properties; severe acute toxic effects; or ionizing radiation released during radioactive decay processes.

Hertz (Hz): A standard unit for describing acoustical frequencies measured as the number of air pressure fluctuation cycles per second. For most people, the audible range of acoustical frequencies is from 20 Hz to 20,000 Hz.

Historical Site: A location that was used or occupied after the arrival of Europeans in North America (ca. A.D. 1492). Such sites may consist of physical remains at archaeological sites or areas where significant

human events occurred, even though evidence of the events no longer remains. They may have been used by people of either European or Native American descent.

Historical Resource: A cultural resource, for the purpose of CEQA, listed in, or determined to be eligible for listing in, the California Register of Historical Resources (PRC § 21084.1). Subsumed in present analysis under "important historic and cultural aspects of our national heritage."

Historical Property: A cultural resource, for the purpose of Section 106, included in, or eligible for inclusion in the National Register of Historic Places (36 CFR § 800.16(l)(1). Subsumed in present analysis under "important historic and cultural aspects of our national heritage."

Holocene: Of, denoting, or formed in the second and most recent epoch of the Quaternary period, which began 10,000 years ago at the end of the Pleistocene.

Hydrocarbons: Any organic compound containing primarily carbon and hydrogen, such as the alkanes, alkenes, alkynes, terpenes, and arenes.

— I —

Igneous: Rock, such as granite and basalt that has solidified from a molten or partially molten state.

Impacts: Impacts analyzed under CEQA must be related to a physical change. Impacts are: (1) Direct or primary impacts that would be caused by the proposed project and would occur at the same time and place; or (2) Indirect or secondary impacts that would be caused by the proposed project and would be later in time or farther removed in distance but would still be reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other effects related to induced changes in the pattern of land use; population density or growth rate; and related effects on air and water and other natural systems, including ecosystems.

Indian Tribe: Any American Indian group in the United States that the Secretary of the Interior recognizes as possessing tribal status (listed periodically in the Federal Register).

Indigenous: Being of native origin (such as indigenous peoples or indigenous cultural features).

Interdisciplinary Team: A group of individuals with different training, representing the physical sciences, social sciences, and environmental design arts, assembled to solve a problem or perform a task. The members of the team proceed to a solution with frequent interaction so that each discipline may provide insights to any stage of the problem and disciplines may combine to provide new solutions.

Invasive Species: An exotic species whose introduction does or is likely to cause economic or environmental harm or harm to human health (Executive Order 13122, 2/3/99).

Isolate: Non-linear, isolated archaeological features without associated artifacts.

— K —

Key Observation Point (KOP): One or a series of points on a travel route or at a use area or a potential use area, where the view of a management activity would be most revealing.

— L —

Landscape Character: The arrangement of a particular landscape as formed by the variety and intensity of the landscape features and the four basic elements of form, line, color, and texture. These factors give the area a distinctive quality which distinguishes it from its immediate surroundings.

Landscape Features: The land and water form, vegetation, and structures which compose the characteristic landscape.

Leasable Minerals: Minerals whose extraction from federally managed land requires a lease and the payment of royalties. Leasable minerals include coal, oil and gas, oil shale and tar sands potash, phosphate, sodium, and geothermal steam.

Less than Significant Impact. An impact that is adverse but that does not exceed the defined thresholds of significance. Less-than-significant impacts do not require mitigation.

Line: The path, real or imagined, that the eye follows when perceiving abrupt differences in form, color, or texture. Within landscapes, lines may be found as ridges, skylines, structures, changes in vegetative types, or individual trees and branches.

Locatable Minerals: Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

— M —

Maintenance Area: An area that currently meets federal ambient air quality standards but which was previously designated as a nonattainment area. Federal agency actions occurring in a maintenance area are still subject to Clean Air Act conformity review requirements.

Management Activity: A surface disturbing activity undertaken on the landscape for the purpose of harvesting, traversing, transporting, protecting, changing, replenishing, or otherwise using resources.

Memorandum of Understanding (MOU): A written but noncontractual agreement between two or more agencies or other parties to take a certain course of action.

Meteorological Tower (MET). Instrument located at the proposed Project site, designed to measure temperature, humidity, relative humidity, solar radiation, and wind speed and direction.

Mineral Material Disposal: The sale of sand, gravel, decorative rock, or other materials defined in 43 CFR 3600.

Mining Claim: A mining claim is a selected parcel of Federal Land, valuable for a specific mineral deposit or deposits, for which a right of possession has been asserted under the General Mining Law. This right is restricted to the development and extraction of a mineral deposit. The rights granted by a mining claim protect against a challenge by the United States and other claimants only after the discovery of a valuable mineral deposit. The two types of mining claims are lode and placer. In addition, mill sites and tunnel sites may be located to provide support facilities for lode and placer mining.

Mitigation: Mitigation consists of measures that avoid or substantially reduce the project's significant environmental impacts by: (a) Avoiding the impacts altogether by not taking an action or parts of an action, (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment, (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, (e) Compensating for the impact by replacing or providing substitute resources or environments (40 CFR 1508.20).

— N —

National Pollutant Discharge Elimination System (NPDES): The NPDES permit program has been delegated in California to the State Water Resources Control Board. These sections of the Clean Water Act require that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the United States must obtain a State certification that the discharge complies with other provisions of the Clean Water Act.

National Register District: A group of significant archaeological, historical, or architectural sites, within a defined geographic area, that is listed on the National Register of Historic Places. See National Register of Historic Places.

National Register of Historic Places: The official list, established by the National Historic Preservation Act, of the Nation's cultural resources worthy of preservation. The National Register lists archeological, historic, and architectural properties (i.e. districts, sites, buildings, structures, and objects) nominated for their local, state, or national significance by state and federal agencies and approved by the National Register Staff. The National Park Service maintains the National Register. Also see National Historic Preservation Act.

National Scenic Trail: One of the three categories of national trails defined in the National Trails System Act of 1968 that can only be established by act of Congress and are administered by federal agencies, although part or all of their land base may be owned and managed by others. National Scenic Trails are existing regional and local trails recognized by either the Secretary of Agriculture or the Secretary of the Interior upon application.

Native American: Indigenous peoples of the western hemisphere.

Nitric Oxide (NO): A colorless toxic gas formed primarily by combustion processes that oxidize atmospheric nitrogen gas or nitrogen compounds found in the fuel. NO is a precursor of ozone, nitrogen dioxide, numerous types of photochemically-generated nitrate particles (including PAN), and atmospheric nitrous and nitric acids. Most nitric oxide formed by combustion processes is converted into nitrogen dioxide by subsequent oxidation in the atmosphere over a period that may range from several hours to a few days.

Nitrogen Dioxide (NO2): A toxic reddish gas formed by oxidation of nitric oxide. Nitrogen dioxide is a strong respiratory and eye irritant. Most nitric oxide formed by combustion processes is converted into nitrogen dioxide by subsequent oxidation in the atmosphere. Nitrogen dioxide is a criteria pollutant in its own right, and is a precursor of ozone, numerous types of photochemically generated nitrate particles (including PAN), and atmospheric nitrous and nitric acids.

Nitrogen Oxides (NOx): A group term meaning the combination of nitric oxide and nitrogen dioxide; other trace oxides of nitrogen may also be included in instrument-based NOx measurements. NOx is a precursor of ozone, photochemically-generated nitrate particles (including PAN), and atmospheric nitrous and nitric acids.

Non-native Species: See Invasive Species and Noxious Weed.

Noxious Weed: According to the Federal Noxious Weed Act (PL 93-629), a weed that causes disease or has other adverse effects on man or his environment and therefore is detrimental to the agricultural and commerce of the United States and to the public health.

Nonattainment Area: An area that does not meet a federal or state ambient air quality standard. Federal agency actions occurring in a federal nonattainment area are subject to Clean Air Act conformity review requirements.

— O —

Off-Highway Vehicle (OHV): Any vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain, deriving motive power from any source other than muscle. OHVs exclude: (1) any non-amphibious registered motorboat; (2), any fire, emergency, or law enforcement vehicle while being used for official or emergency purposes; (3) any vehicle whose use is expressly authorized by a permit, lease, license, agreement, or contract issued by an authorized officer or otherwise approved; (4) vehicles in official use; and (5) any combat or combat support vehicle when used in times of national defense emergencies.

Operation and Maintenance (O&M) Facility. Building and yard constructed to store critical spare parts and provide a building for maintenance services.

Organic Compounds: Compounds of carbon containing hydrogen and possibly other elements (such as oxygen, sulfur, or nitrogen). Major subgroups of organic compounds include hydrocarbons, alcohols, aldehydes, carboxylic acids, esters, ethers, and ketones. Organic compounds do not include crystalline or amorphous forms of elemental carbon (graphite, diamond, carbon black, etc.), the simple oxides of carbon (carbon monoxide and carbon dioxide), metallic carbides, or metallic carbonates.

Overdraft condition: A condition in which the total volume of water being extracted from the groundwater basin would be greater than the total recharge provided to the basin.

Ozone (O3): A compound consisting of three oxygen atoms. Ozone is a major constituent of photochemical smog that is formed primarily through chemical reactions in the atmosphere involving reactive organic compounds, nitrogen oxides, and ultraviolet light. Ozone is a toxic chemical that damages various types of plant and animal tissues and which causes chemical oxidation damage to various materials. Ozone is a respiratory irritant, and appears to increase susceptibility to respiratory infections. A natural layer of ozone in the upper atmosphere absorbs high energy ultraviolet radiation, reducing the intensity and spectrum of ultraviolet light that reaches the earth's surface.

— P —

Paleontological Resources (Fossils): The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are for understanding past environments, environmental change, and the evolution of life.

Paleontology: A science dealing with the life forms of past geological periods as known from fossil remains.

Paleozoic Era: An era of geologic time (600 million to 280 million years ago) between the Late Precambrian and the Mesozoic eras and comprising the Cambrian, Ordovician, Silurian, Devonian, Mississippian, Pennsylvanian, and Permian periods.

Particulate Matter: Solid or liquid material having size, shape, and density characteristics that allow the material to remain suspended in the atmosphere for more than a few minutes. Particulate matter can be characterized by chemical characteristics, physical form, or aerodynamic properties. Categories based on aerodynamic properties are commonly described as being size categories, although physical size is not used to define the categories. Many components of suspended particulate matter are respiratory irritants. Some components (such as crystalline or fibrous minerals) are primarily physical irritants. Other components are chemical irritants (such as sulfates, nitrates, and various organic chemicals). Suspended particulate matter also can contain compounds (such as heavy metals and various organic compounds) that are systemic toxins or necrotic agents. Suspended particulate matter or compounds adsorbed on the surface of particles can also be carcinogenic or mutagenic chemicals.

Peak Particle Velocity: A measure of ground-borne vibrations. Physical movement distances are typically measured in thousandths of an inch, and occur over a tiny fraction of a second. But the normal convention for presenting that data is to convert it into units of inches per second.

Perennial Yield: The maximum quantity of water that can be annually withdrawn from a groundwater basin over a long period of time [during which water supply conditions approximate average conditions] without developing an overdraft condition.

Petroglyph: Pictures, symbols, or other art work pecked, carved, or incised on natural rock surfaces.

pH (parts hydrogen): The logarithm of the reciprocal of hydrogen-ion concentration in gram atoms per liter.

Physiographic Province: An extensive portion of the landscape normally encompassing many hundreds of square miles, which portrays similar qualities of soil, rock, slope, and vegetation of the same geomorphic origin.

Pleistocene (Ice Age): An epoch in the Quaternary period of geologic history lasting from 1.8 million to 10,000 years ago. The Pleistocene was an epoch of multiple glaciations, during which continental glaciers covered nearly one fifth of the earth's land.

Pliocene: The Pliocene Epoch is the period in the geologic timescale that extends from 5.332 million to 2.588 million years before present.

PM10 (inhalable particulate matter): A fractional sampling of suspended particulate matter that approximates the extent to which suspended particles with aerodynamic equivalent diameters smaller than 50 microns penetrate to the lower respiratory tract (tracheo-bronchial airways and alveoli in the lungs). In a regulatory context, PM_{10} is any suspended particulate matter collected by a certified sampling device having a 50 percent collection efficiency for particles with aerodynamic equivalent diameters of 9.5-10.5 microns and an maximum aerodynamic diameter collection limit less than 50 microns. Collection efficiencies are greater than 50 percent for particles with aerodynamic diameters smaller than 10 microns and less than 50 percent for particles with aerodynamic diameters larger than 10 microns.

PM2.5 (fine particulate matter): A fractional sampling of suspended particulate matter that approximates the extent to which suspended particles with aerodynamic equivalent diameters smaller than 6 microns penetrate into the alveoli in the lungs. In a regulatory context, PM2.5 is any suspended particulate matter collected by a certified sampling device having a 50 percent collection efficiency for particles with aerodynamic equivalent diameters of 2.0-2.5 microns and an maximum aerodynamic diameter collection limit less than 6 microns. Collection efficiencies are greater than 50 percent for particles with aerodynamic diameters smaller than 2.5 microns and less than 50 percent for particles with aerodynamic diameters larger than 2.5 microns.

Precursor: A compound or category of pollutant that undergoes chemical reactions in the atmosphere to produce or catalyze the production of another type of air pollutant.

Prehistoric: Refers to the period wherein American Indian cultural activities took place before written records and not yet influenced by contact with nonnative culture(s).

Programmatic Agreement (PA): A document that details the terms of a formal, legally binding agreement between one party and other state and/or federal agencies. A PA establishes a process for consultation, review, and compliance with one or more federal laws, most often with those federal laws concerning historic preservation.

Project: The whole of an action that has the potential for resulting in a physical change in the environment, directly or ultimately.

Proponent: Alta Windpower Development LLC

Proposed Action: Alta East Wind Project.

Protocol Agreement (Protocol): A modified version of the NPA, adapted to the unique requirements of managing cultural resources on public lands in California, and is used as the primary management guidance for BLM offices in the state.

— Q —

Quaternary Age: The most recent of the three periods of the Cenozoic Era in the geologic time scale of the ICS. It follows the Tertiary Period, spanning 2.588 ± 0.005 million years ago to the present. The Quaternary includes two geologic epochs: the Pleistocene and the Holocene Epochs.

— R —

Recovery Act: See American Reinvestment and Recovery Act of 2009.

Rehabilitation: A management alternative and/or practice which restores landscapes to a desired scenic quality.

Restoration (Cultural Resource): The process of accurately reestablishing the form and details of a property or portion of a property together with its setting, as it appeared in a particular period of time. Restoration may involve removing later work that is not in itself significant and replacing missing original work. Also see Stabilization (Cultural Resource).

Riparian: Situated on or pertaining to the bank of a river, stream, or other body of water. Normally describes plants of all types that grow rooted in the water table or sub-irrigation zone of streams, ponds, and springs.

Road: A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.

Route: "Routes" represents a group or set of roads, trails, and primitive roads that represents less than 100 percent of the BLM transportation system. Generically, components of the transportation system are described as routes.

— S —

Saleable Minerals: Common variety minerals on the public lands, such as sand and gravel, which are used mainly for construction and are disposed by sales or special permits to local governments. See also Mineral Materials.

Scale: The proportionate size relationship between an object and the surroundings in which the object is placed.

Scenery: The aggregate of features that give character to a landscape.

Scenic Area: An area whose landscape character exhibits a high degree of variety and harmony among the basic elements which results in a pleasant landscape to view.

Scenic Quality: The relative worth of a landscape from a visual perception point of view.

Scenic Quality Evaluation Key Factors: The seven factors (land form, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications) used to evaluate the scenic quality of a landscape.

Scenic Quality Ratings: The relative scenic quality (A, B, or C) assigned a landscape by applying the scenic quality evaluation key factors; scenic quality A being the highest rating, B a moderate rating, and C the lowest rating.

Scenic Values: See Scenic Quality and Scenic Quality Ratings.

Secretary of the Interior: The U.S. Department of the Interior is in charge of the nation's internal affairs. The Secretary serves on the President's cabinet and appoints citizens to the National Park Foundation board.

Sedimentary Rocks: Rocks, such as sandstone, limestone, and shale, that are formed from sediments or transported fragments.

Sensitivity Levels: Measures (e.g., high, medium, and low) of public concern for scenic quality.

Shaft: See Mine Shaft.

Significant and Unavoidable Impact. An impact that exceeds the defined thresholds of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

Significant Impact on the Environment: A substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by the proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. An economic or social change by itself is not considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

Special Status Species: Federal- or state-listed species, candidate or proposed species for listing, or species otherwise considered sensitive or threatened by state and federal agencies.

State Historic Preservation Office (SHPO): The official within and authorized by each state at the request of the Secretary of the Interior to act as liaison for the National Historic Preservation Act. Also see National Historic Preservation Act.

State Implementation Plan (SIP): Legally enforceable plans adopted by states and submitted to EPA for approval, which identify the actions and programs to be undertaken by the State and its subdivisions to achieve and maintain national ambient air quality standards in a time frame mandated by the Clean Air Act.

State Water Resources Control Board (SWRCB): Created in 1967, joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California's waters. The mission of the nine Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology.

Subsurface: Of or pertaining to rock or mineral deposits which generally are found below the ground surface.

Sulfur Dioxide (SO2): A pungent, colorless, and toxic oxide of sulfur formed primarily by the combustion of fossil fuels. It is a respiratory irritant, especially for asthmatics. A criteria pollutant in its own right, and a precursor of sulfate particles and atmospheric sulfuric acid.

Supervisory Control and Data Acquisition System (SCADA). A system that allows for controlling and monitoring individual turbines and the wind plant as a whole from a central host computer or a remote personal computer.

— T —

Tertiary: The Tertiary Period marks the beginning of the Cenozoic Era. It began 65 million years ago and lasted more than 63 million years, until 1.8 million years ago. The Tertiary is made up of 5 epochs: the Paleocene Epoch, the Eocene Epoch, the Oligocene Epoch, the Miocene Epoch, and the Pliocene Epoch.

Texture: The visual manifestations of the interplay of light and shadow created by the variations in the surface of an object or landscape.

Toxic: Poisonous. Exerting an adverse physiological effect on the normal functioning of an organism's tissues or organs through chemical or biochemical mechanisms following physical contact or absorption.

Traditional Cultural Properties: Areas associated with the cultural practices or beliefs of a living community. These sites are rooted in the community's history and are important in maintaining cultural identity.

Trail: A linear route managed for human-powered, stock, or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

— U —

Undertaking: Equivalent in present analysis to "proposed action" and "proposed project." An undertaking, pursuant to 36 CFR § 800.16(y), "means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval."

— V —

Vandalism (Cultural Resource): Malicious damage or the unauthorized collecting, excavating, or defacing of cultural resources. Section 6 of the Archaeological Resources Protection Act states that "no person may excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands…unless such activity is pursuant to a permit issued under section 4 of this Act."

Variables: Factors influencing visual perception including distance, angle of observation, time, size or scale, season of the year, light, and atmospheric conditions.

Variety: The state or quality of being varied and having the absence of monotony or sameness.

Vehicle Miles Traveled (VMT): The cumulative amount of vehicle travel within a specified or implied geographical area over a given period of time.

Viewshed: The landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor. Protection, rehabilitation, or enhancement is desirable and possible.

Visual Contrast: See Contrast.

Visual Quality: See Scenic Quality.

Visual Resources: The visible physical features on a landscape (e.g., land, water, vegetation, animals, structures, and other features).

Visual Resource Management Classes: Categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. There are four classes. Each class has an objective which prescribes the amount of change allowed in the characteristic landscape.

Visual Resource Management (VRM): The inventory and planning actions taken to identify visual values and to establish objectives for managing those values; and the management actions taken to achieve the visual management objectives.

Visual Values: See Scenic Quality.

— W —

Wetlands: Permanently wet or intermittently water-covered areas, such as swamps, marshes, bogs, potholes, swales, and glades.

Wilderness Area: An area formally designated by Congress as part of the National Wilderness Preservation System as defined in the Wilderness Act of 1964 (78 Stat. 891), Section 2(c).

Wilderness Study Area: A roadless area or island that has been inventoried and found to have wilderness characteristics as described in section 603 of FLPMA and section 2(c) of the Wilderness Act of 1964 (78 Stat. 891). Source for both of these is BLM's IMP and Guidelines for Lands Under Wilderness Review (December 1979).

Wind Turbine Generator (WTG). A rotary device that extracts energy from the wind.

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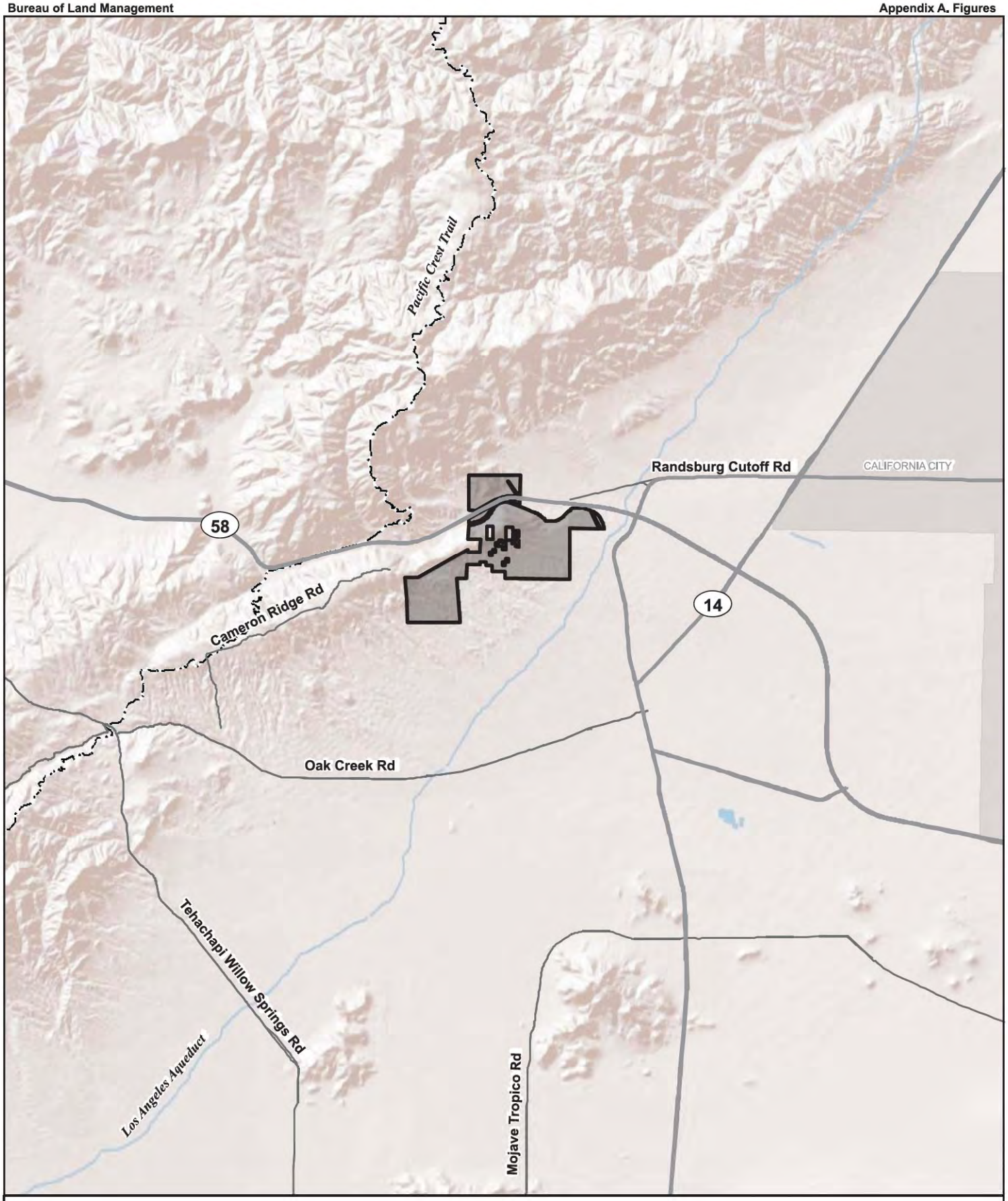
This entire document consists of maps and schematics that cannot be made fully compliant with Section 508 of the Rehabilitation Act of 1973. If you need help using the information here, please contact the Ridgecrest Field Office at (760) 384-5400 and reference the Proposed Plan Amendment and Final EIS for the Alta East Wind Project, Appendix A, Figures. Disclaimer: The Bureau of Land Management makes no representations or warranties regarding the accuracy or completeness of this map. The map is merely representational, it and the data from which it was derived are not binding on the Bureau and may be revised at any time in the future. The Bureau of Land Management shall not be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map or the data from which it was derived.



0 1.25 2.5 5 Miles

Project Boundary

Figure 2-1

Regional Location Map

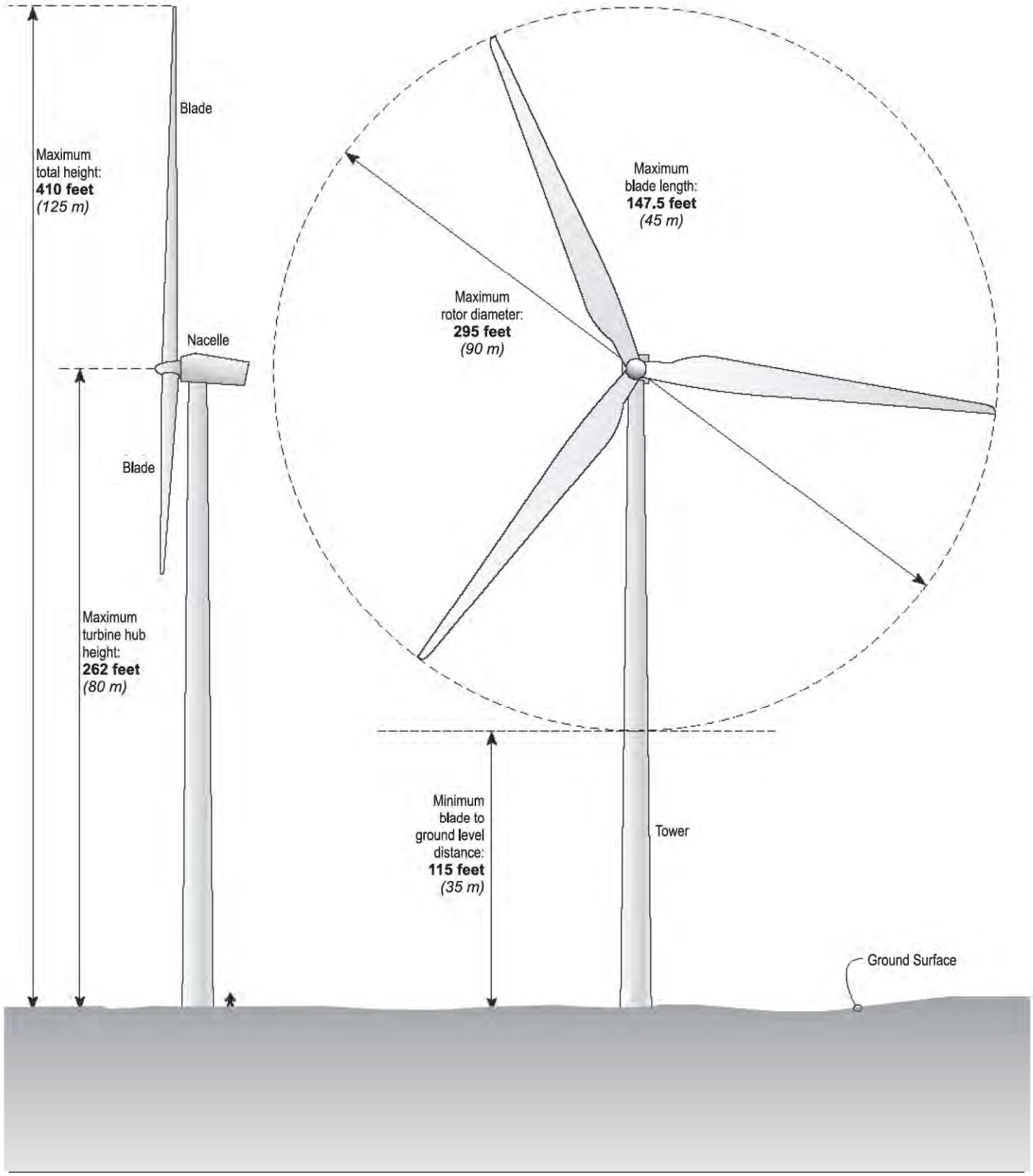


Figure 2-2
Schematic Illustration of WTG

Source: AWD, 2011.

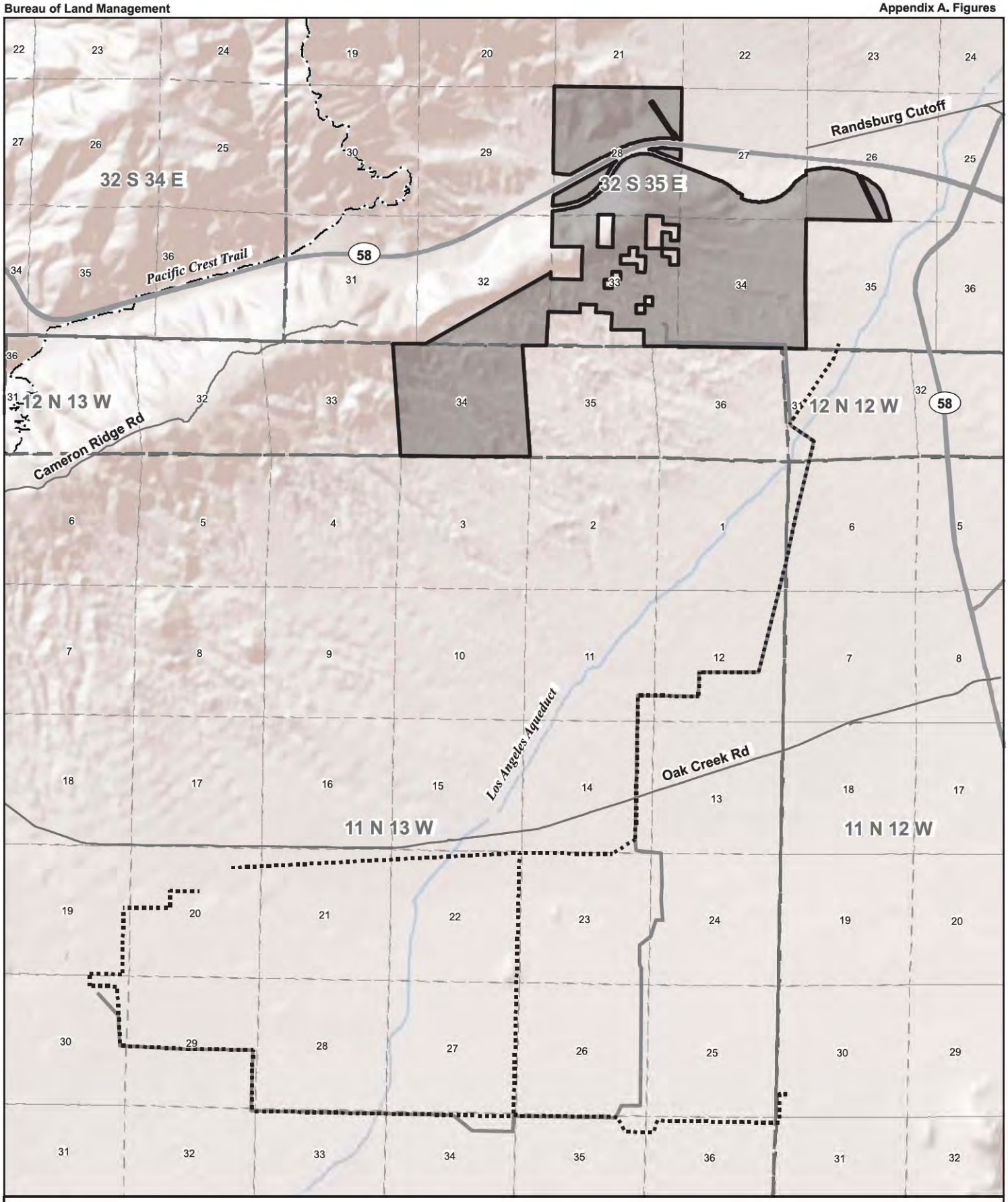


Figure 2-3

Alta East Wind Project Transmission Line

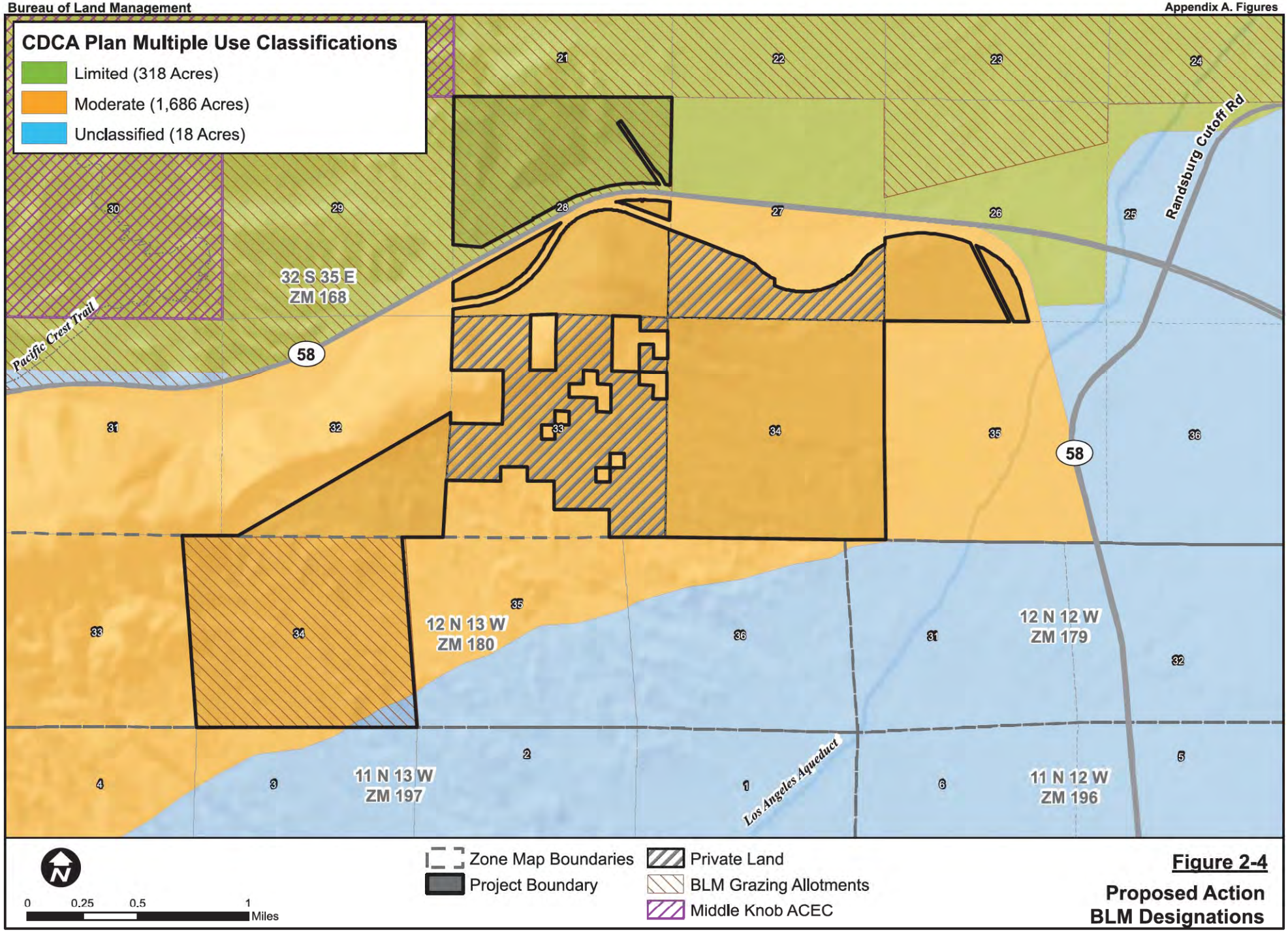


Figure 2-4

Proposed Action BLM Designations

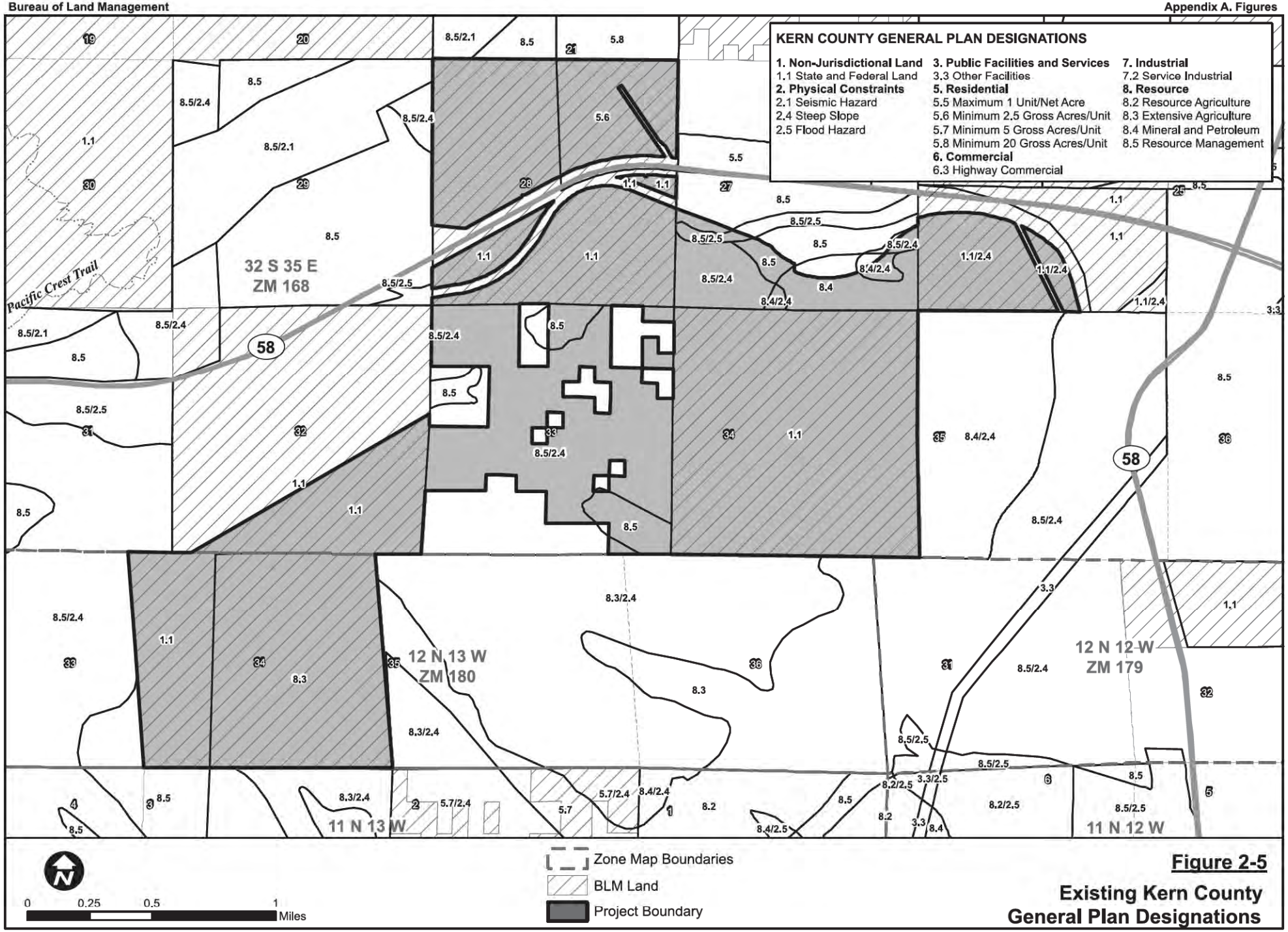


Figure 2-5

Existing Kern County General Plan Designations

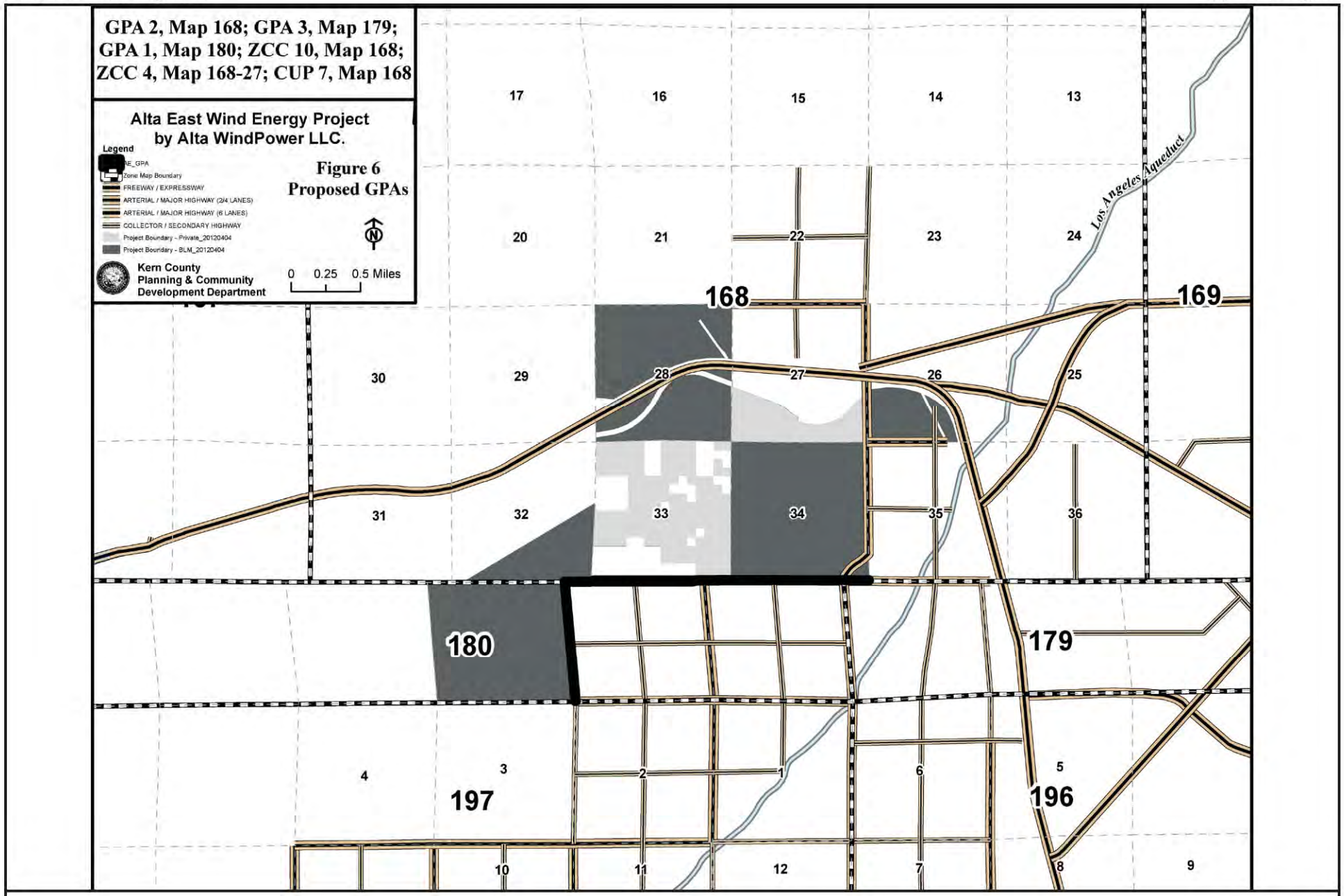


Figure 2-6

Proposed GPA's

Source: Kern County Planning and Community Development Department

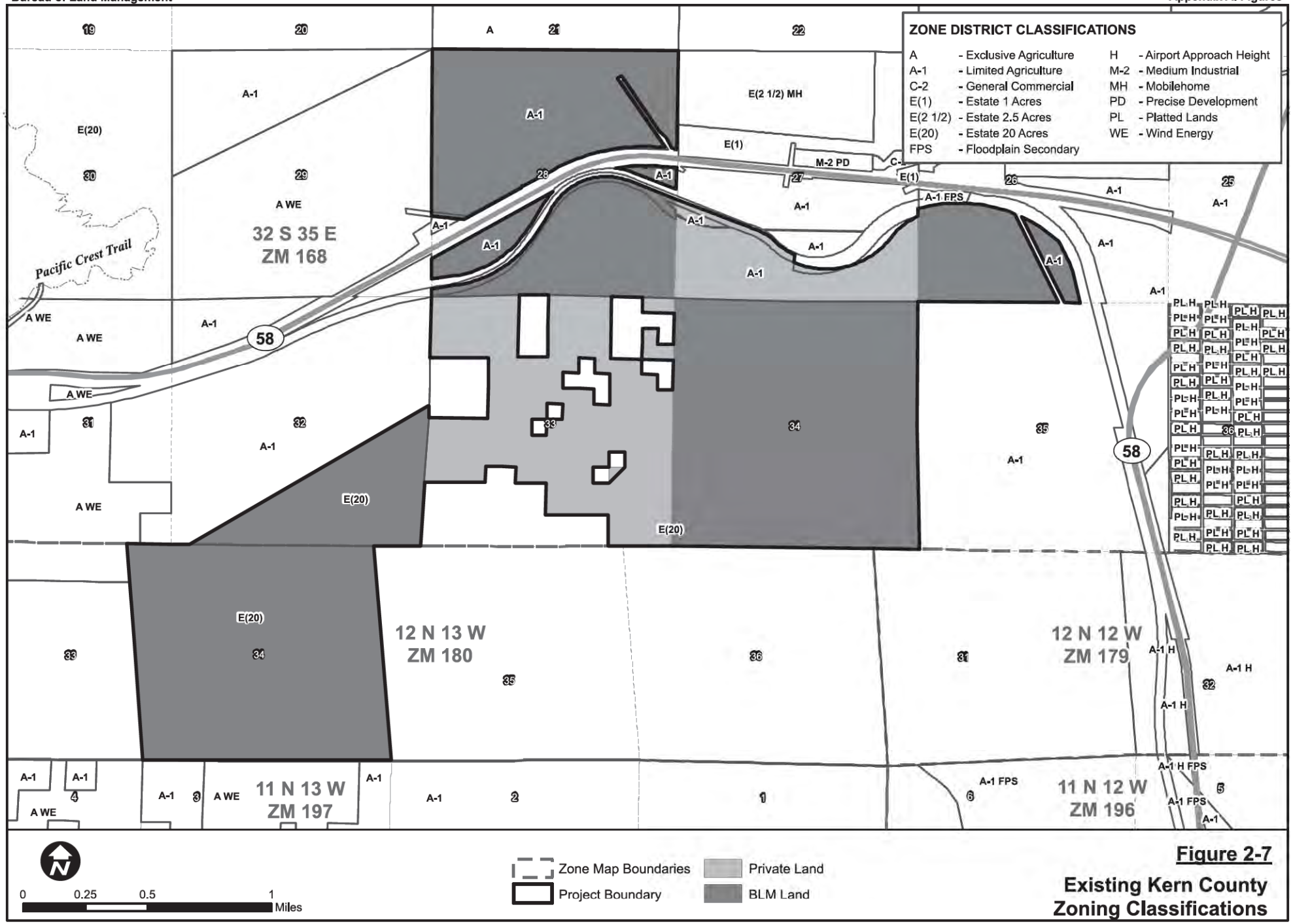


Figure 2-7

Existing Kern County Zoning Classifications

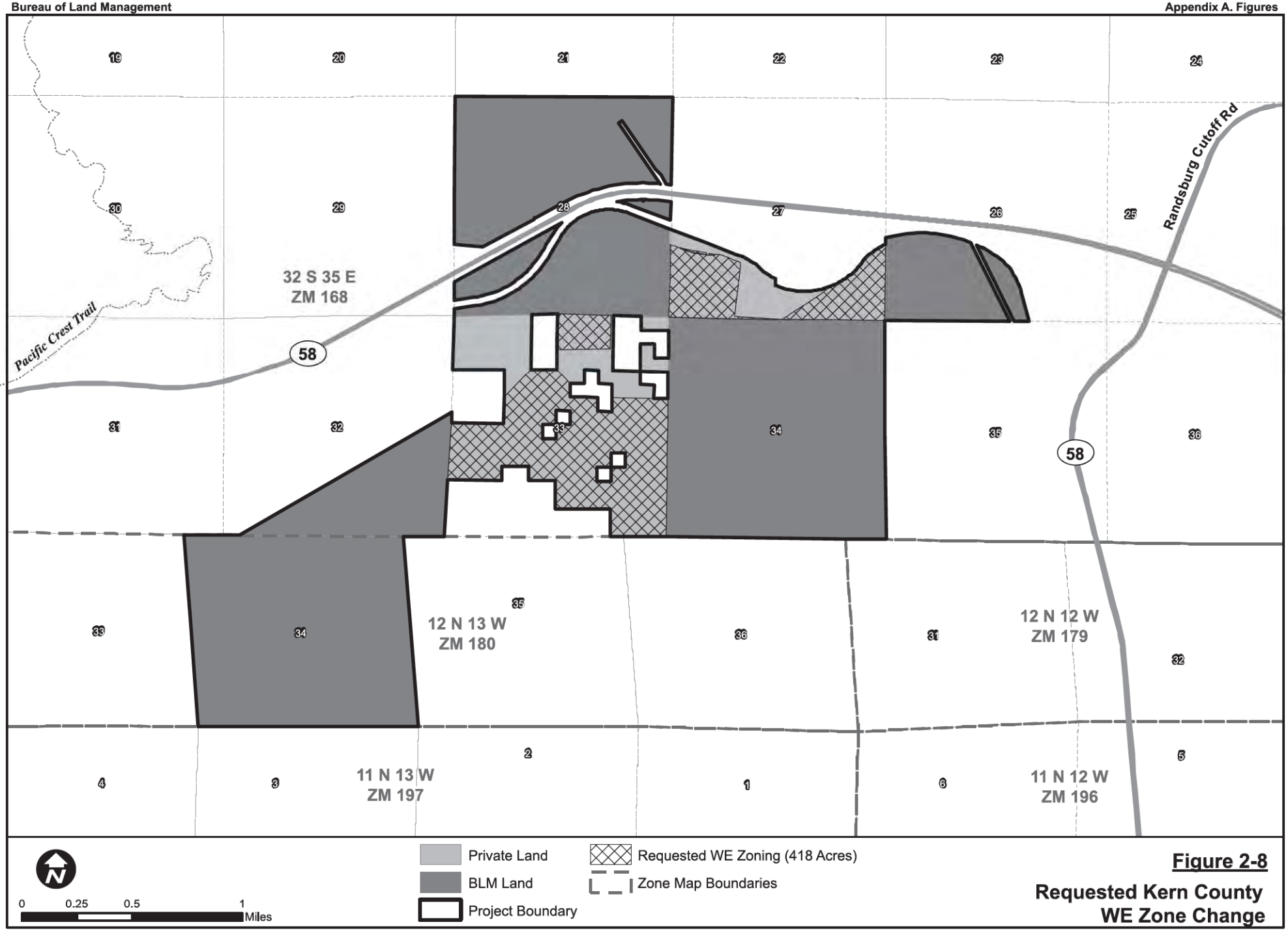


Figure 2-8

Requested Kern County WE Zone Change

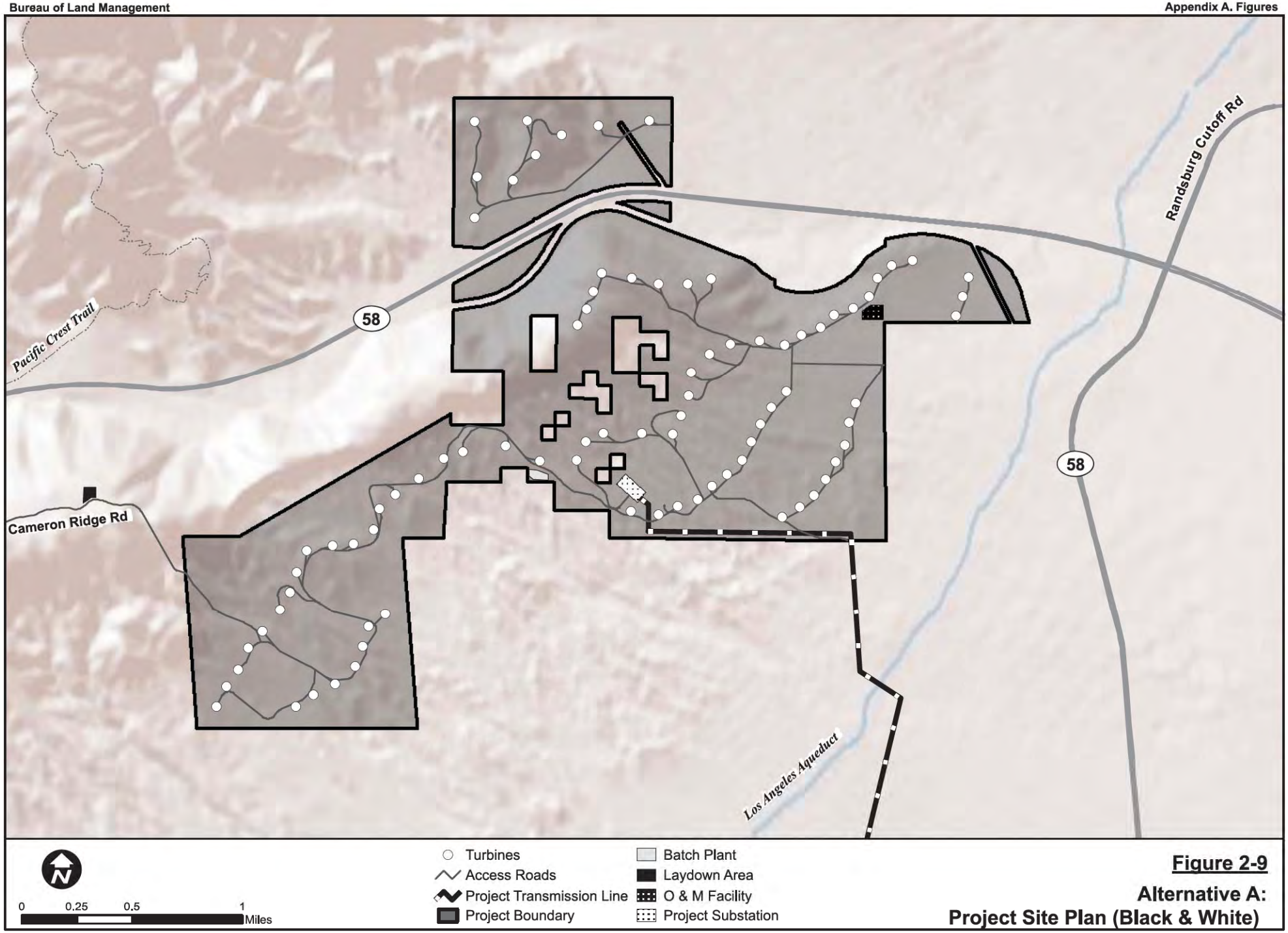


Figure 2-9

Alternative A:
Project Site Plan (Black & White)

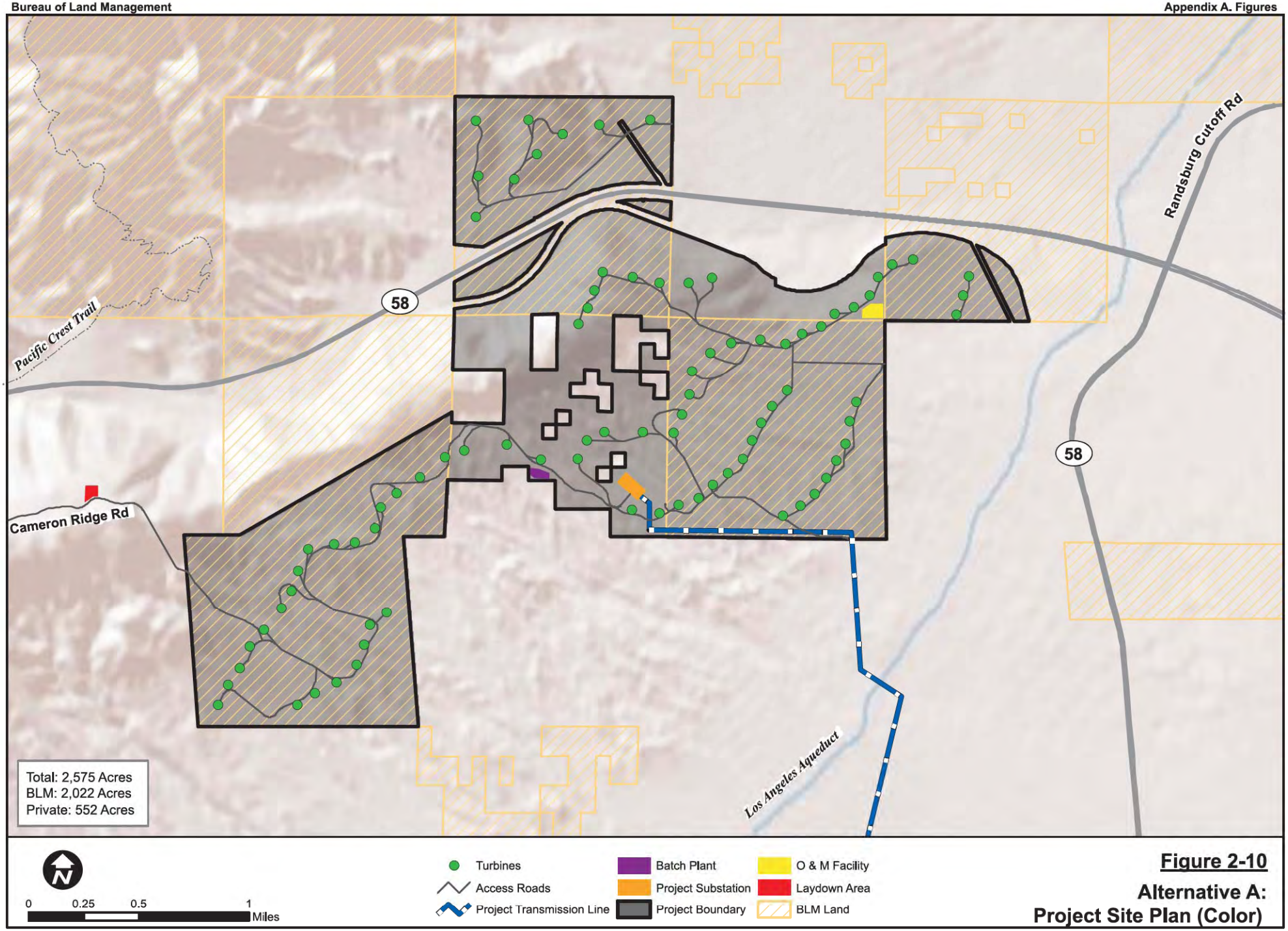


Figure 2-10

Alternative A: Project Site Plan (Color)

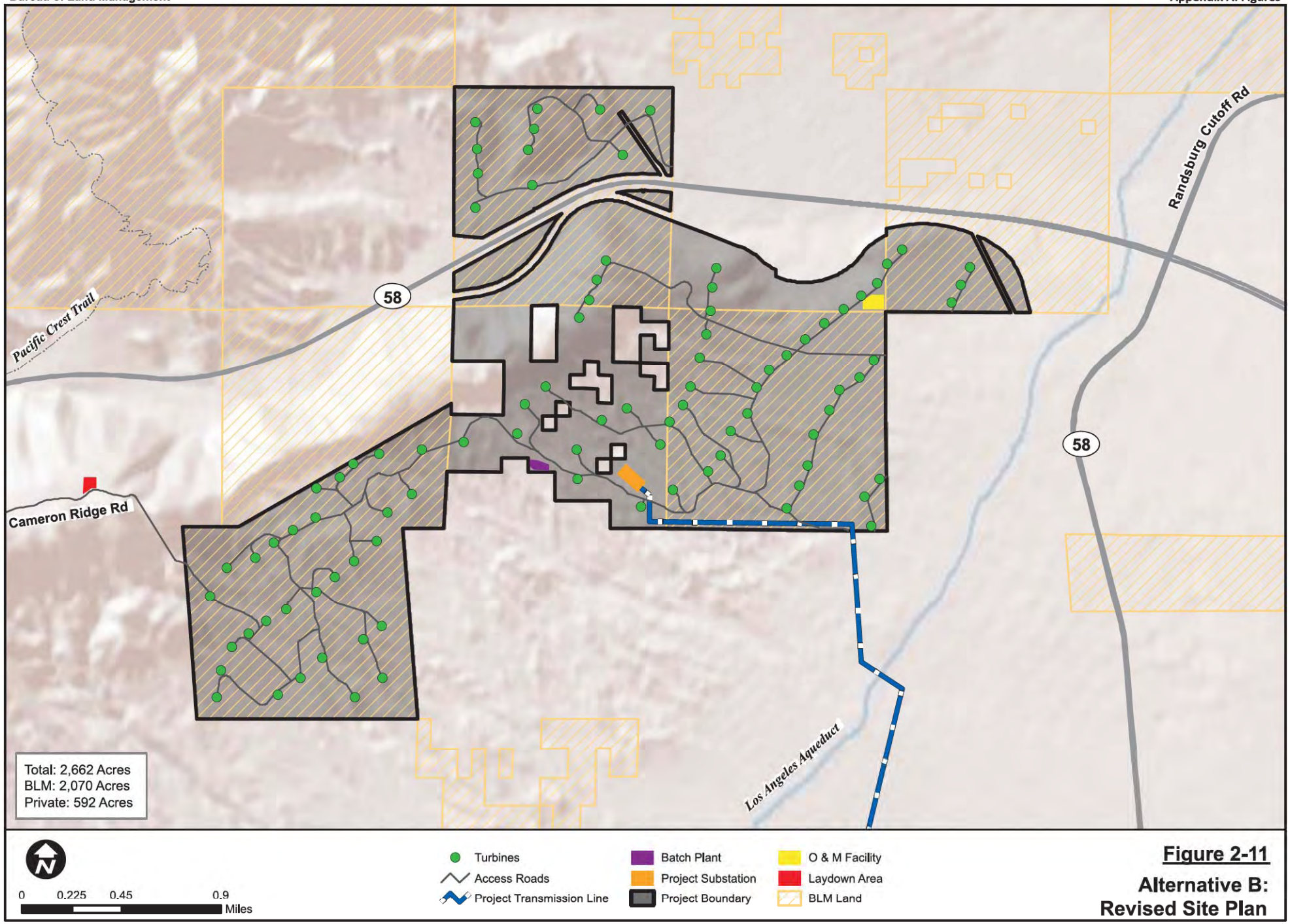


Figure 2-11

Alternative B: Revised Site Plan

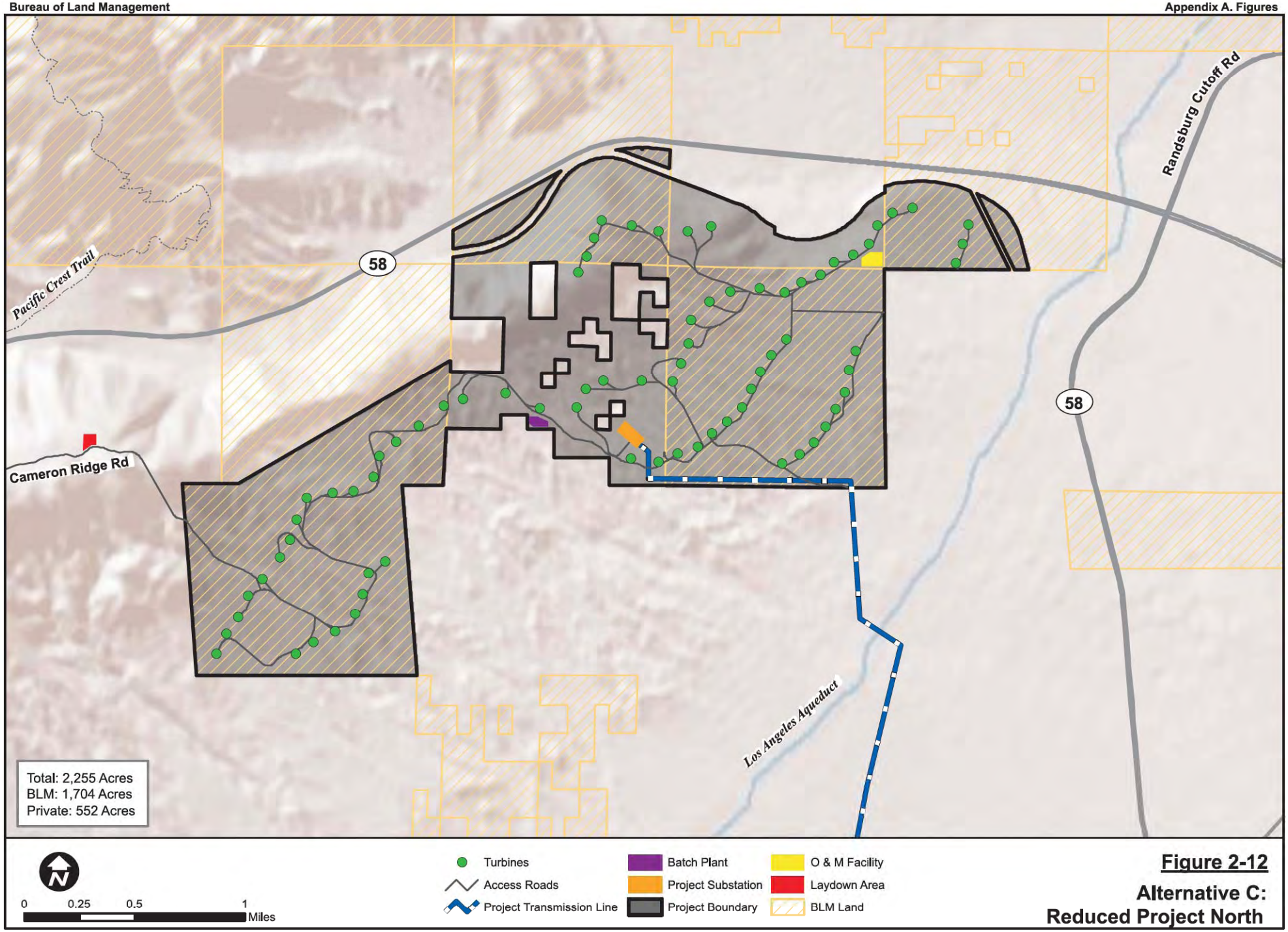


Figure 2-12

Alternative C: Reduced Project North

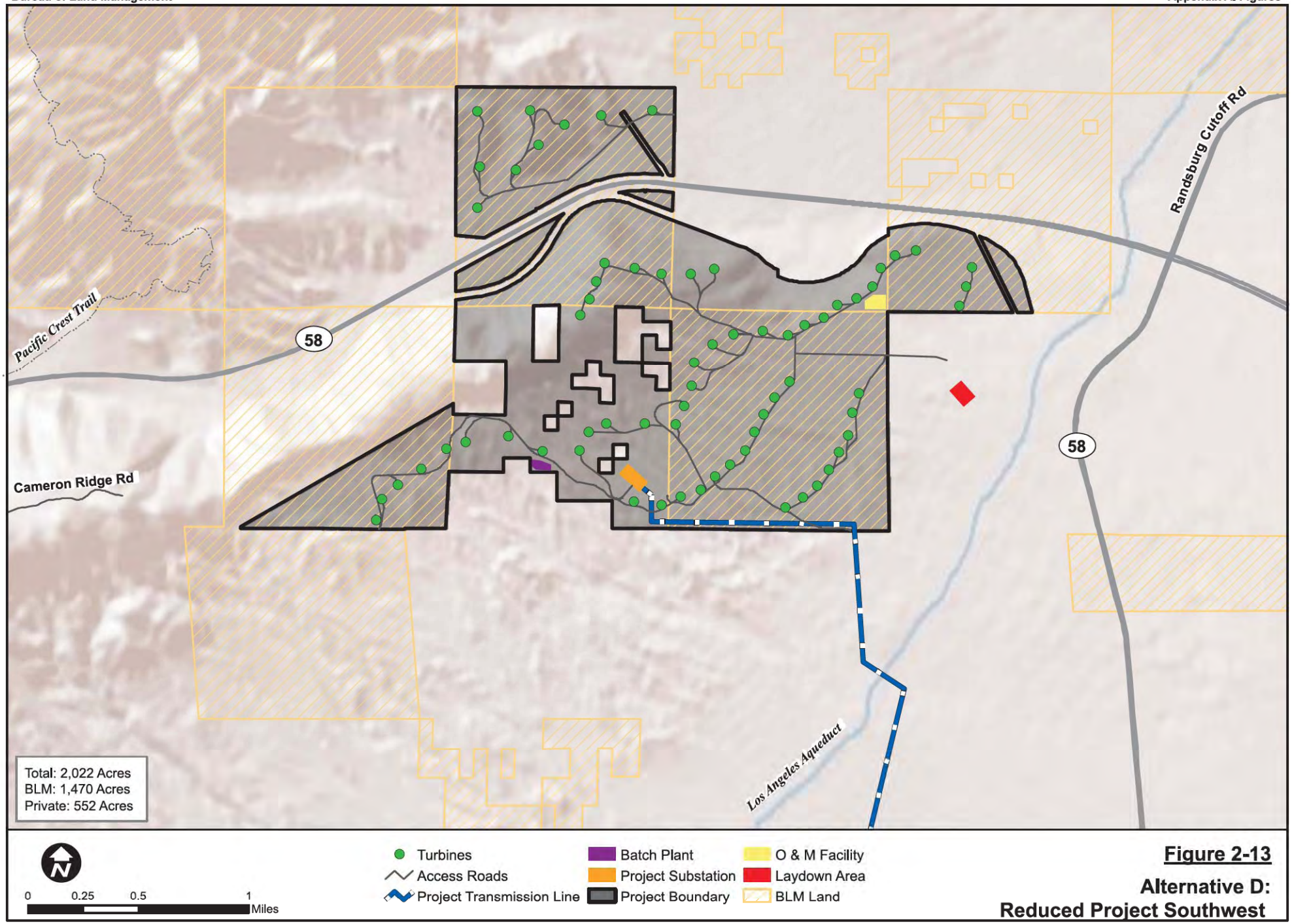


Figure 2-13

Alternative D: Reduced Project Southwest

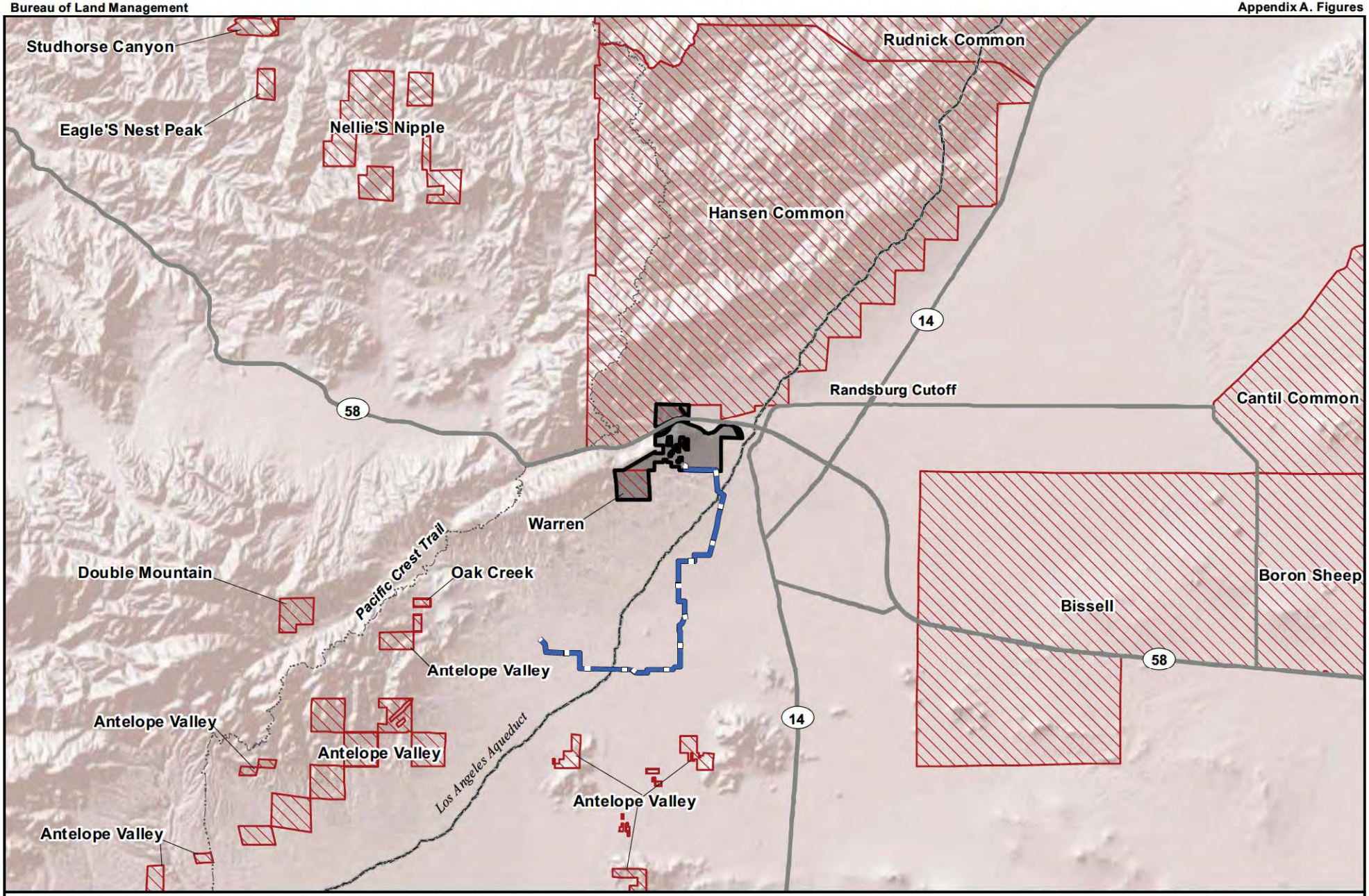
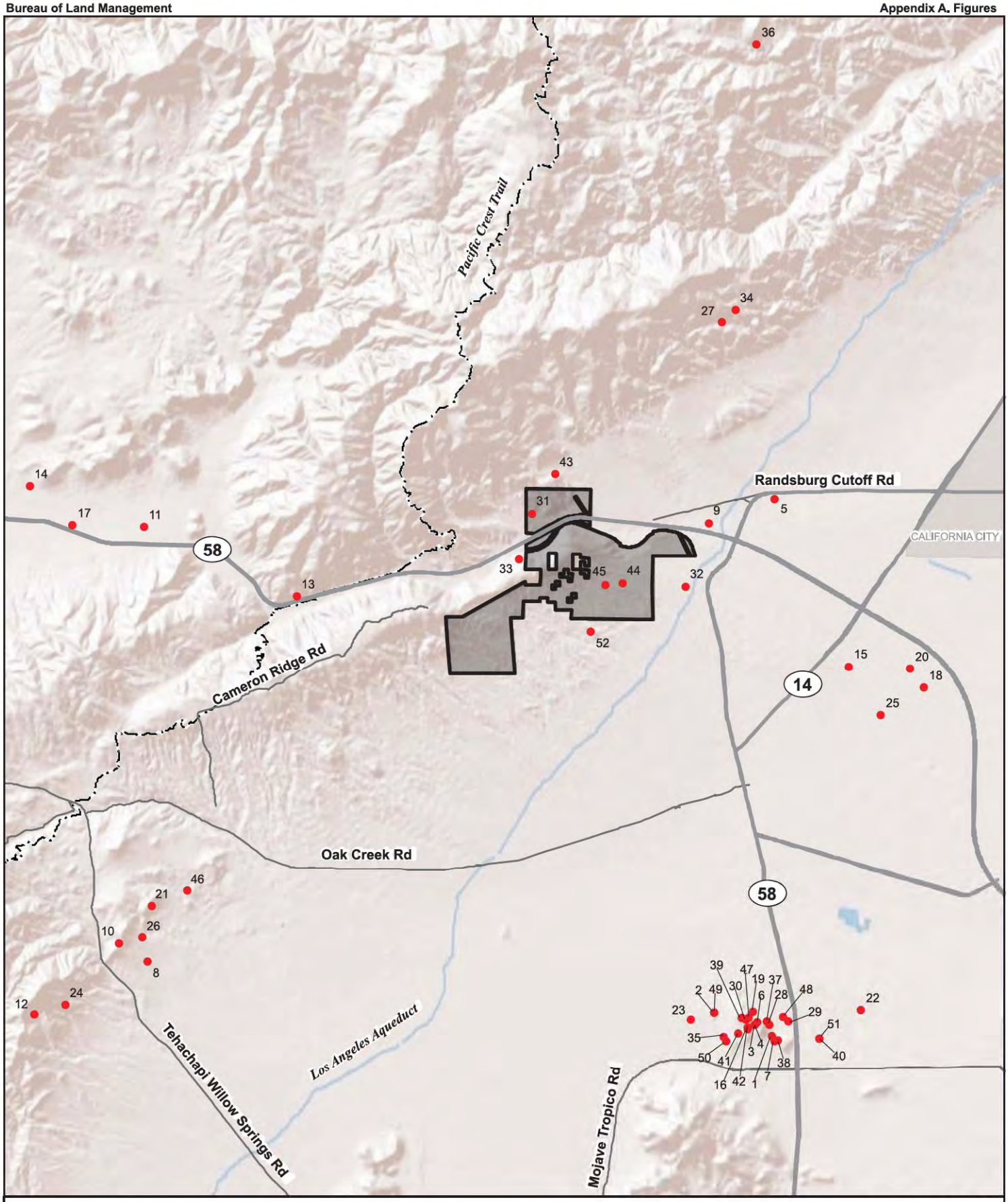


Figure 3.7-1
BLM Grazing Allotments



0 1 2 4 Miles

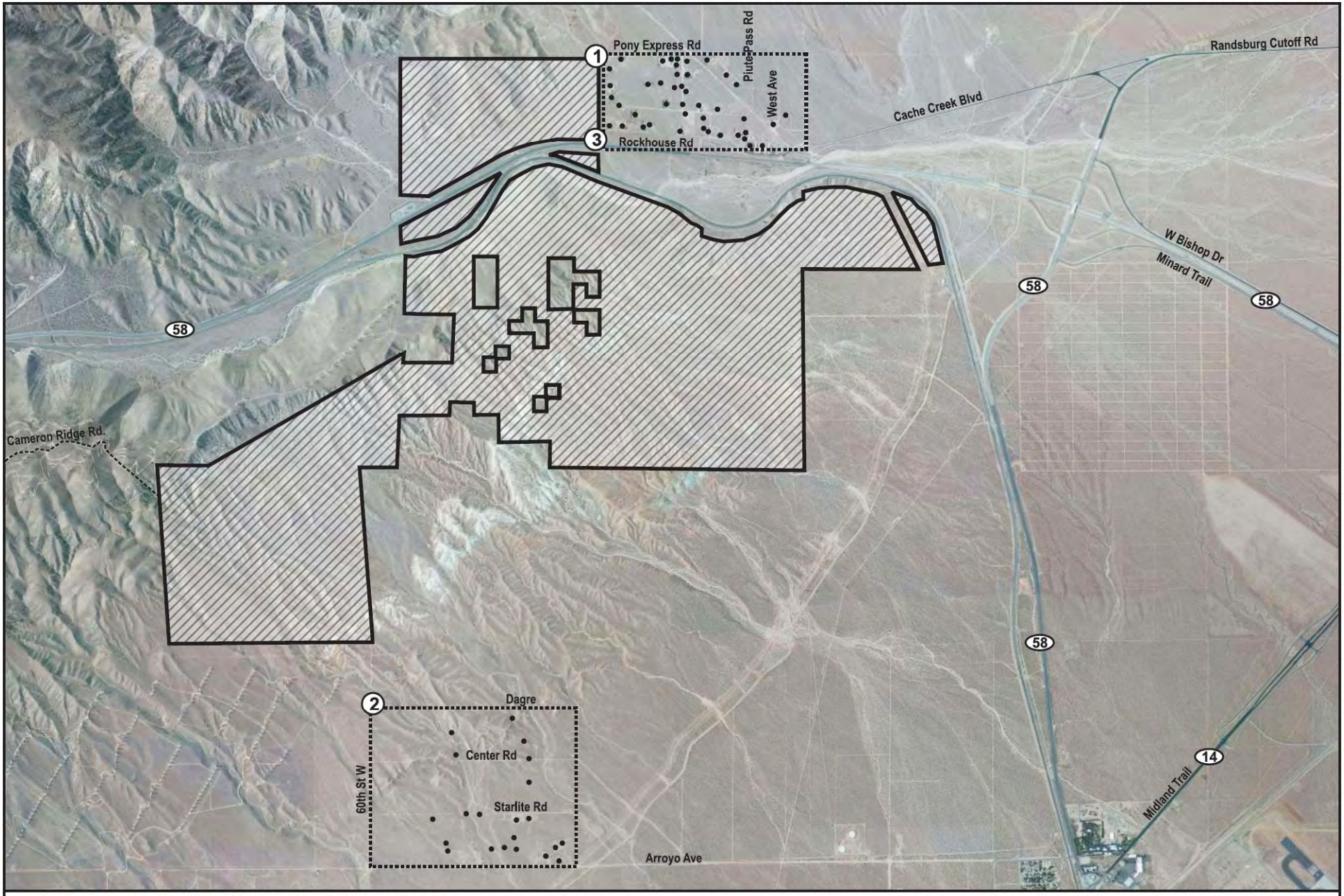
Mineral Resources Sites *(Refer to Table 3.8.1)*

Project Boundary

Figure 3.8-1

Regional Mineral Resources Sites

Source: MRDS, 2011a; MRDS, 2011b; MRDS, 2011c

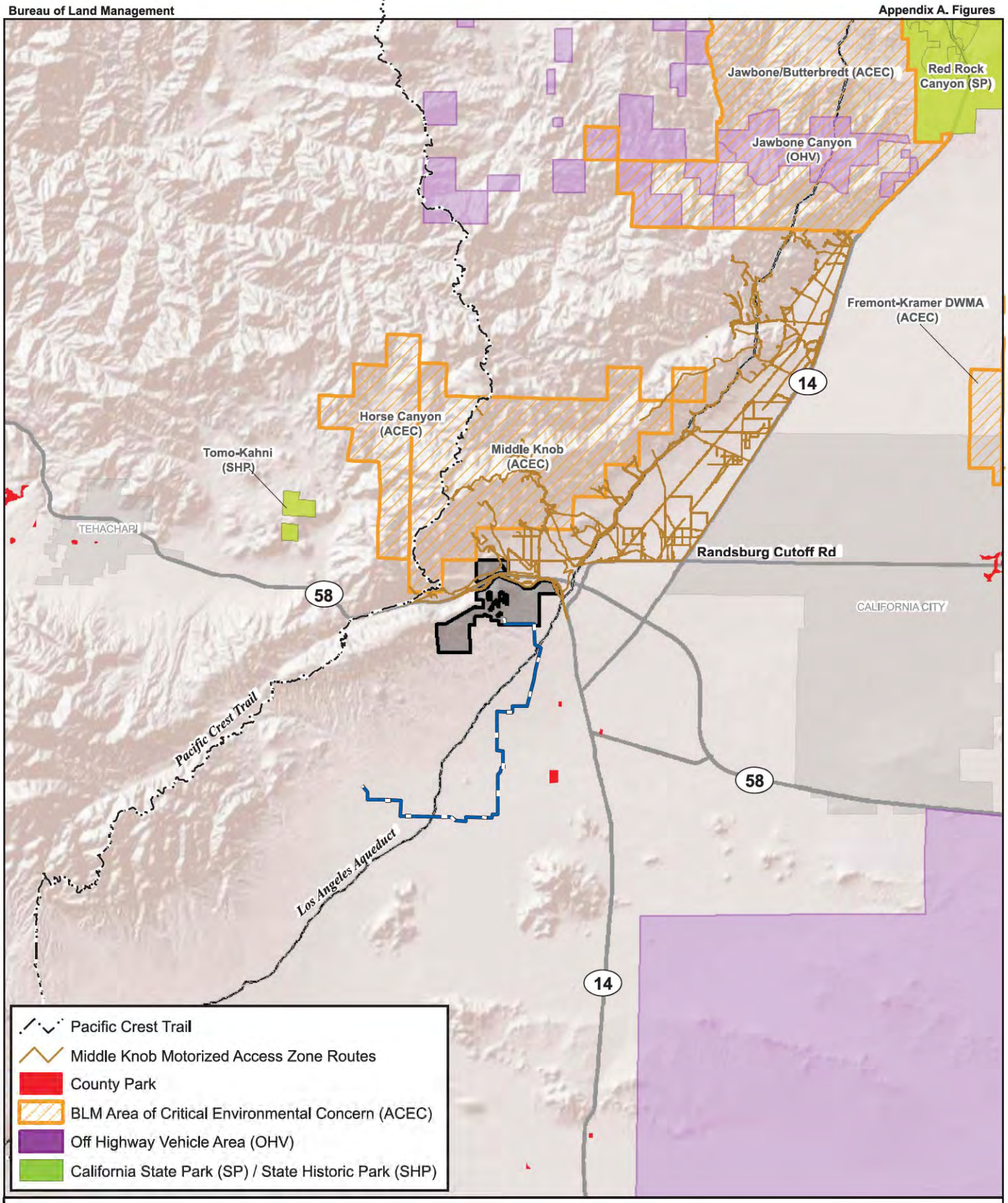


1 Noise Monitoring Location

Project Boundary

Residential Receptor

Figure 3.9-2
Noise Monitoring Locations and Sensitive Receptors

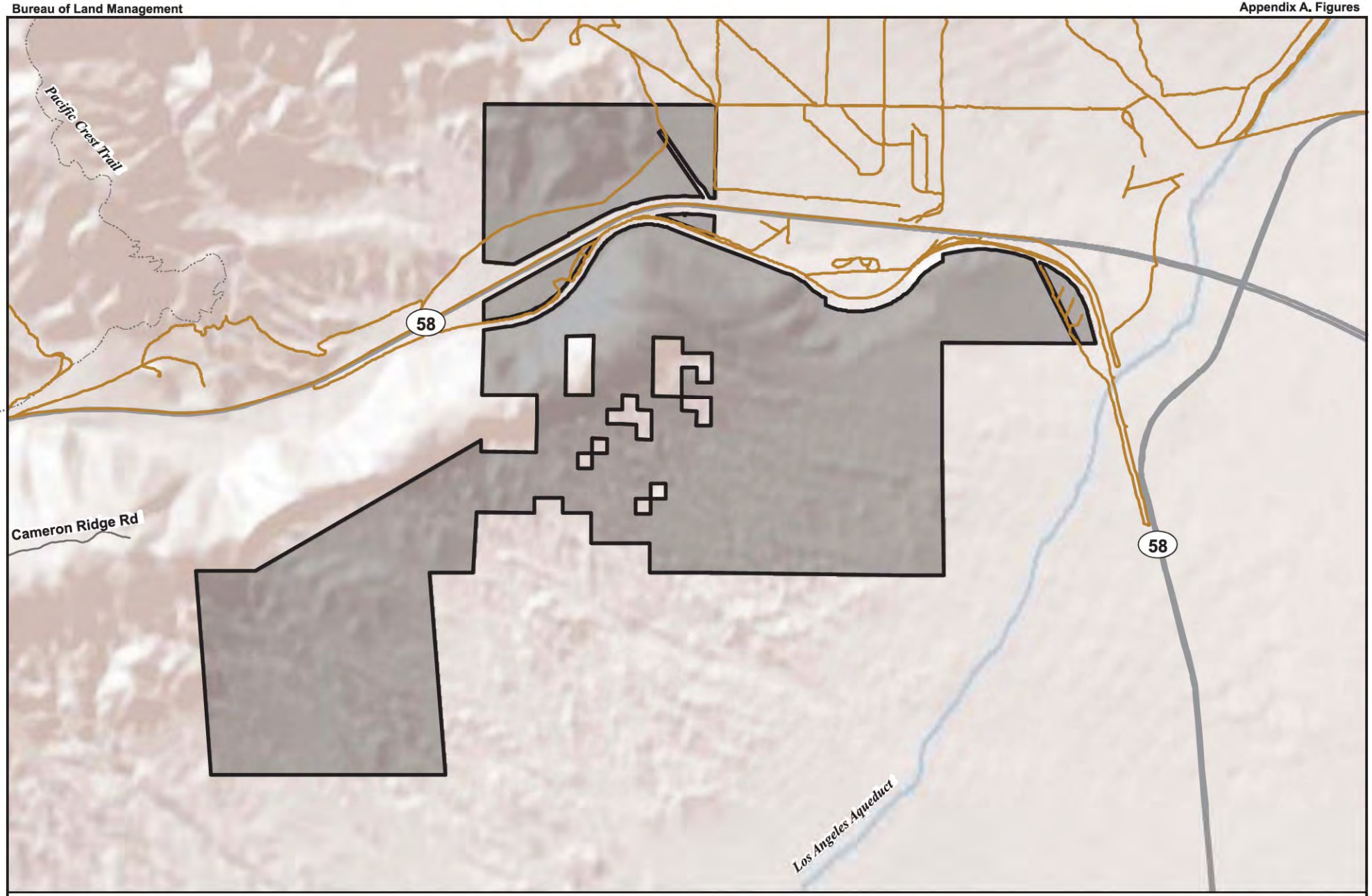


Project Transmission Line
Project Boundary

0 2 4 8 Miles

Figure 3.12-1

Regional Recreation Resources



0 0.25 0.5 1 Miles

Middle Knob Motorized Access Zone Routes

Project Boundary

Figure 3.12-2

Middle Knob Motorized Access Zone Routes in Project Area

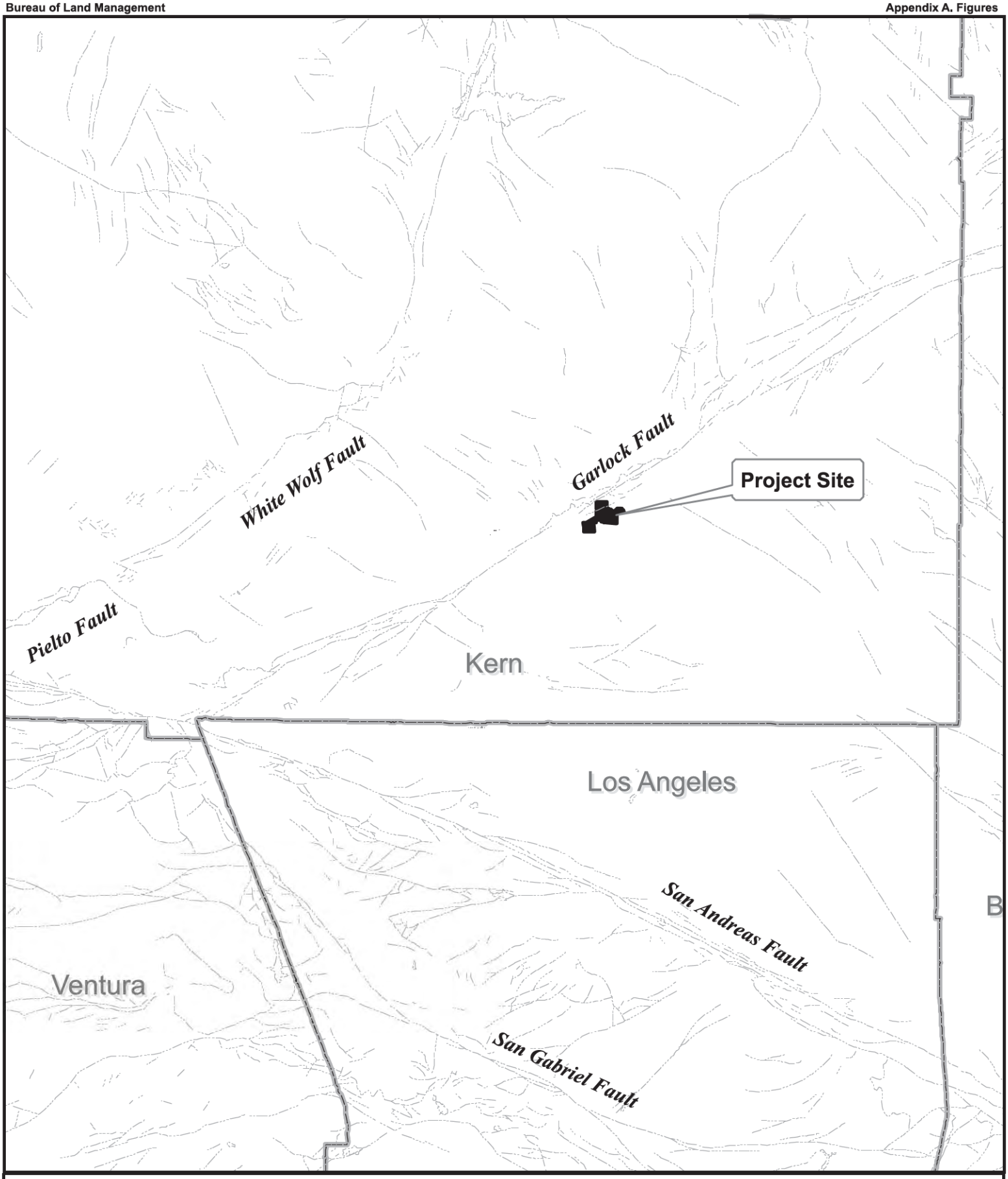
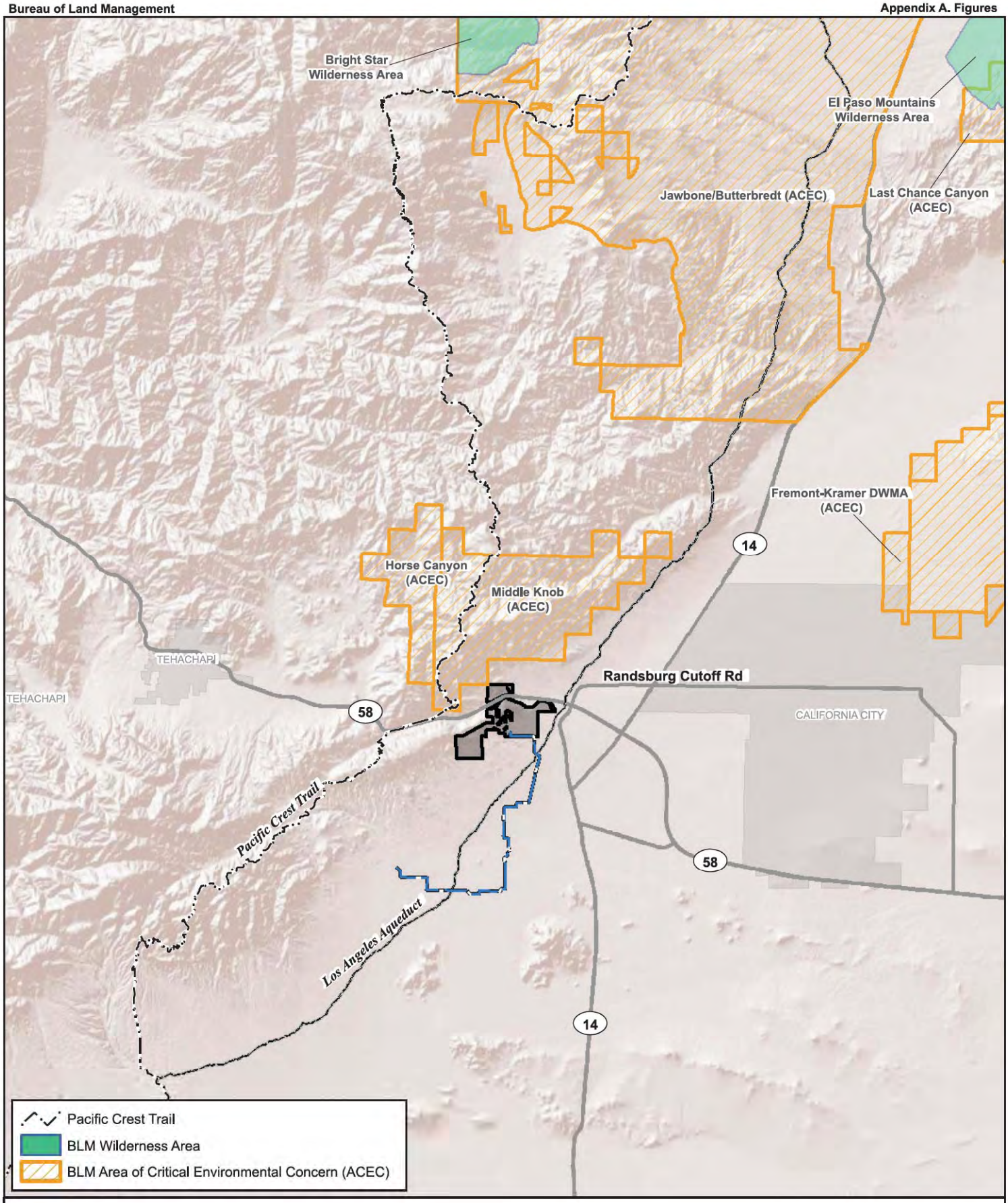


Figure 3.14-1
Regional Fault Lines

Source: USGS

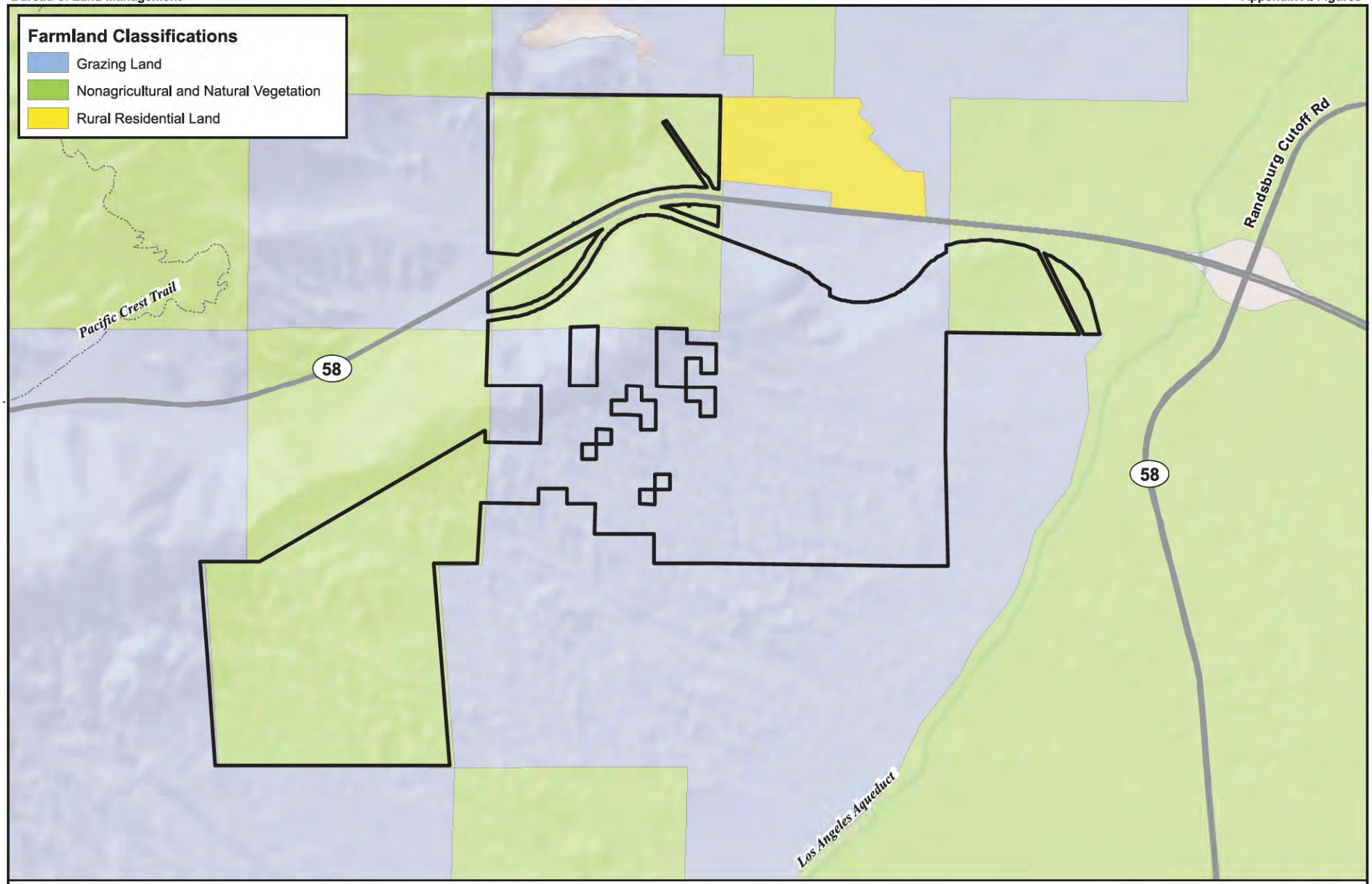


Project Transmission Line
Project Boundary

0 2.5 5 10 Miles

Figure 3.15-1

Special Designations



0 0.25 0.5 1 Miles

Project Boundary

Figure 3.15-2

Farmland Classifications

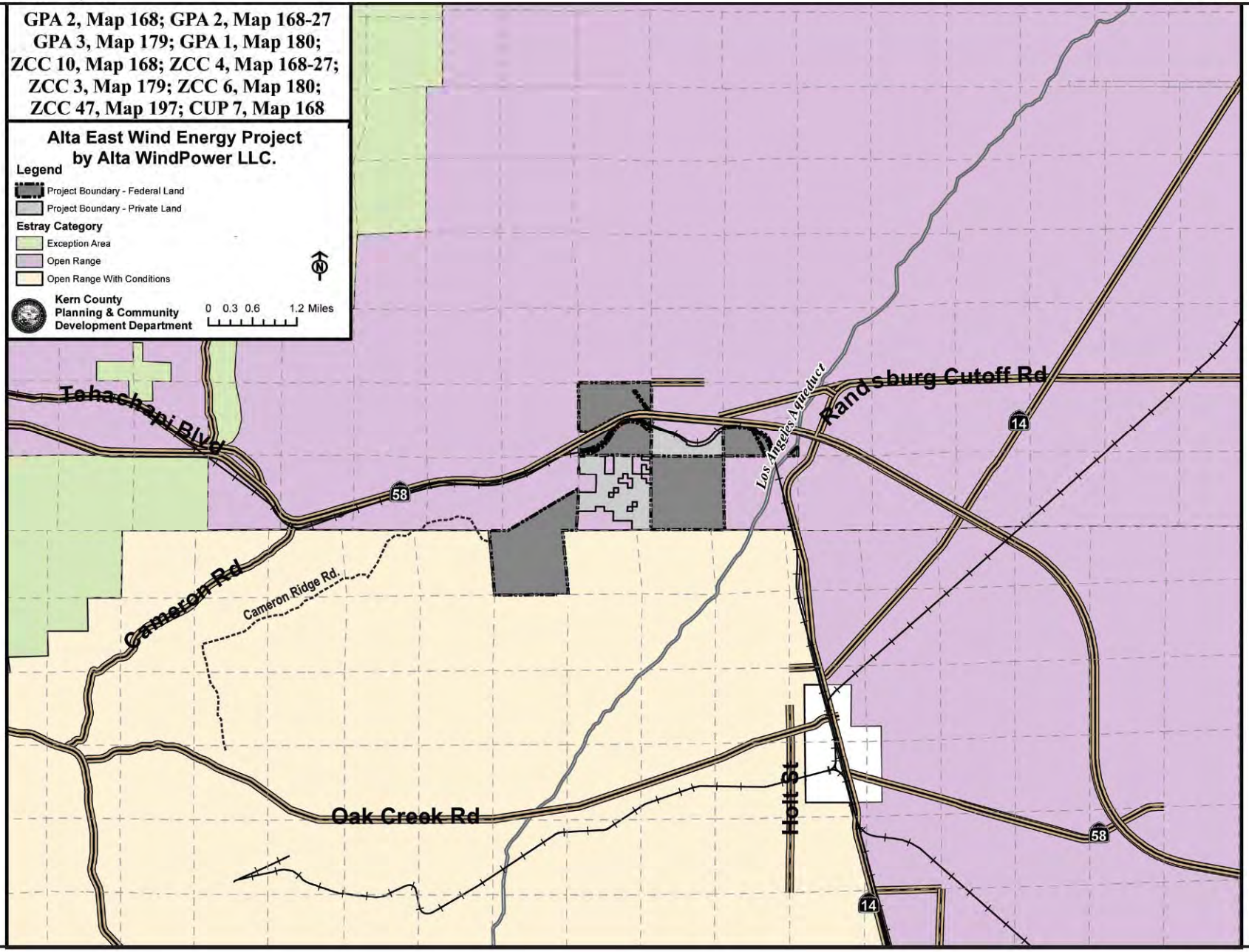
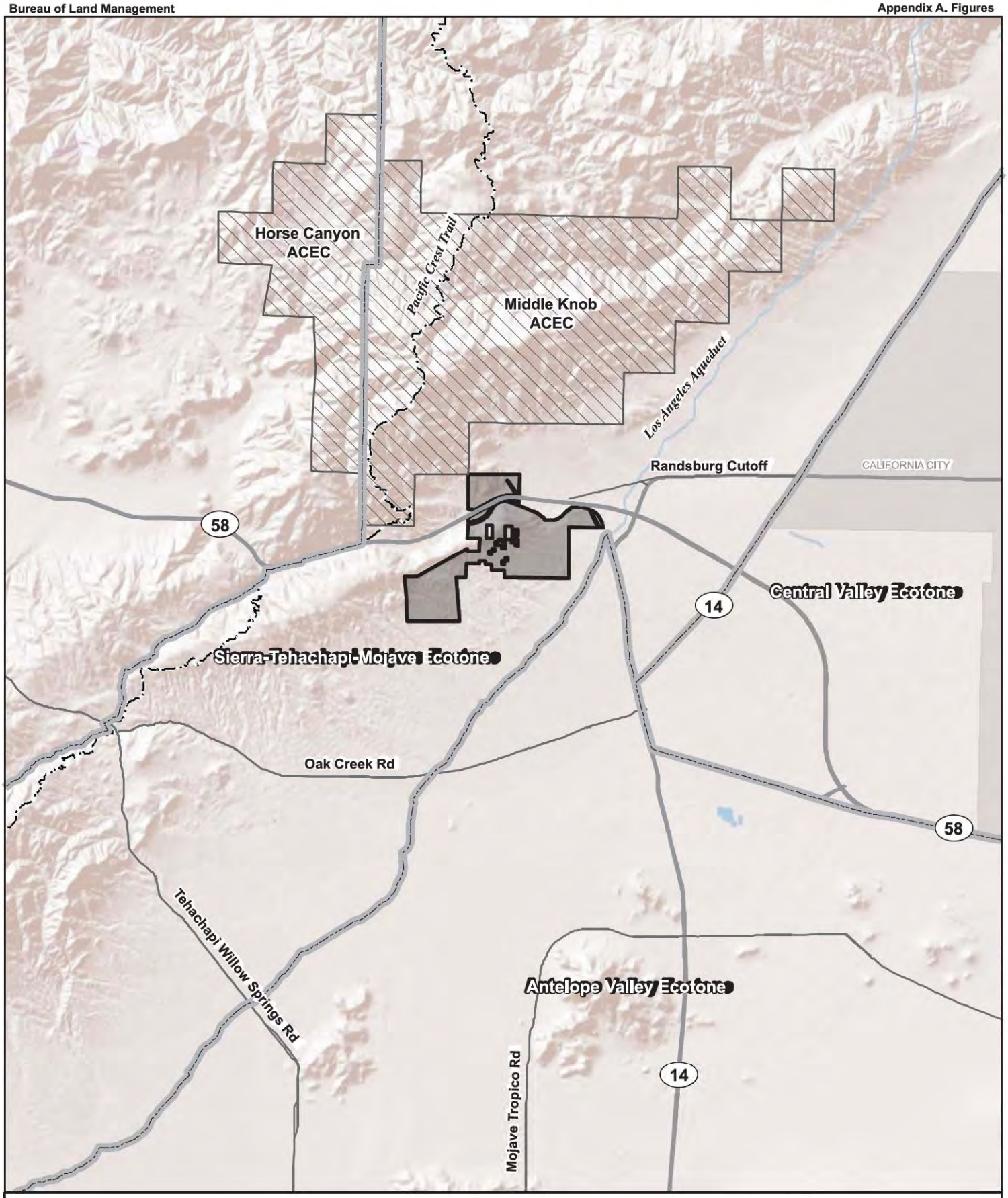


Figure 3.15-3

Estray Ordinance

Source: Kern County Planning and Community Development Department



0 1.25 2.5 5 Miles

ACEC
Ecotone
Project Boundary

Figure 3.17-1

Regional Ecotone Locations

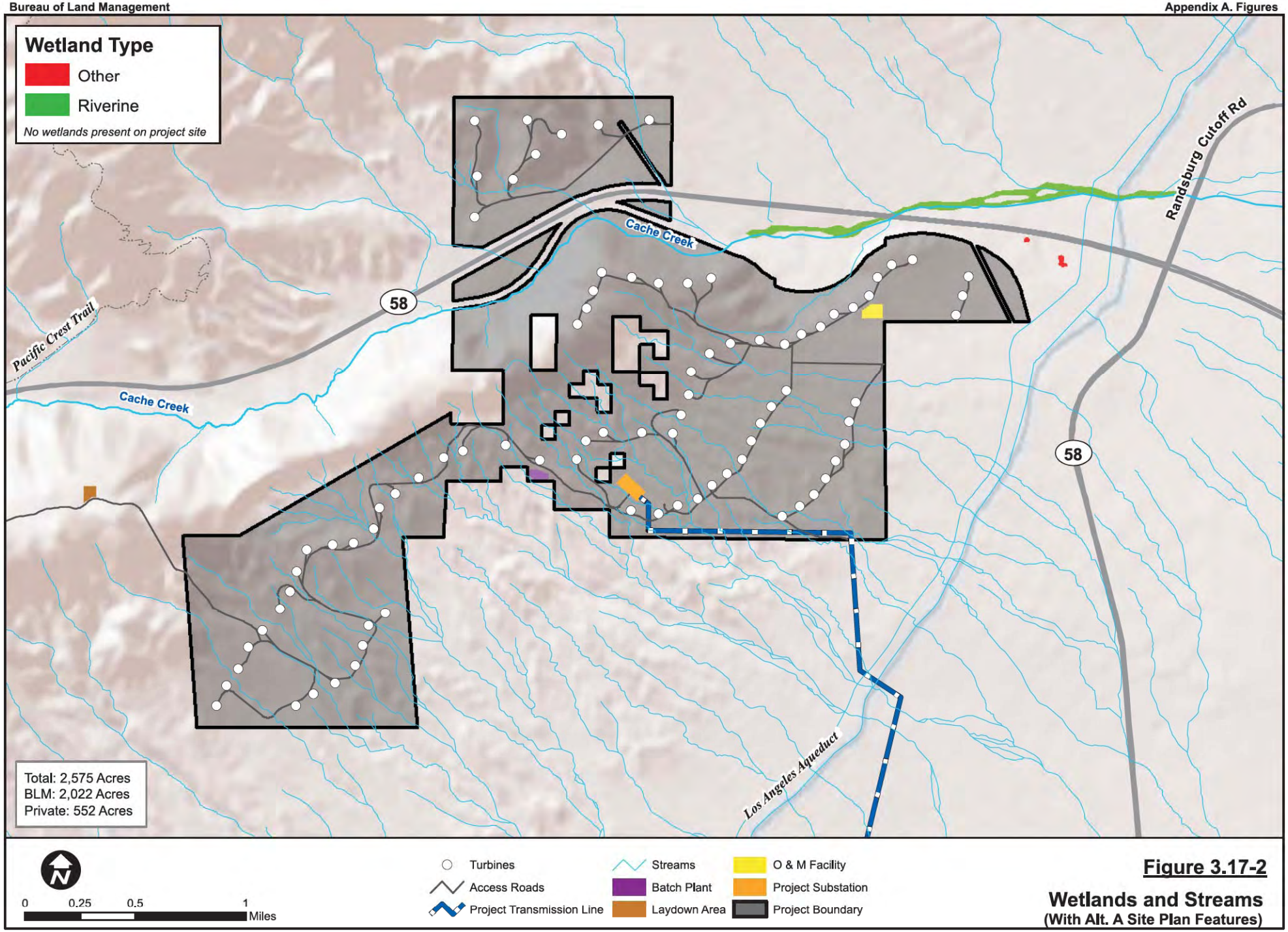


Figure 3.17-2

Wetlands and Streams
(With Alt. A Site Plan Features)

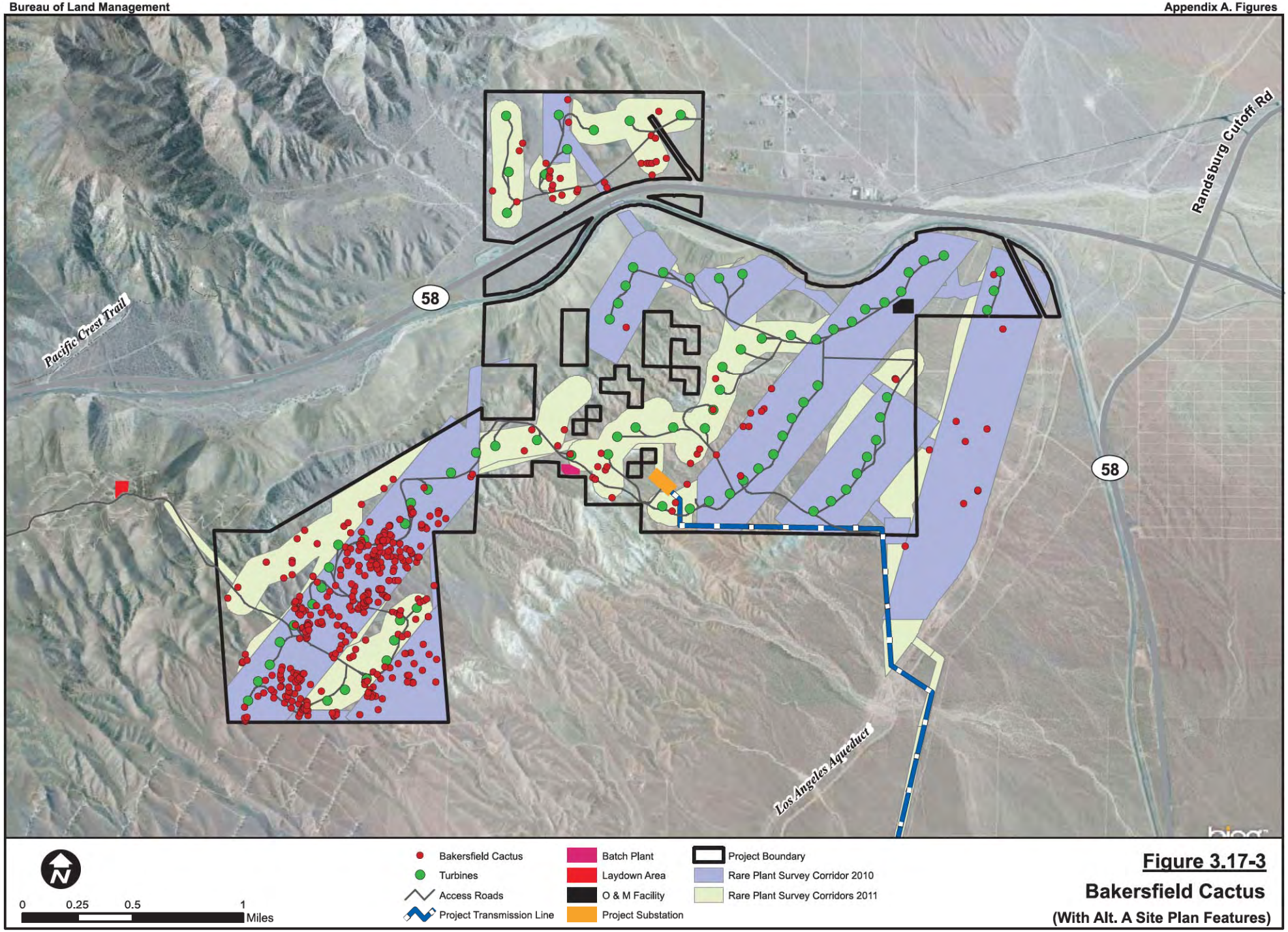
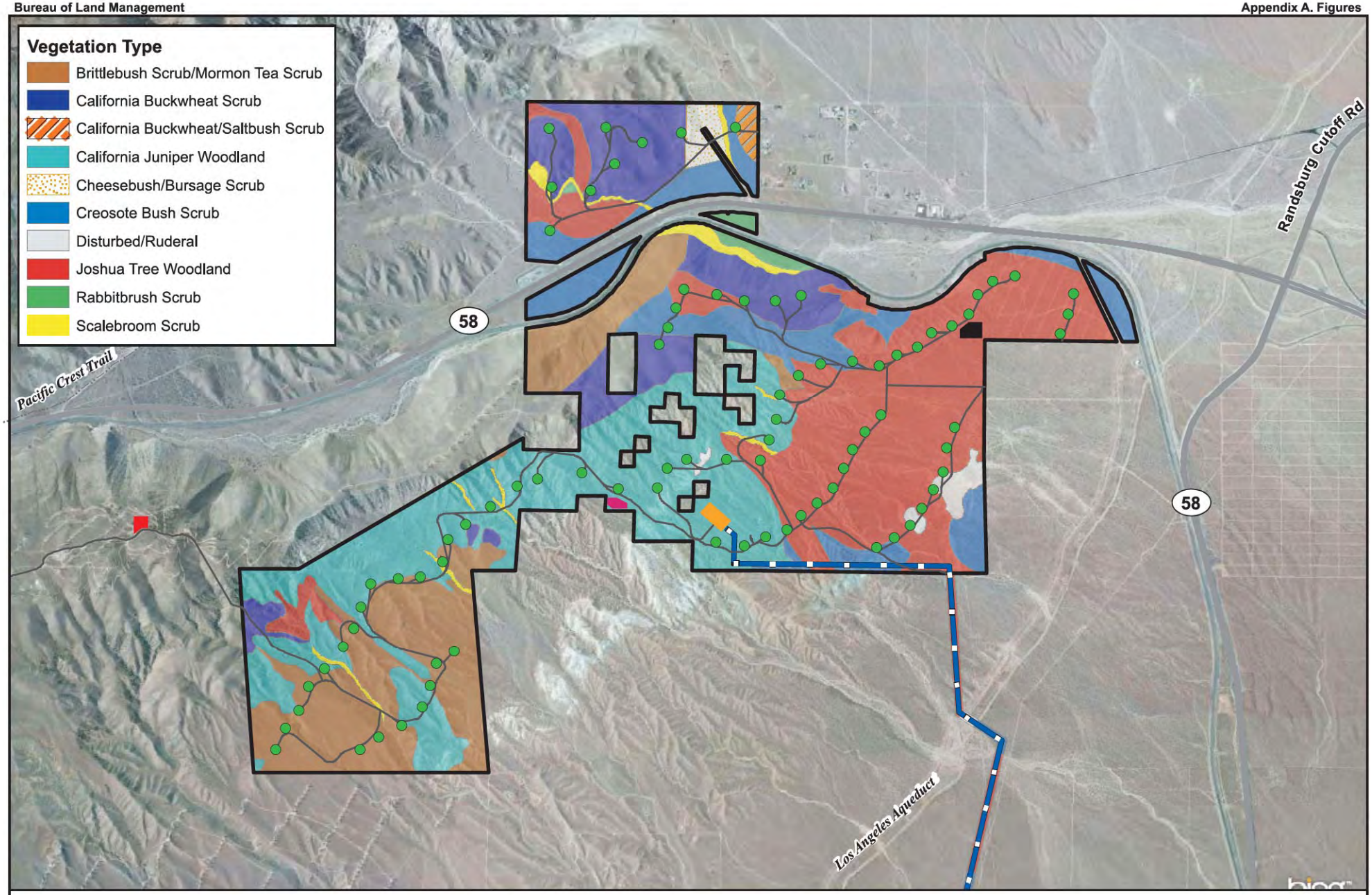


Figure 3.17-3
Bakersfield Cactus
(With Alt. A Site Plan Features)

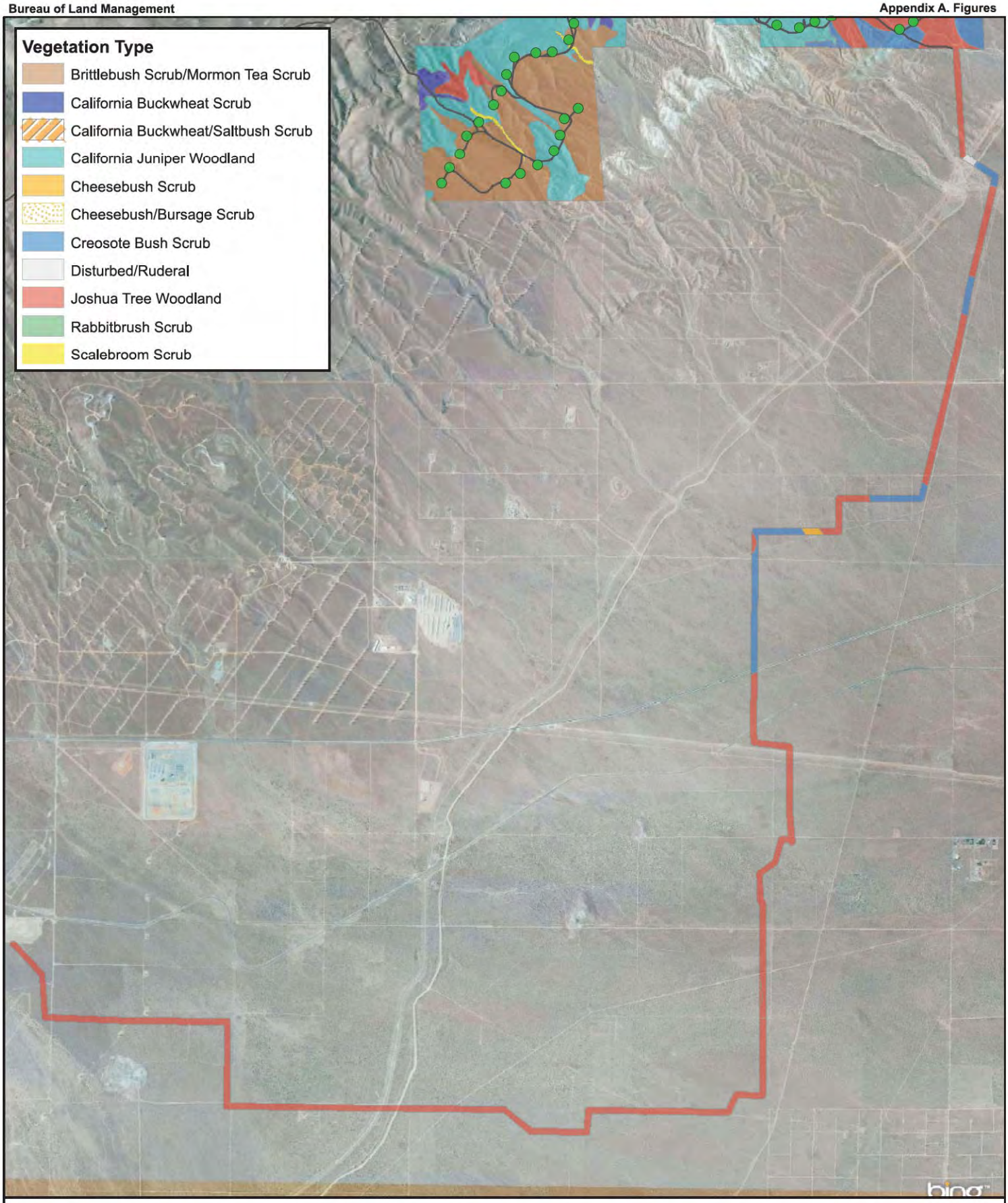


0 0.25 0.5 1 Miles

Turbines
Access Roads
Project Transmission Line
Batch Plant
Project Substation
Project Boundary
O & M Facility
Laydown Area

Figure 3.17-4

Vegetation Communities - Project Site
(With Alt. A Site Plan Features)



0 0.25 0.5 1 Miles

Turbines

Access Roads

Figure 3.17-5

Vegetation Communities - Gen-Tie Line

(With Alt. A Site Plan Features)

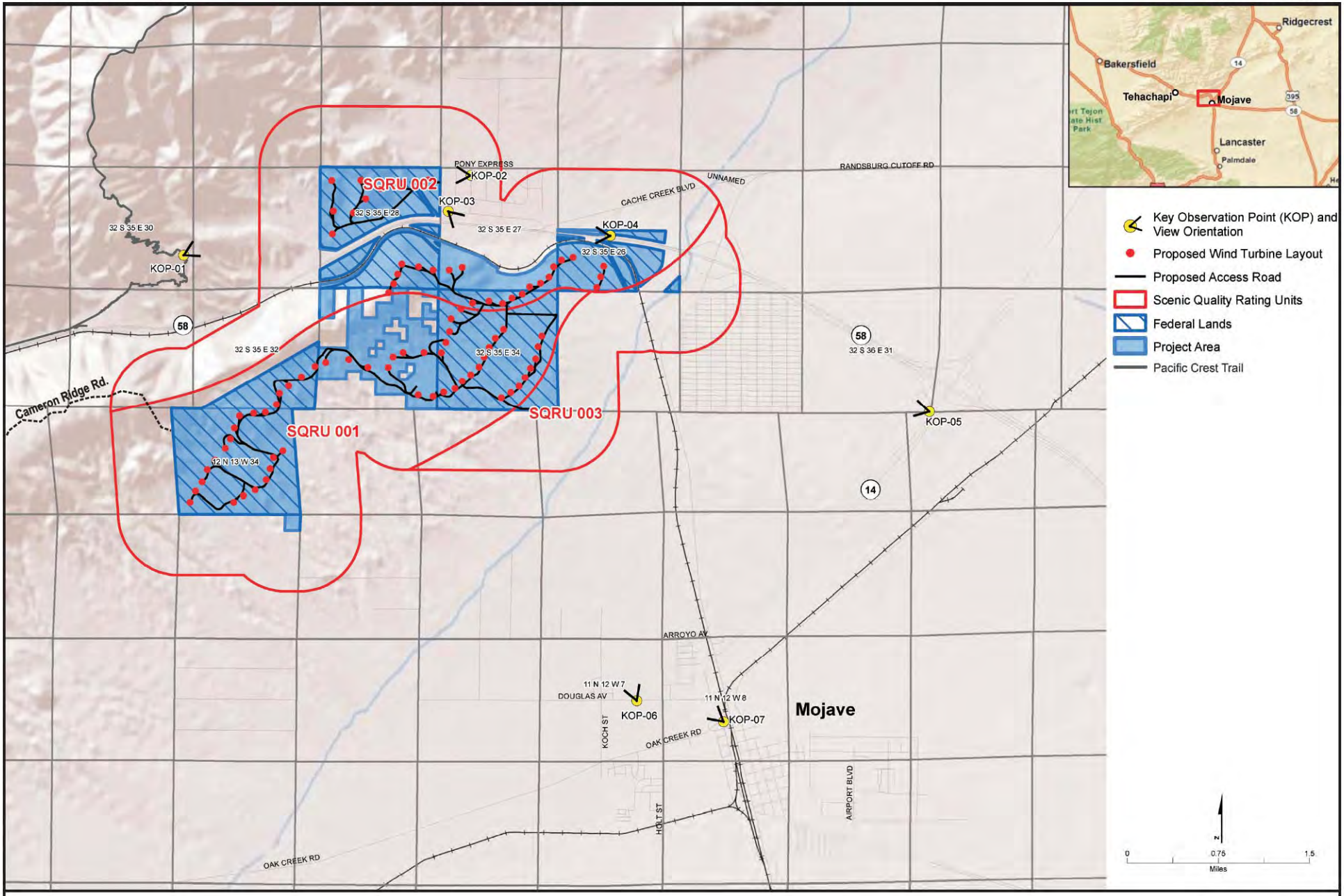


Figure 3.18-1

Location of Key Observation Points (KOPs)

Source: CH2MHill, 2012.

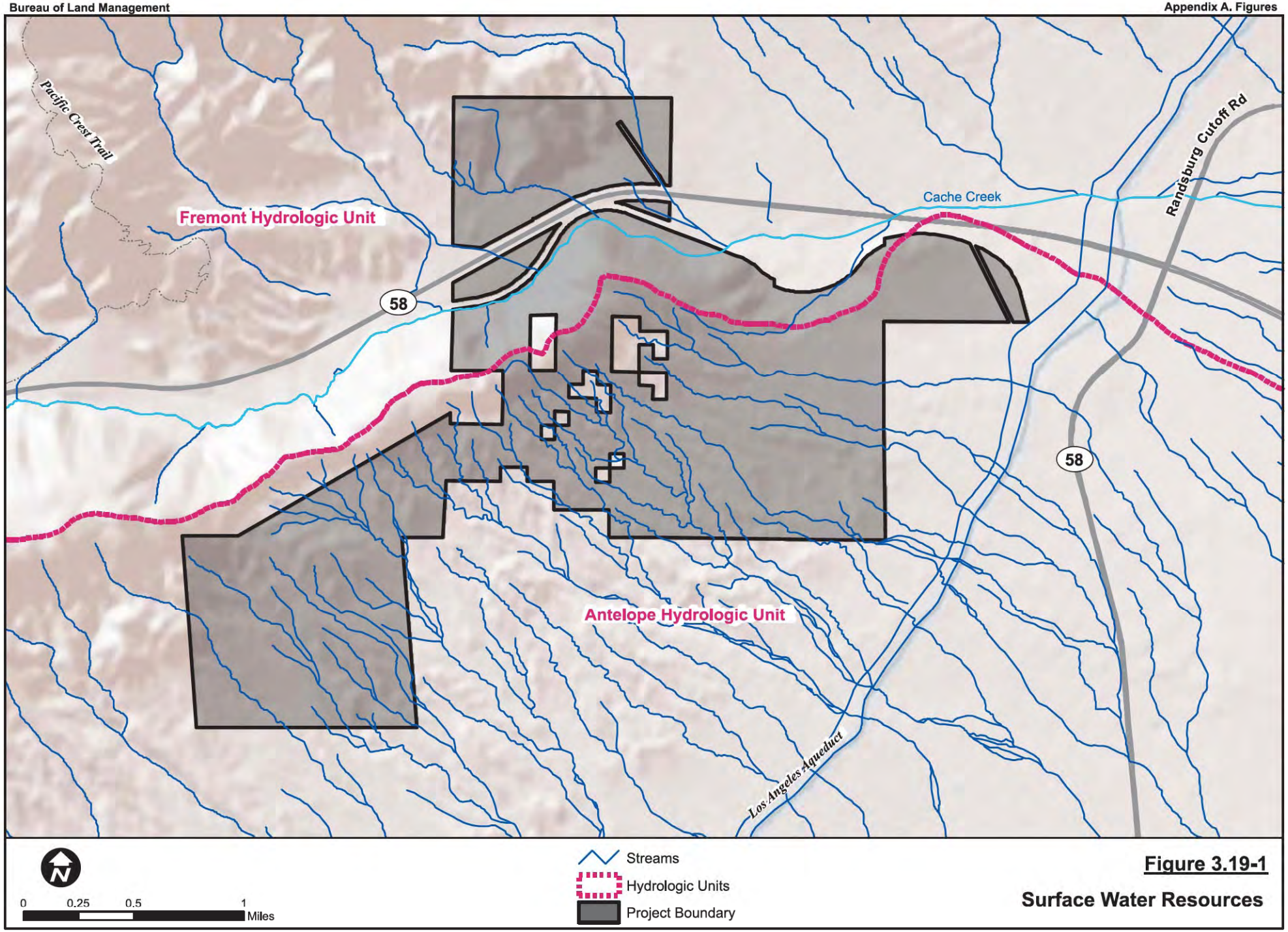


Figure 3.19-1

Surface Water Resources

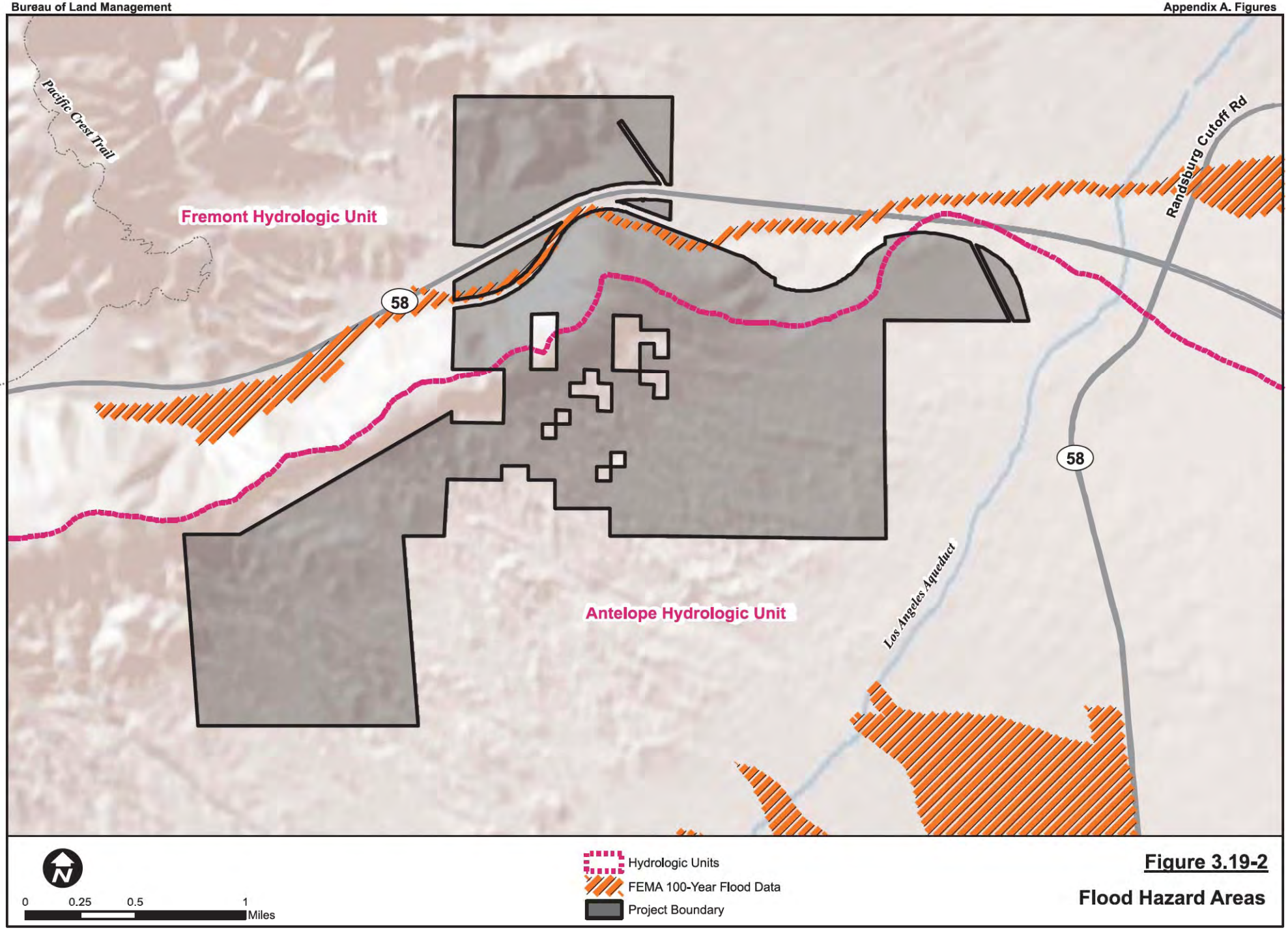


Figure 3.19-2

Flood Hazard Areas

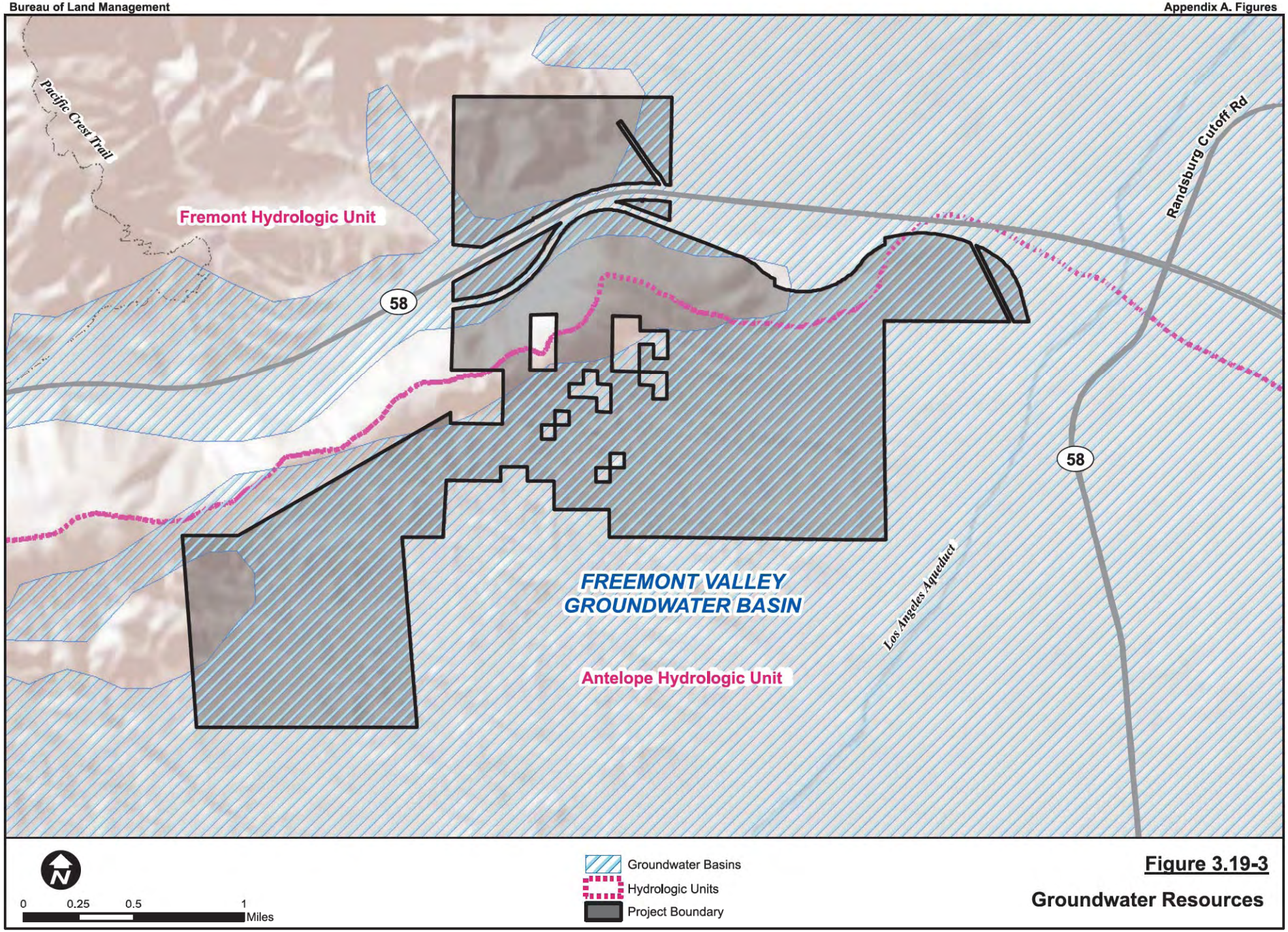
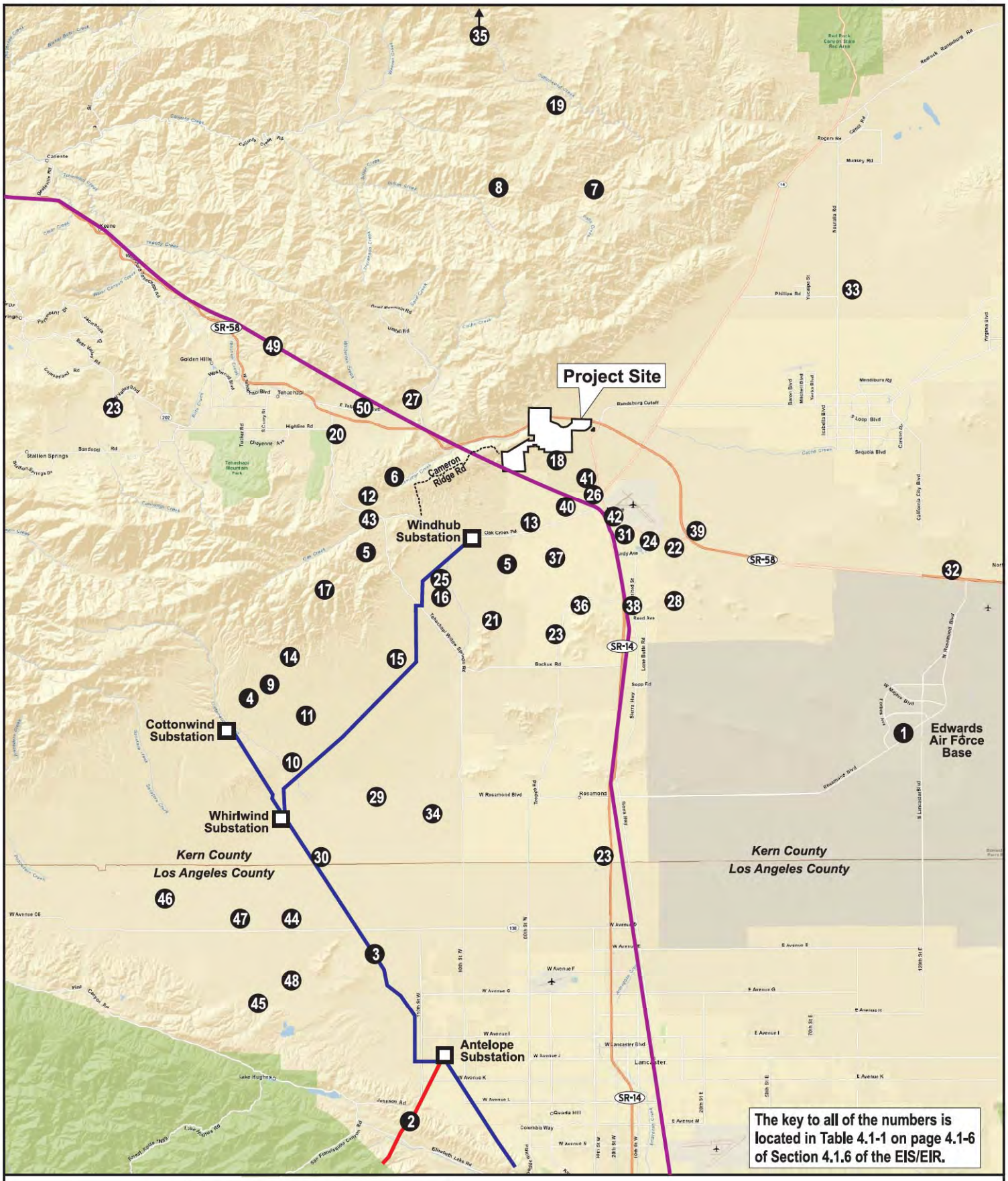


Figure 3.19-3

Groundwater Resources

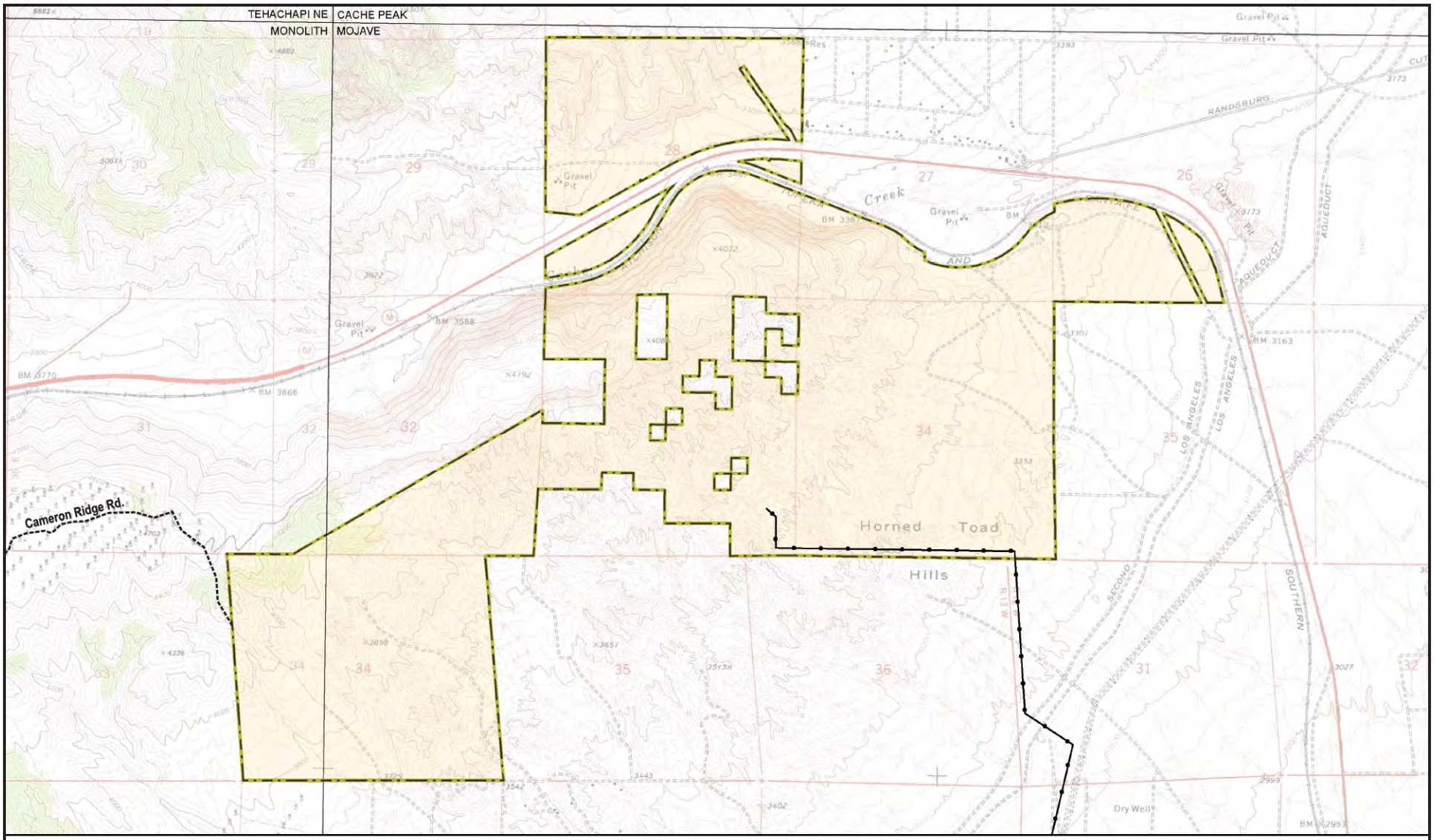


Antelope-Pardee Transmission Line
TRTP Transmission Line
California High-Speed Train Project

N

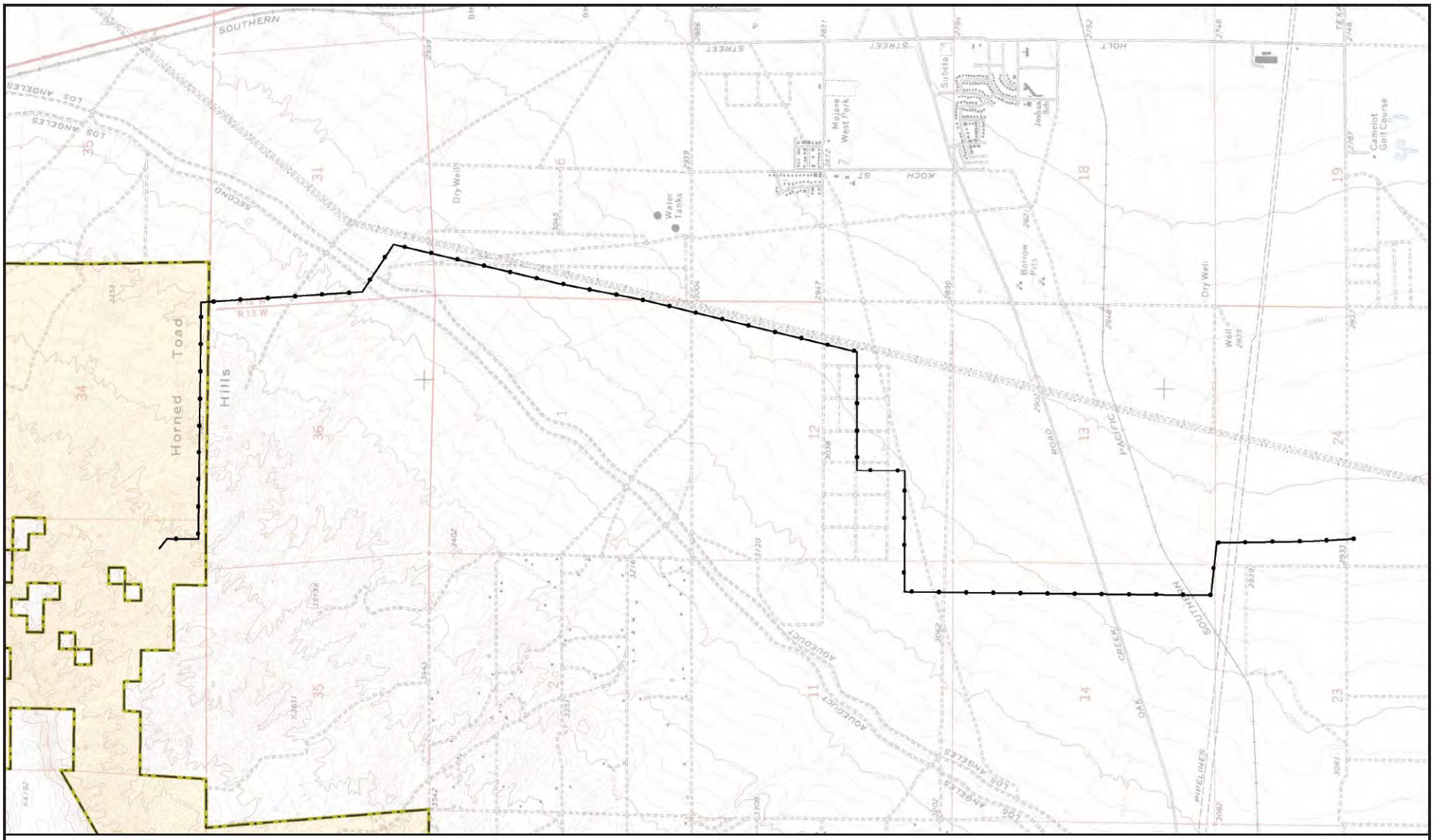
0 1¼ 2½ 5 10
Scale in Miles

Figure 4.1-1
Cumulative Projects



Source: AppliedEarthworks, 2012.

Figure 4.4-1a
Area of Potential Effect
Project Area and Northern Extent of Transmission Line



Legend

- Transmission Line
- Alta East Area of Potential Effect Boundary (2012-04-04)*

*Surveyed for Cultural Resources May 2010 and March 2011.

SCALE 1:24,000

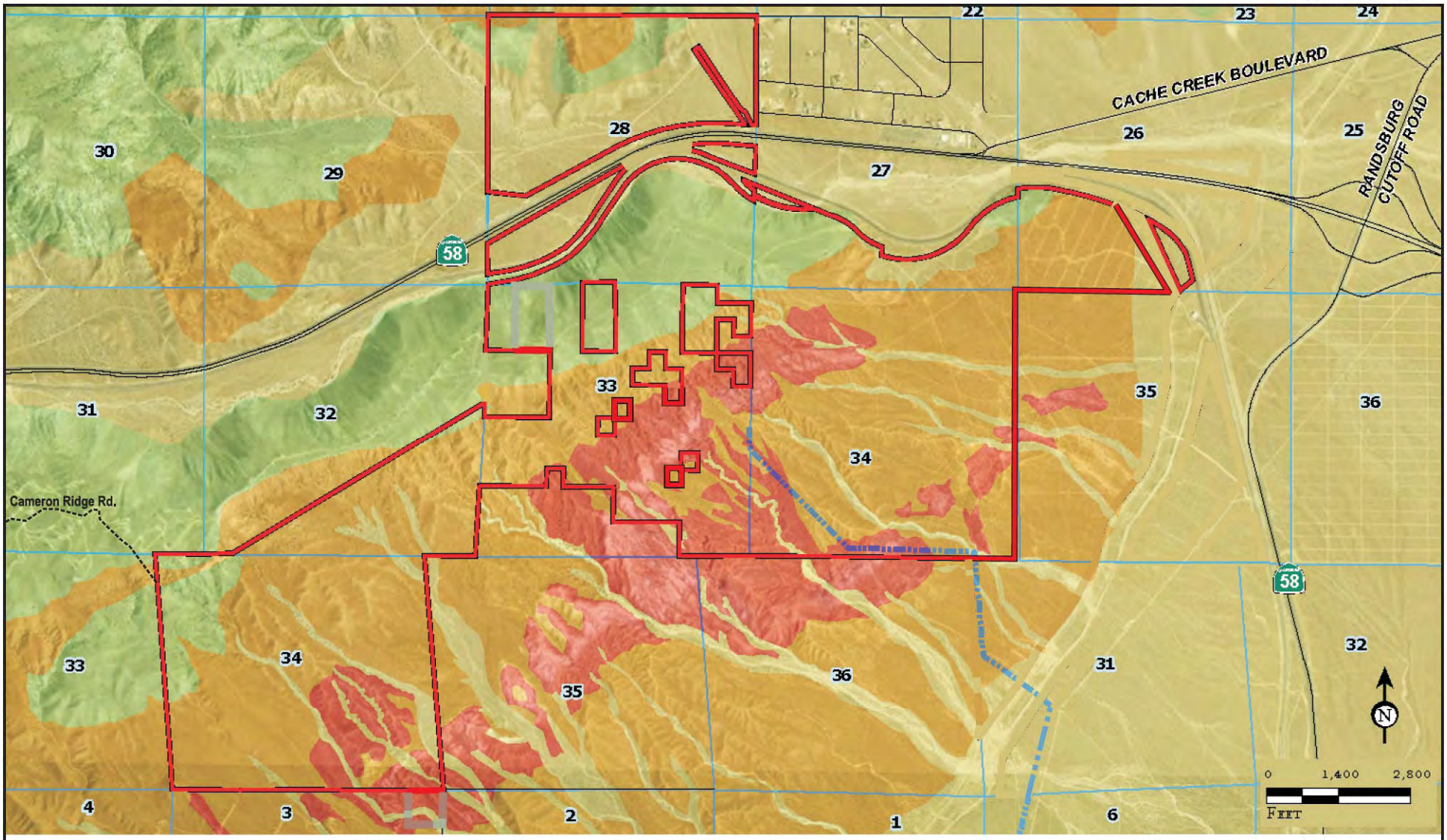
1 0.5 0 1 Miles

1,000 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Feet

1 0.5 0 1 Kilometers

Source: AppliedEarthworks, 2012.

Figure 4.4-1b
Area of Potential Effect
Southern Project Area and Full Extent of Transmission Line



Potential Fossil Yield Classification

- Classification 1 (Very Low)
- Classification 2 (Low)
- Classification 3 (Moderate / Unknown)
- Classification 5a (Very High)

- Project Boundary
- TR Section Number
- Transmission Line

Source: LSA, 2010.

Figure 4.10-1
Potential Fossil Yield Classification Map
Project Vicinity

Existing View from KOP 1. View to the east from the Pacific Crest National Scenic Trail. This location is approximately 2 miles east of the trail access point at the Cameron Canyon Road overpass of SR 58. The rural residential area located at the eastern entrance to the Tehachapi Pass is visible near the center of the view. Portions of the project site visible from this location are managed by BLM.

Figure 4.18-1

KOP 1 – View Looking East from Pacific Crest National Scenic Trail

Source: CH2MHill, 2012.

View from KOP 1 with simulated Project. Alta East turbines would be visible across the middleground of the view, both north and south of SR 58.

Figure 4.18-2

Visual Simulation of the Alta East Wind Project – KOP 1

Source: CH2MHill, 2012.

Existing View from KOP 2. View to the northwest from location within rural residential area located at the eastern entrance to the Tehachapi Pass. The Pacific Crest National Scenic Trail passes through the mountains visible in this view's backdrop, approximately 3 miles away from the viewpoint. Portions of the project site visible from this location are managed by BLM.

Figure 4.18-3

KOP 2 – View Looking Northwest From Within Rural-Residential County Lands North of SR 58 in Tehachapi Pass

Source: CH2MHill, 2012.

View from KOP 2 with simulated Project. Alta East turbines would appear beyond Wildflower Canyon Road, just west of the rural residential area.

Figure 4.18-4

Visual Simulation of the Alta East Wind Project – KOP 2

Source: CH2MHill, 2012.

Existing View from KOP 3. View to the southeast from the rural residential area located near the eastern entrance to the Tehachapi Pass. This viewpoint is located along the southwestern edge of the residential area. Both SR 58 and the Southern Pacific railroad tracks are visible in the foreground and middleground. Portions of the project site visible from this location include private lands and lands managed by BLM.

Figure 4.18-5

KOP 3 – View Looking Southeast From Within Rural-Residential County Lands North of SR 58 in Tehachapi Pass

Source: CH2MHill, 2012.

View from KOP 3 with simulated Project. Alta East turbines would appear above the foothills south of SR 58.

Figure 4.18-6

Visual Simulation of the Alta East Wind Project – KOP 3

Source: CH2MHill, 2012.

Existing View from KOP 5. View to the west from Midland Trail at Sequoia Boulevard. This view approximates the view toward the northeastern portion of the project site from the intersection of SR 14 and SR 58; segments of each to the north and east of the intersection respectively are eligible for designation as state scenic highways. Portions of the project site visible from this location include private lands and lands managed by BLM.

Figure 4.18-7

KOP 5 – View Looking Northwest from SR 14/SR 58 Interchange

Source: CH2MHill, 2012.

View from KOP 5 with simulated Project. Alta East turbines would be visible across most of the view, along the base of the Tehachapi Mountain foothills.

Figure 4.18-8

Visual Simulation of the Alta East Wind Project – KOP 5

Source: CH2MHill, 2012.

Existing View from KOP 7. View to the northwest from the Oak Creek Road overpass of the SR 58 business route. This elevated view approximates views from west Mojave. Existing wind turbines are visible in the foothills to the west. Portions of the project site visible from this location include private lands and lands managed by BLM.

Figure 4.18-9

KOP 7 – View Looking North from Oak Creek Road/SR 58 Overpass in Mojave

Source: CH2MHill, 2012.

View from KOP 7 with simulated Project. Alta East turbines would appear across most of the view and would be visibly taller than some of the existing turbines in the area.

Figure 4.18-10

Visual Simulation of the Alta East Wind Project – KOP 7

Source: CH2MHill, 2012.

Bureau of Land Management