DUDEK

MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

MEMORANDUM

To: Patrick Brown, Soitec
From: Jonathan Leech
Subject: Cumulative Construction Noise Impacts – Rugged and Tule Wind
Date: January 9, 2015
cc:
Attachment(s): Attachment 1, BLM Letter to Tule Wind LLC Granting Extension (December 18, 2014); Attachment 2, Tule Wind LLC Letter to BLM Seeking Extension (November 19, 2014); Attachment 3, Tule Wind LLC Preliminary Construction Schedule (April 16, 2014).

On December 18, 2014, the U.S. Bureau of Land Management (BLM) amended a Right of Way (ROW) (serial #: CACA-049698; Issued April 10, 2012 and Amended June 25, 2014) granting Tule Wind LLC a one-year extension on the deadline for submitting a Notice to Proceed (NTP) for the Tule Wind Project. (Attachment 1). Tule Wind LLC had originally sought a two-year extension for a number of reasons. (Attachment 2).

The amended ROW grants Tule Wind LLC an extension to obtaining the NTP from BLM until December 31, 2015. Under the terms of the ROW, construction of the Tule Wind Project must begin within 90 days of the issuance of the NTP, or by March 31, 2016.

Summary of Construction Noise Analysis Parameters

The timing and sequencing of construction activities within a major scale project is typically quite challenging to pinpoint prior to the selection of the construction contractor that will carry out the construction effort. The noise levels associated with various construction tasks vary widely, with greater noise levels when a large assemblage of heavy construction equipment is being used, with lesser average noise levels for activities involving fewer or no pieces of heavy equipment.

When assessing cumulative noise impacts from multiple major construction projects in a region, it is typical to use the maximum noise level from the most intensive construction activity, in order to account for the worst-case noise scenario should all projects undergo intensive construction activities all at the same time. Caltrans, FHWA and others use a maximum

construction noise level for a large project to be 95 dBA at 50 feet, based upon the assemblage of heavy equipment used for major earthmoving activity, the most noise intensive portion of most commercial construction projects.

Using the standard distance attenuation formula (6 dBA of attenuation with each doubling of distance from the construction activity), 95 dBA at 50 feet becomes:

89 dBA at 100 ft

83 dBA at 200 ft

77 dBA at 400 ft

71 dBA at 800 ft

65 dBA at 1600 ft

So at 1600 feet, maximum construction noise exposure becomes 65 dBA. Hourly average noise levels from construction activity would be approximately 62 dBA (30 minutes of each hour at 65 dBA, and 30 minutes of each hour at background levels of 50 dBA) at this distance of 1,600 feet.

Analyzing Potential For Cumulative Noise Impact From Overlapping Tule Wind Project and Rugged Solar Farm Construction

As of the date of this memorandum, Tule Wind LLC has not publicly released a construction schedule that reflects the BLM extension. Accordingly, this analysis utilizes the most recent construction schedule publicly released, and assumes beginning of construction as of March 31, 2016. (Attachment 3).

The County standard stipulates a maximum construction noise as an 8-hour average of 75 dBA. There are certain points during the construction of the Rugged Solar project and during the Tule Wind project where some noise sensitive land uses would be exposed to the maximum allowable 75 dBA 8-hour average. However, because decibels are a logarithmic function, combining two different noise levels is not accomplished with a simple addition. If you have two different sound levels which differ by 10 dBA or greater, their sum will simply equal the larger dBA level. If the two sound levels are less than 10 dBA apart, the sum will be greater than the larger value.

Consequently, where a noise sensitive land use has been shown to have an 8-hour average from construction of one project at 75 dBA, adding sound with average hourly value 65 dBA or less from a second project would not raise the value above 75 dBA on an 8-hour average basis. Based on the standard distance attenuation rate described above, the most intensive earth-moving

activity from both the Rugged and Tule project would have to both occur simultaneously and within 800 feet of the same sensitive receptor for combined projects noise to exceed the noise level from with construction process. It is not anticipated that the major earth-moving construction phases for the two projects will be occurring simultaneously within 800 feet of any noise sensitive land use affected by either project. Where less intensive construction activity is occurring for either project, the combined noise effects at distances as close as 400 feet from construction to the noise sensitive land use would not be anticipated to exceed County Standards. Further discussion of the project construction timing is provided below.

As indicated in Table 1-9 Rugged Construction Schedule of the Program Environmental Impact Report (PEIR), construction of the most noise intensive phase of the Rugged solar farm (most intensive earth-moving activities such as grading) would commence August 2015, and would be completed by October 2015. Other activities such as construction of the operations and maintenance building and undergrounding utilities would all be completed by March 2016. Pursuant to the latest available information for the Tule Wind Energy project schedule (Attachment 3), including an extension just granted from BLM (Attachment 1), the Tule Wind Project would not begin construction until March 31, 2016. The most intensive construction components for Rugged solar farm (i.e., earthmoving) would therefore be completed prior to the Tule Wind project. Because the most noise intensive construction phases of the Rugged solar farm and Tule Wind Energy project construction schedules would not overlap, the Rugged solar farm would not contribute to a cumulatively considerable impact.

ATTACHMENT A

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
EL CENTRO FIELD OFFICE
1661 So. 4th Street
El Centro, CA 92243
(760)337-4400

December 18, 2014

In Reply Refer To:
CACA-049698 / 2800(P)
CA 670.20

CERTIFIED MAIL 7012 3460 0000 2982 3355
RETURN RECIEPT REQUESTED

Rany Raviv
Vice President, Business
Iberdrola Renewables, Inc.
1125 NE Couch St., Suite 700
Portland, Oregon 97209

RE: Tule Wind LLC, CACA-049698

Dear Mr. Raviv:

This letter is in response to the letter sent to the Bureau of Land Management (BLM) dated November 19, 2014 requesting an extension to the December 31, 2014 deadline for issuance of the Notice to Proceed (NTP) as stated in the right-of-way (ROW) grant (serial #: CACA-049698; Issued April 10, 2012 and Amended June 25, 2014).

Your request is the latest in a series of schedule modifications that Tule Wind LLC and Iberdrola have submitted to the BLM since the Secretary of the Interior's signing of the Record of Decision (ROD) for the Tule Wind Project, or "Project". Prior to the ROD, a schedule was provided to the BLM showing civil construction beginning in February 2012 and the Project going online by December 2012. After the ROD three additional schedules have been submitted by Iberdrola to the BLM, pushing civil construction start dates back to September 2012, January 2014, and September 2014. This Project received prompt agency review and approval based on the initially proposed schedules. Delay in issuance of the NTP beyond December 31, 2015 may not be consistent with the best use of public lands.

Construction on the Project, as required by condition 5e of the ROW grant, must begin within 90 days of issuance of the NTP. Per BLM Policy IM-2009-43, if construction on a wind energy development authorization has not commenced within two years from the date of the grant signing, the ROW holder must provide to the BLM good cause as to the nature of any delay, the anticipated date of construction, and evidence of progress toward commencement of construction. Tule Wind LLC must demonstrate and ensure due diligence of development or ROW CACA-049698 will be suspended or terminated in accordance with 43 CFR 2807.17 – 2807.19.

Per Iberdrola's request and based on the reasons noted in that request, the BLM is offering to amend the Tule Wind Project (CACA-049698) Grant Terms and Conditions 5e. (page 4, only) to read:

> *The holder shall obtain a Notice to Proceed (NTP) from the BLM no later than, December 31, 2015. The holder shall start construction on the initial phase of development within 90 days of BLM's issuance of a NTP. The holder shall submit a construction schedule to the BLM prior to the NTP, and shall complete construction no later than 24 months after the start of construction. Failure of the holder to comply with this diligent development provision may cause the Authorized Officer to suspend or terminate the authorization in accordance with 43 CFR 2807.17 – 2807.19, and use the posted Performance and Reclamation bond to cover the costs for removal of any equipment and/or facilities and reclamation of the site. The Authorized Officer will provide the holder a written Notice of Failure to Ensure Diligent Development prior to the Suspension or termination of the authorization. The holder will be provided an opportunity to correct any noncompliance in accordance with 43 CFR 2807.18 or submit a written request to the Authorized Officer for an extension of the timelines in the approved Plan of Development.*

NTP Extension Stipulation:

Consistent with the requirements in IM-2009-43 to show good cause and provide evidence of progress toward construction, the BLM requires that Tule Wind LLC and Iberdrola take the following steps within 60 days of receipt of this offer:

- Provide the BLM a detailed description, schedule (including milestones), and date of completion for the tasks (and subtasks implied) cited in your request letter:
  - The administrative approval from the County of San Diego for that portion of the project located in the County's jurisdiction.
  - The pre-construction conditions contained in the separate County Major Use Permit.
  - The amendment of the Large Generator Interconnection Agreement with the California Independent System Operator and San Diego Gas & Electric.
  - The execution of a Power Purchase Agreement and who the parties of any such agreement are expected to be.
  - The ROW title insurance and due diligence work required to finalize the design and commence physical construction.
  - The 110 ROW grant conditions and 24 project-specific plans required by the BLM.
  - The Integrated Pest Management Environmental Assessment.

- Provide the BLM a detailed construction schedule, with milestones, for the Project, including a reasonable and acceptable start of construction date. A start date would be deemed reasonable and acceptable if it is prior to March 31, 2016 or within 90 days following the issuance of an NTP.

Failure to complete ongoing due diligence and provide this information, with appropriate completion dates and milestones, could provide grounds for suspending or terminating the ROW under 43 CFR 2807.17.

Within 30 days upon receipt of this letter, please sign and date both copies of the amended ROW grant, and return them to the El Centro Field Office at the above address. If you have any questions, please contact Peter Godfrey at (951) 697-5385 or pgodfrey@blm.gov.

Sincerely,

Thomas F. Zale
Field Manager

Enclosures:
Amended ROW Grant for CACA-049698 (2)

cc:
K. Harley McDonald, Iberdrola
Jim Kenna, BLM

Issuing Office
El Centro Field Office

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
RIGHT-OF-WAY GRANT

SERIAL NUMBER CACA - 049698

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1. As approved by the Record of Decision for the Tule Wind Project dated December 19, 2011 and amended by the Amended Record of Decision for the Tule Wind Project dated March 7, 2013, an amended right-of way grant is hereby issued pursuant to Title V of the Federal Land Policy and Management Act of October 21, 1976 (43 U.S.C. 1761 et seq.) and the Bureau of Land Management right-of-way regulations (43 CFR Part 2800) and amendments thereto.

2. Nature of Interest:

   a. By this instrument, the holder:

      Tule Wind LLC a subsidiary of Iberdrola Renewables, LLC
      1125 NW Couch Street, Suite 700
      Portland, Oregon 97209

      receives a right to use and occupy the following described public lands to construct, operate, maintain, and decommission a Type-III wind energy project and ancillary facilities as described in the approved Plan of Development (POD) incorporated herein:

         See attached legal description (Exhibit A).

   b. The project authorized herein consists of: permanent construction of up to 62 turbine sites, 18.81 miles of new access road, 11.08 miles of improvements to existing roadways, 34.5 kV collector lines, an overhead 138 kV gen-tie line and two meteorological towers. Also included are the following temporary construction facilities: a 10 acre parking and staging area and twelve two acre construction laydown areas.

   c. This instrument shall expire on December 31, 2041 unless, prior thereto, it is relinquished, abandoned, or terminated pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.

   d. This instrument may be renewed by the Authorized Officer. The holder is required to submit an application for renewal at least 120 calendar days prior to the expiration date of this instrument. The Authorized Officer will review the application for renewal to ensure the holder is complying with the terms, conditions, and stipulations of this instrument and applicable laws and regulations. If renewed, the right-of-way shall be subject to the regulations existing at the time of

renewal and any other terms and conditions that the Authorized Officer deems necessary to protect the public interest.

e. Notwithstanding the renewal, expiration, relinquishment, abandonment, or termination of this instrument, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the renewal, expiration, relinquishment, abandonment, or termination of this authorization.

f. The Authorized Officer retains the right of access to the lands included within the right-of-way at any time and may enter any facility on the right-of-way in accordance with 43 CFR 2805.15(a). The holder shall pay monitoring fees in accordance with 43 CFR 2805.16 for the reasonable costs incurred in the inspection and monitoring of construction, operation, maintenance, and decommissioning of the right-of-way.

g. This instrument is issued subject to valid existing rights in accordance with 43 CFR 2805.14.

3. Rental:

a. For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management (BLM) the fair market value rental of the right-of-way, as determined by the Authorized Officer. Provided, however, that the rental may be adjusted by the Authorized Officer, whenever necessary, to reflect changes in fair market value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices. The rental provisions of this authorization may also be modified consistent with the provisions of any regulatory changes or pursuant to the provisions of any new or revised statutory authorities. Rent will be paid on an annual basis consistent with the regulations. Fair market rental at the time of grant authorization is attached as Exhibit F.

4. Bond:

a. A Performance and Reclamation bond, for an amount determined by the BLM Authorized Officer based on current market values will be required prior to issuance of the Notice-to-Proceed for construction, from the holder to ensure compliance with the terms and conditions of this instrument. The bond must be maintained in effect until removal of improvements and restoration of the right-of-way has been accepted by the BLM Authorized Officer. Acceptable bond instruments include cash, cashier's or certified check, certificate or book entry deposits, negotiable U.S. Treasury securities (notes, bills, or bonds) equal in value to the bond amount, surety bonds from the approved list of sureties (U.S. Treasury Circular 570) payable to the BLM, irrevocable letters of credit payable to the BLM issued by financial institutions that have the authority to issue letters of credit and whose operations are regulated and examined by a federal agency, or a policy of insurance that provides the BLM with acceptable rights as a beneficiary and is issued by an insurance carrier that has the authority to issue insurance policies in the applicable jurisdiction and whose insurance operations are regulated and

examined by a federal or state agency. The Authorized Officer will not accept a corporate guarantee as an acceptable form of bond. The holder must provide the bond in an acceptable form prior to receiving a Notice to Proceed (NTP) (Form 2800-15) for ground disturbing activities. The bond will be reviewed at the time of any assignment, modification, or renewal of this instrument. The Authorized Officer may increase or decrease the bond amount at any time during the term of the right-of-way authorization, consistent with the regulations.

b. The holder agrees that any bond held as security for holder's performance of the terms and conditions of this grant may, upon failure on the holder's part to fulfill any of the requirements herein set forth or made a part hereof, be retained by the United States to be applied as far as may be needed to the satisfaction of the holder's obligations assumed hereunder, without prejudice whatever to any other rights and remedies of the United States.

c. Should the bond delivered under this instrument become unsatisfactory to the Authorized Officer, the holder shall, within 45 calendar days of demand, furnish a new bond. In the event of noncompliance with the terms and conditions of this instrument, the BLM will notify the holder that the surety or other bond instrument is subject to forfeiture and will allow the holder 30 calendar days to respond before action is taken to forfeit the bond and suspend or terminate the authorization.

5. Terms and Conditions:

a. This instrument is issued subject to the holder's compliance with all applicable laws and regulations and, in particular, with the regulations contained in Title 43 Code of Federal Regulations Part 2800, including the terms and conditions required by 43 CFR 2805.12. Failure of the holder to comply with applicable law or regulations or any terms, conditions, or stipulations of this instrument shall constitute grounds for suspension or termination thereof of this instrument in accordance with 43 CFR 2807.17 – 2807.19. The Authorized Officer may change the terms and conditions of this instrument as a result of changes in legislation, regulations, or as otherwise necessary to protect public health or safety or the environment in accordance with 43 CFR 2805.15(e).

b. The right-of-way Stipulations (Exhibit B), attached hereto and the approved Plan of Development are incorporated into and made a part of this instrument as fully and effectively as if they were set forth herein in their entirety.

c. The holder shall perform all operations in a good and workmanlike manner, consistent with the approved Plan of Development, so as to ensure protection of the environment and the health and safety of the public. The Authorized Officer may order an immediate temporary suspension of operations, orally or in writing, in accordance with 43 CFR 2807.16 to protect public health or safety or the environment if the Authorized Officer determines that the holder has violated one or more of the terms, conditions, or stipulations of this instrument. An immediate temporary suspension order is effective until the holder receives a written NTP from the Authorized Officer.

d. The holder will not initiate any construction or other surface disturbing activities on the right-of way without prior written authorization of the Authorized Officer. Such authorization will be a written NTP issued by the Authorized Officer or his/her delegated representative. NTP's will be required during construction, and each will authorize construction or use and occupancy only as therein expressly stated and only for the particular location or use and occupancy therein described, i.e., a construction phase or site location. The Authorized Officer will issue a NTP subject to such terms and conditions as deemed necessary when the design, construction, use, occupancy, and operation proposals are in conformity with the terms and conditions of this instrument.

e. The holder shall obtain a Notice to Proceed (NTP) from the BLM no later than, December 31, 2015. The holder shall start construction on the initial phase of development within 90 days of the BLM's issuance of a NTP. The holder shall submit a construction schedule to the BLM prior to the NTP, and shall complete construction no later than 24 months after the start of construction. Failure of the holder to comply with this diligent development provision may cause the Authorized Officer to suspend or terminate the authorization in accordance with 43 CFR 2807.17 - 2807.19, and use the posted Performance and Reclamation bond to cover the costs for removal of any equipment and/or facilities and reclamation of the site. The Authorized Officer will provide the holder a written Notice of Failure to Ensure Diligent Development prior to the suspension or termination of the authorization. The holder will be provided an opportunity to correct any noncompliance in accordance with 43 CFR 2807.18 or submit a written request to the Authorized Officer for an extension of the timelines in the approved Plan of Development.

f. Upon termination by the Authorized Officer or expiration of this instrument, all improvements shall be removed from the public lands within 180 calendar days or otherwise disposed of as provided for in the approved Plan of Development, or as directed by the Authorized Officer.

g. This instrument shall, at a minimum, be reviewed by the Authorized Officer at the end of the 20th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that this instrument may be reviewed at any time deemed necessary by the Authorized Officer in accordance with the regulations.

h. This instrument may be assigned consistent with the regulations, but all assignments are subject to approval by the Authorized Officer. In addition, the qualifications of all assignees must comply with the requirements of the regulations. A partial assignment of this instrument shall not be approved if such action would hinder the Authorized Officer's management of the authorization or the associated public lands.

i. Upon the request of the Authorized Officer, the holder shall provide access to environmental, technical, and financial records, reports, and other information related to construction, operation, maintenance, and decommissioning of the right-of-way. Any information marked confidential or proprietary will be kept confidential to the extent allowed by law. Failure of the holder to cooperate with such request, provide data, or grant access to such records, reports, and information may, at the discretion of the Authorized Officer, result in suspension or termination of the right-of-way grant in accordance with the regulations.

j. The holder shall not initiate any construction or other surface disturbing activities as a minor change to the right-of-way or Plan of Development without prior written approval of the Authorized Officer, or his delegate. Such authorization shall be a written Change of Condition or Adjustment. Each Change of Condition/Adjustment shall authorize construction or use only as therein expressly stated and only for the particular location and use therein described. All Changes of Condition/Adjustments are subject to such terms and conditions as deemed necessary by the Authorized Officer at the time of approval. Approved changes authorize construction or use only as therein expressly stated and only for the particular location, phase, area, or use described. The Authorized Officer may, by written notice, suspend or terminate in whole or in part any Change of Condition/Adjustment which has been approved, when in the Authorized Officer's judgment, unforeseen conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment. All Conformance Requests will be documented and tracked to ensure the acreages of disturbance affected by post-authorization conformance changes remain within the limits of impacts analyzed in the Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and approved in the Record of Decision and right-of-way.

IN WITNESS WHEREOF, The undersigned agree to the terms, conditions, and stipulations of this right-of-way grant.

Agent of Tule Wind, LLC	BLM Authorized Officer
Title	Field Manager
Date	Date

Attachments:

Exhibit A: Legal Description
Exhibit B: Stipulations
Exhibit C: USFWS Biological Opinion
Exhibit D: Memorandum of Agreement
Exhibit E: Right-of-Way Rental Worksheet

EXHIBIT A - LEGAL DESCRIPTION

San Bernardino Meridian

T. 15 S., R.6 E.,
sec. 34, all;
sec. 35, all;

T. 16 S., R.6 E.,
sec. 2, lots 3 and 4, S½NW¼, SW¼;
sec. 3, all;
sec. 4, all;
sec. 9, all;
sec. 10, all;
sec. 11, S½NE¼, W½, SE¼;
sec. 12, S½N½, S½;
sec. 13;
sec. 14;
sec. 15, W½NE¼, W½, S½SE¼;

T. 16 S., R.7 E.,
sec. 17, SW¼, SW¼SE¼;
sec. 18, lots 2 to 4, E½NE¼, SW¼NE¼, SE¼NW¼, E½SW¼, SE¼;
sec. 19, lots 1, 2 and 4, NE¼NE¼, W½E½, E½W½;
sec. 20, E½, E½NW¼, NW¼NW¼, SE¼SW¼;
sec. 21, SW¼SW¼;
sec. 28, W½SW¼,W½NW¼;
sec. 29, E½, E½NW¼, SW¼NW¼, NE¼SW¼;
sec. 30, lot 1, E½NW¼, NW¼NE¼;
sec. 32, E½, E½W½;
sec. 33, W½;

T. 17 S., R.7 E.,
sec. 3, lot 4, SW¼NW¼, W½SW¼;
sec. 4, lots 1, 2, 5 and 6, SW¼NE¼, S½NW¼, SW¼, W½SE¼;
sec. 5, lots 5, 6 and 7, S½NE¼, S½NW¼, E½SW¼, SE¼;
sec. 8, E½NW¼, SW¼SE¼;
sec. 9, lots 4 to 6;
sec. 10, W½W½;
sec. 15, NE¼, E½NW¼, NW¼NW¼;
sec. 17, NW¼NE¼;
sec. 21, NE¼, NE¼NW¼.

Totaling 12,239 acres of public land, more or less.

EXHIBIT B STIPULATIONS

1. The holder shall construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the approved Plan of Development, as amended or supplemented by approval of the Authorized Officer. Any surface disturbing activity, additional construction, or use that is not in accord with the approved Plan of Development shall not be initiated without the prior written approval of the Authorized Officer. A copy of the complete right-of-way grant, including all stipulations and approved Plan of Development, shall be made available on the right-of-way area during construction, operation, and decommissioning. Noncompliance with the above will be grounds for immediate temporary suspension of activities if it constitutes a threat to public health or safety or the environment.

2. The holder shall comply with the Biological Opinion for listed and proposed species associated with this project signed by the U.S. Fish and Wildlife Service on September 2, 2011, attached as Exhibit C. Failure to comply with the requirements of the Biological Opinion shall be cause for suspension or termination of the right-of-way grant.

3. The holder shall comply with the stipulations set forth in the Memorandum of Agreement (MOA) among the Bureau of Land Management, the Department of Energy, the Bureau of Indian Affairs, the United States Army Corps of Engineers, the Ewiiaapaayp Band of Kumeyaay Indians, Tule Wind LLC, the California State Historic Preservation Officer and the Advisory Council on Historic Preservation regarding the Tule Wind Energy Project in San Diego County, California. This MOA is attached as Exhibit D of this grant.

4. The holder shall designate a representative who shall have the authority to act upon and to implement instructions from the Authorized Officer. The holder's representative shall be available for communication with the Authorized Officer within a reasonable time when construction or other surface disturbing activities are underway.

5. The holder shall protect all survey markers found within the right-of-way. Survey markers include, but are not limited to, Public Land Survey System line and corner markers, other property boundary line and corner markers, and horizontal and vertical geodetic monuments. In the event of obliteration or disturbance of any of the above, the holder shall immediately report the incident, in writing, to the Authorized Officer and the respective installing authority if known. Where any of the above survey markers are obliterated or disturbed during operations, the Authorized Officer will determine how the marker is to be restored. The holder will be instructed to secure the services of a registered land surveyor or informed that an official survey will be executed by the Bureau of Land Management (BLM). All surveying activities will be in conformance with the Manual of Surveying Instructions and appropriate State laws and regulations. Surveys by registered land surveyors will be examined by the Authorized Officer and the BLM State Office Chief Cadastral Surveyor for conformance with the Manual of Surveying Instructions and State laws and regulations before being filed in the appropriate State or county offices of record. The holder shall be responsible for all administrative and survey costs.

6. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. 'Waste' means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

7. The holder shall comply with all applicable Federal, State, and local laws and regulations, existing or hereafter enacted or promulgated, with regard to any hazardous material, as defined by 43 CFR 2801.5 that will be used, produced, or transported on or within the right-of-way, or used in the construction, operation, maintenance, or decommissioning of the project or any of its facilities. The holder agrees in accordance with 43 CFR 2807.12(e) to fully indemnify the United States against any liability arising from the release of any hazardous material on or near the right-of-way in connection with the holder's use and occupancy of the right-of-way, whether or not the release is authorized under the grant. This agreement applies without regard to whether a release is caused by the holder, or its agent.

8. Within 120 calendar days of completion of construction, the holder will submit to the Authorized Officer as-built drawings and a certification of construction verifying that the facility has been constructed in accordance with the design, plans, specifications, and applicable laws and regulations.

9. The holder will be liable for all fire suppression costs resulting from fires caused during construction, operations, or decommissioning. The holder shall comply with all guidelines and restrictions imposed by agency fire control officials.

10. Confine all construction and construction-related activities to the minimum necessary area as defined by the final engineering plans. All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas identified on the final engineering plans. To the extent practical, the limits of the approved work space shall be delineated with stakes and/or flagging that shall be maintained throughout the construction period. An environmental monitor shall complete regular observations to ensure that all work is completed within the approved work limits, and in the event any work occurs beyond the approved limits, it shall be reported. During and after construction, entrances to newly developed access roads shall be gated to prevent the unauthorized use of these construction access roads by the general public. Signs prohibiting unauthorized use of the access roads shall be posted on these gates.

11. Conduct contractor training for all construction staff. Prior to construction, all developer, contractor, and subcontractor personnel shall receive training regarding the appropriate work practices necessary to implement the stipulations and comply with environmental regulations, including plant and wildlife species avoidance, impact minimization, and best management practices. Sign-in sheets and hard hat decals shall be provided that document contractor training has been completed for construction personnel.

12. Conduct biological construction monitoring. An authorized biological monitor must be present at the construction sites during all ground disturbing and vegetation removal activities. The monitor shall survey the construction sites and surrounding areas for compliance with all environmental specifications. Weekly biological construction monitoring reports shall be prepared and submitted to the appropriate permitting and responsible agencies through the duration of the ground disturbing and vegetation removal construction phase. Monthly biological construction monitoring reports shall be prepared and submitted through the duration of project construction to document compliance with environmental requirements.

13. Restore all temporary construction areas pursuant to a Habitat Restoration Plan. All temporary work areas not subject to long-term use or ongoing vegetation maintenance shall be revegetated with native species characteristic of the adjacent native vegetation communities in accordance with a Habitat Restoration Plan. A habitat restoration specialist will be designated and approved by the BLM and will determine the most appropriate method of restoration. Restoration techniques may include the following: hydroseeding, hand-

seeding, imprinting, and soil and plant salvage. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. The Habitat Restoration Plan shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project. At the completion of project construction, all construction materials shall be completely removed from the site. All temporary construction access roads shall be permanently closed and restored. Topsoil located in areas to be restored will be conserved and stockpiled during the excavation process for use in the restoration. Wherever possible, vegetation would be left in place to avoid excessive root damage and to allow for natural recruitment following construction. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the BLM. If restoration of temporary impact areas is not possible to the satisfaction of the BLM, the temporary impact shall be considered a permanent impact and compensated.

14. Provide habitat compensation or restoration for permanent impacts to native vegetation communities. Permanent impact to all native vegetation communities shall be compensated through a combination of habitat compensation and habitat restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Habitat compensation shall be accomplished through agency-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting comparable habitats to those lands impacted by the Proposed Project. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of the start of construction. Habitat restoration may be appropriate as compensation for permanent impacts provided that restoration is demonstrated to be feasible and the restoration effort is implemented pursuant to a Habitat Restoration Plan, which includes success criteria and monitoring specifications. The Habitat Restoration Plan shall be approved by the permitting agencies prior to construction of the project. All habitat compensation and restoration used as mitigation for the Proposed Project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the Proposed Project on private lands shall include long-term management and legal protection assurances.

15. Implement fire prevention best management practices during construction and operation activities. Fire prevention best management practices shall be implemented during construction and operation of the project as specified by the Construction Fire Prevention/Protection and Wildland Fire Prevention and revised Fire Safety Electric Standard Practice Operation and Maintenance Plan.

16. Limit temporary and permanent impacts to jurisdictional features to the minimum necessary as defined by the final engineering plans. Obtain and implement the terms and conditions of agency permit(s) for unavoidable impacts to jurisdictional wetlands and waters. All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas within the approved work limits identified on the final engineering plans. The limits of the approved work space shall be delineated with stakes and/or flagging that shall be maintained throughout the construction period in accordance with Environmental and Construction Compliance Management Plan (ECCMP) (Appendix D). The project applicant shall obtain applicable permits and provide evidence of permit approval, which may include but not be limited to, a Clean Water Act Section 404 Permit, a Clean Water Act Section 401 water quality certification, and a Section 1602 streambed alteration agreement with the respective agencies (U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife) for impacts to jurisdictional features prior to project construction. The applicant shall implement the terms and conditions of these authorizations.

17. Implement habitat creation, enhancement, preservation, and/or restoration pursuant to a wetland mitigation plan to ensure no net loss of jurisdictional waters and wetlands. Temporary and permanent impacts to all jurisdictional resources shall be compensated through a combination habitat creation (i.e. establishment), enhancement, preservation, and/or restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Any creation, enhancement, preservation, and/or restoration effort shall be implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project. A habitat restoration specialist will be designated and approved by the permitting agencies and will determine the most appropriate method of restoration. Restoration techniques may include hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the BLM. If restoration of temporary impact areas is not possible to the satisfaction of the BLM, the temporary impact shall be considered a permanent impact and compensated accordingly. All habitat creation and restoration used as mitigation for the Proposed Project on public lands shall be located in areas designated for resource protection and management. All habitat creation and restoration used as mitigation for the Proposed Project on private lands shall include long-term management and legal protection assurances.

18. Where drainage crossings are unavoidable, construct access roads at right angles to drainages. Unless not possible due to existing landforms or site constraints, access roads shall be built perpendicular to drainages to minimize the impacts to these resources and prevent impacts along the length of jurisdictional features.

19. Prepare and implement a Noxious Weeds and Invasive Species Control Plan. A Noxious Weeds and Invasive Species Control Plan has been prepared by HDR and shall be reviewed by the responsible agencies. On BLM lands, the plan shall be consistent with an Integrated Pest Management approach per the Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Report (2007).The plan shall be implemented during all phases of project construction and operation. The plan shall include best management practices to avoid and minimize the direct or indirect effect of the establishment and spread of invasive plant species during construction. Implementation of specific protective measures shall be required during construction, such as cleaning vehicles prior to off-road use, using weed-free imported soil/material, restricted vegetation removal and requiring topsoil storage. Development and implementation of weed management procedures shall be used to monitor and control the spread of weed populations along the construction access and transmission line right-of-ways. Vehicles used in transmission line construction shall be cleaned prior to operation off of maintained roads. Except as required to comply Biological Opinion Condition (Exhibit C; ROD Appendix A), or as provided in the ECCMP variance process (Appendix D), existing vegetation shall be cleared only from areas scheduled for immediate construction work and only for the width needed for active construction activities. Noxious weed management shall be conducted annually to prevent the establishment and spread of invasive plant species. This shall include weed abatement efforts, targeted at plants listed as invasive exotics by the California Exotic Plant Pest Council in their most recent "A" or "Red Alert" list. Only herbicides approved by the BLM in California will be used on BLM lands. Herbicide application can only occur on BLM lands with an approved Pesticide Use Proposal (PUP). Pesticide use should be limited to non-persistent pesticides and should only be applied in accordance with label and application permit directions and restrictions for terrestrial and aquatic applications.

20. Install fencing or flagging around identified special-status plant species populations in the construction areas. Prior to the start of construction, a qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species for all construction areas. All of the special-status plant locations shall be recorded using a Global Positioning System (GPS), which will be used to site the

avoidance fencing/flagging. Special-status plant species shall be avoided to the maximum extent possible by all construction activities. The boundaries of all special-status plant species to be avoided shall be delineated in the field with clearly visible fencing or flagging. The fencing/flagging shall be maintained for the duration of project construction activities.

21. Implement special-status plant species compensation. Impacts to special-status plant species shall be maximally avoided. Where impacts to special-status plant species are unavoidable, the impact shall be quantified and compensated through plant salvage and relocation or through off-site land preservation. Where salvage and relocation is feasible and biologically preferred, it shall be conducted pursuant to an agency-approved plan that details the methods for salvage, stockpiling, and replanting and the characteristics of the receiver sites. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. Success criteria and monitoring shall also be included in the plan. Where off-site land preservation is biologically preferred, it shall be implemented pursuant to an agency approved plan that describes the mitigation land resources and the long-term management and legal protection assurances.

22. Cover and/or provide escape routes for wildlife from excavated areas and monitor these areas daily. All steep trenches and excavations during construction shall be inspected twice daily (i.e., morning and evening) by a qualified biologist to monitor for wildlife entrapment. Large/steep excavations shall be covered and/or fenced nightly to prevent wildlife entrapment unless excavations provide an earthen ramp to allow for a wildlife escape route.

23. Enforce speed limits in and around all construction areas. Vehicles shall not exceed 15 miles per hour on unpaved roads and the right-of-way accessing the construction site.

24. Minimize night construction lighting adjacent to native habitats. Lighting of construction areas at night shall be the minimum necessary for personnel safety and shall be low illumination, selectively placed, and directed/shielded appropriately to minimize lighting in adjacent native habitats.

25. Prohibit littering and remove trash from construction areas daily. Littering shall not be allowed by the project personnel. All food-related trash and garbage shall be removed from the construction sites on a daily basis.

26. Prohibit the harm, harassment, collection of, or feeding of wildlife. Project personnel shall not harm, harass, collect, or feed wildlife. No pets shall be allowed in the construction areas.

27. Obtain and implement the terms of agency permit(s) with jurisdiction over federal or state listed species. The applicant shall implement the Biological Opinion as described in Exhibit C for impacts to federally listed wildlife species and a Section 2081 permit (or consistency determination) from the California Department of Fish and Wildlife for take of state listed wildlife species resulting from this project. The terms and conditions included in these authorizations shall be implemented, which may include seasonal restrictions, relocation, monitoring/reporting specifications, and/or habitat compensation through restoration or acquisition of suitable habitat.

28. Provide compensation for temporary and permanent impacts to Quino checkerspot butterfly habitat through conservation and/or restoration. Temporary and permanent impact to Quino checkerspot butterfly shall be

compensated through a combination of habitat compensation and habitat restoration at a minimum of a 2:1 mitigation ratio for non-critical habitat and a minimum of a 3:1 mitigation ratio for critical habitat, or as required by the permitting agencies. Habitat compensation shall be accomplished through U.S. Fish and Wildlife Service-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting Quino checkerspot butterfly. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of permit issuance. Habitat restoration may be appropriate as habitat compensation provided that the restoration effort is demonstrated to be feasible and implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to project construction. All habitat compensation and restoration used as mitigation for the Proposed Project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the Proposed Project on private lands shall include long-term management and legal protection assurances.

29. Conduct pre construction nesting bird surveys and implement - appropriate avoidance measures for identified nesting birds. If the project must occur during the avian breeding season (February 1st to August 31st, and as early as January 1 for some raptors), Tule Wind LLC should prepare a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) to address avoidance of impacts to nesting birds. Tule Wind LLC will submit to the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) the NBMMRP (see following for details) for review and comment to obtain concurrence the NBMMRP meets the intent of the stipulation prior to commencement of the project during the breeding season. The NBMMRP should include the following:

1. Nest Survey Protocols describing the nest survey methodologies
2. A Management Plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks
3. A Monitoring and Reporting Plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log (NML) with sufficient details to enable USFWS and CDFW to monitor Tule Wind LLC's compliance with Fish and Wildlife Code Sections 3503, 3503.5, 3511, and 3513
4. A schedule for the submittal (usually weekly) of the NML
5. Standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks
6. A detailed explanation of how the buffer widths were determined
7. All measures Tule Wind LLC will implement to preclude birds from utilizing project-related structures (i.e., construction equipment, facilities, or materials) for nesting. To determine presence of nesting birds that the project activities may affect, surveys should be conducted beyond the project area—300 feet for passerine birds and 500 feet for raptors. The survey protocols should include a detailed description of methodologies utilized by CDFW-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols should include but are not limited to the size of project corridor being surveyed, method of search, and behavior that indicates active nests. Each nest identified in the project area should be included in the NML. The NMLs should be updated daily and submitted to the CDFW weekly. Since the purpose of the NMLs is to allow the CDFW to track compliance, the NMLs should include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 feet for passerine birds, 500 feet for raptors) and nests whose standard buffer width was reduced by encroachment of project-related activities. The NMLs should provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The

NMLs will allow for tracking the success and failure of the buffers and will provide data on the adequacy of the buffers for certain species. Tule Wind LLC will rely on its avian biologists to determine the appropriate standard buffer widths for nests within the project corridor/footprint to employ based on the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths should be site- and species- guild-specific and data-driven and not based on generalized assumptions regarding all nesting birds.

The determination of the buffer widths should consider the following factors:

a. Nesting chronologies
b. Geographic location
c. Existing ambient conditions (human activity within line of sight—cars, bikes, pedestrians, dogs, noise)
d. Type and extent of disturbance (e.g., noise levels and quality—punctuated, continual, ground vibrations—blasting-related vibrations proximate to tern colonies are known to make the birds flush the nests)
e. Visibility of disturbance
f. Duration and timing of disturbance
g. Influence of other environmental factors
h. Species' site-specific level of habituation to the disturbance. Application of the standard buffer widths should avoid the potential for project-related nest abandonment and failure of fledging, and minimize any disturbance to the nesting behavior. If project activities cause or contribute to a bird being flushed from a nest, the buffer must be widened.

30. Design all transmission towers and lines to conform with Avian Power Line Interaction Committee standards. The Proposed Project shall implement recommendations by the Avian Power Line Interaction Committee (2006), which will protect raptors and other birds from electrocution. These measures are sufficient to protect even the largest birds that may perch or roost on transmission lines or towers from electrocution.

31. Develop and implement project-specific Avian Protection Plans. Develop and implement an Avian Protection Plan related to wire, transmission tower, and facilities impacts from electrocution and collision of bird species. An Avian Protection Plan shall be developed jointly with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife and shall provide the framework necessary for implementing a program to reduce bird mortalities and document actions. The Avian Protection Plan shall include the following: corporate policy, training, permit compliance, construction design standards, nest management, avian reporting system, risk assessment methodology, mortality reduction measures, avian enhancement options, quality control, public awareness, and key resources.

32. Design and configure wind turbines to maximally avoid and minimize bird and bat resources. Various design features shall be used to reduce or avoid impacts to bird and bat species. These may include avoiding guy wires, reducing impacts with appropriate turbine layout based on micro-siting decisions that may include such refinements such as placing all turbines on the ridgeline and avoiding placement of turbines on slopes and within canyons, reduce foraging resources near turbines, undergrounding collector lines as much as feasible, marking all associated aboveground powerlines and guy wires with bird diverters, and following the Avian Power Line Interaction Committee (APLIC) standards at a minimum to reduce bird strikes.

33. Minimize turbine lighting. Night-lighting may serve as an attractant for birds especially migrants, which may be attracted to the light. Lighting that attracts birds shall be avoided on the turbines. Lights with short flash duration that emit no light during the off phase shall be used. Lights that have the minimum number of flashes per minute and the briefest flash duration shall be used. Lights on auxiliary buildings near turbines and met towers shall be motion-sensitive rather than constant "on" lights. All lighting on buildings shall be shielded and downcast. To avoid disorienting or attracting birds, Federal Aviation Administration visibility lighting shall employ only strobe, strobe-like, or blinking lights, preferably with all lights illuminating simultaneously. Minimum intensity, maximum "off-phased" duel strobes are preferred. No steady burning lights shall be used.

34. Conduct post-construction bird and bat species mortality monitoring and reporting pursuant to an approved monitoring program. Conduct a minimum of at least 3 years of post-construction bird and bat mortality monitoring per guidance from the BLM and recommendations from the Wind Turbine Guidelines Advisory Committee (USFWS 2009a) to satisfy Tier 4 and Tier 5 monitoring requirements. If the initial 3 years of survey do not capture a good rain year (i.e. good eagle reproduction), then an additional 2 years of data collection will be required such that the surveys are conducted during a good rain year. Additionally, if post-construction bird and bat mortality monitoring during the first 3 years identifies mortality inconsistent with the pre-project impact assessments, additional years of post-construction bird and bat mortality monitoring may be required by the wildlife agencies, as described the Avian and Bat Protection Plan. Annual monitoring reports shall be submitted to the wildlife agencies and the BLM.

35. Monitor golden eagles nests in the area to track productivity. Conduct annual surveys of golden eagle territories within 10 miles of the turbines for a minimum of 10 years. Conduct surveys to determine location of active nest, number of eggs laid and number of young fledged, using methods similar to those described by Pagel et al. 2010 and as described in the project-specific Avian and Bat Protection Plan, which can be accessed at http://www.cpuc.ca.gov/environment/info/dudek/ecosub/Tule_TS.htm. Annual monitoring reports shall be provided to the wildlife agencies and the BLM.

36. Implement an adaptive management program in an Avian and Bat Protection Plan that provides triggers for required operational modifications (seasonality, radar, turbine-specific modifications, cut-in speed).
An Avian and Bat Protection Plan shall be prepared and implemented by the project applicant based on an adaptive management program that uses the information provided from the implementation of Stipulations 34 and 35, which includes post-construction bird and bat monitoring and the golden eagle nest productivity monitoring. The Avian Protection Plan required under Stipulation 31 would be augmented for the Tule Wind Project to incorporate protection measure for bat species. This adaptive management program must implement in manner that assures net zero loss of golden eagle on a population level basis. If mortality of any golden eagle occurs during the Tule Wind Project's operation, regardless of age or gender, the responsible and adjacent turbines will be shut down while the adaptive management program, as described in the complete Avian and Bat Protection Plan (available at http://www.cpuc.ca.gov/environment/info/dudek/ecosub/Tule_TS.htm), is implemented. This program will be based on monitoring of the active nest locations and eagle activity within 10 miles of the turbines. Measures will include curtailing operation of all or selected turbines during the fledging period of the active nests or potential permanent shutdown of turbines that are closest to active nests until the nest location changes to a farther location (eagles are known to build numerous nests within their territory and use different nest locations each year (Kochert et al. 2002)). Other measures (e.g., radar monitoring and turbine modifications) will be implemented as dictated by the monitoring data and as specified by the adaptive management program. Based on the monitoring of bat mortality, the adaptive management program shall have

triggers for the implementation of limited and periodic feathering or shut down of turbines to avoid impacts to bats.

37. Prepare an Avian and Bat Protection Plan. Prior to project construction, an Avian and Bat Protection Plan must be submitted to the USFWS and CDFW. Acceptance of the Plan from the U.S. Fish and Wildlife Service will document that the Avian and Bat Protection Plan was prepared consistent with the Bald and Golden Eagle Protection Act, but will not in and of itself authorize take of golden eagles or determine that no take will occur. Acceptance of the Plan from the California Department of Fish and Wildlife will document that the Avian and Bat Protection Plan is technically adequate and consistent with the California Department of Fish and Wildlife guidelines, but will not authorize take of this fully protected species.

38. Conduct maintenance activities resulting in vegetation disturbance outside of the bird nesting season or conduct pre-construction nesting bird surveys. Maintenance activities with the potential to result in direct or indirect habitat disturbance, most notably vegetation management, shall be conducted outside of the bird nesting season to the maximum extent practicable. Where avoidance is not possible, the project proponent shall conduct pre-construction nesting bird surveys to determine the presence of active nests in or adjacent to construction areas. If active nests are identified, appropriate avoidance measures would be identified and implemented to prevent disturbance to the nesting bird(s). If federal or state listed nesting birds are identified, the project proponent shall contact the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife to determine the appropriate course of action.

39. Reduce impacts at scenic highway and trail crossings. At highway and trail crossings, structures shall be placed at the maximum feasible distance from the crossing to reduce visual impacts as long as other significant resources are not negatively affected.

40. Reduce impacts at scenic view areas. In scenic view areas, as designated by the BLM, structures would be placed to avoid sensitive features and/or allow conductors to clearly span the features, within limits of standard design where feasible.

41. Reduce visibility of construction activities and equipment. If visible from nearby roads, residences, public gathering areas, recreational areas, facilities, or trails, stationary construction sites and staging areas shall be visually screened using temporary screening fencing where practical. Fencing will be of an appropriate design and color for each specific location. Where practical, construction staging and storage will be screened with opaque fencing from close-range residential views. Additionally, construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use shall be avoided. Tule Wind LLC shall submit final construction plans demonstrating compliance with this measure to the BLM and San Diego County for review and approval at least 60 days before the start of construction.

42. Reduce construction night-lighting impacts. Tule Wind LLC shall design and install all lighting at construction and storage yards and staging areas and fly yards such that illumination of the project facilities, vicinity, and nighttime sky is minimized. Tule Wind LLC shall submit a Construction Lighting Mitigation Plan to the BLM and San Diego County for review and approval before ordering of any exterior lighting fixtures or components. Tule Wind LLC shall not place an order for any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the BLM and San Diego County. The Plan shall include but is not necessarily limited to the following:

- Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary;
- All lighting shall be of minimum necessary brightness consistent with worker safety; and
- High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.

43. Reduce construction impacts to natural features. No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate survey or construction activity limits.

44. Reduce in-line views of land scars. Construct access or spur roads at appropriate angles from the originating primary travel facilities to minimize extended in-line views of newly graded terrain, when feasible. Contour grading should be used where feasible to better blend graded surfaces with existing terrain. Tule Wind LLC shall submit final construction plans demonstrating compliance with this measure to the appropriate land use jurisdiction agency for review and approval at least 60 days before the start of construction.

45. Reduce visual contrast from unnatural vegetation lines. In those areas where views of land scars are unavoidable, the boundaries of disturbed areas shall be aggressively revegetated to create a less distinct and more natural-appearing line to reduce visual contrast. Furthermore, all graded roads and areas not required for ongoing operation, maintenance, or access shall be returned to preconstruction conditions. In those cases where potential public access is opened by construction routes, Tule Wind LLC shall create barriers or fences to prevent public access and patrol construction routes to prevent vandalized access and litter cleanup until all vegetation removed returns to its pre-project state. Tule Wind LLC shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and San Diego County, for review and approval at least 60 days before the start of construction.

46. Minimize vegetation removal. Only the minimum amount of vegetation necessary for construction of structures and facilities will be removed. Topsoil located in areas to be restored shall be conserved during excavation and reused as cover on disturbed areas to facilitate re-growth of vegetation. Topsoil located in developed or disturbed areas is excluded from this measure.

47. Reduce visual contrast associated with ancillary facilities. Tule Wind LLC shall submit to the BLM a Surface Treatment Plan describing the application of colors and textures to all new facility structure buildings, walls, fences, and components comprising all ancillary facilities. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast by blending the facilities with the landscape. The Surface Treatment Plan shall be submitted to the BLM for approval at least 90 days before (a) ordering the first structures that are to be color treated during manufacture or (b) construction of any of the ancillary facility components, whichever comes first. If the BLM notifies Tule Wind LLC that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, Tule Wind LLC shall prepare and submit for review and approval a revised Plan. The Surface Treatment Plan shall include:

- Specification and 11" × 17" color simulations at life-size scale of the treatment proposed for use on project structures, including structures treated during manufacture

- A list of each major project structure, building, tower and/or pole, and fencing specifying the color(s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation)
- Two sets of brochures and/or color chips for each proposed color
- A detailed schedule for completion of the treatment
- Procedures to ensure proper treatment maintenance for the life of the project.

Tule Wind LLC shall not specify to vendors the treatment of any buildings or structures treated during manufacture or perform the final treatment on any buildings or structures treated onsite, until Tule Wind LLC receives notification of approval of the Surface Treatment Plan by the BLM. Within 30 days following the start of commercial operation, Tule Wind LLC shall notify the BLM that all buildings and structures are ready for inspection.

48. Reduce potential visual contrast of transmission structures. Tule Wind LLC will use dulled-metal-finish transmission structures and non-specular conductors.

49. Reduce potential transmission conductor visibility and visual contrast. The following design measures shall be applied to all new structure locations, conductors, and re-conductored spans to reduce the degree of visual contrast caused by the new facilities:

- All new conductors and re-conductored spans are to be non-specular in design to reduce conductor visibility and visual contrast.

- Where revisions would not conflict with existing design considerations to avoid sensitive resources (including hydrological, cultural, and biological resources), no new access roads shall be constructed such that they directly approach existing or proposed towers in a straight line from sensitive viewing locations immediately downhill of the structures.

50. Reduce visual impacts resulting from native tree removal. In the event that ornamental or native trees within the project area will be removed due to project design and grading, the project applicant shall prepare a Tree Replacement Plan to be submitted with the Screening/Landscape Plan. The Tree Replacement Plan shall include but is not limited to the following:

a. Tree Removal Locations: Indicate the size, type, and location of each tree (additional items, such as a tree survey by a professional engineer or licensed land survey, may be required.)

b. Assessment of the health and structural conditions, soils, tree size (trunk diameter, basal diameter, height, canopy spread), pest and disease presence, and accessibility of native oak trees to be removed due to project design and grading in order to determine whether existing trees can be transplanted outside the project footprint post-construction. If the assessment determines native oak trees can be transplanted, the oaks would be augmented with additional oak plantings in case the larger trees decline and are lost as a result of the relocation process. If native oak trees cannot be transplanted, the Tree Replacement Plan shall indicate the size, type, and location of each proposed replacement tree (additional items, such as a tree survey by a professional engineer or licensed land survey, may be required).

c. Photos of the site and/or trees to be removed.

d. Oak replacement plan focusing on oak tree planting with smaller container trees at higher numbers, recommended at least 5:1 with 15-gallon size trees. The Tree Replacement Plan must minimize mature tree loss to the degree feasible. The Tree Replacement Plan shall be submitted to the appropriate land use jurisdiction agency for approval at least 90 days prior to planned tree removal. If the BLM notifies the Tule Wind LLC that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, Tule Wind LLC shall prepare and submit the revised Tree Replacement Plan for review and approval.

51. Reduce potential visual impacts of wind turbines and ancillary facilities. Tule Wind LLC shall submit to the BLM a Surface Treatment Plan describing the design and application of colors and textures to all new wind turbine facilities, fences, and components comprising all ancillary facilities. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast to the degree feasible. Except for structures or components already held in inventory on the date of the ROW issuance, the Treatment Plan shall be submitted to the BLM for approval at least 90 days before (a) ordering the first structures that are to be color treated during manufacture or (b) construction of any of the ancillary facility components, whichever comes first. If the BLM notifies Tule Wind LLC that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, Tule Wind LLC shall prepare and submit for review and approval a revised Plan.

52. Reduce long-term night-lighting impacts from ancillary facilities. Tule Wind LLC shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare, and illumination of the project facilities, vicinity, and nighttime sky is minimized. Tule Wind LLC shall submit a Lighting Mitigation Plan to the BLM for review and approval at least 90 days before ordering any permanent exterior lighting fixtures or components. Tule Wind LLC shall not order any exterior lighting fixtures or components until the Lighting Mitigation Plan is approved by the BLM. The Plan shall include but is not necessarily limited to the following:

- Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary.

- All lighting shall be of minimum necessary brightness consistent with worker safety.

- High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.

53. Incorporate Obstacle Collision Avoidance System (OCAS), or equivalent system onto Tule Wind Project wind turbines. Following FAA approval, the project applicant shall install the OCAS lighting system on all proposed wind turbines in order to minimize nighttime lighting impacts attributed to the operation of FAA required obstruction lighting. If OCAS is not approved by FAA at the time an FAA lighting system has been purchased by Tule Wind, LLC, the OCAS or equivalent system need not be installed retroactively, unless required by FAA.

54. Prepare Construction Notification Plan. Forty-five days prior to construction, Tule Wind LLC shall prepare and submit a Construction Notification Plan to the BLM for approval. The plan shall identify the procedures that will be used to inform property owners of the location and duration of construction, identify approvals that are needed prior to posting or publication of construction notices, and include text of proposed public notices and advertisements. The plan shall address at a minimum two of the following components:

- Public notice mailer. A public notice mailer shall be prepared and mailed no less than 15 days prior to the start of construction. The notice shall identify specific construction activities that would restrict, block, remove parking, or require a detour to access existing residential properties. The notice shall state the type of construction activities that will be conducted and the location and duration of construction, including all helicopter activities. Tule Wind LLC shall mail the notice to all residents or property owners within 1,000 feet of project components. If construction delays of more than 7 days occur, an additional notice shall be prepared and distributed.

- Newspaper advertisements. Fifteen days prior to construction, a notice shall be placed in local newspapers and bulletins, including Spanish language newspapers and bulletins. The notice shall state when and where construction will occur and provide information about the public liaison person and identify the hotline. If construction is delayed for more than 7 days, an additional round of newspaper notices shall be placed to discuss the status and schedule of construction.

- Public venue notices. Thirty days prior to construction, notice of construction shall be posted at public venues such as libraries, community notification boards, post offices, rest stops, community centers, and other public venues to inform affected residents about the purpose and schedule of construction activities.

- Public liaison person and toll-free information hotline. Tule Wind LLC shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbances. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. Tule Wind LLC shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.

55. Notify property owners and provide access. To facilitate access to properties obstructed by construction activities, Tule Wind LLC shall notify property owners and tenants at least 24 hours in advance of construction activities and shall provide alternative access if required.

56. Provide notice for access restrictions or anticipated closures to wilderness and recreation areas. Tule Wind LLC shall coordinate with the BLM to ensure that proper signage is posted in advance for any access restriction and/or anticipated closures of wilderness and recreation areas so that recreational users may plan accordingly. Signage shall be posted 30 days prior to construction at public venues such as rest stops, resource management offices, and along access routes to known recreational destinations that would be restricted, blocked, or detoured. Notices shall provide information on alternative recreation areas that may be used during the closure of these facilities.

57. Maintain access along McCain Valley Road. Tule Wind LLC shall coordinate with the BLM to ensure that access is maintained to wilderness and recreation areas within the McCain Valley area during construction. Tule Wind LLC shall provide adequate turnouts along McCain Valley Road such that visitors to the area may utilize the roadway to access recreational areas. In addition, the project applicant shall ensure that construction vehicles and equipment are not left in McCain Valley Road so as to obstruct the movement of non-construction vehicles in the area. If at any time it is determined that a road closure is needed for public safety, Tule Wind LLC will provide notification to the BLM. Any anticipated road closures that will occur as part of the construction process should be identified in advance in the NTP request for that section of construction.

58. Develop and Implement a Historic Properties Treatment Plan-Cultural Resources Management Plan. A Historic Properties Treatment Plan–Cultural Resources Management Program (HPTP-CRMP) shall be prepared to avoid or mitigate impacts for significant cultural resources pursuant to Section 106 Guidelines. An MOA shall be developed among all federal, state, and local agencies to implement the HPTP-CRMP. As part of the HPTP-CRMP, recorded cultural resources within that can be avoided, but are within 100 feet of the proposed construction area shall be listed and demarcated during construction as Environmentally Sensitive Areas (ESAs). ESAs will be designated by marking the boundaries of sites with a buffer zone of at least 50 feet beyond the outer limits of the site extent using temporary fencing or other reasonably recognizable boundary defining materials. All recommended National Register of Historic Places (NRHP)- and/or California Register of Historic Resources (CRHR)-eligible resources that would not be affected by direct impacts, but are within 100 feet of direct impact areas, shall be designated as ESAs. Protective fencing or other markers shall be erected and maintained to protect ESAs from inadvertent trespass for the duration of construction in the vicinity. An archaeologist shall monitor during ground-disturbing activities at all cultural resource ESAs. The HPTP-CRMP shall also define any additional areas that are considered to be of high sensitivity for discovery of buried NRHP-eligible historic properties and CRHR-eligible historic resources, including burials, cremations, or sacred features. These areas of high-sensitivity shall also be monitored by qualified archaeologists during construction. If recommended NRHP-eligible historic properties and CRHR-eligible historic resources are not avoidable, the HPTP-CRMP shall provide a process for evaluating NRHP and CRHR eligibility, consulting with Native Americans about site treatment, working with engineers to avoid resources; suggest various options for reducing adverse effects; and outline a data recovery mitigation plan that would include research design, field sampling, laboratory analysis, reporting, curation, and dissemination of results. Other treatment measures to resolve adverse effects could include but are not limited to historical documentation, photography, collection and publishing of oral histories, field work to gather information for research purposes or some form of public awareness or interpretation. A description of alternative treatments to resolve adverse effects other than data recovery excavations could also include:

- Relocation of construction components to portions of historic properties that do not contribute to the qualities that make the resource eligible for the NRHP and CRHR;
- Deeding cemetery or other sensitive areas into open space in perpetuity and providing necessary long-term protection measures;
- Public interpretation including the preparation of a public version of the cultural resources studies and/or education materials for local schools;
- Providing Native American tribes future access to traditional and cultural areas on the Project site after completion of Project construction; and

- Tule Wind LLC financial support of existing cultural centers for the preparation of interpretive displays.

The HPTP-CRMP shall include provisions for reporting and curation of artifacts and data at a facility that is approved by the agency. As part of the HPTP-CRMP, processing of all collected cultural remains shall be described. Tule Wind LLC shall attempt to gain permission for artifacts from privately held land to be curated with the other project collections. All artifacts shall be analyzed to identify function and chronology as they relate to the history of the area. Faunal material shall be identified as to species. A Native American monitor may be required at culturally sensitive locations specified by the lead agency following government-to-government consultation with Native American tribes. The monitoring plan in the CRMP shall indicate the locations where Native American monitors shall be required.

59. Avoid and Protect Significant Resources. Tule Wind LLC shall design and implement a long-term management plan to protect NRHP-eligible, CRHR-eligible sites or sites treated as eligible for project management purposes from direct impacts of project operation and maintenance and from indirect impacts (such as erosion and access) that could result from the presence of the project. The plan shall be developed in consultation with the BLM to design measures that shall be effective against project maintenance impacts, such as vegetation clearing and road and tower maintenance, and project-related vehicular impacts. The plan shall also include context for understanding the cultural resources within the ROW and describe how protective measures for cultural resources within the ROW or main project area that may experience operational and access impacts as a result of the project. Measures considered shall include demarcation of Environmentally Sensitive Areas (ESAs) during any subsequent project construction or maintenance activities for all a within 100 feet of direct impact areas, permanent restrictive fencing or gates, permanent access road closures, signage, stabilization of potential erosive areas, site capping, site patrols, and interpretive/educational programs, or other measures that will be effective for protecting the resources. The plan shall be property specific and shall include provisions for monitoring and reporting its effectiveness and for addressing inadequacies or failures that result in damage to resources. Monitoring of sites selected during consultation with the BLM shall be conducted annually by a professional archaeologist for a minimum period of 5 years.

Monitoring shall include inspection of all site loci and defined surface features, documented by photographs from fixed photo monitoring stations and written observations. A monitoring report shall be submitted to the BLM within 1 month following the annual resource monitoring. The report shall indicate any properties that have been affected by erosion, unauthorized excavation or collecting or vehicle or maintenance impacts. For properties that have been impacted, Tule Wind LLC shall provide recommendations for mitigating impacts and for improving protective measures. After 5 years of resource monitoring, the BLM shall evaluate the effectiveness of the protective measures and the monitoring program. Based on that evaluation, the BLM may require that Tule Wind LLC revise or refine the protective measures, or alter the monitoring protocol or schedule. If the BLM does not authorize alteration of the monitoring protocol or schedule, those shall remain in effect for the duration of the project operation.

If annual monitoring program identifies adverse effects to properties eligible for listing on the NRHP and CRHR from operation or long-term presence of the project, or if, at any time, Tule Wind LLC, the BLM become aware of such adverse effects Tule Wind LLC shall notify the BLM immediately and implement additional protective measures, as directed by the BLM. At the discretion of the BLM such measures may

include, but not be limited to, refinement of monitoring protocols, data-recover investigations, or payment of compensatory damages in the form of nondestructive cultural resource studies or protection.

60. Training for Contractors. All construction personnel shall be trained regarding the recognition of possible buried cultural remains and protection of all cultural resources, including prehistoric and historic resources during construction, prior to the initiation of construction or ground-disturbing activities. The Applicant shall complete training for all construction personnel and retain documentation showing when training of personnel was completed. Training shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Training shall inform all construction personnel that shall be avoided, and that travel and construction activity shall be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of artifacts or other cultural materials on or off the ROW by Tule Wind LLC, its representatives, or employees shall not be allowed. Violators shall be subject to prosecution under the appropriate State and federal laws, and violations shall be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order. The following issues shall be addressed in training or in preparation for construction:

- All construction contracts shall require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits, their responsibility to avoid and protect all cultural resources, and the penalties for collection, vandalism, or inadvertent destruction of cultural resources.

- Tule Wind LLC shall provide training for supervisory construction personnel describing the potential for exposing cultural resources and procedures and notifications required in the event of discoveries by project personnel or archaeological monitors. Supervisors shall also be briefed on the consequences of intentional or inadvertent damage to cultural resources. Supervisory personnel shall enforce restrictions on collection or disturbance of artifacts or other cultural resources.

61. Construction Monitoring. Prior to issuance of a NTP, Tule Wind LLC shall identify and retain a qualified archaeologist, in accordance with the Secretary of the Interior's Standards and Guidelines (Secretary's Standards) (36 CFR 61), and Native American observer to monitor ground-disturbing activities in culturally sensitive areas in an effort to identify any unknown resources. A qualified archaeologist shall attend preconstruction meetings, as needed, to make comments and/or suggestions concerning the monitoring program and to discuss excavation plans with the excavation contractor. The requirements for archaeological monitoring shall be noted on the construction plans.

All construction activities in environmentally sensitive areas, or any other area of the project deemed sensitive for containing cultural resources, shall be monitored by a qualified archaeologist. Since significant portions of the project site contain sedimentary deposits that have the potential to contain buried cultural resources, then full-time cultural resources monitoring shall be implemented during all phases of ground-disturbing work in these areas. A cultural resource monitor shall meet the Secretary of the Interior Standards Qualifications as a professional archaeologist and, as appropriate, shall be on the lead agencies approved consultants list. The archaeological monitor(s) shall also be familiar with the project area and, therefore, be capable of anticipating the types of cultural resources that may be encountered.

62. Discovery of Unknown Resources. In the event that previously unknown cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground disturbance to allow evaluation of recommended significant cultural resources. The process for handling inadvertent discoveries shall be documented in the CRMP. It shall detail the methods, consultation procedures, and timelines for assessing register eligibility, formulating a mitigation plan, and implementing treatment should avoidance and protection of the resource not be possible. Mitigation and treatment plans for unanticipated discoveries shall be approved by the agency and SHPO prior to implementation. The archaeologist in coordination with the BLM shall evaluate the significance of the discovered resources based on eligibility for the NRHP, CRHR, or local registers. Preliminary determinations of NRHP eligibility shall be made by the BLM, in consultation with other appropriate agencies and local governments, and the SHPO.

63. Control Unauthorized Access. Tule Wind LLC shall coordinate with the authorized officer of the BLM at least 60 days before construction to review gate designs for newly developed access roads within the ROW. On trails proposed for dual use as access roads, gates shall be wide enough to allow horses, bicycles, and pedestrians to pass through. Tule Wind LLC shall document its coordination efforts with the administering agency of the road/trail and provide this documentation to the BLM 30 days prior to construction. Signs prohibiting unauthorized use of the access roads shall be posted on the installed gates.

64. Funding of Law Enforcement Patrols. To control unauthorized use of project access roads and to provide for the general protection of cultural and natural resources on the site made more accessible as a result of the project facilities, the Grantee shall provide funding to the BLM for law enforcement patrols in the amount not to exceed $50,000 per year for the period of construction. After construction, Tule Wind, LLC shall provide funding in the amount of $25,000 per year for this purpose for the term of the ROW. Representatives from the BLM and Grantee ("the Parties") shall meet annually to review the funding amount. If damage or theft of items of historical value has been occurring and the Parties determine that additional BLM staff presence in the Tule Project area would reduce the damage or theft, then the amount shall be increased by agreement of the Parties to a new amount deemed necessary, and adjusted to reflect funding from other projects in the vicinity of the Tule Project available to the BLM for enforcement. The amount may also be adjusted by agreement of the Parties annually to reflect actual, documented costs. Additionally, Grantee will, in coordination with the BLM, train its operations and maintenance staff and instruct the staff to be observant and vigilant during routine project activities and to take appropriate actions to prevent and/or report unauthorized activity on the site.

65. Continue Consultation with Native Americans and Other Traditional Groups. Tule Wind LLC shall provide assistance to the BLM to continue required government to government consultation with interested Native American tribes and individuals (Executive Memorandum of April 29, 1994, and Section 106 of the National Historic Preservation Act) and other traditional groups to identify and assess or mitigate the impact of the approved project on traditional cultural properties or other resources of Native American concern, such as sacred sites and landscapes, or areas of traditional plant gathering for food, medicine, basket weaving, or ceremonial uses. As directed by the BLM, Tule Wind LLC shall undertake required treatments, studies, or other actions that result from such consultation. Actions that are required during or after construction shall be defined, detailed, and scheduled in the HPTP-CRMP and implemented by Tule Wind LLC. Tule Wind LLC is required to conform to the terms and conditions of the approved Memorandum of Agreement for the Tule Wind Project, as well as the HPTP-CRMP prepared for the project.

66. Human Remains. All locations of known Native American human remains shall be avoided through project design and designation as ESAs if within 100 feet of project components. During construction, if human

remains are encountered, Native American consultation consistent with NAGPRA shall be undertaken. In addition, if human remains are encountered on non-federal (state, county, or private) lands, California Health and Safety Code §7050.5 states that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code §5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the San Diego County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within a reasonable time frame. Subsequently, the Native American Heritage Commission shall identify the "most likely descendant." The most likely descendant shall then make recommendations and engage in consultations concerning the treatment of the remains as provided in Public Resources Code §5097.98. Avoidance and protection of inadvertent discoveries which contain human remains shall be the preferred protection strategy with complete avoidance of impacts to such resources protected from direct project impacts by project redesign. Tule Wind LLC shall follow all State and federal laws, statutes, and regulations that govern the treatment of human remains. Tule Wind LLC shall comply with and implement all required actions and studies that result from such consultations, as directed by the BLM.

67. Inventory and evaluate paleontological resources in the Final Area of Potential Effects. Prior to construction, Tule Wind LLC shall conduct and submit to the BLM for approval an inventory of significant paleontological resources within the affected area, based on field surveys of areas identified as marginal through high or undetermined paleontological sensitivity potential.

68. Develop Paleontological Monitoring and Treatment Plan. Following completion and approval of the paleontological resources inventory and prior to construction, Tule Wind LLC shall prepare and submit to the BLM for approval a Paleontological Monitoring Treatment Plan (Plan). The Plan shall be designed by a Qualified Paleontologist and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all BLM and San Diego County regulatory requirements, including BLM Paleontological Resource Guidelines.

The Qualified Paleontologist shall have an MA or PhD in Paleontology, shall have knowledge of the local paleontology, and shall be familiar with paleontological procedures and techniques. The Plan shall identify construction impact areas of moderate to high sensitivity for encountering significant resources and the depths at which those resources are likely to be encountered. The Plan shall outline a coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbance 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). Sediments with zero sensitivity will not require paleontological monitoring. The Qualified Paleontologist shall have a BA in Geology or Paleontology and a minimum of 1 year of monitoring experience in local sediments. The Plan shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The Plan shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting. The Plan shall specify that all paleontological work undertaken by the applicant 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 the BLM).

Notices to proceed shall be issued by the lead agency and other agencies with jurisdiction, following approval of the Paleontological Monitoring and Treatment Plan.

69. Monitor Construction for Paleontology. Based on the paleontological sensitivity assessment and Paleontological Monitoring and Treatment Plan consistent with Stipulation 69 (Develop Paleontological Monitoring and Treatment Plan), Tule Wind LLC shall conduct full-time construction monitoring by the qualified paleontological monitor in areas determined to have moderate (PFYC - Class 3) to high (PFYC- Class 4) paleontological sensitivity within the Tule Wind Project site. Sediments of low, marginal (i.e. PFYC – Class 2), or, undetermined (PFYC Class 3) sensitivity shall be monitored by a qualified paleontological monitor on a part-time basis (as determined by the Qualified Paleontologist). Construction activities shall be diverted when data recovery of significant fossils is warranted, as determined by the Qualified Paleontologist.

70. Conduct Paleontological Data Recovery. If avoidance of significant paleontological resources is not feasible or appropriate based on project design, treatment (including recovery, specimen preparation, data analysis, curation, and reporting) shall be carried out by the project, in accordance with the approved Treatment Plan per Stipulation 69 (Develop Paleontological Monitoring and Treatment Plan).

71. Train Construction Personnel. Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall be trained regarding the recognition of possible subsurface paleontological resources and protection of all paleontological resources during construction. The project shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. Training shall inform all construction personnel that Environmentally Sensitive Areas include areas determined to be paleontologically sensitive, as defined on the paleontological sensitivity maps for the project, and must be avoided, and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils on or off the ROW by the project, its representatives, or employees 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. The following issues shall be addressed in training or in preparation for construction:

- All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing subsurface paleontological resources, their responsibility to avoid and protect all such resources, and the penalties for collection, vandalism, or inadvertent destruction of paleontological resources.
- The project shall provide a background briefing for supervisory personnel describing the potential for exposing paleontological resources, the location of any potential Environmentally Sensitive Areas, and procedures and notifications required in the event of discoveries by project personnel or paleontological monitors. Supervisory personnel shall enforce restrictions on collection or disturbance of fossils.
- Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be diverted, and the project paleontologist shall be notified. Once the find has been inspected and a preliminary assessment made, the project paleontologist will notify the lead agency and other appropriate land managers and proceed with data recovery in accordance with the approved Paleontological Monitoring and Treatment Plan.

72. Blasting Plan. Tule Wind LLC will prepare a blasting plan that will reduce impacts associated with construction-related noise and vibrations related to blasting. The blasting plan will be site specific, based on general and exact locations of required blasting and the results of a project-specific geotechnical investigation.

The blasting plan will include a description of the planned blasting methods, an inventory of receptors potentially affected by the planned blasting, and calculations to determine the area affected by the planned blasting. Noise calculations in the blasting plan will account for blasting activities and all supplemental construction equipment. The final blasting plan and pre-blast survey shall meet the requirements provided below.

The blasting plan will include a schedule to demonstrate, where feasible, construction blasting to occur infrequently enough that it will not exceed the County's impulsive noise standard because blasting would not occur for more than 25% (15 minutes) during a 1-hour period due to the short time duration of a blast. Where this is not possible, other construction blasting would be coordinated with impacted building occupants to occur in their absence, or at other acceptable times, to avoid nuisance or annoyance complaints. If necessary the applicant will temporarily relocate impacted residents on an as needed basis for the duration of the blasting activities. The applicant will be responsible for temporary relocation expenses (i.e.; expenses for temporary housing) incurred by impacted residents if relocation is necessary during blasting activities. To ensure that potentially impacted residents are informed, the applicant will provide notice by mail to all property owners within 300 feet of the project at least 1 week prior to the start of construction activities. Blasting would be completed between 7 a.m. and 7 p.m. A rock anchoring or min-pile system may be used to reduce the risk of damage to structures during blasting activities. Fair compensation for lost use will be provided to the property owner. Physical damage to potentially vulnerable structures will be addressed by avoiding construction blasting near the structures wherever possible, and, if necessary, non-blasting construction methods will be evaluated. If adversely affected, structures shall be restored to an equivalent condition, and fair compensation for lost use will be provided to the owner. If necessary, portable noise barriers to reduce excessive noise impacts shall be used between the source and affected occupied properties. Noise barriers that break the line of sight would provide 5 dB attenuation. Increasing the height of the barrier would increase the attenuation of the barrier. A 5 dBA to 10 dBA attenuation is considered reasonably feasible.

Supplemental construction equipment, such as drill rigs, may be used to support blasting. At a distance of 80 feet, drill rig noise emissions are approximately 75 dBA Leq. Drill rigs, without mitigation, have the potential to cause temporary noise impacts if used less than 80 feet from the property line of an occupied residence. The blasting plan will include measures to reduce noise impacts resulting from the use of drill rigs at less than 80 feet from a property line. Such measures may include temporary noise barriers or limited hours of operation to reduce the impact.

Tule Wind LLC shall conduct a pre-blast survey. A written report of the pre-blast survey and final blasting plan shall be provided to the appropriate regulatory agency and approved prior to any rock removal using explosives. In addition to any other requirements established by the appropriate regulatory agencies, the pre-blast survey and blasting plan shall meet the following conditions:

- The pre-blast survey shall be conducted for structures within a minimum radius of 1,000 feet from the identified blast site to be specified by Tule Wind LLC.

- Sensitive receptors that could reasonably be affected by blasting shall be surveyed as part of the preblast survey.

- Notification that blasting would occur shall be provided to all owners of the identified structures to be surveyed prior to commencement of blasting.

- The pre-blast survey shall be included in the final blasting plan. The final blasting plan shall address air-blast limits, ground vibrations, and maximum peak particle velocity for ground movement, including provisions to monitor and assess compliance with the air-blast, ground vibration, and peak particle velocity requirements. The blasting plan shall meet criteria established in Chapter 3 (Control of Adverse Effects) in the Blasting Guidance Manual of the U.S. Department of Interior Office of Surface Mining Reclamation and Enforcement. The blasting plan shall outline the anticipated blasting procedures for the removal of rock material at the proposed turbine foundation locations. The blasting procedures shall incorporate line control to full depth and controlled blasting techniques to create minimum breakage outside the line control and maximum rock fragmentation within the target area. Prior to blasting, all applicable regulatory measures shall be met. Tule Wind LLC, its general contractor, or its subcontractor (as appropriate) shall keep a record of each blast for at least 1 year from the date of the last blast.

73. Site-specific noise mitigation plan. Prior to construction, a site-specific noise mitigation plan will be developed to ensure that noise from turbines will not adversely impact surrounding residences. Mitigation of the turbine noise may include revising the turbine layout, curtailment of nighttime use of selected turbines, utilization of an alternate turbine manufacturer (or combination of manufacturers), implementation of noise reduction technology, or other methods of compliance with applicable noise standards. The plan will also demonstrate how the project will maintain the turbines so that they will be kept in good running order throughout the operational life of the project and would not create significant noise levels due to deterioration.

74. Prepare and implement a Traffic Control Plan. At minimum, the plan will include the following:

- Tule Wind LLC shall encourage carpooling to the construction site to reduce personal vehicle traffic in the project area to the greatest extent possible.

- Tule Wind LLC will consider the specific object sizes, weights, origin, destination, and unique handling requirements, and evaluate alternative transportation approaches.

- Measures such as informational signs and flaggers shall be implemented when equipment may result in blocked roadways, and traffic cones or similar shall be implemented to identify any necessary changes in temporary lane configuration.

- Flaggers and directional guidance for bicyclists along Old Highway 80 shall be used.
- All Caltrans' standards for utility encroachments shall be met.

- The plan shall be prepared in accordance with Caltrans' Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook (WATCH) Manual.

- Clearances or overhead crossings shall conform to regulations of the BLM and the number of crossings shall be minimized.

- New installations under an existing roadbed shall be made by the boring-and-jacking method. No trenching under the traveled way will occur.

- For freeways and expressways, the placement of longitudinal encroachments is prohibited within controlled-access ROWs.

- Utilities shall not be located in median areas.

- Transverse crossings shall be normal (90°) to the highway alignment where practical. If impractical, skews of up to 30° from normal may be allowed.· Supports for overhead lines crossing freeways shall be located outside the controlled-access ROW and not on cut-or-fill slopes, and shall not impair sight distances. All installations shall be placed as close to the ROW line as possible. Aboveground utilities shall be outside the clear recovery zone (20 feet from edge-of-travel way for conventional highways and 30 feet for freeways and expressways). Allowance shall be made for future widening of the highways.

- New installations shall not impair sight distances.

Tule Wind LLC shall coordinate in advance with the applicants for the other two connected actions. This effort shall include coordinating the timing of construction of the various projects to reduce potential conflicts. Tule Wind LLC shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. The County will then notify respective police, fire, ambulance, and paramedic services. Tule Wind LLC shall notify counties and cities of the proposed locations, nature, timing, and duration of any construction activities, and advise of any access restrictions that could impact their effectiveness.

Tule Wind LLC shall provide a draft copy of the Traffic Control Plan to the agencies listed for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to the Tule Wind LLC, and plan revisions will address each comment to the satisfaction of the commenting agency. The final plan will be submitted to the BLM and San Diego County with input from commenting agencies and provided to Tule Wind LLC for implementation during all construction activities.

75. Repair roadways damaged by construction activities. If damage to roads occurs, Tule Wind LLC shall coordinate repairs with the affected public agencies to ensure that any impacts to area roads are adequately repaired at Tule Wind LLC's cost. Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. Said measures shall be incorporated into an access agreement/easement with the applicable governing agency prior to construction.

76. Consult with and inform FAA, DOD, and U.S. Customs and Border Protection. Tule Wind LLC shall consult with the FAA, DOD, and U.S. Customs and Border Protection (San Diego Sector) to avoid potential safety issues associated with proximity to airports, military bases or training area, and landing strips and to determine where Border Protection aircraft operate in the County. Prior to construction, Tule Wind LLC shall provide written notification to the FAA, the U.S. Air Force Regional Environmental Coordinator (or appropriate DOD representative), U.S. Customs and Border Protection (San Diego Sector), the BLM and San Diego County stating when and where the new transmission lines, towers, and wind turbines will be erected, and shall install markers as requested by U.S. Customs and Border Protection or FAA. Tule Wind LLC shall also provide all agencies listed above with aerial photos or topographic maps clearly showing the new lines, towers, and wind turbines.

77. Hazardous Materials Management Plan. Prior to approval of final construction plans, Tule Wind LLC shall prepare an HMMP for the construction phase of the project, which shall be reviewed and approved by the appropriate agency, and shall include the following components:

- The plan shall identify all hazardous materials that will be present on any portion of the construction site, including, but not limited to, fuels, solvents, and petroleum products. The plan shall address storage, use, transportation, and disposal of each hazardous material anticipated to be used at the site.

- The plan shall establish inspection procedures, storage requirements, storage quantity limits, inventory control, non-hazardous product substitutes, and disposition of excess materials.

- The plan shall identify secondary containment and spill prevention countermeasures, as well as a contingency plan to identify potential spill hazards, how to prevent their occurrence, and responses for different quantities of spills that may occur. Secondary containment and countermeasures shall be in place throughout construction so that if any leaks or spills occur, responses will be made immediately.

- The plan shall identify materials (and their locations) that will be on site and readily accessible to clean up small spills (i.e., spill kit, absorbent pads, and shovels). Such emergency spill supplies and equipment shall be clearly marked and located adjacent to all areas of work and in construction staging areas.

- The plan shall identify the spill-response materials that must be maintained in vehicles during construction and procedures for notification to the appropriate authorities.

- The plan shall identify adequate safety and fire suppression devices for construction-related activities involving toxic, flammable, or explosive materials (including refueling construction vehicles and equipment). Such devices shall be readily accessible on the project site, as specified in the Applicant's Fire Protection Plan approved by the applicable fire plan, and per the Uniform Building Code and Uniform Fire Code.

- The plan shall be included as part of all contractor specifications and final construction plans to the satisfaction of the appropriate agency.

- The plan shall also identify requirements for notices to federal and local emergency response authorities, and shall include emergency response plans.

Prior to construction, all contractor and subcontractor personnel shall receive training regarding the components of the HMMP, as well as applicable environmental laws and regulations related to hazardous materials handling, storage, and spill prevention and response measures.

Tule Wind LLC shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the plan for all construction activities. The plan shall be submitted to the BLM at least 30 days prior to construction.

78. Health and Safety Program. Prior to approval of final construction plans, Tule Wind LLC shall prepare a

Health and Safety Program for each applicable phase of the project (i.e., construction, operation, and decommissioning). The program shall be developed to protect both workers and the general public during all phases of the project. The program shall be implemented to educate construction workers about the hazards associated with the particular project site and the safety measures that must be taken to prevent injury. The program shall include standards regarding occupational safety, safe work practices for each task, hazard training requirements for workers, and mechanisms for documentation and reporting.

Regarding occupational health and safety, the program should identify all applicable federal and state occupational safety standards; establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; OSHA standard practices for safe use of explosives and blasting agents; and measures for reducing occupational EMF exposures); establish fire safety evacuation procedures; and define safety performance standards (e.g., electrical system standards and lightning protection standards). The program should include a training program to identify hazard training requirements for workers for each task and establish procedures for providing required training to all workers. The program should include worker training regarding how to identify potentially contaminated soils and/or groundwater. Documentation of training and a mechanism for reporting serious accidents to appropriate agencies should be established.

The program should identify requirements for temporary fencing around staging areas, storage yards, and excavation areas during construction or decommissioning activities. Such fencing shall be designed to restrict transient traffic, off-highway vehicle (OHV) use, and the general public from accessing areas under construction and should be removed once construction or decommissioning activities are complete. The program should also identify appropriate measures to be taken during operation of the project to limit public access to hazardous facilities (e.g., permanent fencing, locked access). In order to inform workers and the general public of the dangers of abandoned mines, pamphlets with the "Stay Out-Stay Alive" information used by federal and state governments should be distributed as part of the program.

Tule Wind LLC shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the program for all construction activities. The program shall be submitted to the BLM and San Diego County at least 30 days prior to construction.

79. Waste Management Plan. Prior to approval of final construction plans, Tule Wind LLC shall prepare a Waste Management Plan, which shall determine waste procedures, waste storage locations, waste specific management and disposal requirements, inspection procedures, and waste minimization procedures. Tule Wind LLC shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the plan for all construction activities. The plan shall be submitted to the BLM and San Diego County, depending on the jurisdiction where the construction activities are completed, at least 30 days prior to construction.

80. Test for pesticides/herbicides on currently or historically farmed land. In areas where the land has been or is currently being farmed, soil samples shall be collected and tested for herbicides, pesticides, and fumigants to determine the presence and extent of any contamination. The sampling and testing shall be prepared in consultation with the County Agricultural Commission, conducted by an appropriate California licensed professional, and sent to a California Certified Laboratory. A report documenting the areas proposed for sampling and the process used for sampling and testing shall be submitted to the BLM for verification at least 60 days prior to construction. Results of the laboratory testing and recommended resolutions for handling and

excavating materials found to exceed regulatory requirements shall be submitted to the BLM at least 30 days prior to construction.

If soil or groundwater contamination is confirmed as a result of soil sampling, Tule Wind, LLC shall immediately stop work and notify the designated environmental field representative. All work in the contaminated area shall cease, the work shall be cordoned off, and the environmental field representative shall implement appropriate health and safety procedures. Work outside the contaminated area may continue as determined by the environmental field representative.

Excavated materials containing elevated levels of pesticides or herbicides would require special handling and disposal according to procedures established by the regulatory agencies. Effective dust control suppression procedures shall be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Tule Wind, LLC shall contact the appropriate regulatory agencies for the State of California (e.g., DTSC or RWQCB) and the County to plan options for handling, treating, and/or disposing materials.

81. Contingency plan for encountering contaminated soils. If soil or groundwater contamination is suspected or encountered during grading or excavation activities (e.g., unusual soil discoloration or strong odor), Tule Wind LLC shall immediately stop work and notify the designated environmental field representative. All work in the area of suspected contamination shall cease, the work area shall be cordoned off, and the environmental field representative shall implement appropriate health and safety procedures. Work outside the suspected area may continue as determined by the environmental field representative.

Preliminary samples of the soil, groundwater, or suspected material shall be taken by OSHA- trained individuals and sent to a California Certified Laboratory for characterization. If the sample testing determines that contamination is not present, work shall continue at the previously suspected site. If contamination is found above regulatory limits, however, the appropriate regulatory agency (e.g. RWQCB or Certified Unified Program Agency (CUPA) responsible for responding to and providing environmental oversight of the region shall be notified in accordance with state or local regulations. In addition, Tule Wind LLC shall contact the appropriate regulatory agencies to plan options for handling, treating, and/or disposing of materials.

Documentation of the suspected contamination shall be made in the form of a report, identifying the location and potential contamination, as well as the process for sampling. Results of laboratory testing and recommended resolutions for handling and excavating materials found to exceed regulatory requirements shall be submitted to the BLM and San Diego County for review and approval.

82. Safety Assessment. Prior to commencing construction activities, Tule Wind LLC shall conduct a safety assessment to describe potential safety issues associated with the project, how safety prevention measures would be implemented, where medical aid kits would be located, the appropriate response action for each safety hazard, and procedures for notifying the appropriate authorities. The assessment shall address issues such as site access, construction hazards, safe work practices, security, heavy equipment transportation, traffic management, emergency procedures, and fire control.

83. Spill Prevention Control and Countermeasure Plan. Prior to the facility going online and becoming operational, Tule Wind LLC shall prepare an SPCC plan to address proper procedures for storage, handling, spill response, and disposal of hazardous materials for the ongoing operation of the project. The SPCC plan

shall meet all requirements outlined in Title 40 of the Code of Federal Regulations, Part 112 (40 CFR Part 112). The SPCC plan shall be reviewed and approved by the appropriate agency's engineering department and certified by a Registered Professional Engineer. The SPCC plan shall identify operating procedures that the facility will implement to prevent oil spills; control measures installed to prevent oil from leaving the project site; and countermeasures to contain, clean up, and mitigate the effects of an oil spill. A copy of the plan shall be kept on site at the facility and made available for review by the U.S. EPA Regional Administrator during normal business hours. The plan shall be amended as required under 40 CFR Part 112. The plan shall be reviewed, evaluated, and updated (if necessary) every 5 years.

84. Hazardous Materials Business Plan. Prior to the facility going online and becoming operational, Tule Wind LLC shall prepare an HMBP in accordance with all related requirements in California Health and Safety Code, Chapter 6.95, Articles 1 and 2. The HMBP shall contain basic information on the location, type, and quantity of hazardous materials stored or used by the facility, as well as the health risks associated with each hazardous material. The HMBP shall include three components: an inventory and site map, emergency response plan, and employee training. The plan shall be reviewed and recertified every year and amended as required by California Health and Safety Code, Chapter 6.95, Articles 1 and 2.

85. Wind Turbine Safety Zone and Setbacks. Prior to approval of final construction plans and as part of the Health and Safety Program for the project described in Stipulation 79, Tule Wind LLC shall establish a safety zone or setback for wind turbine generators from residents and occupied buildings, roads, ROWs, transmission lines, and other public access areas sufficient to prevent accidents from the operation of wind turbine generators. A plan detailing the proposed setbacks and safety zone shall be submitted to the BLM and San Diego County for review and approval at least 30 days prior to construction of any turbine foundation. The plan shall include a graphic depicting each turbine and the associated buffer safety zone.

The industry standard safety setback is 1.25 times the total height for wind turbines and 1.0 times the total height for towers that do not contain moving parts. The safety setback shall be measured from the center of the wind turbine or tower to the edge of the ROW or easement, or if no ROW or easement is established, to the line or structure in question. The applicant shall ensure that all towers and structures comply with appropriate safety zones and setbacks. Tule Wind LLC or its contractor shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to approved setbacks and safety zones.

86. Minimize electromagnetic and public safety communications. The project shall be designed to minimize EMI (e.g., impacts to radar, microwave, television, and radio transmissions) and comply with FCC regulations. Signal strength studies shall be completed prior to construction and conducted when proposed locations have the potential to impact transmissions. Potential interference with public safety communications systems (e.g., radio traffic related to emergency activities) shall be avoided.

In the event the project results in EMI, Tule Wind LLC or the facility operator shall work with the owner of the impacted communications system to resolve the problem. Potential measures may include realigning the existing antenna or installing relays to transmit the signal around the project. Additional warning information may also need to be conveyed to aircraft with onboard radar systems so that echoes from project equipment can be quickly recognized.

87. Limit conductor surface potential. Prior to construction, Tule Wind LLC shall specify and implement designs that limit the conductor surface electric gradient in accordance with the Institute of Electrical and Electronic Engineers (IEEE) Radio Noise Design Guide.

88. Document complaints of broadcast interference. After energizing the transmission line, Tule Wind LLC shall respond to and document all radio/television/equipment interference complaints received and the responsive actions taken. These records shall be made available to the appropriate regulatory agency for review upon request. Tule Wind LLC shall refer all unresolved disputes to the approving agency.

89. Aeronautical study. During preliminary design of the wind turbines, Tule Wind LLC shall prepare an aeronautical study in consultation with the FAA and DOD in order to evaluate potential impacts to air defense and Department of Homeland Security radars. As part of the study, Tule Wind LLC shall submit to the FAA specific coordinates, heights, frequencies, and power measurements related to each proposed turbine in order for the FAA to evaluate whether any of the turbines would exceed obstruction standards for flight operations or result in a significant hazard to air navigation in the area during construction or operation. Tule Wind LLC shall coordinate with the FAA and DOD to resolve any issues related to the project's potential to impact the aforementioned radar systems, which may involve the incorporation of appropriate design considerations, including but not limited to, markings and lighting in accordance with FAA regulations. Tule Wind LLC shall incorporate into the final design plans all conditions coordinated with the FAA and DOD for a determination of no hazard to air navigation.

90. Determine proper grounding procedures and implement appropriate grounding measures. As part of the project siting and construction process, Tule Wind LLC shall identify objects (such as fences, conductors, and pipelines) that have the potential for induced voltages and work with the affected parties to determine proper grounding procedures (Note: CPUC General Order 95 and the NESC do not have specific requirements for grounding). Tule Wind LLC shall install all necessary grounding measures prior to energizing the line. At least 30 days prior to energizing the line, Tule Wind LLC shall notify in writing all property owners within and adjacent to the project's ROW regarding the date the line is to be energized, subject to the review and approval of the appropriate regulatory agency. The written notice shall provide a contact person and telephone number for answering questions regarding the line and guidelines on what activities should be limited or restricted within the ROW. The written notice shall describe the nature and operation of the line, and the applicant's responsibilities with respect to grounding all conducting objects. In addition, the notice shall describe the property owner's responsibilities with respect to notification for any new objects that may require grounding and guidelines for maintaining the safety of the ROW. Tule Wind LLC shall respond to and document all complaints received and the responsive action taken. These records shall be made available to the appropriate regulatory agency for review upon request. Tule Wind LLC shall refer all unresolved disputes to the approving agency for resolution.

91. Prepare and implement a Dust Control Plan. Tule Wind LLC, shall prepare and file with the San Diego Air Pollution Control District and Bureau of Land Management a Dust Control Plan that describes how the following measures would be implemented and monitored at all locations of the project. The following measures shall be incorporated to reduce fugitive dust and other criteria pollutant emissions during construction activities:

- Rock aprons or rattle plates will be installed as needed at the intersection of dirt access roads and paved public roadways to clean the tires of equipment prior to leaving the site.

- All active construction areas, unpaved access roads, parking areas, and staging areas will be paved, watered three times daily, or stabilized with nontoxic soil stabilizers as needed to control fugitive dust.

- Pre-water sites up to 48 hours in advance of clearing to control fugitive dust.

- All public streets will be swept or cleaned with mechanical sweepers if visible soil material is carried onto them by construction activities or vehicles.

- Apply chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands that are unused for 14 consecutive days).

- Exposed stockpiles (e.g., dirt, sand, etc.) will be covered and/or watered or stabilized with nontoxic soil binders as needed to control emissions.

- Pre-moisten, prior to transport, import and export dirt, sand, or loose materials.

- Trucks transporting bulk materials will be completely covered unless 2 feet of freeboard space from the top of the container is maintained with no spillage and loss of material. In addition, the cargo compartment of all haul trucks will be cleaned and/or washed at the delivery site after removal of the bulk material.

- Movement of bulk material handling or transfer will be stabilized prior to handling or at a point of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line.

- Plant vegetative ground cover in disturbed areas to meet the criteria of the revegetation plan.

- Traffic speeds on unpaved roads and the ROW will be limited to 15 miles per hour.

- Vehicle idling time will be limited to a maximum of 5 minutes for vehicles and construction equipment, except where idling is required for the equipment to perform its task.

- Road graders used during site development activities will be equipped with a CARB-verified Level 2 diesel emission control strategy or a comparable diesel-control technology that will reduce inhalable particulate matter (PM10) emissions by 50% or more.

- If suitable park-and-ride facilities are available in the project vicinity, construction workers will be encouraged to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the project would depend upon the proximity of carpool facilities to the job site, the geographical commute departure points of construction workers, and the extent to which carpooling would not adversely affect worker show-up time and the project's construction schedule.

- All off-road, diesel-powered construction equipment will be kept in good tune and maintained according to the manufacturer's specifications.

- Construction equipment will use electric-powered motors where feasible.
- The construction contractor will prepare and implement a high-wind dust control plan and terminate soil disturbance when winds exceed 25 miles per hour.
- The construction contractor will require 90-day, low-NOx tune-ups for off-road equipment.
- Diesel particulate filters will be utilized on heavy equipment where feasible.
- Construction activities will comply with all applicable SDAPCD rules and regulations.

92. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared to reduce soil erosion during construction. In compliance with the new SWRCB's NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002, effective July 1, 2010), Tule Wind LLC shall prepare a project-specific SWPPP. The SWPPP shall be prepared before construction begins and kept on site throughout the construction process. The SWPPP shall include:

a. Identification of pollutant sources and non-stormwater discharges associated with construction activity.

b. Specifications for BMPs that shall be implemented during project construction to minimize the potential for accidental releases and runoff from the construction areas, including temporary construction yards, pull sites, and helicopter landing zones. Specifications shall include:

- A plan for training construction crews, a plan for monitoring and inspecting BMPs and site conditions.
- A plan for sampling and analysis of pollutants (as necessary).

c. Where applicable, the following shall apply:

- Construction impacts shall be minimized to the greatest extent possible.
- Upon completion of construction phases, roadways shall be reduced to minimum widths needed.
- Areas disturbed during construction shall be revegetated to their natural states.
- Construction roadways shall follow natural contours to the extent practical and be designed to minimize stream crossings, avoid wetlands, and maintain surface water runoff patterns to prevent erosion.
- CDFW guidelines for culverts shall be followed to minimize long term maintenance and meet a 10-year rain event to minimize trapping of sediment.

d. Where applicable, the following shall apply to reduce the release of contaminants to the local surface and groundwater:

- For on-site storm drain inlets, mark all inlets with the words "No Dumping! Flows to Sensitive Habitat" or similar markings.

- For landscaping, show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. Show self-retaining landscape, if any. State that final landscape plans will preserve existing native trees, shrubs, and ground cover will cover maximum extent possible.

- Design landscaping to minimize irrigation, runoff, and use of pesticides and fertilizers that contribute to stormwater pollution. Select plants that are appropriate for site soils, slopes, climate, wind, sun, rain, land use, ecological consistency, and plant interactions.

- For outdoor storage of equipment or materials, show storage areas and how they will be covered and what structural features or grading will be incorporated to prevent pollutants from discharging from the site.

- Designate areas for vehicle/equipment repair, maintenance, and cleaning, and document how these areas will be contained to prevent pollutant runoff.

- For leaking or failure of large power transformers, have 100% containment at each power transformer.

93. Avoidance and preventative measures to protect local groundwater during excavation. Prior to excavation, a qualified geologist/hydrologist shall determine the depth of groundwater in areas where excavation would occur. The project shall be designed to avoid areas of shallow groundwater where feasible. In such areas where groundwater cannot be avoided during excavation, the site shall be dewatered during construction, and materials that could contaminate the groundwater shall be kept at least 200 feet from the dewatering activities. An NPDES permit shall be obtained for proper disposal of water. Treatment may be required prior to discharge.

94. Identification of sufficient water supply. Prior to construction Tule Wind LLC will prepare comprehensive documentation that identifies one or more confirmed, reliable water sources that when combined meet the project's full water supply construction needs. Documentation will consist of the following:

- Preparation of a groundwater study. For well water that is to be used, the applicant will commission a groundwater study by a qualified hydrogeologist to assess the existing condition of the underlying groundwater/aquifer and all existing wells (with owner's permission) in the vicinity of proposed well location/water sources. The groundwater study will evaluate aquifer properties and aquifer storage. The groundwater study will estimate short and long-term well water supplies from each well proposed to be used, and documentation indicating that each well is capable of producing the total amount of water to be supplied for construction from each well. The groundwater study will estimate short- and long-term impacts of the use of the well(s) on the local groundwater production (short-term extraction for construction water and ongoing O&M water), on all project wells, and on other wells in the project area. The groundwater study will include an assessment of the potential for subsidence brought on by

project-related water use in the area. The applicant will provide demonstration of compliance will all applicable laws and regulations and will obtain a County of San Diego Major Use Permit for use of any proposed well prior to construction that is located within the County.

- Documentation of Purchased Water Source(s). For water that is to be purchased from one or more water/utility district(s), the applicant shall provide written documentation from such district(s) indicating the total amount of water to be provided and the time frame that the water will be made available to the project. (Confirmed potential water district sources include the Jacumba Community Services District and the Live Oak Springs Water Company). Total confirmed water supplies from the combination of above documented sources shall equal the total gallons of water needed through construction of the project.

95. Storm Water Management Plan (SWMP). The applicant shall commission an SWMP in compliance with the County of San Diego Major Storm Water Management Plan. The SWMP shall be project specific and developed in conjunction with project design. The SWMP shall include site design BMPs that, where applicable, shall:

a. Maintain pre-development rainfall runoff characteristics.

b. Locate the project and road improvement alignments to avoid or minimize impacts to receiving waters or to increase the preservation of critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions.

c. Minimize the project's impervious footprint.

d. Conserve natural and critical areas, such as floodplains, steep slopes, wetlands, and areas with erosive and unstable soil conditions

e. Where landscape is proposed, drain rooftops, impervious sidewalks, walkways, trails, and patios into adjacent landscaping.

f. Design and locate roadway structures and bridges to reduce the amount of work in live streams, and minimize the construction impacts.

g. Implement the following methods to minimize erosion from slopes:

- Disturb existing slopes only when necessary
- Minimize cut-and-fill areas to reduce slope lengths
- Incorporate retaining walls to reduce steepness of slopes or to shorten slopes
- Provide benches or terraces on high cut-and-fill slopes to reduce concentration of flows;
- Round and shape slopes to reduce concentrated flow
- Collect concentrated flows in stabilized drains and channels.

h. Protect slopes and channels. The BMPs shall:

- Minimize disturbances to natural drainages.

- Convey runoff safely from the tops of slopes.
- Vegetate slopes with native or drought tolerant vegetation.
- Stabilize permanent channel crossings.
- Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
- Include other design principles that are comparable and equally effective.

i. The SWMP shall also incorporate Low Impact Development Features into the project, including but not limited to:

- Preserve well-draining soils (Type A or B)
- Preserve significant trees
- Set back development envelope from drainages
- Restrict heavy construction equipment access to planned green/open space areas
- Re-till soils compacted by construction vehicles/equipment
- Collect and reuse upper soil layers of development site containing organic materials
- Curb cuts to landscaping
- Use rural swales
- Use concave median
- Use permeable pavements
- Pitch pavements toward landscaping
- Use cisterns and rain barrels
- Downspout to swale
- Use vegetated roofs
- Use soil amendments
- Reuse native soils
- Use smart irrigation systems
- Use street trees (HDR 2009b)

j. The SWMP shall ensure that the project follows CDFW guidelines for culverts to minimize long term maintenance and meet a 10-year rain event to minimize the trapping of sediment.

96. Creek-crossing procedures. Where creek crossings can be completed during dry season, with no flows present in the creek, seasonally timed restorative open trenching will be completed. This procedure will use minimum trench widths. Trench cut material will not be placed outside of the creek bed and outside of 100-year inundated areas. Trench fill will be compacted and replaced to existing conditions, including matching existing creek bed gradations, and restoring vegetation. Open trenching restoration will be completed prior to any wet season flows, and will include anti-erosion action plans for any unplanned rainfall during construction. The applicant shall obtain all required permits prior to completing open trenching through drainages. In any case, flows will be isolated from open trenching by best management practices mandated by the General Construction Permit. Areas of trenching would be restored and/or vegetated at completion of work. Where creek crossing cannot be completed during the dry season creek crossing shall use jack-and-bore procedures to avoid direct impacts and shall be conducted in a manner that does not result in sediment-laden discharge or hazardous

materials release to the water body. The following measures shall be implemented during horizontal boring (jack-and-bore) operations:

a. Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages.

b. Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of the bank or wetland/riparian boundary. Spoils shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention).

c. Portable pumps and stationary equipment located within 100 feet of a water resource (i.e. wetland/riparian boundary, creeks, and drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10-gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times.

d. Immediately following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion, and temporary sediment barriers shall be left in place until restoration is deemed successful.

The applicant shall obtain the required permits prior to conducting creek crossing work. Required permits may include ACOE CWA Section 404, Regional Water Quality Control Board Clean Water Act 401, and CDFW Streambed Alteration Agreement 1602. The applicant shall implement all pre and post-construction conditions identified in the permits issued.

97. Erosion Control and Sediment Transport Control Plan. The Erosion Control and Sediment Transport Control Plan would be included with the project grading plans submitted to the County for review and comment. The plan would be submitted to the BLM and San Diego County, a minimum of 60 days prior to project design and would be prepared in accordance with the standards provided in the Manual of Erosion and Sedimentation Control Measures and consistent with practices recommended by the Resource Conservation District of Greater San Diego County. Implementation of the plan would help stabilize soil in graded areas and waterways and reduce erosion and sedimentation. The plan would designate BMPs that would be implemented during construction activities. Erosion control efforts, such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (e.g., flagging), vehicle mats in wet areas, and retention/settlement ponds, would be installed before extensive soil clearing and grading begins. Appropriate stabilization measures, such as mulching or seeding, would be used to protect exposed areas during construction activities. Revegetation plans, the design and location of retention ponds, and grading plans would be submitted to the CDFW and ACOE for review in the event of construction near waterways. In disturbed areas where construction equipment has caused compaction of soils (e.g., staging areas, structure sites, temporary spur roads, etc.), soils would be decompacted as necessary prior to seeding, and reclamation would occur to enhance revegetation and reduce potential for erosion.

98. Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design. The design-level geotechnical studies to be performed by Tule Wind LLC shall identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures shall be utilized for protection of reinforcement, concrete, and metal-structural components against corrosion, including

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. The geotechnical studies shall also identify areas with potentially expansive or collapsible soils and include appropriate design features, including excavation of potentially expansive or collapsible soils during construction and replacement with engineered backfill, ground-treatment processes, and redirection of surface water and drainage away from expansive foundation soils. Studies shall conform to industry standards of care and ASTM standards for field and laboratory testing. Design shall conform to applicable sections of the County of San Diego grading codes, CBC, and the standard specifications for public works construction. The geotechnical studies prepared by a certified geologist shall be submitted to the BLM 60 days prior to construction of proposed structures.

99. Conduct geotechnical investigations. The applicant shall perform design-level geotechnical investigations to evaluate the potential for liquefaction, lateral spreading, seismic slope instability, and ground-cracking hazards to affect the approved project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures that meet CBC and IEEE design parameters shall be incorporated into the project designs. Appropriate measures for project facilities could include construction of pile foundations, ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in underground cables to allow ground deformations without damage to structures. The geotechnical investigations prepared by a certified geologist shall be submitted to the BLM and San Diego County 60 days prior to construction of proposed structures.

100. Facilities inspections conducted following major seismic event. If large levels of ground shaking (such as Modified Mercalli Intensity VI or greater) are experienced or a major earthquake (magnitude 6.0 and above), occurs along the Elsinore Fault, a professional licensed geologist, geotechnical engineer, and structural engineer hired by Tule Wind LLC shall perform facilities inspections as quickly as possible. Careful examination shall be conducted of all project facilities. Any required repair or needed improvements shall be implemented as soon as feasible to ensure that the integrity of project facilities has not been compromised. Conduct geotechnical surveys for landslides and mines. Tule Wind LLC shall perform design-level geotechnical surveys to evaluate the potential for unstable slopes, landslides, earthflows, debris flows and mine tunnels/shafts in the vicinity of project facilities and shall address these surveys in final design of project facilities. Based on these surveys, approved project facility design shall incorporate appropriate measures, such as locating facilities away from very steep hillsides, debris flow source areas, the mouths of steep hillside drainages, and mine tunnels and shafts. Appropriate design and construction considerations shall be followed for the slope areas within the project area, including BMPs for surface drainage, reducing slope inclinations where grading operations are conducted to minimize potential slope instabilities. Possible mitigation measures to reduce rockfall, rock slope failure, and landslide hazards include mechanical removal of large boulders from slope faces; stabilization of boulders with anchors, rock bolting, gunite, or cable nets; or construction of intercepting slope ditches or berms. The geotechnical studies prepared by a certified geologist shall be submitted to the BLM and San Diego County 60 days prior to construction of proposed structures.

101. Notification of utility service interruption. Prior to construction in which a utility service interruption is known to be unavoidable, Tule Wind, LLC shall notify members of the public affected by the planned outage by mail of the impending interruption, and shall post flyers informing the public of the service interruption in neighborhoods affected by the planned outage. Copies of notices and dates of public notification shall be provided to the applicable lead agency

102. Protect underground utilities. Prior to construction of the transmission line, the Tule Wind LLC shall submit to the BLM and San Diego County written documentation, including evidence of review by the appropriate jurisdictions, including the following:

- Construction plans designed to protect existing utilities and that show the dimensions and location of the finalized alignment
- Records that the applicant provided the plans to affected jurisdictions for review, revision, and final approval
- Evidence that the project meets all necessary local requirements
- Evidence of compliance with design standards
- Copies of necessary permits, agreements, or conditions of approval
- Records of discretionary decisions made by the appropriate agencies.

103. Coordinate with utility providers. Tule Wind LLC shall coordinate with all applicable utility providers with facilities located within or adjacent to the project to ensure that design does not conflict with other facilities prior to construction. In the event of a conflict, the project will be aligned vertically and/or horizontally as appropriate to avoid other utilities and provide adequate operational and safety buffering. Alternately, the other existing facilities may be relocated. Long-term operations and maintenance of the project will be negotiated through easement, purchased ROW, franchise agreement, or joint use agreement.

104. Develop and Implement a Construction Fire Prevention/Protection Plan. Tule Wind LLC shall develop a multiagency Construction Fire Prevention/Protection Plan in consultation with and to the satisfaction of CAL FIRE, SDRFPD, and SDCFA. Tule Wind LLC shall monitor construction activities to ensure implementation and effectiveness of the plan. The final plan will be approved by the commenting agencies prior to the initiation of construction activities by Tule Wind LLC.

a. At minimum, the plan will include the following:

- Procedures for minimizing potential ignition
- Vegetation clearing
- Fuel modification establishment
- Parking requirements
- Smoking restrictions
- Hot work restrictions
- Red Flag Warning restrictions
- Fire coordinator role and responsibility
- Fire suppression equipment on site at all times work is occurring
- Requirements of Title 14 of the CCR, Article 8 #918 "Fire Protection" for private land portions
- Access Road widening to a maximum of 20 feet for Ribbonwood and McCain Valley Roads, and a maximum of 18 feet for spur roads.
- Applicable components of the SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009)
- Emergency response and reporting procedures
- Emergency contact information
- Worker education materials; kick-off and tailgate meeting schedules

· Other information as provided by CAL FIRE, Rural Fire Protection District, SDCFA, and the BLM

b. Additional restrictions will include the following:

· During the construction phase of the project, Tule Wind LLC shall implement ongoing fire patrols. Tule Wind LLC shall maintain fire patrols during construction hours and for 1 hour after end of daily construction and hotwork.

· Fire Suppression Resource Inventory – In addition to 14 CCR 918.1(a), (b), and (c), Tule Wind LLC shall update in writing the 24-hour contact information and on-site fire suppression equipment, tools, and personnel list on a quarterly basis and provide it to the Rural Fire Protection District, SDCFA, and CAL FIRE.

· During Red Flag Warning events, as issued daily by the National Weather Service in SRAs and LRAs, and when the USFS Project Activity Level is Very High on Cleveland National Forest (as appropriate), all non-essential, non-emergency construction and maintenance activities shall cease or be required to operate under a Hot Work Procedure (see APM TULE-PDF-1). Tule Wind LLC and contractor personnel shall be informed of changes to the Red Flag event status and Project Activity Level as stipulated by CAL FIRE and Cleveland National Forest.

· All construction crews and inspectors shall be provided with radio and cellular telephone access that is operational throughout the project area to allow for immediate reporting of fires upon confirmation. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported upon confirmation to the fire agencies with jurisdiction in the project area immediately upon ignition.

· Each crew member shall be trained in fire prevention, initial attack firefighting, and fire reporting. Each member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all crewmembers as needed, and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect.

· Each member of the construction crew shall be trained and equipped to extinguish small fires with hand-held fire extinguishers in order to prevent them from growing into more serious threats. Each crew member shall at all times be within 100 yards of a vehicle containing equipment necessary for fire suppression as outlined in the final Construction Fire Prevention/Protection Plan.

· Water storage tanks (APM TULE-PDF-7) shall be installed and operational at the time of start of construction, except where construction of new access roads is necessary to reach the SDRFPD's preferred location for the water tank, in which case the water tank will be installed along with access road construction. Tule Wind LLC will provide a draft copy of the Construction Fire Prevention/Protection Plan to CAL FIRE, SDRFPD, SDCFA and the BLM

for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to Tule Wind LLC and revisions to the plan will address each comment to the satisfaction of the commenting agency. The final plan will be approved by CAL FIRE, SDRFPD, SDCFA and the BLM prior to the initiation of construction activities and provided to the Tule Wind LLC for implementation during all construction prior to the initiation of construction activities. All construction work on the Tule Wind Project shall follow the Construction Fire Prevention/Protection Plan guidelines and commitments.

105. Provide Assistance to San Diego Rural Fire Protection District (SDRFPD) and San Diego County Fire Authority (SDCFA). Through a development agreement with SDRFPD and SDCFA, Tule Wind LLC will provide funding for the training and acquisition of necessary firefighting equipment and services to SDRFPD/SDCFA to improve the response and firefighting effectiveness near wind turbines, electrical transmission lines, and aerial infrastructure based on project fire protection needs. Funding would be as provided in the Amended and Restated Agreement for Provision of Fire and Emergency Protection Services with SDRFPA and SDCFA, dated November 30, 2011. Assistance by Tule Wind LLC shall provide funding for one SDCFA Fire Code Specialist II position to enforce existing fire code requirements, including but not limited to implementing required fuel management requirements (e.g., defensible space), in priority areas to be identified by the SDCFA for the life of the project. All fuel management activities shall be in accordance with CEQA Guidelines Section 15304 (i), which indicates that the minor land alternation activities will not have a significant effect on the environment, as the activities will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. In addition, Tule Wind LLC is to provide funding to allow SDCFA to employ up to four volunteer/reserve firefighters as part-time code inspectors on a stipend basis for up to 90 days per year for the life of the project. The funding for the SDCFA Fire Code Specialist II position and the four volunteer/reserve firefighters as part-time code inspectors will be provided through proportional contributions, to be determined by the BLM, from Tule Wind LLC to the SDCFA prior to construction.

106. Customized Fire Protection Plan for Project. A draft Fire Protection Plan will be submitted to SDRFPD, SDCFA and the BLM at least 90 days before the start of any construction activities. Comments on the draft FPPs shall be provided to the Tule Wind LLC and the Tule Wind LLC shall resolve each comment in consultation with SDRFPD and SDCFA. The final FPP shall be approved prior to the initiation of construction activities. The FPP will include, at minimum, the following:

· San Diego County FPP Content Requirements (http://www.sdcounty.ca.gov/dplu/docs/Fire-Report-Format.pdf)
· Rural Fire Protection District Content Requirements
·Provisions for fire safety and prevention
· Water supply
· Fire suppression/detection systems – built-in detection system with notification
· Secondary containment
· Site security and access
· Emergency shut-down provisions
· Fuel modification plan
· Access road widths and surfacing
· Emergency drill participation.
· Emergency evacuation plan

- Integration into plans created to satisfy Stipulation 106.

The Tule Wind Project FPP will be incorporated into Stipulation 106, the Construction Fire Prevention/Protection Plan. The Customized Fire Protection Plan will incorporate clarifications and additional Tule Wind Project APMs described in Section B of this EIR/EIS. The Final FPP for the Tule Wind Project is to be approved by SDRFPD and SDCFA prior to initiation of construction. The current FPP for the Tule Wind Project is available on the CPUC website: http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/ECOSUB.htm.

107. Wind Turbine Generator Fire Protection Systems. Fire detection, warning, and suppression systems for each wind turbine generator will include modern technology and will address, at minimum, the following:

- Use of non-combustible or difficult to ignite materials
- Early fire detection and warning systems
- Maintenance according to manufacturer specification
- Auto switch-off and complete disconnection from the power supply system
- Ongoing hazard/fire safety training for staff
- Automatic fire extinguishing systems in the nacelle of each wind turbine (stationary, inert gas, or similar). Tule Wind LLC will implement this technology through the wind turbine manufacturer or an aftermarket supplier.
- Non-combustible or high flash point lubricant oils.

108. Preparation of Disturbed Area Revegetation Plan. All areas disturbed during construction activities that will not be continuously included in the long-term maintenance access ROW will be provided native plant restoration in order to prevent non-native, weedy plants from establishing. Disturbed areas that will be included in the long-term maintenance program will not be revegetated as any plants that establish in these areas will be removed on an ongoing (at least annual) basis. This measure will be implemented under the biological monitoring program. It directs that the temporary disturbance areas will be revegetated with native plants common to the area through direction detailed in a Habitat Restoration Plan. The Habitat Restoration Plan will be prepared to restore native habitat and to reduce the potential for non-native plant establishment. The restoration plan will incorporate a Noxious Weeds and Invasive Species Control Plan to assist in restoring the construction area to the prior vegetated state and lessen the possibility of establishment of non-native, flammable plant species. A copy of the Revegetation Plan will be provided to the BLM and San Diego County. In addition, prior to the termination of the ROW authorization, a decommissioning plan will be developed and approved by the BLM and other agencies having jurisdiction. The decommissioning plan will include a site reclamation plan and monitoring program. As the wind facility is removed from the site, topsoil from all decommissioning activities will be salvaged and reapplied during final reclamation. All areas of disturbed soil will be reclaimed to native habitat conditions found naturally in the area.

EXHIBIT – C
USFWS BIOLOGICAL OPINION

APPENDIX A

Biological Opinion for the Tule Wind Project

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

In Reply Refer To:
FWS-SD-10B0136-11F0229

SEP 02 2011

Memorandum

To: District Manager, Bureau of Land Management, California Desert District Office
Moreno Valley, California

From: Field Supervisor, Carlsbad Fish and Wildlife Office
Carlsbad, California

Subject: Formal Section 7 Consultation for the Proposed Tule Wind Project
San Diego County, California

Attention: Teresa A. Raml

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion on the proposed issuance of a ROW grant by your agency, the Bureau of Land Management (BLM), to facilitate construction and operation of the Tule Wind Project. The project proponent, Tule Wind, LLC, also proposes to discharge fill material within Waters of the U.S., which will require authorization through the U.S. Army Corps of Engineers (Corps) in accordance with section 404 of the Clean Water Act ("CWA permit"). A part of the project will be constructed on Tribal trust lands, which will require approval by the Bureau of Indian Affairs (BIA) of right-of-way (ROW) leases. The BLM is the lead Federal agency and the Corps and BIA are identified as "Cooperating Agencies" for this project in accordance with the National Environmental Policy Act (NEPA).

The implementing regulations for section 7(a)(2) of the Act at 50 CFR § 402.07 allow for consultation responsibilities to be fulfilled through a lead Federal agency when an action involves more than one Federal agency. The BLM is the lead Federal action agency for the Tule Wind Project (CPUC/BLM 2010). This biological opinion fulfills the interagency consultation requirements of section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*), for the BLM, Corps, and BIA.

This biological opinion addresses the potential effects of the Tule Wind Project on the federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*, "Quino"), in accordance with section 7 of the Act, and is based on information in our files, the biological assessment submitted by BLM, and coordination with the Corps and BIA. The proposed project does not affect designated Quino critical habitat. The complete project file addressing this consultation is maintained at our agency's Carlsbad Fish and Wildlife Office (CFWO).

The BLM has requested Service concurrence with a not likely to adversely affect (NLAA) determination for the federally endangered Peninsular bighorn sheep (*Ovis canadensis nelsoni*, "PBS"). We concur with your NLAA determination for the following reasons: 1) no potential escape terrain or permanent water sources for PBS exists within the project area; 2) PBS do not occur within the project area (the closest observation was 0.79 mile away); 3) none of the areas heavily used by PBS will be within line-of-sight of the wind turbines; and 4) prior to drilling or blasting activities, biological monitors will ensure that PBS are not within 0.33 mile.

CONSULTATION HISTORY

On December 10, 2009, we received a request for a species list from the BLM for the proposed project, and on February 1, 2010, we provided the requested species list for the proposed project. On February 25, 2010, we approved the methodology and authorized focused surveys for Quino for the Tule Wind Project site (R. Dossey, pers. comm. 2010), and in June 2010, we received the first Quino survey report for the project (HDR 2010a). In August 2010 we received a draft biological assessment (BA) for the project.

In a memorandum dated September 7, 2010, received by the Service on September 8, 2010, the BLM submitted the final BA (HDR 2010b) and requested formal section 7 consultation on the proposed project. Between September 2010 and June 2011, we received additional information regarding the distribution of Quino in the action area and some clarifications regarding the proposed action.

On June 29, 2011, via electronic mail (email), we provided a draft biological opinion for review and comment to the BLM. The BLM provided a copy of the draft biological opinion to the BIA, Corps, Tule Wind, LLC, and Ewiiaapaayp Tribe. In July 2011 we received the second Quino survey report for the project (HDR 2011). On August 5, 2011, we received comments on the draft biological opinion from the BLM, which incorporated comments from the Corps, BIA, and Tule Wind, LLC. Comments from the BLM, Corps, BIA, and Tule Wind, LLC were incorporated or addressed, as appropriate, into a revised draft biological opinion, which was provided to the BLM for additional review and comment on August 29, 2011. No further comments were received.

BIOLOGICAL OPINION

PROPOSED ACTION

The BLM proposes to issue a ROW grant to allow Tule Wind, LLC to construct part of the Tule Wind Project on BLM lands. To construct the project, Tule Wind LLC proposes to discharge fill material into Waters of the U.S., which will require a CWA permit from the Corps. A part of the project is also proposed for construction on Tribal trust lands, and BIA approval is needed for ROW leases on these lands.

The proposed project footprint includes 725.3 total acres of land, of which 535.8 acres are on BLM lands, 72.0 acres are on the Ewiiaapaayp Indian Reservation, 7.9 acres are on the Campo Indian Reservation, and 11.9 acres are on the Manzanita Indian Reservation. The remaining acreage

includes lands owned by the California State Lands Commission (35.5 acres) and private interests (62.2 acres). The project site is about 50 miles east of San Diego, 90 miles west of the Colorado River, and near the north side of rural community of Boulevard in San Diego County (Figure 1).

The proposed project will consist of up to 128 wind turbines, access roads between the turbines, overhead transmission lines, an overhead and underground electrical collector cable system, a 5-acre collector substation site, a 5-acre operation and maintenance site, a temporary 5-acre cement batch plant site, a temporary 10-acre parking area, 19 2-acre temporary laydown areas, three permanent meteorological towers, and one Sonic Detection and Ranging System unit or one light detecting and ranging unit. Each turbine will include a 200-foot radius that will be cleared and graded, with an approximately 60-foot diameter permanent foundation.

Project Activities Near or Within Occupied Quino Habitat

Construction

The proposed project components that will require construction activities near or within occupied Quino habitat include the installation of wind turbines and underground collectors, construction of new roads, and upgrading existing roads. Roads between turbine sites will be temporarily constructed at 36-foot widths to allow for a large crane. The temporary portions of these roadways will be restored after the completion of construction according to a habitat restoration plan to the standard 16- to 20-foot width (except for County roads, which will be restored to 24-foot widths). The ground disturbance within occupied Quino habitat is displayed on Figure 2. In addition, road improvements to the Crestwood access road occur over 1.1 acres within occupied Quino habitat.

Operations and Maintenance

Operations and maintenance activities included with the proposed project are wind turbine maintenance, and road use and maintenance. Each turbine will be serviced periodically (e.g., twice a year), or as needed. Inoperative turbines will be repaired, replaced, or removed in a timely manner. Typical turbine servicing activities will include temporarily deploying a crane within the construction easement of each turbine, removing the turbine rotor, replacing generators and bearings, and deploying personnel to climb the towers to service parts within the turbine. All equipment associated with turbine maintenance will stay within the permanent project footprint.

Selected conservation measures for construction and operations and maintenance activities that are relevant to Quino are provided below. In addition, measures related to fire safety are attached as an Appendix.

Conservation Measures

1. Occupied Quino habitat[1] permanently impacted during construction will be offset at a 2:1 ratio by habitat acquisition and perpetual management. A plan detailing Tule Wind, LLC's

[1] Occupied Quino habitat is defined as any suitable Quino habitat within 0.6 mile (1 kilometer) of a Quino sighting.

conservation commitments ("conservation plan") will be submitted to the CFWO for approval prior to construction of the project. In addition to identifying the location of the conservation property and its value to Quino, the conservation plan will identify:

- The method for protecting the biological resource values in perpetuity (e.g., conservation easement);

- The entity or organization proposed as owner and land manager of the acquired property, and

- An endowment based on a Property Analysis Record (PAR; Center for Natural Lands Management © 1998) or similar estimation method to secure ongoing funding for the specific perpetual management, maintenance, and monitoring activities identified in the plan (e.g., access control, invasive species management, fencing and signage). The endowment will be managed as a long-term investment intended to 1) exist indefinitely and 2) fund necessary land management activities, to the extent practicable, solely from investment earnings and not from the initial endowment amount. To assure adequate funding for long-term implementation of the management activities as prescribed in the PAR, the endowment amount should be sufficient to generate the earnings necessary to periodically (i.e., annually) increase the endowment amount in accordance with a long-term inflation indicator (e.g., Consumer Price Index).

2. Dust suppression measures will be implemented during construction to minimize the creation of dust clouds. These measures include applying water at least once per day or as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction. In addition, watering frequency will be increased to 4 times per day if winds exceed 25 miles per hour. Finally, non-toxic soil stabilizers may be used to control fugitive dust.

3. Construction vehicle speeds will be restricted to 15 miles per hour on unpaved roads within occupied Quino habitat during the flight season.

4. Dust abatement techniques will be used on unpaved, unvegetated surfaces to minimize airborne dust. Erosion and fugitive dust control measures will be inspected and maintained regularly.

5. If construction within occupied Quino habitat has not started by May 2012, additional Service-protocol Quino surveys will be conducted in the flight season prior to construction.

6. All construction clearing and grubbing in occupied Quino habitat will be conducted in one continuous time period. Clearing and grubbing will not be conducted during the Quino flight season, which generally includes 4 to 6 weeks between January and May, depending on weather conditions (Service 2003). (for additional information on Quino monitoring see http://www.fws.gov/carlsbad/TEspecies/Quino_Monitor.htm)

7. Orange snow fencing will be installed to delimit construction boundaries and/or to identify exclusion areas within occupied Quino habitat. Quino exclusion areas are defined as areas within occupied habitat, as identified by the biological monitor, where Quino are observed or their host plants occur outside of the project footprint where it is simpler to exclude construction activities from those sensitive areas than to fence the entire construction boundary.

8. Newly constructed access roads to turbines in occupied Quino habitat will be gated to reduce off-highway vehicle (OHV) activity.

9. Native vegetation will be restored in the temporarily affected work areas after construction. Restoration will include planting or seeding native plants that were present prior to the work and/or are compatible with existing vegetation near the work area. In areas of occupied and potential Quino habitat, seeds of host plants will be included in the seed mix. A habitat restoration plan will be prepared for the project that specifies the limits of restoration, planting mix and densities, performance criteria for survival and growth, and maintenance and monitoring procedures. The habitat restoration plan will be submitted to the CFWO for approval prior to construction of the project.

10. A Worker Environmental Awareness Plan (WEAP) will be developed. The environmental training will cover the sensitive resources found on site, flagging/fencing of exclusion areas, permit requirements, and other environmental issues. All construction site personnel will be required to attend the environmental training in conjunction with hazard and safety training prior to working on site.

11. A biological monitor(s) will be on site during all phases of construction to regularly monitor construction activities, implement the WEAP, and ensure construction is proceeding in compliance with the conservation measures committed to by Tule Wind, LLC, as well as measures required by the regulatory agencies. The biological monitor will provide a report to the BLM, BIA, Ewiiaapaayp Tribe, and CFWO at least monthly identifying construction activities and the results of compliance monitoring related to implementation of the project's conservation measures. The biological monitor(s) responsible for areas within 0.6 mile (1 kilometer) of a Quino sighting will be approved by the CFWO and have knowledge of the biology and ecology of Quino.

12. All access roads constructed within the occupied Quino habitat will be maintained regularly, and no Quino host or nectar plants will be allowed to grow within the roadway.

13. Except when not feasible due to physical or safety constraints, all vehicle movement will be restricted to existing roads or new access roads constructed specifically for the Tule Wind Project. Access roads will be determined and marked by Tule Wind, LLC in advance of construction. Approval from a biological monitor and the BLM will be obtained prior to any travel off of existing or new access roads on BLM lands. On Tribal reservation lands, approval from a biological monitor, the BIA, and the appropriate tribe (i.e., the Ewiiaapaayp

Tribe, Campo Tribe, or Manzanita Tribe) will be obtained prior to any construction or travel off existing or new access roads.

14. A Weed Management Plan will be submitted to the BLM for approval prior to construction activities on BLM lands. On Tribal reservation lands, the Weed Management Plan will be submitted to the BIA and the appropriate tribe (i.e., the Ewiiaapaayp Tribe, Campo Tribe, or Manzanita Tribe) for approval prior to construction activities. The approved plan will be developed and finalized prior to the commencement of construction activities. The plan will address monitoring and educating personnel on weed identification and methods for avoiding and treating infestations. If mulch is used, it is required to be certified weed-free. Tule Wind, LLC will work with the BLM, State, and County to obtain seeding specifications to be compliant with this requirement.

15. When trucks and construction equipment arrive on site, a controlled inspection and cleaning area will be established at a suitable offsite location to visually inspect construction equipment and to wash tires and other equipment surfaces free from clinging mud and plant materials.

Action Area

According to 50 CFR § 402.02 pursuant to section 7 of the Act, the "action area" means all areas to be affected directly or indirectly by the Federal action. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area. For this consultation, the action area is considered to be the 725.3-acre project site subject to ground disturbance.

STATUS OF THE SPECIES

Listing Status

Quino was listed as endangered on January 16, 1997 (62 FR 2313). The Service approved the recovery plan for the Quino ("Quino recovery plan") on August 11, 2003 (Service 2003), and completed a 5-year review on August 18, 2009 ("Quino 5-year review") (Service 2009).

Species Description

Quino is a recognized subspecies of Edith's checkerspot (*Euphydryas editha*) and is a member of the Nymphalidae family, the brush-footed butterflies, and the Melitaeinae subfamily, checkerspots and fritillaries. Quino differs from the other Edith's checkerspot subspecies in size, wing coloration, and larval and pupal phenotypes (Mattoni et al. 1997). Among the other subspecies of Edith's checkerspot, Quino is moderate in size with a wingspan of approximately 1.5 inches. The dorsal (top) side of its wings is covered with a red, black, and cream-colored checkered pattern, the ventral (bottom) side is mottled with tan and gold. Its abdomen generally has bright red stripes across the top. Quino larvae are black and have a row of nine, orange-colored tubercles (fleshy/hairy extensions) on their back. Pupae are extremely cryptic and are mottled black and blue-gray.

Status and Distribution

Multiple observations of Quino have been reported across a wide elevation range, from approximately 500 feet in elevation to over 5,000 feet (Service 2003). Quino was historically distributed throughout the coastal slope of southern California, including Los Angeles, Orange, Riverside, San Diego, and San Bernardino counties, and northern Baja California, Mexico (Mattoni et al. 1997, Service database). That distribution included the westernmost slopes of the Santa Monica Mountains, the Los Angeles plain and Transverse Ranges to the edge of the upper Anza-Borrego desert, and south to El Rosario in Baja California, Mexico (Emmel and Emmel 1973, Mattoni et al. 1997, Service database).

Quino may have once been one of the most abundant butterflies in coastal southern California, but by the 1970s, most of the coastal bluff and mesa habitats in southern California had been urbanized or otherwise disturbed. However, Quino still occupied locations inland and at higher elevations including Dictionary Hill, Otay Lakes, and San Miguel Mountain in San Diego County; and the Gavilan Hills in Riverside County. By the middle 1980s the species was thought to have disappeared from the known locations; the petition to list the species in 1988 suggested that it might be extinct. Current information suggests that Quino has been extirpated from Los Angeles, Orange, and San Bernardino counties and most northern locations in San Diego County. Nonetheless, new populations have been discovered in portions of Riverside County and south San Diego County, and the species continues to survive in northern Baja California, Mexico.

Overall, more than 75 percent of the historical range of the Quino has been lost (Brown 1991, Service database), and more than 90 percent of the subspecies' coastal mesa and bluff habitat, where most historical records are located, has been destroyed by habitat fragmentation, degradation, and development (Service database). At listing, Quino populations were reduced in number and size from historical conditions by more than 95 percent range-wide. For a detailed discussion of the current distribution of Quino, please refer to the Quino recovery plan (Service 2003). The Quino recovery plan identifies six recovery units throughout Riverside and San Diego counties and describes the known extant occurrence complexes (or metapopulations) throughout the range of the subspecies.

Habitat Affinity

In southwestern San Diego County, the primary host plants for the Quino are dot-seed plantain, thread-leaved bird's beak, and white snapdragon. Larval Quino may also use other species of plantain (*Plantago* spp.) and annual owl's-clover as primary or secondary host plants and will diapause in or near the base of native shrubs, such as California buckwheat (*Eriogonum fasciculatum*) (73 FR 3327). In 2008, Chinese houses (*Collinsia concolor*) was reported as a new Quino host plant (Pratt 2010).

In its adult stage, Quino use a number of flowering plants as nectar sources. These nectar sources include lomatium (*Lomatium* spp.), goldfields (*Lasthenia* spp.), popcorn flowers (*Plagyobothrys* and *Cryptantha* spp.), gilia (*Gilia* spp.), ground pink (*Linanthus dianthiflorus*), chia (*Salvia*

columbariae), annual lotus (*Lotus* spp.), onion (*Allium* spp.), yerba santa (*Eriodictyon* spp.), and California buckwheat (67 FR 18359, Mattoni et al. 1997).

Quino are generally found in open areas and ecotone situations that may occur in a number of plant communities, including grasslands, coastal sage scrub, and native woodlands with an open canopy cover. Open areas within a given vegetation community seem to be critical landscape features for Quino populations. Optimal habitat appears to contain little or no invasive nonnative vegetation, and especially, a well-developed cryptogamic crust. Densely vegetated areas are not known to support Quino (Mattoni et al. 1997). Habitat patch suitability is determined primarily by larval host plant density, topographic diversity, nectar resources availability, and climatic conditions (Service 2003).

Threats and Conservation Needs

Quino is threatened by urban and agricultural development, invasion by nonnative species, off-road vehicle use, grazing, fire management practices (Service 2003), and habitat fragmentation that limits metapopulation dynamics. Other factors that could contribute to population declines include enhanced nitrogen deposition and elevated atmospheric carbon dioxide concentrations. In addition, climate change has been identified as a potential threat to Quino, which is supported by observations in western Riverside County of ongoing range shift for this subspecies upslope in elevation, and extirpation of many populations in lower elevations, where drier habitats are likely to occur (Service 2009). Conversion to nonnative annual grassland will be the greatest threat to Quino reserves (Service 2003).

Significant areas of remaining Quino habitat have been protected through inclusion in Natural Community Conservation Planning/Habitat Conservation Planning reserve areas, the San Diego National Wildlife Refuge, and other habitat acquisition initiatives. Future conservation needs include protecting additional habitat supporting known populations (occurrence complexes) and landscape connectivity between them; conducting research necessary to refine recovery criteria; management of Quino habitat including enhancement of host plant populations, diversification of nectar sources and pollinators, and control of nonnative plants; establishing and maintaining a captive propagation program; targeted reintroduction if determined to be necessary; and establishing a cooperative outreach program.

The status of Quino was described in detail in the recently completed Quino 5-year review (Service 2009). Please refer to this document for more detailed information on local distribution of Quino populations, abundance, biology and life history, and habitat and ecosystem requirements, as well as a full discussion on potential threats to the species as a result of climate change.

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR § 402.02) define the environmental baseline as the past and present effects of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated effects of all proposed Federal

projects in the action area that have undergone section 7 consultation and the effects of State and private actions that are contemporaneous with the consultation in progress.

On November 10, 2010, the Service issued a no jeopardy and no adverse modification biological and conference opinion addressing construction and long-term operations and maintenance of the Sunrise Powerlink (SRPL) Project (Service 2010). The SRPL Project includes construction of a high-voltage 117-mile transmission line and related facilities from south of El Centro in Imperial County to the northeast edge of the Marine Corps Air Station Miramar in San Diego County. Some of the impacts to Quino from the SRPL Project occur within the Jacumba Occurrence Complex and the Southeast San Diego Recovery Unit. Within 14 acres of land, the SRPL Project overlaps a portion of the Tule Wind Project's action area, but not in the area occupied by Quino (Figure 3). Impacts to Quino and its designated critical habitat as a result of the SRPL Project were fully offset through acquisition and provision of long-term management of Occupied Quino habitat at the Long Potrero site.

On September 1, 2011, the Service issued a no jeopardy biological opinion for San Diego Gas and Electric's (SDG&E) East County ("ECO") Substation Project, which addressed impacts to Quino from construction of a new substation, rebuilding of the existing Boulevard Substation, looping in of the existing 500 kilovolt (kV) Southwest Powerlink transmission line into the new ECO Substation, and construction of a new approximately 13.5- mile-long 138 kV transmission line. Within 1.6 acres of land, the ECO Substation Project overlaps a portion of the action area for the Tule Wind Project, but not in the area occupied by Quino (Figure 3). Impacts to Quino as a result of the ECO Substation project are being offset through the acquisition and long-term management of occupied Quino habitat at a 2:1 ratio.

One Quino individual was located within the action area north and outside the Southeast San Diego Recovery Unit for this species (Service 2003) (Figure 1). No host plants for Quino were found in 2009. However, in 2010, the host plant, Chinese houses, was found within 200 feet of the Quino observation, and nectar sources such as popcorn flowers, goldfields, and chia were found in the general vicinity. In addition, based on the use of 0.6 mile (1 kilometer) buffers around Quino observations to estimate occupied Quino habitat (Service 2003), the Crestwood access road also overlaps occupied habitat (Figure 1). As a result, the area of potential ground disturbance includes 31.9 acres of occupied Quino habitat (R. Dossey, pers. comm. 2011).

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the proposed action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and, are later in time, but are still reasonably certain to occur.

According to the final BA (HDR 2010), the BLM and California Public Utilities Commission (CPUC) consider Energia Sierra Juarez (ESJ) Gen-Tie Project and the ECO Substation Project "connected actions" to the Tule Wind Project under the California Environmental Quality Act. The Department of Energy (DOE) is the lead Federal agency for the ESJ Gen-Tie Project, which involves construction of a new high voltage transmission line that will provide a generation-tie to transmit renewable energy from a wind farm in northern Baja California, Mexico to the ECO Substation (Figure 1) (DOE 2010). The DOE has determined that the ESJ Gen-Tie Project will not affect Quino or other federally listed species (DOE 2011). The BLM is the lead Federal agency for the ECO Substation Project, described above in the *Environmental Baseline* section of this biological opinion, and BLM has determined that the ECO Substation project will affect Quino.

The Service has determined that the ESJ Gen-Tie Project and the ECO Substation Project are not actions interrelated or interdependent to the Tule Wind Project. Specifically, the ESJ Gen-Tie Project and the ECO Substation Project are activities that would occur regardless of construction of the Tule Wind Project. The ESJ Gen-Tie Project is being built primarily to transmit renewable energy from Mexico, not from the Tule Wind Project (DOE 2010). The ECO Substation Project will occur regardless of the Tule Wind Project because the proposed ECO Substation or Boulevard Substation will provide an "interconnection hub" for all future renewable generation projects along SDG&E's SWPL transmission line, not just the Tule Wind Project (CPUC/BLM 2010). The ECO Substation Project is also being built to increase the reliability of the regional transmission system. Moreover, as indicated above, the DOE has made a "no effect" determination for the ESJ Gen-Tie Project, and the ECO Substation Project has been addressed in a separate section 7 consultation with the BLM, Corps, and SDG&E.

Construction and road use and maintenance activities proposed as part of the Tule Wind Project may result in adverse effects to Quino due to direct mortality, habitat loss, and potentially increased threats from nonnative plants, dust, fire, and recreation, as described below. Other operations and maintenance activities are not expected to result in adverse effects to this species since these activities will be restricted to the permanently disturbed habitat around each wind turbine.

The following analysis of direct, indirect, and cumulative effects and the overall project's effect on recovery is inclusive of all impacts to Quino from the Tule Wind Energy Project. Because the overall project could not be constructed as proposed without approval or issuance of the proposed BLM ROW grant, BIA lease, or Corps CWA permit, no difference exists among these three Federal actions.

Direct Effects

Construction of wind turbines and new access roads and the expansion of existing access roads within Quino habitat have the potential to kill or injure Quino eggs, larvae, or pupae during the removal or crushing of occupied host plants. This impact will occur within about 31.9 acres of occupied Quino habitat. In addition, crushing or trampling of eggs, larvae, or pupae could occur if people walk through occupied host plants outside of the direct impact area. However, in occupied Quino habitat, snow fencing will be used to delimit construction areas and/or to identify Quino exclusion areas, and biological monitors will be present to oversee vegetation clearing activities.

These measures should reduce the risk of Quino mortality from human foot traffic to a discountable level (i.e., one that is highly unlikely to occur).

Clearing and grubbing of occupied Quino habitat will be conducted outside the Quino flight season to reduce direct mortality of adult Quino; however, since other construction activities will be ongoing, adult Quino could be struck by vehicles moving through the project area during the Quino flight season, which generally includes 4 to 6 weeks between January and May, depending on weather conditions (Service 2003). Available survey data indicate the density of Quino in the general project vicinity is low; thus, the likelihood of a vehicle striking an adult Quino is low, though not discountable, since during construction an estimated 396 project-related vehicle trips will occur along access roads within occupied Quino habitat (R. Dossey, pers. comm. 2011). To reduce the risk of these impacts to a discountable level, a 15 mile per hour speed limit will be adhered to by construction vehicles on all unpaved access roads within occupied Quino habitat during the Quino flight season.

Following construction, impacts to Quino individuals associated with road use and maintenance could occur over 5.46 acres of roads; however, the potential for this impact will be reduced to a discountable level because of the limited staffing needed to operate and maintain the wind turbines (12 full-time staff) and because roads will be regularly maintained to prevent host and nectar plants from growing on them and attracting Quino that could be subject to crushing or vehicle strikes. Likewise, we believe, based on our best professional judgment, that the potential for Quino to be struck by wind turbines is discountable because Quino typically fly pretty low to the ground and probably too low to get hit by wind turbines. Also, when the wind is strong enough to drive the wind turbines, Quino likely would try to stay low and protected from the wind as much as possible (E. Porter, pers. comm. 2011).

In addition to loss of individual Quino larvae, eggs, and pupae, the permanent removal of up to 24.7 acres and the temporary loss of up to 7.2 acres of occupied Quino habitat due to construction (R. Dossey, pers. comm. 2011) will reduce the availability of oviposition sites, larval food sources, pupal sheltering sites and adult nectar sources within the action area. However, using the 0.6 mile (1 kilometer) buffer surrounding each Quino observation (Figure 2), approximately 4,135 acres of occupied habitat occurs in the vicinity of the project area. Thus, the project will impact only a small proportion of the occupied habitat available to the species and should not affect the long-term viability of any Quino occurrence.

Habitat loss can result in habitat fragmentation, making it more difficult for individuals to move between areas of higher quality habitat and exchange genetic material (Service 2003). However, the relatively small amount of habitat removed within the action area when viewed in context of the broader general project area (i.e., 0.6-mile buffer surrounding each Quino observation) is not expected to fragment Quino habitat to an extent that prevents movement of Quino individuals. The area subject to temporary ground disturbance will be restored in accordance with a CFWO-approved restoration plan and the permanent loss of habitat will be offset at a 2:1 ratio by preservation and long-term management of similar Quino habitat.

No additional loss of occupied Quino habitat is expected due to road use and maintenance activities. Roads will be regularly maintained after the initial construction impacts to prevent host and nectar plants of this species from growing on them.

Indirect Effects

Nonnative Plant Introduction

Construction activities have the potential to introduce nonnative plants to the action area by carrying seeds on vehicles, people, or equipment and through ground disturbance. Ground disturbance can promote the establishment and spread of nonnative plants (Merriam et al. 2006); nonnative plants could degrade habitat quality for Quino by competing with and replacing host and nectar plants (Service 2003). Conversion of habitat to nonnative grasslands is the greatest threat to Quino reserves (Service 2003). However, several conservation measures are proposed that should effectively minimize the potential for the spread of nonnative species, including the identification and avoidance of weed infestations, washing of off-road equipment prior to entering the construction area, implementation of a CFWO-approved restoration plan, and removal of weeds.

Similar to construction, nonnative plants can be introduced during road use and maintenance activities. The project includes 1.43 miles of new roads and 0.69 mile of existing roads in occupied Quino habitat. This results in 5.46 acres of roads within this habitat. However, the potential for the spread of nonnative plants during road use and maintenance activities should be minimized because there will be no new ground disturbance associated with maintenance activities, and the maintenance activities will be intermittent and low intensity in nature.

Dust

Fugitive dust from construction activities can negatively affect photosynthesis and decrease water-use efficiency of plants (Sharifi et al. 1997, Talley et al. 2006), including Quino host and nectar plants. However, the potential for such impacts from dust should be low. The construction activities occur within occupied Quino habitat over a short duration, outside host plant growing season, and conservation measures are proposed to minimize dust during construction, including applying water.

Dust from road use and maintenance activities can impact Quino as described above for construction. However, due to the intermittent and low intensity nature of road use and maintenance activities, the potential for impacts from dust should be minimal. In a study of the impacts of access road and recreational trail dust on the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) and its host plant, blue elderberry (*Sambucus mexicana*), Talley et al. (2006) indicated that dust control measures are not likely to be necessary for low-use roads and trails. Talley et al. (2006) concluded that dust from low-use dirt and paved access roads and trails did not affect beetle presence through changed elderberry condition.

Recreation

New access roads can lead to increased recreational activities (including OHV use) that can disturb host and nectar plants, kill individual Quino, and introduce and promote nonnative plant species. The project includes 1.43 miles of new roads and 0.69 mile of existing roads in occupied Quino habitat, which would result in 5.46 acres of roads in Quino habitat. To reduce the potential for increased recreation, gates will be installed at the new access roads to reduce the potential for the public to enter and disturb the area.

Fire

Transmission lines can cause fires via sparks, debris contact with transformers and conductors, wooden poles being blown down by wind, conductor-to-conductor contact, dirt buildup on powerline hardware, or wildlife contact with powerlines. Small and medium voltage powerlines and high winds were responsible for four of the largest California fires from 1923 to 2007. Wind turbines without fire suppression systems can also be the source of wildfires due to turbine malfunction and lightning (CPUC/BLM 2010). Tule Wind, LLC has prepared a detailed Fire Protection Plan (FPP) (RC Biological Consulting, Inc. 2010). The FPP was approved by the San Diego Rural Fire Protection District in November 2010 and accepted by the San Diego County Fire Authority on February 28, 2011.

Quino adults, larvae, and eggs could be burned in wildfires. In addition, habitat is susceptible to conversion of shrubland to nonnative grasslands with short fire return intervals (Service 2003). Nonnative plants resulting from this conversion likely would compete with Quino host and nectar plants (Service 2003). However, periodic infrequent fire also can play a role in creating and maintaining suitable habitat conditions for Quino (Mattoni et al. 1997), like open areas. The impact of fire on Quino depends upon the intensity, frequency, and season of fire occurrence and size of the nonnative seedbank (Service 2003).

Regardless, numerous project design features are proposed in the Fire Protection Plan to minimize the potential for wildfire including the use of steel poles, insulators, minimum clearance distances from the ground, gravel around facilities, and avoiding switching devices with moving parts on poles (to avoid arcing) (see Appendix for FPP proposed mitigation measures) (RC Consulting 2010). In addition, an area around each turbine will be permanently cleared of vegetation during construction. With implementation of these measures, the potential for wildfire-induced impacts to the Quino due to project construction, operations, and maintenance should be effectively avoided or minimized to a discountable level.

Impact on Recovery

The proposed project does not conflict with the recovery actions or goals described in the Quino recovery plan (Service 2003). Approximately 212 acres of project impacts represents a loss of only 0.2 percent of the 96,767 total acres within the southeast San Diego recovery unit for Quino (Figure 3). Moreover, the occupied habitat for Quino that will be impacted by the project does not occur in this recovery unit or any potential future recovery unit mentioned in the recovery plan. The

relatively small loss of Quino habitat from construction and operation of the Tule Wind Project is not expected to affect the long-term viability of any existing or future recovery unit or to fragment habitat to an extent that prevents Quino movement within the action area or across the broader landscape. Habitat temporarily affected will be restored and habitat loss will be offset at a 2:1 ratio by long-term preservation and management of similar habitat. This conservation action will offset project impacts and support recovery of the species.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. We are unaware of any non-Federal actions affecting listed species that are reasonably certain to occur in the action area considered by this opinion.

CONCLUSION

After reviewing the current status of the species, the environmental baseline for the action area, effects of the proposed action, and the cumulative effects, it is our biological opinion that the proposed action is not likely to jeopardize the continued existence of Quino. Our conclusions are based on the following:

1. The project affects a relatively small amount of habitat across the overall range of the Quino and within the vicinity of the project;

2. The project includes measures to minimize direct mortality of Quino eggs, larvae, pupae, and adults and to avoid and minimize indirect effects.

3. Impacts due to operations and maintenance activities should be restricted to intermittent, low intensity road use and maintenance.

4. Temporarily impacted areas of occupied habitat will be restored to ensure that these areas regain ecological function for this species.

5. The proposed project does not conflict with the recovery actions or goals described in the Quino recovery plan (Service 2003). The occupied Quino habitat that will be impacted does not occur in any recovery unit identified in this plan. In addition, the habitat loss will be offset by preservation and management of occupied habitat at a 2:1 ratio.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any

such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Harass is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary and must be undertaken by the BLM, Corps, and/or BIA, as Federal action agencies, so that they become binding conditions of any grant or permit issued to Tule Wind, LLC, as appropriate, for the exemption in section 7(o)(2) to apply. The BLM, Corps, and BIA have a continuing duty to regulate the activity covered by this Incidental Take Statement. If the BLM, Corps, and/or BIA: 1) fail to assume and implement the terms and conditions; or 2) fail to require the Tule Wind, LLC to adhere to the terms and conditions of the Incidental Take Statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the BLM, Corps, BIA or Tule Wind, LLC must report the progress of the action and its impact on the species to the Service as specified in the Incidental Take Statement.

AMOUNT OR EXTENT OF TAKE

Quantifying the precise number of Quino individuals that may be incidentally taken is not possible because the butterfly's small body size and diapause life stage make the observance or detection of mortality highly unlikely. In addition, numbers will fluctuate on a seasonal and annual basis at any occupied site. As reflected in our effects analysis above, impacts to Quino have been quantified and evaluated based on loss of occupied habitat. The loss of occupied habitat provides a method to quantify the impact to the species when we cannot identify or predict the number of individuals impacted and provides a method to assess the overall impact on recovery. Consistent with our effects analysis and because we cannot reasonably identify or predict the number of Quino individuals likely to be taken, we have established a habitat-based anticipated level of incidental take that, if exceeded, will trigger reinitiation of formal consultation.

Incidental take of Quino is exempted for the BLM, Corps, BIA and Tule Wind, LLC as follows:

- Death or injury of eggs, larvae, and pupae from crushing, trampling, or removal of host plants during construction within up to 31.9 acres of occupied Quino habitat, defined as any suitable habitat within 0.6 mile (1 kilometer) of a Quino sighting. The amount or extent of incidental take will be exceeded if more than 31.9 acres of occupied Quino habitat, as generally depicted on Figure 2, is impacted during construction.

No take of Quino is anticipated or exempted due to operations and maintenance activities, including along and/or within the 5.46 acres of existing and newly constructed roads, or due to project-related or operations and maintenance-induced fires.

EFFECT OF THE TAKE

In this biological opinion, we determined that the level of anticipated take is not likely to result in jeopardy to Quino.

REASONABLE AND PRUDENT MEASURE

Tule Wind, LLC will implement numerous conservation measures as part of the proposed action to minimize the incidental take of Quino. Our evaluation of the proposed action is based on the assumption that the actions as set forth in the "Conservation Measures" section of this biological opinion will be implemented. Any changes to the conservation measures proposed by BLM and Tule Wind, LLC or in the conditions under which project activities were evaluated may constitute a modification of the proposed action. If this modification causes an effect to Quino that was not considered in the biological opinion, reinitiation of formal consultation pursuant to the implementing regulations of section 7(a)(2) of the Act (50 CFR § 402.16) may be warranted. The reasonable and prudent measure outlined below is nondiscretionary. Failure to comply may cause the protective coverage of section 7(o)(2) to lapse. The following reasonable and prudent measure is necessary and appropriate to monitor and report incidental take.

Tule Wind, LLC shall monitor and report the impacts of project construction on Quino eggs, larvae, and pupae.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, Tule Wind, LLC must comply with the following term and condition, which implements the reasonable and prudent measure described above and outlines reporting and monitoring requirements. Terms and conditions are non-discretionary.

1.1 Tule Wind, LLC shall provide the BLM, Corps, BIA, and CFWO with a report within 30 days of project clearing and grubbing activities in occupied Quino habitat that includes: a) the acreage of Quino habitat removed due to project activities; and b) any incidental observations of Quino larvae (caterpillars) by the biological monitor in areas of occupied Quino habitat affected by construction. The biological monitor must be approved by the CFWO and have knowledge of the biology and ecology of Quino.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid

adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to develop information. We recommend the following actions be conducted by the BLM:

1. Continue to survey for Quino and map host and nonnative plant occurrences on BLM lands.

2. Implement and evaluate measures to remove nonnative grasses and restore areas of Quino habitat on BLM lands.

REINITIATION NOTICE

This concludes formal consultation on the proposed actions outlined in the initiation request. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the proposed action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in this opinion; or 4) a species is listed or critical habitat is designated that may be affected by the proposed action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation. With regard to 2 above, the CFWO should be notified immediately if project-related or operations and maintenance-induced fires impact occupied Quino habitat in the action area.

If you have any questions regarding this biological opinion, please contact Jesse Bennett of this office at 760-431-9440, extension 305.

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APPENDIX

Fire Safety Measures

1. Steel power poles will be used instead of wooden poles.

2. Transmission and collector line designs will include long insulators to support the wires. The long insulators assure adequate conductor separation to prevent arcing during high-wind conditions and contact with raptors with wide wingspans.

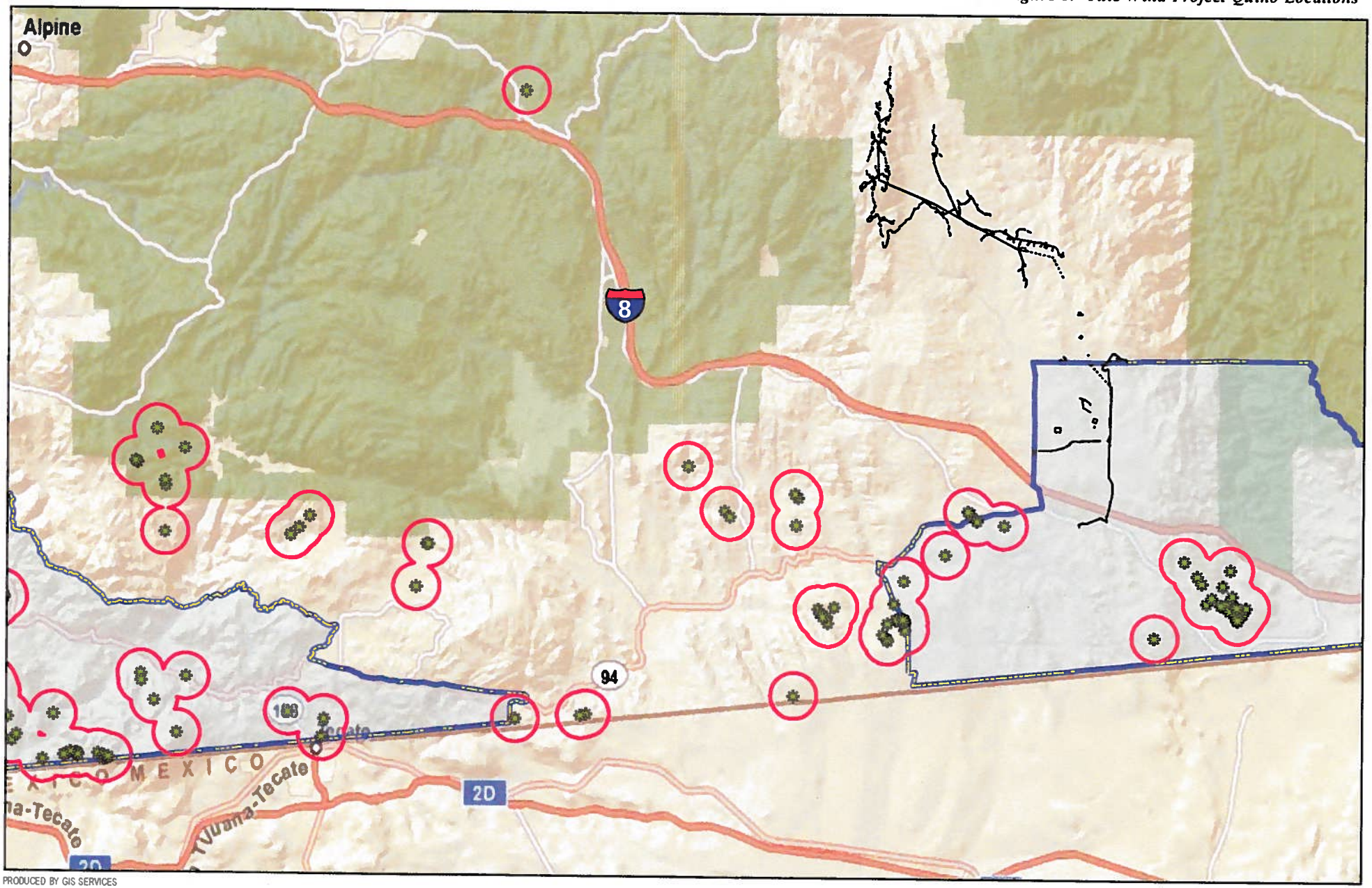
3. No switching devices with moving parts (i.e., fused cutouts, switches, reclosers) will be located on the poles.

4. The transmission line will be designed so under all load conditions, the line will be no closer to the ground than 25 feet. In areas where a distribution circuit is also placed on the pole at a lower elevation, the minimum clearance for the distribution circuit to the ground is also 25 feet.

5. In areas with the potential for wildfire, self-supporting poles will generally be used at locations where the line changes direction rather than guy wires and anchors. If guys and anchors are used, they will be rated for a minimum of 150 percent of expected loading. This design approach eliminates the most likely cause of pole collapse (i.e., failure of a guy wire and/or anchor).

6. To provide separation of installed equipment from combustible vegetation, gravel will be placed in and around substations, wind turbines, and transformers.

Figure 1. Tule Wind Project Quino Locations



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CARLSBAD FIELD OFFICE
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BIOLOGY CONTACT: JESSE BENNETT
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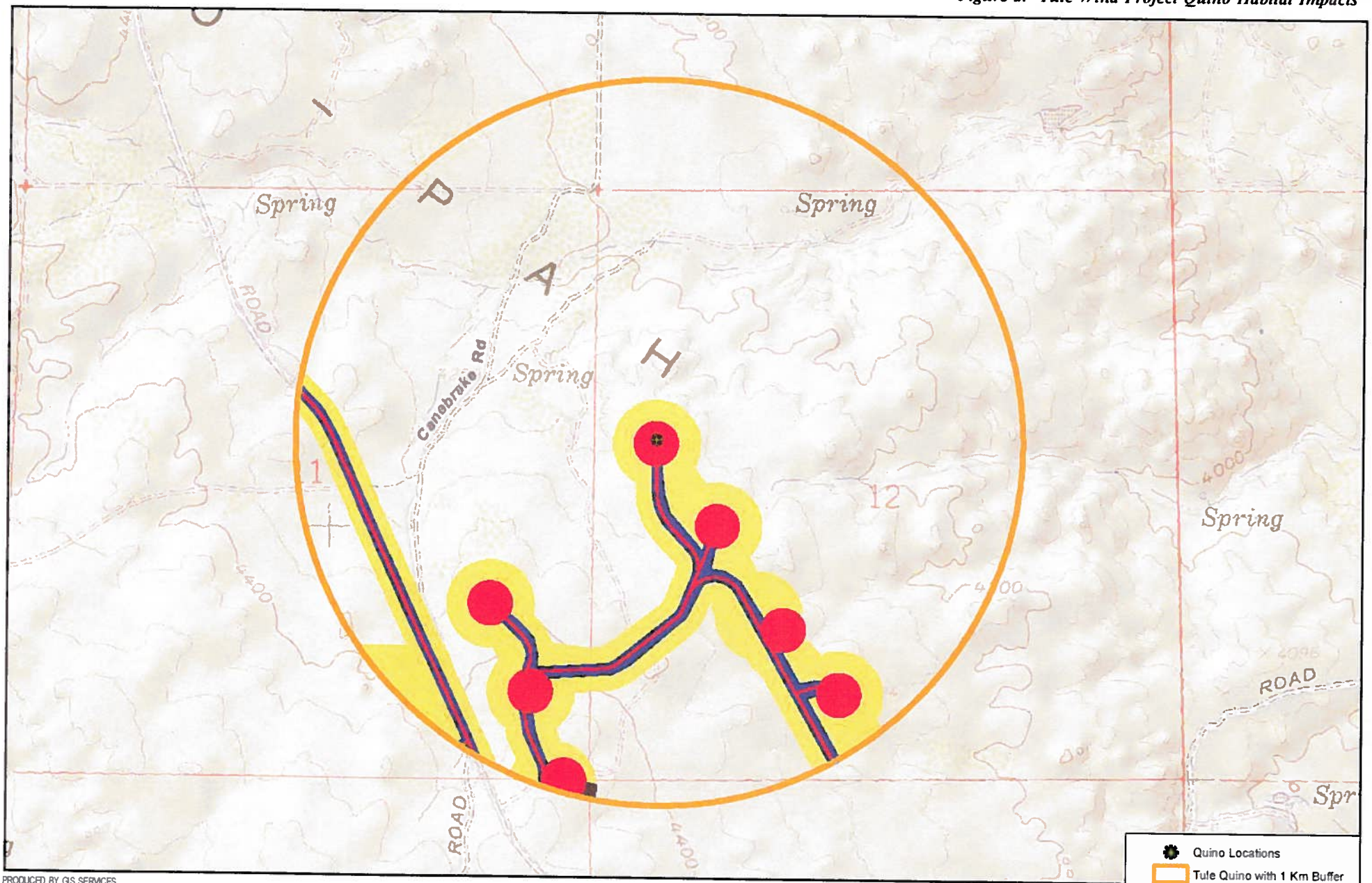
UTM ZONE 11
NAD 83

- Quino Locations
- Tule Project
- Tule Quino with 1 Km Buffer
- Quino with 1 Km Buffer
- Quino Final Recovery Units

U.S. Fish & Wildlife Service
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Carlsbad, California 92011

Figure 2. Tule Wind Project Quino Habitat Impacts



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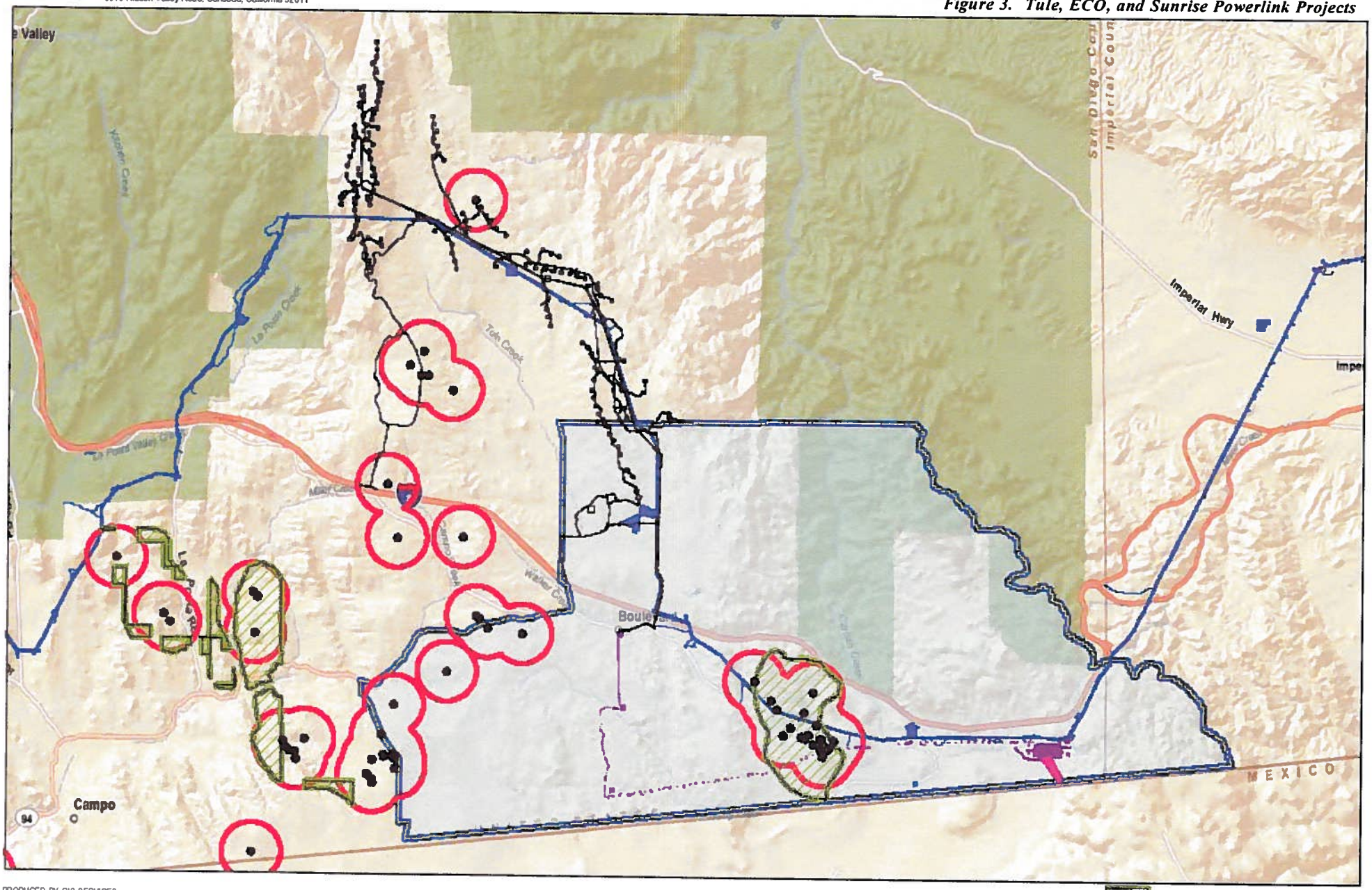
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Carlsbad, California 92011

Figure 3. Tule, ECO, and Sunrise Powerlink Projects



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UTM ZONE 11
NAD 83

Quino Checkerspot Butterfly Final Critical Habitat
ESJ Project
Tule Project
ECO Project
Sunrise Powerlink
QCB Locations
Quino with 1 Km Buffer
Quino Final Recovery Units

EXHIBIT – D
MEMORANDUM OF AGREEMENT

APPENDIX B

Memorandum of Agreement