Wright Solar Park Habitat Conservation Plan
Draft Environmental Assessment Errata

Changes, corrections, and clarifications have been made to the Wright Solar Park Habitat Conservation Plan (HCP) Draft Environmental Assessment (EA) based on public and agency comment and internal review by the U.S. Fish and Wildlife Service (Service). The changes were made to improve the consistency, clarity, and intent of the information provided in the Draft EA, and to respond to comments on the EA analysis and conservation measures in the HCP. These changes, which are summarized in Table 1, are within the scope and analysis of the Draft EA and do not change the Service's consideration or conclusions regarding the environmental consequences of the proposed action or alternatives.

Refinement of the proposed site layout since publication of the Draft EA and inclusion of a new conservation easement along the west side of the solar array resulted in an overall reduction in the permanent and temporary disturbance footprints of the proposed project. Specifically, the Draft EA specified that 1,400 acres would be developed into power generating facilities within the larger 2,731-acre project site (i.e., permanently disturbed), and that an additional 200 acres would be temporarily disturbed during construction as staging areas and temporary access roads. The refined site layout would limit the permanent disturbance footprint to 1,200 acres and the temporary disturbance footprint to 50 acres (i.e., a reduction in the total disturbance footprint from 1,600 acres to 1,250 acres). The San Joaquin kit fox movement corridor on the west side of the solar array would encompass about 285 acres within a permanent conservation easement. These changes are noted as errata to Chapter 2 of the Draft EA in Table 1, but apply to all (numerous) locations where they are referenced in the Draft EA.

Changes reflected in **bold** in Table 1 represent additions to the text in the Draft EA; changes reflected as ~~strikethrough~~ represent deletions from the text.

The Draft EA and responses to comments on the Draft EA are available for review in the project record at the Services' office in Sacramento, California, and will be posted on the project website for public review (XXX).

Table 1. Revisions to the Draft Environmental Assessment

EA Section	Page No.	Description of Change
2.2.2, Alternative 2, Proposed Action Alternative, Security Fencing and Lighting	2-7	Lighting would be installed for ongoing maintenance and security purposes, and would occur at the switchyard, substation, O&M facility, entry and egress gates, and at strategic locations around the facility. Project lighting will meet the following conditions: ~~All lighting would use amber-colored lenses where possible and be shielded and directed downward to minimize the potential for glare or spillover onto adjacent ownerships. Lighting would be used from dusk to dawn and switched lights, which would only be activated when workers are present, would be installed and left in the off position until needed or as code requires, where possible. Security lighting would be set up to use infrared or forward looking infrared radar (FLIR) technology:~~ • **No lighting will be placed near or oriented toward the 230-kV transmission corridor to avoid affecting wildlife that may use this area for nighttime movement.** • **Narrow spectrum bulbs will be used to limit the range of species affected by lighting.** • **All lighting shall be designed so that 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 and neither the lamp nor the reflector interior surface would be visible from outside the footprint of the facilities.** • **Light fixtures shall be installed on poles of minimal height or be installed on the buildings.** • **All lighting shall be of minimum necessary brightness consistent with worker safety** • **The number of lighting fixtures shall be limited to the minimum required.** • **All illuminated areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when it is occupied. Any perimeter lighting shall also only be motion activated.** • **All lighting poles, fixtures, and hoods shall be of dark-colored material.** • **Operational exterior lighting shall be limited to the O&M building and the substation, unless other exterior lighting is required by law or code.**

EA Section	Page No.	Description of Change
		▪ **Unless determined necessary by Merced County for safety or security reasons, any signs at the entry of the project site shall not be lit (reflective coating is acceptable).** ▪ **Lighting would be used from dusk to dawn for the project substation to conform to National Electrical Safety Code (NESC) requirements and all applicable Merced County outdoor lighting codes.**
2.2.2, Alternative 2, Proposed Action Alternative, Construction Actions	2-7	In total, about ~~1,600 acres~~ **1,250 acres** would be disturbed during construction, including ~~1,400 acres~~ **1,200 acres** that would support solar infrastructure and ~~200 acres~~ **50 acres** that would be temporarily disturbed during construction for staging and access.
2.2.2, Alternative 2, Proposed Action Alternative, Site Access and Construction Staging	2-8	In total, approximately ~~200 acres~~ **50 acres** would be temporarily disturbed during construction.
2.2.2, Alternative 2, Proposed Action Alternative, Site Disturbance, Grading and Compaction	2-8	As noted above, the maximum footprint of the Proposed Action Alternative would be approximately ~~1,600 acres~~**1,250 acres**, including staging areas and access roads.
2.2.2, Alternative 2, Proposed Action Alternative, Design Features	2-11 through 2-12	The following additional design features shall be included to increase the amount of movement areas for San Joaquin kit fox and to avoid and minimize impacts **on** the covered species: ▪ **The solar panels shall be constructed in a layout that is consolidated to the extent feasible, while still meeting the goal of using the existing contours of the land and not resulting in a large amount of earth work.** ▪ **The battery storage facility shall be placed on the exterior of the panel layout (not in one of the corridors) and will be constructed as close to the panels as possible to reduce the overall footprint of the project.** ▪ **A buffer that is at least 500 feet wide shall be incorporated into the site layout on the west side of the project area, starting at the toe of the slope, or lands under the control of the applicant, if those lands are further into the project area than the toe of the slope. The buffer will extend into the project area. No solar panels or permanent structures will be placed in the buffer and the portion of the buffer under control of the project applicant will be placed under a conservation easement in perpetuity and managed as low grassland suitable for San Joaquin kit fox and associated grassland species.**

EA Section	Page No.	Description of Change
2.2.2, Alternative 2, Proposed Action Alternative, Avoidance and Minimization Measures	2-12 through 2-13	▪ All employees**, consultants** and contractors**, including grazing operators,** would receive environmental training prior to the commencement of construction **or grazing** activities. ▪ To prevent inadvertent entrapment of San Joaquin kit foxes or other animals during construction, all excavated, steep-walled holes or trenches more than ~~5 feet~~ **2-feet** deep shall be covered at the close of each working day by plywood or similar materials. Any covers that are installed would be able to be removed quickly by construction staff should the need arise. If covers require heavy equipment to lift them, some means of inspecting the inside of the hold would be installed (e.g., Plexiglass windows) so that biological monitors can ensure no animals are trapped inside. Holes and trenches less than ~~5 feet~~ **2 feet** may either be covered or provided with escape ramps at a rate of one ramp every 100 feet. Escape ramps may be constructed of earth fill or wooden planks with a slope no steeper than 45 degrees. If wooden planks are used, perpendicular groves or rungs shall be provided to aid in traction. All holes and trenches, whether covered or uncovered, more than 2 feet deep shall be inspected **prior to the start of the construction day, around midday, and at the end of each construction day as they are being covered for the night. These inspections shall occur** ~~for trapped animals, regardless of~~ whether or not work is occurring in that area. Before holes or trenches are filled, they shall be thoroughly inspected for trapped animals. Work ~~would~~ **shall** not continue until trapped animals have moved out of or are removed from the open trench and relocated to a location approved by the Service and California Department of Wildlife (CDFW). ▪ Speed limits within the project site would be limited to 15 mph during **the day on project access roads and shall not exceed 10 mph during emergency nighttime work.** ~~daylight hours and 10 mph at night. All project-related vehicles and equipment would be restricted to established roads, construction areas, and designated staging areas~~. ▪ **When rodent traps are used inside of facilities only humane traps shall be used and animals shall be relocated and released outside of buildings.** ▪ **All new sightings of covered species shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where species were observed shall also be provided to the Service and CDFW.**

EA Section	Page No.	Description of Change
Table 2-1, California tiger salamander – Construction, O&M and Decommissioning of Solar Park	2-14	▪ **Metal flashing shall be installed** ~~Install tightly woven exclusion fencing~~ between the work area and alkali vernal pools to prevent California tiger salamander from entering the work area. Determine the specific location of the fencing in consultation with the Service and CDFW. ▪ Rodenticide**, herbicide,** and pesticide use is prohibited.~~ Limit herbicide applications to areas where mowing is not possible (e.g., around buildings and against poles and other infrastructure).~~
Table 2-1, Blunt-nosed leopard lizard – Construction, O&M and Decommissioning of Solar Park	2-14	▪ Conduct preconstruction surveys of suitable blunt-nosed leopard lizard habitat according to ~~Service protocols~~**the most recent agency-approved protocol (i.e., CDFW protocol unless the Service develops survey protocols for this species during the permit term).** If an occupied burrow is located, contact the Service and CDFW and follow removal and relocation protocols in consultation with the wildlife agencies. Submit results of preconstruction survey to the Service and CDFW for review and approval. **No ground-disturbing maintenance activities shall occur in or adjacent to areas where blunt-nosed leopard lizard have been detected until a Service- and CDFW-approved avoidance and monitoring plan is in place.** ▪ No monofilament plastic **or soil strengthening agents, geo fabrics, and dust suppression products that would adversely affect these species** will be used for erosion control. **Only natural fiber, biodegradable meshes shall be used in erosion control mats, blankets, and straw or fiber wattles, and these features shall be installed in such a way as to prevent entrapment of special-status reptiles or amphibians while maintaining access to potential breeding habitat. The specific erosion control agents shall be approved by CDFW prior to use.** ▪ ~~Between April 1 and September 30, mowing is allowed only when temperatures are below 75 degrees Fahrenheit (F), measured 1-2 centimeter (cm) above the ground in the sun, to avoid optimal activity temperatures (i.e., 77F-95F measured 1-2 cm above the ground [California Department of Fish and Game 2004]) for blunt nosed leopard lizard.~~**During the active season for blunt-nosed leopard lizards (generally starting April 15, but any time of year with temperatures of 77 degrees Fahrenheit as measured 2 centimeters above the ground), prior to any planned ground-disturbing construction, O&M, or decommissioning activities, such as the regarding of project site roads, a biologist with experience in surveying for blunt-nosed leopard lizard shall assess site conditions for supporting the species.**

EA Section	Page No.	Description of Change
Table 2-1, Blunt-nosed leopard lizard – Construction, O&M and Decommissioning of Solar Park	2-15	Rodenticide**, herbicide,** and pesticide use is prohibited. ~~Limit herbicide applications to areas where mowing is not possible (e.g., around buildings and against poles and other infrastructure).~~
Table 2-1, San Joaquin kit fox – Construction, O&M and Decommissioning of Solar Park	2-15	Rodenticide, **herbicide,** and pesticide use is prohibited. ~~Limit herbicide applications to areas where mowing is not possible (e.g., around buildings and against poles and other infrastructure).~~
2.2.2, Alternative 2, Proposed Action Alternative, Habitat Preservation and Management	2-18	To offset the permanent loss and degradation of approximately ~~1,400 acres~~ **1,250 acres** of habitat and temporary disturbance of an additional ~~200 acres~~ **50 acres** within the project site, the Proposed Action Alternative would include management of habitat onsite, outside of the project footprint, and conservation of approximately 2,450 acres of grazed grasslands southeast of the project site (Figure 1-2). **In addition, the applicant would establish a permanent buffer along the western edge of the project site. This buffer would be on the flat part of the valley and would be revegetated and managed in a low grassland condition to increase prey availability and natural denning opportunities, and to provide a movement corridor past the project site. The buffer, which would encompass approximately 285 acres, would be placed under a conservation easement and protected in perpetuity.**
EC-4, Avoid and minimize impacts on nesting birds.	2-19	The following measures will be implemented to ensure that the Proposed Action Alternative does not significantly affect nesting bird species. - Remove suitable nesting habitat (trees and ground vegetation) during the non-breeding season (generally ~~September 1–January 31~~**September 16 through December 31**). - To the extent feasible, avoid construction activities in or near suitable or occupied nesting habitat during the breeding season (generally ~~February 1–August 31~~**January 1 through September 15**). - If construction activities (including vegetation removal, clearing, and grading) will occur during the nesting season for migratory birds, a qualified biologist will conduct preconstruction nesting bird surveys ~~within 14 days~~ **no more than 10 days** prior to construction activities within a given work area. Suitable habitat within the construction area and areas within a 500-foot buffer will be surveyed for tree-nesting raptors, and a 50-foot buffer will be surveyed for all other bird species. The initial survey should be conducted at least ~~14 days~~ **no more than 10 days** prior to construction to allow sufficient time to develop an avoidance strategy if nests are identified. A final survey should be conducted within 24 hours of ground-disturbing

EA Section	Page No.	Description of Change
		activities. - If an active nest is identified near a given work area and work cannot be conducted outside the nesting season (~~February 1–August~~ 31**January 1 through September 15**), a no-activity zone will be established around the nest by a biologist with avian experience in coordination with the Service. Fencing and/or flagging will be used to delineate the no-activity zone. To minimize the potential to affect the reproductive success of the nesting pair, the extent of the no-activity zone will be based on the distance of the activity to the nest, the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of the species, and the dissimilarity of the proposed activity to background activities. The no-activity zone will be large enough to avoid nest abandonment and will be between 50 and 1,000 feet from the nest, or as otherwise required by the Service. - **All hollow vertical tubes, such as solar mount poles and chain link fence poles will be capped upon installation to prevent the entrapment of migratory birds.**
Figure 2-1	2-25	Figure 2-1 in the Draft EA is replaced with the attached (revised) Figure 2-1 which depicts the new buffer provided on the west side of the project site to allow for San Joaquin kit fox movement.
3.2.2, Agricultural Resources, Proposed Action Alternative, Conversion of Important Farmland to Nonagricultural uses	3.2-5	Mitigation Measure AG-1: Enter into a ~~Community~~ **Solar** Benefits Agreement In order to compensate for the direct and indirect loss of agricultural employment, reductions in tax revenues, and harm to the commercial viability of agriculture in Merced County associated with the long-term conversion of approximately 1,388 acres of cropland, the applicant will enter into a ~~Community~~ **Solar** Benefits Agreement with Merced County, as required by the County, that ~~provides for direct compensation~~ **directly compensates Merced County** for accrued losses over the lifetime of the solar facility.
3.3.2, Biological Resources, Environmental Setting, Special-Status Species	3.3-12	**<u>Migratory Birds</u>** **The project site is in a region of the northern San Joaquin Valley that is dominated by agricultural production. This region also supports the largest remaining block of wetlands in California's Central Valley containing 70,000 acres of private wetlands and associated grasslands, and surrounding 53,000 acres of state and federal lands (U.S. Fish and Wildlife Service 2014). These wetlands and associated grasslands, which include two national wildlife refuges and four state wildlife areas, comprise over 160,000 acres and are collectively known as the Grasslands Ecological Area (U.S. Fish and Wildlife Service 2014). The National Audubon Society has recognized the Grasslands Ecological Area as**

EA Section	Page No.	Description of Change
		an Important Bird Area for wintering waterfowl and the Western Hemisphere Shorebird Reserve Network has identified the Grasslands Ecological Area as being of international importance to shorebirds (National Audubon Society 2013, Western Hemisphere Shorebird Reserve Network 2009). The Grasslands Ecological Area supports one-half million migratory ducks, geese, and swans each year between November and February (National Audubon Society 2013). This area also supports breeding and wintering tricolored blackbirds, wintering sandhill cranes, wintering white-faced Ibis, and serves as a major stopover area for shorebirds each fall, winter, and spring (National Audubon Society 2013). Nearly 50% of all the shorebirds in California's Central Valley are found in the Grasslands Ecological Area during mid-April, the peak of spring migration (Western Hemisphere Shorebird Reserve Network 2009). **The project site is approximately 6–10 miles west and southwest of the Grasslands Ecological Area and does not provide similar wetland habitat and only very limited foraging opportunities for waterfowl and shorebirds. Waterfowl typically forage in flooded or moist habitats, including agricultural habitats such as rice, corn, or post-harvest flooded fields (Central Valley Joint Venture 2006:49). The project site provides very limited habitat for shorebirds due to the lack extensive emergent wetlands (e.g., managed wetlands), seasonal wetlands, shallow flooded habitat (e.g., evaporation and sewage ponds), and flooded agricultural lands (e.g., rice, post-harvest flooded fields) that shorebirds in the Central Valley typically use (Shuford et al. 1998:231, Hickey et al. 2003:38).**
3.3.2, Biological Resources, Proposed Action Alternative, San Joaquin Kit Fox – Operation-Related Impacts	3.3-31	Use of rodenticides**, herbicides,** and pesticides would be prohibited on the project site~~, and the use of herbicides would be limited to areas where mowing is not possible (e.g., within fenced areas around buildings and beneath solar panels)~~.
3.3.2, Biological Resources, Proposed Action Alternative, California Tiger Salamander – Operation-Related Impacts	3.3-33	Finally, the use of rodenticides**, herbicides,** and pesticides would be prohibited on the project site~~, and herbicide applications would be limited to areas where mowing is not possible~~.

EA Section	Page No.	Description of Change
3.3.2, Biological Resources, Proposed Action Alternative, Blunt-Nosed Leopard Lizard – Operation-Related Impacts	3.3-35	The use of rodenticides**, herbicides,** and pesticides would be prohibited within the project site~~, and herbicide applications would be limited to areas where mowing is not possible~~.
3.3.2, Biological Resources, Proposed Action Alternative, Special-Status Invertebrates	3.3-36	Mitigation Measure BIO-1: Protect elderberry shrub The following measures will be implemented prior to and during construction to ensure that the construction activities would not have a significant impact on valley elderberry longhorn beetle. - ~~Avoid removal~~ **Removal** of the elderberry shrub on the project site **is prohibited**. - ~~Orange c~~**Construction** barrier fencing**, sized to prevent San Joaquin kit fox and other sensitive species from becoming entrapped in fence openings**, will be placed along a perimeter 100 feet from **the dripline of** the elderberry shrub.

O&M = operations and maintenance.
kV = kilovolt.
Service = U.S. Fish and Wildlife Service.
EA = environmental assessment.

References

Central Valley Joint Venture. 2006. *Central Valley Joint Venture Plan – Conserving Bird Habitat*. U.S. Fish and Wildlife Service, Sacramento, CA.

Hickey, C., W. D. Shuford, G. W. Page, and S. Warnock. 2003. *The Southern Pacific Shorebird Conservation Plan: A Strategy for Supporting California's Central Valley and Coastal Shorebird Populations*. Version 1.1. PRBO Conservation Science, Stinson Beach, CA.

National Audubon Society. 2013. *Important Bird Areas*. Available: http://netapp.audubon.org/iba/Site/173. Accessed: September 11, 2014.

Shuford, W. D., G. W. Page, and J. E. Kjelmyr. 1998. Patterns and Dynamics of Shorebird Use of California's Central Valley. *The Condor* 100, No. 2.

U.S. Fish and Wildlife Service. 2014. *Grasslands Wildlife Management Area*. Available: http://www.fws.gov/refuges/profiles/index.cfm?id=81653. Accessed: September 11, 2014.

Western Hemisphere Shorebird Reserve Network. 2009. *The Grasslands*. Available: http://www.whsrn.org/site-profile/grasslands. Accessed: September 11, 2014.

Operations & Maintenance Building

Battery Storage Facility Option #1

Temporary Construction Facilities

Approximate Location of Substation & Interconnection Facility

Kit Fox corridor

Kit Fox corridor

Not under lease

500' property line setback

Battery Storage Facility Option #2

Array 1

Array 2

Array 3

Array 4

Array 5

Array 6a

Array 7

Array 8

10S 9E

11S 9E

T.10S., R.9E., MDBM

T.11S., R.9E., MDBM

T.11S., R.9E., MDBM

A.P.N. 078-200-085

A.P.N. 078-200-083

A.P.N. 078-200-082

A.P.N. 078-200-027

A.P.N. 078-200-028

A.P.N. 078-200-030

A.P.N. 078-200-081

A.P.N. 088-020-002

A.P.N. 088-020-038

A.P.N. 088-020-040

A.P.N. 088-020-003

A.P.N. 088-020-041

SW 1/4 OF NW 1/4

SW 1/4

BLANKET EASEMENT FOR S.J.V. OVER PCL 3 OF 39/PM/18 2525 OR 693

BLANKET EASEMENT FOR S.J.V. OVER PCL 2 OF 39/PM/18 2525 OR 695

BLANKET EASEMENT FOR S.J.V. OVER SECTION 35 2525 or 697

BLANKET EASEMENT FOR S.J.V. OVER SE 1/4 SEC. 35 2525 or 697

BLANKET EASEMENT FOR S.J.V. OVER NE 1/4 SECTION 2 2525 or 697

BLANKET EASEMENT FOR S.J.V. OVER SECTION 2 2525 or 697

BLANKET EASEMENT FOR S.J.V. OVER NW 1/4 SEC. 1 2599 OR 77

BLANKET EASEMENT TO TIDEWATER OIL CO. OVER SW 1/4 SEC. 1 1724 OR 912

1724/O.R./912 20' STRIP TO TIDEWATER OIL CO. (Assumed location based on 7' Tidewater Oil easement in NW

1080/O.R./388 75' WIDE TO P.G.&E.

2703/O.R./444 10' WIDE STRIP TO PG&E

2021/O.R./254c 30'x30' TO SAN LUIS WATER DIST.

281/O.R./290 15' WIDE FOR PG&E

3020/O.R./98 50' WIDE TO PG&E

2021/O.R./253 30' WIDE FOR SAN LUIS WATER DIST.

2021/O.R./254e 30'x30' TO SAN LUIS WATER DIST.

1735/O.R./802 20' WIDE TO TIDEWATER OIL CO.

2021/O.R./290 30'x30' TO SAN LUIS WATER DIST.

1082/O.R./202 75' TO PG&E

2046/O.R./274 Within previous R.O.W.

2072/O.R./627 Within previous R.O.W.

702/O.R./345 SLY 30' for ROAD

2021/O.R./254i NW 30' TO SAN LUIS WATER DIST.

2565/O.R./991 20' TO PACBELL

1716/O.R./795 50' TO P.G.&E.

2021/O.R./254d 30'X30' TO SAN LUIS WATER DIST.

1732/O.R./749 50' STRIP TO PG&E

2565/O.R./989 20'x75' TO PAC BELL

2021/O.R./254h 30' TO SAN LUIS WATER DIST

2021/O.R./261 1400'x30' TO SAN LUIS WATER DIST

2021/O.R./254g 30'x30' TO SAN LUIS WATER DIST

1730/O.R./402 20' STRIP TO TIDEWATER OIL CO.

2021/O.R./254j 30'x30' TO SAN LUIS WATER DIST.

2021/O.R./962 30' STRIP TO SAN LUIS WATER DIST.

2021/O.R./962 30'X30' TO SAN LUIS WATER DIST.

2021/O.R./962 30' STRIPS TO SAN LUIS WATER DIST.

1976/O.R./123 1' WIDE STRIP TO P.G.&E. 2,637.7' LONG

858/O.R./192-1 & 1096/OR/389-1 75' TO P.G.&E.

858/O.R./284 75' TO P.G.&E.

2746/O.R./898 62.5' TO P.G.&E.

860/O.R./22 75' TO PG&E

Legend

20ft

100ft

Access Roads

All weather

Native Grade

Site Access

Project Boundary

Laydown Areas

Fence

Wildlife Corridors

Not under lease

Under lease

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

1:10,000

0 0.25 0.5 Miles

Figure 2-1

Wright Solar Park, LLC
Project Facilities

N W E S

ALEXANDER PROJECT SERVICES
Experience Relationship Know-how

Prepared by APS
April 17,, 2015

Attachment 1
Wright Solar Park Habitat Conservation Plan Environmental Assessment Comments and Responses to Comments

The public comment period on the Draft Environmental Assessment (EA) for the Wright Solar Park Habitat Conservation Plan (HCP) began on January 13, 2015 and ended on March 16, 2015 (80 *Federal Register* [FR] 1660). Two comment letters were received during the 60-day public comment period, including one comment letter from a state agency and one comment letter from two non-governmental organizations. One additional comment letter was received after the public comment period closed, but is considered in this document to be responsive to comments and concerns specific to the proposed action. Table 1 lists the name and affiliation of the commenters and the number that was assigned to the comment letter (e.g., SA1). Copies of all comment letters are provided below.

Table 1. Agencies and Organizations that Provided Comments on the Draft Wright Solar Park HCP EA

Letter Number	Commenter / Title	Agency /Organization	Date
SA1	Jeffrey R. Single, Ph.D., Regional Manager,	California Department of Fish and Wildlife	March 11, 2015
NGO1	Kim Delifino, California Director	Defenders of Wildlife	March 16, 2015
	Ileene Anderson, Senior Scientist	Center for Biological Diversity	
NGO2	Kaylee Dolen, Administrative Assistant Project Coordinator	Friends of Animals	March 23, 2015

The National Environmental Policy Act (NEPA) requires that a federal lead agency consider all comments received during a review and comment period, and provide a response to all comments that are considered substantive. For the purposes of the Wright Solar Park HCP EA, *substantive comments* include all comments that requested clarification or modification of an alternative; requested clarification, improvements, or modifications to the existing analysis, methodology, or assumptions included in the EA; questioned the accuracy of the information presented; or presented new information relevant to the analysis. All substantive comments in each letter received during the public comment period were labeled with a unique identification number (e.g., SA1-1). Responses to substantive comments are provided below. All comments, including those that were determined not to be substantive, were reviewed and considered by U.S. Fish and Wildlife Service (Service) staff in preparing this document.

Written Comments and Responses

Comment Letter SA1

MAR-12-15 03:54PM FROM- +9191665428 25 T-821 P 002 F-721

DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

CHARLTON H. BONHAM, Director

Letter SA1

March 11, 2015

Mike Thomas
Chief, Conservation Planning Division
Sacramento Fish and Wildlife Office
2800 Cottage Way, W-2605
Sacramento, California 95825

Subject: Draft Environmental Assessment (DEA) and Habitat Conservation Plan (HCP) for Wright Solar Park.

Dear Mr. Thomas:

The California Department of Fish and Wildlife (CDFW) has reviewed the Draft Environmental Assesment (DEA) and Draft Habitat Conservation Plan (DHCP) submitted by Merced County (Lead Agency) for the Wright Solar Park (Project) located approximately 4.5 miles southeast of Santa Nella, California, southwest of the intersection of Interstate 5 and State Route (SR) 33/152, on the south side of Billy Wright Road in western Merced County. San Luis Reservoir and O'Neill Forebay are located approximately 3 miles to the northwest of the Project, the Agua Fria Multi-Species Conservation Bank is located adjacent to the Project's western boundary, and Los Banos Reservoir and associated State Park is located adjacent to the Project's southern boundary. The previously approved Fox Hills and Villages of Laguna San Luis developments are located adjacent to the northeastern and northwestern boundaries of the Project site, respectively.

The Project includes the construction and operation of a 200-megawatt (MW) solar photovoltaic (PV) power generating facility, on 1,392 acres of a 2,732.49-acre Project site. An additional 190.33 acres of temporary disturbance will occur during Project construction. Power generation facilities associated with the Project include the installation of access roads, solar modules, tracker components, direct current to alternating current power inverters, medium voltage transformers, a 500-foot, 230-kilovolt (kV) generation-tie line, a medium voltage collection system including a 1.5-mile medium voltage buried or overhead transmission line and associated poles, on-site project substation, interconnection switching station, battery energy storage system (BEES), security fencing and lighting, temporary construction laydown areas, and an Operations and Maintenance (O&M) building.

As a trustee for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection and management of fish, wildlife and habitat necessary for biologically sustainable populations of those species. In this capacity, CDFW administers the California Endangered Species Act (CESA), the Native Plant Protection Act, and other provisions of the California Fish and Game Code that afford protection to the State's fish and wildlife trust resources. CDFW is also recognized as a "Trustee Agency" and a "Responsible Agency" under the California Environmental Quality Act (CEQA) (CEQA Guidelines §15386). Pursuant to our

Conserving California's Wildlife Since 1870

jurisdiction, CDFW is concerned about potential Project-related impacts to several special status species, including but not limited to, San Joaquin kit fox (*Vulpes macrotis mutica*, SJKF), which is listed as threatened and endangered pursuant to the California Endangered Species Act (CESA) and the Federal Endangered Species Act (FESA), respectively, California tiger salamander (*Ambystoma californiense*, CTS), which is listed as threatened pursuant to CESA and FESA, Swainson's hawk (*Buteo swainsoni*, SWHA), which is listed as threatened pursuant to CESA, and blunt-nosed leopard lizard (*Gambelia sila*, BNLL) which is listed as endangered pursuant to CESA and as fully protected by the State. Our specific comments follow.

Potential Impacts and Recommendations

San Joaquin Kit Fox: The Project is located within a critical portion of the remnant north-south movement corridor for the SJKF. CDFW and the United States Fish and Wildlife Service (USFWS) consider the Santa Nella area a "pinch-point" in the connectivity between the north and south SJKF populations, and the associated movement corridor is considered critical to the continued existence and genetic diversity of the northern SJKF population. There is a very narrow area remaining in the Santa Nella vicinity that is usable for kit fox north-south movement, and the proposed Project creates a major barrier between the Los Banos Valley core kit fox population and the northern kit fox population. An influx of individuals from the Los Banos Valley is thought to be critical to the continued existence and genetic diversity of the northern kit fox population. The Project would substantially reduce the remaining habitat in the north-south movement corridor and could result in its permanent fragmentation. SA1-1

Since the dry-farmed agricultural and grassland portions of the Project area are likely to support foraging and denning kit fox, respectively, prior to any ground-disturbing activities in this area that could result in "take", as defined by Section 86 of the Fish and Game Code, acquisition of a State Incidental Take Permit (ITP) is warranted to comply with CESA. CDFW is prohibited by the California Code of Regulations, Title 14, Section 783.4(4)b to issue an ITP that would jeopardize the continued existence of this species. *As the Project is currently proposed in the DEA and DHCP, it is uncertain if CDFW would be able to make a "No Jeopardy" finding due to the connectivity constraints posed by the Project as proposed. A "No Jeopardy" finding by CDFW is necessary for issuance of an ITP.* SA1-2

Implementation of the proposed Project, in conjunction with other development planned in the Santa Nella Community Specific Plan (SNCSP), as well as the previously approved Fox Hills and Villages of Laguna San Luis developments, would likely result in permanent fragmentation of the north-south migratory corridor of SJKF. Unless additional accommodations for SJKF movement are developed within the Project design, the proposed Project could result in extirpation of the northern range of SJKF. The wildlife corridors proposed to aid in the movement of SJKF are within existing electrical line easement areas and are crossed by Project access roads and are not necessarily or consistently compatible with the needs of special status and other native wildlife species, since these areas are subject to management activities required by and of the utility companies, are not managed for the purposes of species conservation, and cannot be protected in perpetuity through conservation easements. SA1-1 cont.

In addition, while CDFW encourages installing artificial dens, we would like to note that the ability for this to increase kit fox use of an area and thus mitigate impacts has not been demonstrated. SA1-3

For the reasons stated above, Project implementation would, at a minimum, impact the entire 420,000 acres of kit fox range north of the Project area in addition to the Project footprint. In order to permit the Project under CESA, Project modifications would be required, including but not limited to suitable movement corridors being established through the Project area, protected in perpetuity via conservation easement, and managed for the purpose of providing ideal foraging, denning, and movement areas for kit fox specifically. It is important to note that the potential inability to meet ITP issuance criteria creates potential permitting difficulties for any Project-related actions considered by other State or local agencies, both for their possible CESA permitting needs and also in relation to compliance with Fish and Game Code Section 2055 (conservation of threatened and endangered species by State Agencies, Boards, and Commissions). SA1-1 cont. SA1-2 cont.

Blunt-Nosed Leopard Lizard: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish, pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited, and CDFW cannot authorize their take in association with a general project except under the provisions of a Natural Communities Conservation Plan (NCCP). The Project is not within an NCCP area. The fully-protected BNLL is known to occupy habitat within the vicinity of the Project site and may occur within the non-native annual grasslands and the dry-farmed areas of the Project site. BNLL are also known to frequent berms and roadways and may utilize the easement corridors within the Project site. Because CDFW cannot authorize take of BNLL in association with the Project since it is a fully protected species, be advised that the possession of an ITP from the USFWS for the take of BNLL does not negate the State requirement for full avoidance of BNLL. Therefore, CDFW recommends the DEA and DHCP be revised to include enforceable mitigation measures to preclude take on the Project site during construction, operation, maintenance and decommissioning activities. For example, we recommend construction, operation, maintenance and decommissioning activities avoid all observed BNLLs by a minimum of the distance that BNLLs are known or expected to travel within their home range, based on telemetry, mark-recapture, or other data. Additional buffers may also be warranted to ensure that the Project would not reduce species' abundance or distribution over time due to habitat loss. The proposed 50-foot avoidance buffers from BNLL occurrences would neither avoid direct take of BNLL during construction nor provide for the persistence of individual lizards after construction is complete. CDFW also recommends that relocation of BNLLs and destruction of burrows be prohibited as this would be a form of take and would therefore violate Fish and Game Code Section 5050. SA1-4 SA1-5 SA1-4 cont.

Lake and Streambed Alteration: CDFW has regulatory authority with regard to activities occurring in streams and/or lakes that could adversely affect any fish or wildlife resource, pursuant to Fish and Game Code sections 1600 *et seq*. Section 1602(a) of the Fish and Game Code requires an entity to notify CDFW before engaging in activities that would substantially change the bed, channel, or bank of a stream or substantially divert or obstruct the natural flow of a stream. Because Project activities are proposed that will involve work within the bed, bank, or channel of a stream, acquisition of a Streambed Alteration Agreement will likely be necessary SA1-5

and submittal of a Streambed Alteration Notification (Notification) to CDFW will be required. The Notification should include all Project-related stream disturbances and mitigation for the disturbances in order for CDFW to efficiently determine which streams are within CDFW jurisdiction. This will reduce the need for CDFW to require extensive additional environmental review for a Streambed Alteration Agreement for the Project in the future. SA1-5 cont.

Project Description, Mitigation Measures and CEQA Comments: CDFW has identified several inconsistences between the Project description and the biological impacts described in the DEA, the DHCP, and the Draft and Final Environmental Impact Report (DEIR and FEIR) that were submitted to CDFW for CEQA review. In addition, the Project as described in the DEA and DHCP, does not reflect the revised Project design or the revised mitigation measures that were adopted by the Lead Agency during the CEQA review process for the protection of special-status species, nor does it address the comments CDFW made on the DEIR and FEIR during the CEQA review process (Attachments A and B). Therefore, CDFW recommends the DEA and DHCP be revised to incorporate the revised Project description and mitigation measures adopted by the Lead Agency during the CEQA review process and address the comments CDFW made on the DEIR and FEIR during the CEQA review process. SA1-6

Thank you for the opportunity to comment on the Wright Solar Park DEA and DHCP. If you have any questions regarding these comments, please contact Lori Bono, Senior Environmental Scientist Specialist at (559) 243-4014, extension 350, or lori.bono@wildlife.ca.gov.

Sincerely,

Jeffrey R. Single, Ph.D.
Regional Manager

Attachments (2)

cc: Thomas Leeman
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EDMUND G. BROWN, JR., Governor
CHARLTON H. BONHAM, Director

Attachment A

August 20, 2014

James Holland
Merced County Planning and Community
Development Department
2222 M Street
Merced, California 95340

Subject: Draft Environmental Impact Report (DEIR) for Wright Solar Park (Conditional Use Permit 12-017), State Clearinghouse number 2013101071.

Dear Mr. Holland:

The California Department of Fish and Wildlife (CDFW) has reviewed the Draft Environmental Impact Report (DEIR) submitted by Merced County (Lead Agency) for the Wright Solar Park (Project) located approximately 4.5 miles southeast of Santa Nella, California, southwest of the intersection of Interstate 5 and State Route (SR) 33/152, on the south side of Billy Wright Road in western Merced County. San Luis Reservoir and O'Neill Forebay are located approximately 3 miles to the northwest of the Project, the Agua Fria Multi-Species Conservation Bank is located adjacent to the Project's western boundary, and Los Banos Reservoir and associated State Park is located adjacent to the Project's southern boundary. The previously approved Fox Hills and Villages of Laguna San Luis developments are located adjacent to the northeastern and northwestern boundaries of the Project site, respectively.

The Project includes approval of a conditional use permit (CUP) to allow the construction and operation of a 200-megawatt (MW) solar photovoltaic (PV) power generating facility, on 1,392 acres of a 2,732.49-acre Project site. An additional 190.33 acres of temporary disturbance will occur during Project construction. Power generation facilities associated with the Project include the installation of access roads, solar modules, tracker components, direct current to alternating current power inverters, medium voltage transformers, a 500-foot, 230-kilovolt (kV) generation-tie line, a medium voltage collection system including a 1.5-mile medium voltage buried or overhead transmission line and associated poles, on-site project substation, interconnection switching station, battery energy storage system (BEES), security fencing and lighting, temporary construction laydown areas and an Operations and Maintenance (O&M) building.

As previously stated in our comment letter on the Notice of Preparation (NOP) prepared for this DEIR, the Project is located within a critical portion of the remnant north-south movement corridor for the San Joaquin kit fox (*Vulpes macrotis mutica*), which is listed as threatened and endangered pursuant to the California Endangered Species Act (CESA) and the federal Endangered Species Act (ESA), respectively. CDFW and the United States Fish and Wildlife Service (USFWS) consider the Santa Nella area a "pinch-point" in the connectivity between the north and south San Joaquin kit fox (SJKF) populations, and the associated movement corridor is considered critical to the continued existence and genetic diversity of the northern SJKF

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population. The Project would substantially reduce the remaining habitat in the north-south movement corridor and could result in its permanent fragmentation. CDFW disagrees with the DEIR's finding that the proposed mitigation measures will reduce the impacts to the SJKF corridor to less than significant. CDFW is also concerned about potential Project-related impacts to several other special status species, including but not limited to, the California tiger salamander (*Ambystoma californiense*, CTS), which is listed as threatened pursuant to both CESA and ESA, Swainson's hawk (*Buteo swainsoni*, SWHA), which is listed as threatened pursuant to CESA, and blunt-nosed leopard lizard (*Gambelia sila*, BNLL) which is listed as endangered pursuant to CESA and as fully protected by the State. Our specific comments follow.

Department Jurisdiction

Trustee Agency Authority: CDFW is a Trustee Agency with the responsibility under the California Environmental Quality Act (CEQA) for commenting on projects that could impact plant, fish and wildlife resources. Pursuant to Fish and Game Code Section 1802, CDFW has jurisdiction over the conservation, protection and management of fish, wildlife, native plants and habitat necessary for biologically sustainable populations of those species. As a Trustee Agency for plant, fish and wildlife resources, CDFW is responsible for providing, as available, biological expertise to review and comment on environmental documents and impacts arising from project activities, as those terms are used under CEQA.

Responsible Agency Authority: CDFW has regulatory authority over projects that could result in "take" of any species listed, or that is a candidate for listing, by the State (State-listed) as threatened or endangered, pursuant to CESA. For this or any other project which impacts listed species, an Incidental Take Permit (ITP) is the mechanism for providing take authorization under CESA. CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (sections 21001{c}, 21083, Guidelines sections 15380, 15064, 15065). Impacts must be avoided or mitigated to less than significant levels unless the CEQA Lead Agency makes and supports a Statement of Overriding Consideration (SOC). A CEQA Lead Agency's SOC would not preclude the Project proponent's obligation to comply with CESA.

Other Rare Species: Species of plants and animals need not be listed as Endangered, Rare or Threatened (E, R or T) pursuant to CESA and/or the ESA to be considered E, R or T under CEQA. If a species can be shown to meet the criteria for a listing as E, R or T under CESA and/or ESA as specified in the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Chapter 3, Section 15380), it should be fully considered in the environmental analysis for the Project.

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish, pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited, and CDFW cannot authorize their take in association with a general project except under the provisions of a Natural Communities Conservation Plan (NCCP). The Project is not within an NCCP area. The fully-protected BNLL is known to occupy habitat within 0.5 miles of the Project site and may

occur within the non-native annual grasslands and the dry-farmed areas of the Project site. BNLL is also known to frequent berms and roadways and may utilize the easement corridors within the Project site. CDFW recommends the DEIR be revised to include appropriate avoidance measures to ensure full avoidance of BNLL. Additional comments on potential Project-related impacts to BNLL are provided below.

Bird Protection: CDFW has jurisdiction over actions that may result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Sections of the Fish and Game Code that protect birds, their eggs and nest include sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Lake and Streambed Alteration Notification: CDFW has regulatory authority with regard to activities occurring in streams and/or lakes that could adversely affect any fish or wildlife resource, pursuant to Fish and Game Code sections 1600 *et seq*. Section 1602(a) of the Fish and Game Code requires an entity to notify CDFW before engaging in activities that would substantially change the bed, channel, or bank of a stream or substantially divert or obstruct the natural flow of a stream. Because Project activities are proposed that will involve work within the bed, bank, or channel of a stream, acquisition of a Streambed Alteration Agreement will likely be necessary and submittal of a Streambed Alteration Notification (Notification) to CDFW will be required. The Notification should include all Project-related stream disturbances and mitigation for the disturbances in order for CDFW to efficiently determine which streams are within CDFW jurisdiction. This will reduce the need for CDFW to require extensive additional environmental review for a Streambed Alteration Agreement for the Project in the future.

Potential Impacts and Recommendations

San Joaquin Kit Fox: CDFW has significant concerns with the proposed Project; implementation would result in significant and irreversible impacts to SJKF, by impacting the entire northern range of the species. The Project as a whole would create a significant movement barrier between the southern and northern kit fox populations. As noted in the DEIR and in our comments above, the Santa Nella area has been identified by CDFW and the USFWS as a "pinch point" in the connectivity between the north and south populations of SJKF. There is a very narrow area remaining in the Santa Nella vicinity that is usable for kit fox north-south movement, and the proposed Project creates a major barrier between the Los Banos Valley core kit fox population and the northern kit fox population. An influx of individuals from the Los Banos Valley is thought to be critical to the continued existence and genetic diversity of the northern kit fox population.

Since the dry-farmed agricultural and grassland portions of the Project area are likely to support foraging and denning kit fox, respectively, prior to any ground-disturbing activities in this area that could result in take, as defined by Section 86 of the Fish and Game Code, acquisition of a State ITP is warranted to comply with CESA. CDFW is prohibited by the California Code of Regulations, Title 14, Section 783.4(4)b to issue an ITP that would jeopardize the continued existence of this species. *As the Project is currently proposed, it is uncertain if CDFW would be*

able to make a "No Jeopardy" finding due to the connectivity constraints posed by the Project as proposed. A "No Jeopardy" finding by CDFW is necessary for issuance of an ITP.

Implementation of the proposed Project, in conjunction with other development planned in the Santa Nella Community Specific Plan (SNCSP), as well as the previously approved Fox Hills and Villages of Laguna San Luis developments, would likely result in permanent fragmentation of the north-south migratory corridor of SJKF. Unless additional accommodations for SJKF movement are developed within the Project design, the proposed Project could result in extirpation of the northern range of SJKF. The wildlife corridors proposed to aid in the movement of SJKF are within existing electrical line easement areas and are crossed by Project access roads and are not necessarily or consistently compatible with the needs of special status and other native wildlife species, since these areas are subject to management activities required by and of the utility companies, are not managed for the purposes of species conservation, and cannot be protected in perpetuity through conservation easements. The DEIR also states that the proposed Project would retain some permeability for SJKF by incorporating a 300-foot wide area of grassland along the north-south running 230-kV transmission line as depicted on Figure 2-3. However, it appears that the corridor width may be substantially less than 300-feet, when the corridor width is compared with the width of the easement area (as labeled on Figure 2-3) occurring under the 230-kV transmission line. Therefore, CDFW requests clarification on the actual width of the proposed wildlife corridors.

In addition, while CDFW encourages installing artificial dens, we would like to note that the ability for this to increase kit fox use of an area and thus mitigate impacts has not been demonstrated.

For the reasons stated above, Project implementation would, at a minimum, impact the entire 420,000 acres of kit fox range north of the Project area in addition to the Project footprint. In order to permit the Project under CESA, Project modifications would be required, including but not limited to suitable movement corridors being established through the Project area, protected in perpetuity via conservation easement, and managed for the purpose of providing ideal foraging, denning, and movement areas for kit fox specifically. It is important to note that the potential inability to meet ITP issuance criteria creates potential permitting difficulties for any Project-related actions considered by other State or local agencies, both for their possible CESA permitting needs and also in relation to compliance with Fish and Game Code Section 2055 (conservation of threatened and endangered species by State Agencies, Boards, and Commissions).

Tule Elk: Tule elk (elk) were discussed in the DEIR, but Project-related impacts to elk were not considered as significant and were not addressed. Elk use much of the Project area south of Highway 152 during the spring through fall period, and development of this area will displace the elk. The direction of displacement and where they would be displaced to could result in significant impacts. For example, changing the seasonal shift from the winter use area below San Luis Dam into a northerly direction could result in elk attempting to cross SR 152. This would present a significant human safety hazard and could impact the elk population. Development-induced shifts in elk use areas could also increase movement distances and result in damage to properties crossed (fences, etc.).

Displacement of elk could have an impact on the overall health of this sub-herd. CDFW has spent significant resources in re-establishment of elk within their historic range, and the elimination of the elk from this area would reverse some of the progress made in restoring elk in California. Minimization and mitigation measures should be proposed that addresses elk displacement, habitat needs, and reduction in safety hazards and property damage.

Blunt-Nosed Leopard Lizard: BNLL have been documented within 0.5 miles of the Project site and have the potential to occur within the non-native annual grasslands and the dry-farmed areas of the Project site. BNLLs are also known to frequent berms and roadways and may utilize the easement corridors of the Project site. Please note that CDFW cannot authorize take of BNLL in association with the Project because it is a fully protected species (Fish and Game Code Section 5050). Therefore, be advised that the possession of an ITP from the USFWS for the take of BNLL does not negate the State requirement for full avoidance of BNLL.
We also recommend the DEIR be revised to include enforceable mitigation measures to preclude take on the Project site during construction, operation, maintenance and decommissioning activities. For example, we recommend construction, operation, maintenance and decommissioning activities avoid all observed BNLLs by a minimum of the distance that BNLLs are known or expected to travel within their home range, based on telemetry, mark-recapture, or other data. Additional buffers may also be warranted to ensure that the Project would not reduce species' abundance or distribution over time due to habitat loss.

Burrowing Owl: CDFW recommends the Lead Agency require the developer follow the methodology, avoidance buffers and mitigation in the *Staff Report on Burrowing Owl Mitigation* dated March 7, 2012 (CDFG 2012), **as written and without modification,** before starting Project-related activities likely to impact burrowing owls. The staff report can be found on our website at www.dfg.ca.gov/wildlife/nongame/docs/BUOWStaffReport.pdf. If Project-related activities are delayed or suspended for more than 30 days, re-surveying is warranted.

As outlined in the *Staff Report on Burrowing Owl Mitigation*, burrow exclusion in and of itself will not always avoid or minimize and mitigate BUOW impacts to less than significant levels, and eviction of BUOWs is a potentially significant impact under CEQA. When temporary or permanent burrow exclusion and/or burrow closure is implemented, BUOWs should not be excluded from burrows unless or until:

- A BUOW Exclusion Plan is developed and approved by the Lead Agency and CDFW;
- Permanent loss of occupied burrow(s) and habitat and temporary exclusion is mitigated;
- Site monitoring is conducted prior to, during and after exclusion of BUOWs from their burrows sufficient to ensure take is avoided; and
- Excluded BUOWs are documented using artificial or natural burrows on an adjoining mitigation site.

Raptors and Migratory Birds: For the protection of raptors and migratory song birds and to assist in avoiding take of avian species as required by Fish and Game Code sections 3503,

3503.5 and 3513, CDFW encourages Project implementation to occur during the non-nesting bird season. However, if ground-disturbing activities must occur during the breeding season (January through September 15th), the Project applicant is responsible for ensuring that implementation of the Project does not result in any violation of the Migratory Bird Treaty Act or relevant Fish and Game Code sections as referenced above. Prior to work commencing, CDFW recommends surveys for active nests be conducted by a qualified wildlife biologist no more than 10 days prior to the start of the Project and that the surveys be conducted in a sufficient area around the work site to identify any nests that are present and to determine their status. A sufficient area means any nest within an area that could potentially be affected by the Project. In addition to direct impacts, such as nest destruction, nests might be affected by noise, vibration, odors, and movement of workers or equipment. CDFW recommends that identified nests are continuously surveyed for the first 24 hours prior to any construction-related activities to establish a behavioral baseline, and once work commences, that all are continuously monitored to detect any behavioral changes. If behavioral changes are observed, we recommend that the work causing that change cease and CDFW consulted for additional avoidance and minimization measures. If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around the nests of unlisted raptors until the breeding season has ended, or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers may be implemented when there is compelling biological or ecological reason to do so, such as when the Project area would be concealed from a nest site by topography. Any variance from these buffers is advised to be supported by a qualified wildlife biologist and it is recommended CDFW be notified in advance of implementation of a no-disturbance buffer variance. We recommend revising Mitigation Measure BIO-29 to reflect these recommendations.

Lake Effect: The DEIR refers to a report written by Wallace Erickson, Ken Levenstein and Paul Kerlinger for the 324-acre Kingbird Solar Facility in eastern Kern County, which concluded that "there is no evidence that this type of project will result in high levels of avian mortality such as risk to population declines or cause any significant biological impacts" and that there is no empirical evidence that PV facilities lead to significant avian mortality resulting from contact or collision with PV panels. The DEIR goes on to draw the conclusion that the "40-MW capacity Kingbird Solar Facility is similar to the proposed project in that it involves PV panels of similar size and height arrayed across the landscape".

While some allowances are made for this comparison in the DEIR, CDFW would like to emphasize that we do not agree with the conclusions that were offered in the report prepared for the Kingbird Solar Facility in eastern Kern County. In addition, the Wright Solar Park Project is five times the size of the Kingbird Solar Facility and unlike the Kingbird Solar Facility, which is located in the desert; the Wright Solar Park Project is located in western Merced County within the Pacific Flyway and the immediate vicinity of the San Luis Reservoir, the O'Neill Forebay, and the Grasslands Ecological Area, and is adjacent to the Agua Fria Multi-Species Conservation Bank and the Los Banos Reservoir and associated State Park. These areas all provide potential nesting and foraging habitat for migratory and special status bird species and in the case of the Agua Fria Multi-Species Conservation Bank, the Grasslands Ecological Area,

and the O'Neill Forebay Wildlife Area (adjacent to O'Neill Forebay), they are actively managed to attract and provide habitat for migratory bird species which increases the potential for bird mortalities due to lake effect.

In addition, the ability of birds to be able to differentiate between the PV solar panels that have been designed for minimal light reflection and the surrounding waters and wetland habitats described above has not been demonstrated in the literature. Therefore, the assumption of the DEIR that "the birds are less likely to focus on the Wright Solar facility" in comparison to the surrounding available habitat is unsubstantiated. The further assumption of the DEIR that the "Project's solar panels are less likely to appear as a body of water because they would be placed on rolling hills, would be set at an angle...and there would be space between each panel and panel array" is also a misconception since the vast size and number of PV solar panels that will be used for the project will still appear as a solid mass when viewed from above. Furthermore, lake effect has also been shown to have a similar effect on bats foraging over solar project sites.

Therefore, CDFW concurs with the determination in the DEIR that the lake effect is a significant and unavoidable impact.

Deferred Mitigation: The DEIR defers the development of several plans and avoidance, minimization and mitigation measures, including the establishment of performance criteria, until after Project approval. The DEIR also includes mitigation measures that are ambiguous and are therefore not enforceable (i.e., "avoid removal of elderberry shrub" and "avoid using pesticides and limit herbicide use within the Project site" instead of "the removal of the elderberry shrubs and the use of herbicides and pesticides will be prohibited within the Project site"). CDFW recommends the DEIR include these measures and the performance criteria that are essential to support the determinations that biological impacts would be less than significant with mitigation incorporated.

In addition, the DEIR appears to imply that if the specified amount of off-site habitat can be purchased and a Habitat Conservation Plan (HCP), which has not yet been disclosed, is developed and approved by the USFWS, then the impacts are mitigated to less than significant levels. To make an informed decision on whether the impacts would actually be mitigated, one would have to understand how the off-site mitigation lands and the actions required in the HCP would increase the target species' populations on the mitigation lands. The success criteria needs to be defined and the actions that make those criteria achievable need to also be described and disclosed. The significance determinations in the DEIR would be much stronger if the specific management actions that would occur on mitigation lands to increase target populations were identified.

CEQA Guidelines §15126.4 (a)(1)(B) states formulation of feasible mitigation measures should not be deferred until some future date. The Court of Appeal in *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645 struck down mitigation measures which required formulating management plans developed in consultation with State and Federal wildlife agencies after project approval.

Courts have also repeatedly not supported conclusions that impacts are mitigable when essential studies, and therefore impact assessments, are incomplete (*Sundstrom v. County of Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry v. City of Murrietta* (1995) 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc. v. County of Orange* (2005) 131 Cal. App. 4th 777).

Rodenticides, Pesticides and Vegetation Management: The DEIR notes that because of the key role rodents play in maintaining refuge habitat for special status species, rodenticides will not be used within the Project site except within buildings. The DEIR also notes that pesticide use will be avoided and herbicide use will be limited to areas where mowing is not possible. CDFW strongly discourages the use of rodenticides, pesticides and herbicides because they have the potential to directly and indirectly impact State-listed species such as the SJKF, SWHA and CTS, which may result in take of these species and would warrant acquisition of an ITP.

Please note that many solar projects are proposed, some of which are in construction and are several thousand acres in size, which will not engage in any form of rodent control, pesticide or herbicide use. As a result, it does not appear that elimination of rodents is necessary for operation of utility-scale solar projects. If rodent pests are an issue, CDFW encourages the use of live traps for pest rodent control. The traps should be sized such that inadvertent trapping of a San Joaquin kit fox would not occur. If vegetation cannot be controlled by mechanical means (i.e. mowing) CDFW recommends the implementation of a grazing plan.

Temporary Impacts: CDFW recommends the Project be redesigned to require all temporary impacts associated with Project construction (i.e., construction office facilities, staging and laydown areas, temporary parking lots, etc.) be confined within areas of the Project site that will be permanently impacted.

Project Fencing: CDFW agrees with the Lead Agency's requirement that all fencing on the Project site have a four- to eight-inch separation between the bottom of the fence and the ground, along the entire fence and the bottom of the fence edges be wrapped back to form a smooth edge to remove the restriction of wildlife movement through the proposed Project site. However, instances of SJKF becoming tangled in the chain-link fencing have continued to be reported. Therefore, CDFW recommends the Lead Agency revise the requirement to include the installation of slats weaved through the fencing to prevent SJKF from becoming entangled in the chain-link. In addition, since fencing will occur around the PV panels and associated buildings and no additional development will occur outside of these areas, CDFW recommends that the perimeter fencing on the Project site be removed from the Project design to allow for the unrestricted movement SJKF, Tule elk and other special status wildlife species.

Dust Control: The Project's DEIR states that soil strengthening agents, geo fabric and dust suppression products may be used for access and circulation roads. CDFW strongly discourages the use of the above mentioned products because they have the potential to directly and indirectly impact CDFW jurisdiction areas and State-listed species such as the SJKF, CTS and SWHA, which may result in take of these species and would warrant the acquisition of an ITP. CDFW also recommends the Lead Agency require the Project developer minimize the use of water on the Project site for dust control and PV panel washing in order to minimize potential changes in the existing vegetative structure and composition of the Project

site. CDFW also recommends the Lead Agency require the Project developer obtain concurrence from CDFW on the species composition of the seed mix prior to reseeding the Project site.

Night Work and Lighting: The DEIR states that construction will be limited to daylight hours only and that artificial nighttime lighting on the Project site will be shielded, directed downward and minimized at night. However, CDFW also recommends that all night lighting be installed using motion activated sensors to reduce impacts of artificial night lighting on foraging, migration and breeding behaviors of special status species.

Vertical Tubes: Vertical tubes such as solar mount poles and chain link fencing poles can result in the entrapment and death of a variety of bird species. CDFW recommends the Lead Agency require that all hollow vertical tubes such as solar mount poles and chain link fencing poles be permanently capped at the time they are installed to prevent the entrapment and death of birds.

Erosion Control: CDFW recommends that only natural-fiber, biodegradable meshes be used in erosion control mats, blankets and straw or fiber wattles and that these erosion control features be installed in such a way as to prevent entrapment of special status amphibians while maintaining access to potential breeding habitat.

Alternatives: CDFW recommends continuing to refine the Project layout to reduce impacts, mostly by designing a more compact footprint. All on-site layouts presented in the DEIR include "corridors" which CDFW believes would be of limited value for wildlife, especially SJKF and Tule elk. It would be better for wildlife in general to design a smaller, more consolidated Project footprint that eliminates and fragments less habitat than to expect or encourage wildlife to use habitat fragments between arrays.

As stated above, clustering arrays as densely as possible would substantially reduce habitat loss and fragmentation, including for SJKF, Tule elk, BNLL, badger, raptors, and all other species occurring on and around the Project site.

Although Alternative 3 reduces the habitat loss and fragmentation compared to Alternative 1, it still creates substantial habitat fragments and would still eliminate the north-south movement corridor for SJKF.

Mitigation Measures: CDFW recommends the Lead Agency revise the following Biological Mitigation Measures as indicated below:

Mitigation Measure BIO-2a

- Offroad vehicle travel will be ~~avoided~~ **prohibited.**

Mitigation Measure BIO-5

- **Removal** ~~Avoid removal~~ of the elderberry shrub **will be prohibited**

- ~~Orange~~ Construction barrier fencing, **sized to prevent SJKF and other sensitive species from becoming entrapped in the fence openings,** will be placed along a perimeter 100 feet from the **dripline of the** elderberry shrub.

Mitigation Measure BIO-8a

- No monofilament plastic will be used for erosion control **and only natural-fiber, biodegradable meshes will be used in erosion control mats, blankets and straw or fiber wattles. These erosion control features will be installed in such a way as to prevent entrapment of special status amphibians while maintaining access to potential breeding habitat.**

- Vehicles will not exceed a speed limit of 15 mph on project access roads ~~or during overland travel~~.

- ~~Tightly woven exclusion fencing (e.g. sediment fencing)~~ **Metal flashing** will be installed between the work area and the alkali vernal pool to prevent California tiger salamander from entering the work area.

- Trenches or holes more than 6 inches deep will be provided with one or more escape ramps constructed of earthen fill or wooden planks and will be inspected by a qualified biologist prior to being filled. **A Qualified Biologist(s) shall inspect all open holes, sumps, and trenches within the Project Area at the beginning, middle, and end of each day for wildlife. All trenches, holes, sumps, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and that are between two- and eight feet deep shall be covered when workers or equipment are not actively working in the excavation, which includes cessation of work overnight, or shall have an escape ramp of earth or a non-slip material with a less than 1:1 (45 degree) slope. All trenches, holes, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and greater than eight feet deep shall be covered when workers or equipment are not actively working in the excavation and at the end of each work day. To prevent inadvertent entrapment of wildlife, a Qualified Biologist shall oversee the covering of all excavated, trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material (such as hardware cloth) at the close of each working day such that wildlife are unable to dig or squeeze under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning, mid-day, the end of each day (including weekends and any other non-work days), and immediately before trenches, holes, sumps, or other excavations are back-filled, a Qualified Biologist shall thoroughly inspect them for wildlife. Trenches, holes, sumps, or other excavations that are covered long term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If any worker discovers that wildlife have become trapped, all activities in the vicinity shall cease and the Qualified Biologist(s) notified immediately. Project workers**

and the Qualified Biologist(s) shall allow the trapped wildlife to escape unimpeded before activities are allowed to continue. If the entrapped animal is a State listed species and an ITP has been acquired by the Project proponent for that species, the Qualified Biologist may capture and relocated the animal in accordance with the Project ITP provisions.

- ~~Work crews or~~ The **CDFW-approved** onsite biological monitor will inspect open trenches, pits and under construction equipment and material left onsite in the morning, **afternoon** and evening, **and prior to equipment or construction materials being moved,** to look for amphibians that may have become trapped or are seeking refuge.

Mitigation Measure BIO-9

- Vehicles will not exceed a speed limit of 15 mph on project access roads ~~or during overland travel~~.
- Other than for emergency purposes, vehicle operation will be ~~avoided~~ **prohibited** within the Project site ~~during nights with wet weather~~ to avoid running over special status amphibians that may be active on the surface under these conditions.
- Because of the key role rodents play in maintaining refuge habitat for special status amphibians, rodenticides will not be used within the Project site ~~except within buildings~~.
- ~~Avoid using p~~ Pesticides and ~~limit~~ herbicide use within the Project site **will be prohibited**. ~~Herbicide application will be limited to~~ **In** areas where mowing is not possible (e.g. within fenced areas around buildings and beneath solar panels) ~~Alternative methods of weed control could be explored in cooperation with responsible government agencies~~ **a CDFW- and USFWS-approved grazing plan will be implemented for vegetation control within the Project site.**

Mitigation Measure BIO-10

- Trenches or holes more than 6 inches deep will be provided with one or more escape ramps constructed of earthen fill or wooden planks and will be inspected by a qualified biologist prior to being filled. Any such features that are left open overnight will be searched each day prior to construction activities to ensure no species are trapped. Work will not continue until trapped animals have moved out of open trenches. **A Qualified Biologist(s) shall inspect all open holes, sumps, and trenches within the Project Area at the beginning, middle, and end of each day for wildlife. All trenches, holes, sumps, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and that are between two- and eight feet deep shall be covered when workers or equipment are not actively working in the excavation, which includes cessation of work overnight, or shall have an escape ramp of earth or a non-slip material with a less than 1:1 (45 degree) slope. All trenches, holes, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and greater than eight feet deep shall be covered when workers or equipment are not actively**

working in the excavation and at the end of each work day. To prevent inadvertent entrapment of wildlife, a Qualified Biologist shall oversee the covering of all excavated, trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material (such as hardware cloth) at the close of each working day such that wildlife are unable to dig or squeeze under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning, mid-day, the end of each day (including weekends and any other non-work days), and immediately before trenches, holes, sumps, or other excavations are back-filled, a Qualified Biologist shall thoroughly inspect them for wildlife. Trenches, holes, sumps, or other excavations that are covered long term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If any worker discovers that wildlife have become trapped, all activities in the vicinity shall cease and the Qualified Biologist(s) notified immediately. Project workers and the Qualified Biologist(s) shall allow the trapped wildlife to escape unimpeded before activities are allowed to continue. If the entrapped animal is a State listed species and an ITP has been acquired by the Project proponent for that species, the Qualified Biologist may capture and relocate the animal in accordance with the Project ITP provisions.

- A~~n~~ **CDFW-approved biologist** ~~oncite biological monitor~~ will inspect open trenches, pits and under construction equipment and material left onsite ~~in the~~ **every** morning, **afternoon** and evening to look for amphibians that may have become trapped or are seeking refuge.

Mitigation Measure BIO-18

- No monofilament plastic will be used for erosion control **and only natural-fiber, biodegradable meshes will be used in erosion control mats, blankets and straw or fiber wattles. These erosion control features will be installed in such a way as to prevent entrapment of special status amphibians while maintaining access to potential breeding habitat.**

- ~~Work crews or~~**A CDFW-approved** onsite biological monitor will inspect open trenches, pits and under construction equipment and material left onsite for special status reptiles each morning, **afternoon** and evening, **and prior to equipment or construction materials being moved** during construction.

Mitigation Measure BIO-19

- Because of the key role rodents play in maintaining refuge habitat for special status reptiles, rodenticides will not be used within the Project site ~~except within buildings~~.

- ~~Avoid using p~~ Pesticides and ~~minimize use of~~ herbicides **use** within the Project site **will be prohibited**. ~~Herbicide application should be limited to~~ **In** areas where mowing is not

possible (e.g. within fenced areas around buildings and beneath solar panels) **a CDFW- and USFWS-approved grazing plan will be implemented for vegetation control within the Project site.**

Mitigation Measure BIO-27a

- **If construction-related activities are delayed or suspended for more than 14 days during the breeding season (January 1 through September 15), CDFW recommends surveys for Swainson's hawks be repeated in accordance with the Swainson's Hawk Technical Advisory Committee's (2000) *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*.**
- The two trees with the Project footprint that will need to be removed for construction or any other trees within the Project site that need to be removed or trimmed for Project construction will be done between September ~~1~~ **14** and ~~January~~ **December** 31 to avoid adversely affecting nesting Swainson's hawk and other nesting birds.

- If Swainson's hawk nests are identified within ½ mile of the Project site, the developer will ~~contact CDFW to~~ establish a **½-mile no-disturbance buffer around the nest site** ~~buffers~~ to avoid disrupting nesting activities. Active Swainson's hawk nests will be monitored by a biologist experienced with the species ~~to determine whether the buffer is appropriate in minimizing disturbance and to determine when young have fledged. If Project construction appears to be disrupting nesting behavior Project activities will cease until the monitoring biologist consults with CDFW to develop a new buffer distance.~~ No Project-related activities (e.g. ground disturbance, loud noises, construction personnel) will be allowed within the **no-disturbance** buffer. The **no-disturbance** buffer will remain intact until ~~the biological monitor has determined that young have fledged from the nest.~~ **the breeding season has ended or until a qualified biologist has determined, and CDFW has agreed in writing, that the birds have fledged and are no longer reliant upon the nest or parental care for survival.**

Mitigation Measure BIO-29

- Remove suitable nesting habitat (trees and ground vegetation) during the non-breeding season (~~generally September 1 – January 31~~ **September 16 through December 31**)

- To the extent feasible, avoid construction activities in or near suitable or occupied nesting habitat during the breeding season of birds (~~generally February 1 August 31~~ **January 1 through September 15th**).

Mitigation Measure BIO-34

- ~~Avoid using~~ **The use of** rodenticides, **herbicides** and pesticides within the Project site **will be prohibited**. ~~Herbicide application should be limited to areas where mowing is not possible (e.g. within fenced areas around buildings and beneath solar panels).~~

Mitigation Measure BIO-35

- Trenches or holes more than 6 inches deep will be provided with one or more escape ramps constructed of earthen fill or wooden planks and will be inspected by a qualified biologist prior to being filled. Any such features that are left open overnight will be searched each day prior to construction activities to ensure no animals are trapped. Work will not continue until trapped animals have moved out of open trenches. **A Qualified Biologist(s) shall inspect all open holes, sumps, and trenches within the Project Area at the beginning, middle, and end of each day for wildlife. All trenches, holes, sumps, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and that are between two- and eight feet deep shall be covered when workers or equipment are not actively working in the excavation, which includes cessation of work overnight, or shall have an escape ramp of earth or a non-slip material with a less than 1:1 (45 degree) slope. All trenches, holes, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and greater than eight feet deep shall be covered when workers or equipment are not actively working in the excavation and at the end of each work day. To prevent inadvertent entrapment of wildlife, a Qualified Biologist shall oversee the covering of all excavated, trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material (such as hardware cloth) at the close of each working day such that wildlife are unable to dig or squeeze under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning, mid-day, the end of each day (including weekends and any other non-work days), and immediately before trenches, holes, sumps, or other excavations are back-filled, a Qualified Biologist shall thoroughly inspect them for wildlife. Trenches, holes, sumps, or other excavations that are covered long term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If any worker discovers that wildlife have become trapped, all activities in the vicinity shall cease and the Qualified Biologist(s) notified immediately. Project workers and the Qualified Biologist(s) shall allow the trapped wildlife to escape unimpeded before activities are allowed to continue. If the entrapped animal is a State listed species and an ITP has been acquired by the Project proponent for that species, the Qualified Biologist may capture and relocated the animal in accordance with the Project ITP provisions.**

Mitigation Measure BIO-36

- Known den: ~~Orange construction barrier fencing~~ **Flagging and/or stakes with flagging attached** will be installed between the work area and the known den site at a minimum distance of 100 feet from the den. The ~~fencing~~ **flagging** will be maintained until construction-related disturbances have ceased. ~~At that time, all fencing will be removed to avoid attracting subsequent attention to the den~~.

- As described in the USFWS *Standard Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance*, in cases where avoidance is not a reasonable alternative, limited destruction of potential San Joaquin kit fox dens may be allowed as follows only after consultation **and written approval have been obtained from the** ~~with~~ USFWS and CDFW.

- **To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of the Project, a Qualified Biologist(s) shall inspect all open holes, sumps, and trenches within the Project Area at the beginning, middle, and end of each day for wildlife. All trenches, holes, sumps, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and that are between two- and eight feet deep shall be covered when workers or equipment are not actively working in the excavation, which includes cessation of work overnight, or shall have an escape ramp of earth or a non-slip material with a less than 1:1 (45 degree) slope. All trenches, holes, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and greater than eight feet deep shall be covered when workers or equipment are not actively working in the excavation and at the end of each work day. To prevent inadvertent entrapment of wildlife, a Qualified Biologist shall oversee the covering of all excavated, trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material (such as hardware cloth) at the close of each working day such that wildlife are unable to dig or squeeze under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning, mid-day, the end of each day (including weekends and any other non-work days), and immediately before trenches, holes, sumps, or other excavations are back-filled, a Qualified Biologist shall thoroughly inspect them for wildlife. Trenches, holes, sumps, or other excavations that are covered long term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If any worker discovers that wildlife have become trapped, all activities in the vicinity shall cease and the Qualified Biologist(s) notified immediately. Project workers and the Qualified Biologist(s) shall allow the trapped wildlife to escape unimpeded before activities are allowed to continue. If the entrapped animal is a State-listed species and an ITP has been acquired by the Project proponent for that species, the Qualified Biologist may capture and relocated the animal in accordance with the Project ITP provisions.**

- **All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods will be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe will not be moved until the USFWS and CDFW have been consulted.**
- **All food-related trash items such as wrappers, cans, bottles, and food scrapes will be disposed of in securely closed containers and removed at least once a week from the Project site.**
- **No firearms will be allowed on the Project site.**
- **No pets, such as dogs or cats will be permitted on the Project site to prevent harassment, mortality of kit foxes, or destruction of dens.**
- **In the case of trapped animals, escape ramps or structures will be installed immediately to allow the animal(s) to escape, or the USFWS and CDFW will be contacted for guidance.**
- **New sightings of kit fox will be reported to the California Natural Diversity Database. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed will also be provided to the USFWS and CDFW.**

Thank you for the opportunity to comment on the Wright Solar Park DEIR. If you have any questions regarding these comments, please contact Craig Bailey, Senior Environmental Scientist (Supervisory) at (559) 243-4014, extension 227, or craig.bailey@wildlife.ca.gov.

Sincerely,

Jeffrey R. Single, Ph.D.
Regional Manager

cc: Thomas Leeman
United States Fish and Wildlife Service
2800 Cottage Way, Room W-2805
Sacramento, California 95825-1846

ec: Julie Vance
Craig Bailey
Steven Hulbert
California Department of Fish and Wildlife

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DEPARTMENT OF FISH AND WILDLIFE
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EDMUND G. BROWN, JR., Governor
CHARLTON H. BONHAM, Director

Attachment B

January 13, 2015

James Holland
Merced County Planning and Community
Development Department
2222 M Street
Merced, California 95340

Subject: Final Environmental Impact Report (FEIR) for Wright Solar Park (Conditional Use Permit 12-017), State Clearinghouse number 2013101071.

Dear Mr. Holland:

The California Department of Fish and Wildlife (CDFW) has reviewed the Final Environmental Impact Report (FEIR) submitted by Merced County (Lead Agency) for the Wright Solar Park (Project) located approximately 4.5 miles southeast of Santa Nella, California, southwest of the intersection of Interstate 5 and State Route 33/152, on the south side of Billy Wright Road in western Merced County.

The Project includes approval of a conditional use permit (CUP) to allow the construction and operation of a 200-megawatt (MW) solar photovoltaic (PV) power generating facility, on 1,392 acres of a 2,732.49-acre Project site. Power generation facilities associated with the Project include the installation of access roads, solar modules, tracker components, direct current to alternating current power inverters, medium voltage transformers, a 500-foot, 230-kilovolt (kV) generation-tie line, a medium voltage collection system including a 1.5-mile medium voltage buried or overhead transmission line and associated poles, on-site project substation, interconnection switching station, battery energy storage system, security fencing and lighting, temporary construction laydown areas and an Operations and Maintenance building.

As previously stated in our comment letter on the Notice of Preparation (NOP) and Draft Environmental Impact Report (DEIR) prepared for this Project, the Project is located within a critical portion of the remnant north-south movement corridor for the San Joaquin kit fox (*Vulpes macrotis mutica*, SJKF), which is listed as threatened and endangered pursuant to the California Endangered Species Act (CESA) and the federal Endangered Species Act (ESA), respectively. The Project would substantially reduce the remaining habitat in the north-south movement corridor and could result in its permanent fragmentation. The Project also has the potential to impact several other special status species, including but not limited to, the California tiger salamander (*Ambystoma californiense*, CTS), which is listed as threatened pursuant to both CESA and ESA, Swainson's hawk (*Buteo swainsoni*, SWHA), which is listed as threatened pursuant to CESA, and blunt-nosed leopard lizard (*Gambelia sila*, BNLL) which is listed as endangered pursuant to CESA and as fully protected by the State. CDFW has reviewed the

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revisions included in the FEIR and the Lead Agency's response to our comments on the DEIR and we do not agree with all of the responses. The following comments represent our most significant remaining concerns, which if unresolved could affect issuance of permits from CDFW for the Project.

Potential Impacts and Recommendations

San Joaquin Kit Fox: CDFW would like to reiterate the significant concerns we raised in our comments on the DEIR and NOP specifically with respect to significant and irreversible impacts to SJKF, by impacting the entire northern range of the species; there is a very narrow area remaining in the Santa Nella vicinity that is usable for kit fox north-south movement, and the proposed Project creates a major barrier between the Los Banos Valley core kit fox population and the northern kit fox population. An influx of individuals from the Los Banos Valley is thought to be critical to the continued existence and genetic diversity of the northern kit fox population.

The Lead Agency has redesigned the Project to include a newly proposed, on average, 500-foot-wide buffer that will be incorporated into the site layout on the west side of the Project area, starting at the toe of the slope and extending into the Project area in an effort to address the above concerns. However, during discussions between the Lead Agency and CDFW, CDFW was made aware that a portion of the newly proposed buffer occurs on land adjacent to the Project site and that it cannot be acquired or protected in perpetuity by the Project developer. Consequently, the newly proposed buffer does not address CDFW's prior recommendation on the DEIR that the Project site be redesigned to incorporate a suitable movement corridor through the Project area, which is protected in perpetuity via a conservation easement, and managed for the purpose of providing ideal foraging, denning, and movement areas for kit fox specifically.

Blunt-Nosed Leopard Lizard (BNLL): As previously discussed in CDFW's comments on the DEIR, BNLL have been documented within 0.5 mile of the Project site and have the potential to occur within the non-native annual grasslands and the dry-farmed areas of the Project site. BNLLs are also known to frequent berms and roadways and may utilize the easement corridors of the Project site. Therefore, CDFW considers the Project site to be potential habitat for BNLL and recommends presence/absence surveys be conducted within and adjacent to the Project site, prior to the initiation of construction-related activities, in accordance with the *California Department of Fish and Game Approved Survey Methodology for the Blunt-Nosed Leopard Lizard* dated May 2004. If BNLLs are detected on the Project site we recommend the Lead Agency and/or Project developer notify CDFW immediately and we continue to recommend that all construction, operation, maintenance and decommissioning activities avoid all observed BNLLs by a minimum of the distance that BNLLs are known or expected to travel within their home range, based on telemetry, mark-recapture, or other data. Additional buffers may also be warranted to ensure that the Project would not reduce species' abundance or distribution over time due to habitat loss. In addition, we would like to reiterate that CDFW cannot authorize take of BNLL in association with the Project because it is a fully protected species (Fish and Game Code Section 5050). We do not agree that implementation of 50 foot buffers around BNLL detections or burrows, as proposed in the FEIR, would avoid take of BNLL. Further, excavation

of burrows in which BNLL are present, as proposed in the FEIR, would result in take, potentially in the form of mortality.

Burrowing Owl: For the protection of burrowing owls and to assist in avoiding take as required by Fish and Game Code sections 3503, 3503.5 and 3513, CDFW continues to recommend the Lead Agency follow the guidance CDFW provided in the DEIR, including the general guideline for implementing a minimum 500-meter no-disturbance buffer for Projects with a high level of disturbance as provided in the *Staff Report on Burrowing Owl Mitigation* dated March 7, 2012. As described in the aforementioned Staff Report, these are general guidelines and if the Lead Agency and/or Project developer decides to adjust these minimum no-disturbance buffers we recommend they consult with CDFW and other burrowing owl experts for assistance in developing site-specific buffer zones which take into account the existing vegetation, human development, and land uses in the area of the Project site. However, if activities are allowed closer than the setback distances recommended above, a broad-scale, long-term, scientifically-rigorous monitoring program should be incorporated to ensuring that burrowing owls are not detrimentally affected by these alternative approaches.

Raptors and Migratory Birds: For the protection of raptors and migratory song birds and to assist in avoiding take of avian species as required by Fish and Game Code sections 3503, 3503.5 and 3513, CDFW continues to recommend the Lead Agency follow the guidance CDFW provided in the DEIR and summarized below, including the minimum no-disturbance buffers:

CDFW recommends Project implementation occurs during the non-nesting bird season. However, if ground-disturbing activities must occur during the breeding season (January through September 15th), the Project applicant is responsible for ensuring that implementation of the Project does not result in any violation of the Migratory Bird Treaty Act or relevant Fish and Game Code sections as referenced above. Prior to work commencing, CDFW recommends surveys for active nests be conducted by a qualified wildlife biologist no more than 10 days prior to the start of the Project and that the surveys be conducted in a sufficient area around the work site to identify any nests that are present and to determine their status. A sufficient area means any nest within an area that could potentially be affected by the Project. In addition to direct impacts, such as nest destruction, nests might be affected by noise, vibration, odors, and movement of workers or equipment. CDFW recommends that identified nests are continuously surveyed for the first 24 hours prior to any construction-related activities to establish a behavioral baseline, and once work commences, that all are continuously monitored to detect any behavioral changes. If behavioral changes are observed, we recommend that the work causing that change cease and CDFW consulted for additional avoidance and minimization measures. If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around the nests of unlisted raptors until the breeding season has ended, or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers may be implemented when there is compelling biological or ecological reason to do so, such as when the Project area would be concealed from a nest site by topography. Any variance from these buffers is advised to be supported by a qualified wildlife biologist and it is recommended CDFW be notified in advance of

implementation of a no-disturbance buffer variance. We recommend revising Mitigation Measure BIO-29 to reflect these recommendations.

Lake and Streambed Alteration Notification: Based on a review of United States Geological Service topography maps and aerial imagery of the Project site and the Final Biological Resources Report prepared for the Wright Solar Project on October 9, 2013, the Project has the potential to impact multiple features that may be within CDFW jurisdiction. Therefore, CDFW continues to recommend that a Lake and Streambed Alteration Notification be submitted for the Project.

Tree Removal: CDFW recommends Mitigation Measure BIO27-a be revised to restrict all necessary tree removal to the raptor and migratory bird non-breeding season, which occurs between September 16th to December 31st, in order to correspond to Mitigation Measure BIO-29 and CDFW's previous recommendation.

Herbicides: CDFW continues to recommend against the use of herbicides on the Project site since they have a potential to directly and indirectly impact State-listed species such as the SJKF, SWHA and CTS. Several renewable energy projects, some of which have completed construction and are several thousand acres in size do not engage in any form of herbicide use and instead engage in a combination of grazing and hand and mechanical vegetation control. Therefore, it does not appear that herbicide use is a necessary component for the operation of utility-scale renewable energy projects.

Temporary Impacts: CDFW reiterates the recommendation that the Project be redesigned and/or construction be phased in order to confine all temporary impacts associated with Project construction (i.e., construction office facilities, staging and laydown areas, temporary parking lots, etc.) within areas of the Project site that will be permanently impacted.

Trenches and Holes: To prevent inadvertent entrapment of SJKF or other wildlife during Project construction, CDFW continues to recommend that the Lead Agency follow the guidance CDFW provided in the DEIR and summarized below:

Trenches or holes more than 6 inches deep will be provided with one or more escape ramps constructed of earthen fill or wooden planks and will be inspected by a qualified biologist prior to being filled. A Qualified Biologist(s) shall inspect all open holes, sumps, and trenches within the Project Area at the beginning, middle, and end of each day for wildlife. All trenches, holes, sumps, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and that are between two- and eight feet deep shall be covered when workers or equipment are not actively working in the excavation, which includes cessation of work overnight, or shall have an escape ramp of earth or a non-slip material with a less than 1:1 (45 degree) slope. All trenches, holes, and other excavations with sidewalls steeper than a 1:1 (45 degree) slope and greater than eight feet deep shall be covered when workers or equipment are not actively working in the excavation and at the end of each work day. To prevent inadvertent entrapment of wildlife, a Qualified Biologist shall oversee the covering of all excavated, trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material (such as hardware cloth) at the close of each working day such that wildlife are unable to dig or squeeze

under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning, mid-day, the end of each day (including weekends and any other non-work days), and immediately before trenches, holes, sumps, or other excavations are back-filled, a Qualified Biologist shall thoroughly inspect them for wildlife. Trenches, holes, sumps, or other excavations that are covered long term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. If any worker discovers that wildlife has become trapped, all activities in the vicinity shall cease and the Qualified Biologist(s) notified immediately. Project workers and the Qualified Biologist(s) shall allow the trapped wildlife to escape unimpeded before activities are allowed to continue. If the entrapped animal is a State listed species and an ITP has been acquired by the Project proponent for that species, the Qualified Biologist may capture and relocated the animal in accordance with the Project ITP provisions.

Thank you for the opportunity to comment on the Wright Solar Park FEIR. If you have any questions regarding these comments, please contact Lori Bono, Senior Environmental Scientist (Specialist) at (559) 243-4014, extension 350, or lori.bono@wildlife.ca.gov.

Sincerely,

for Jeffrey R. Single, Ph.D.
Regional Manager

cc: Thomas Leeman
United States Fish and Wildlife Service
2800 Cottage Way, Room W-2805
Sacramento, California 95825-1846

ec: Julie Vance
California Department of Fish and Wildlife

Response to Comment SA1-1

The potential effects of the Proposed Action Alternative on San Joaquin kit fox movement corridors are described in Section 3.3 of the Draft EA (page 3.3-30). As described in that section, construction of the Proposed Action Alternative could disrupt kit fox movement through the project site and would result in the permanent loss or degradation of 1,200 acres of low quality denning, foraging, and movement habitat. Although the Proposed Action Alternative would retain some permeability for wildlife by retaining a 300-foot wide area of grassland within the transmission line corridor along the north-south boundary of the project site, impacts on species movement through this area would occur, and are disclosed in the EA.

Potential cumulative impacts on biological resources, including San Joaquin kit fox movement, are described in Section 4.4 of the Draft EA (pages 4-4 to 4-6). As described in that section, the Fox Hills development would adjoin the northeast corner of the project site and would be located on both sides of Interstate 5 (I-5), although all proposed land uses west of I-5 (and adjacent to the project site) would be associated with open space uses, including a golf course, and would allow for San Joaquin kit fox movement at night. In addition, the biological opinion for the Fox Hills development includes several avoidance and minimization measures to reduce potential impacts on San Joaquin kit fox and their habitat, including the establishment of a preserve of at least 378 acres, speed limits during project activities, placement of escape ramps in all trenches or holes that are left open for longer than 24 hours, provisions for an on-site biological monitor to inspect potential dens and confirm San Joaquin kit fox absence prior to excavation, weekly compliance inspections, and completion of a Service-approved revegetation plan (U.S. Fish and Wildlife Service 1994). As a result, the Fox Hills development is not anticipated to contribute to a cumulative effect on wildlife movement west of I-5 or adjacent to the project site.

Continued development in the community of Santa Nella is expected to contribute to the cumulative loss of open space in the vicinity. Much of the development within this urban community is planned for low-density residential development which allows for no more than six units per acre, with a minimum lot or parcel size of 6,000 square feet (Merced County 2013). Although continued buildout of this community would likely result in a loss of San Joaquin kit fox habitat, our assessment concludes that it would not appreciably impede San Joaquin kit foxes from moving north and south across State Route (SR) 152, particularly given the low density of the population north of SR 152.

The highest priority for San Joaquin kit fox conservation in the region is to protect the local Santa Nella satellite population and to retain a connection between that population and the Panoche Valley. Neither the Fox Hills development nor continued buildout of the community of Santa Nella would result in a loss of connection between these populations. Similarly, potential effects on kit fox movement from the Proposed Action Alternative would be limited to movement within the local region, not between populations. Moreover, project-specific and cumulative effects on movement within the local Santa Nella satellite population of kit fox as a result of the Proposed Action Alternative would be offset by maintenance of all areas outside of the footprint of the solar facility as managed grasslands; establishment of a permanent buffer along the western edge of the project site to allow for kit fox movement (see below); and preservation in perpetuity of approximately 2,450 acres of grazed grasslands southeast of the project site (i.e., the offsite mitigation lands). The offsite mitigation lands include key parcels that support the protection of movement corridors connecting San Joaquin kit fox populations in western Merced County with the core San Joaquin kit fox population in Panoche Valley to the south. In addition, the conservation strategy provided in the HCP (and summarized in Chapter 2 of the Draft EA) includes design, avoidance, and minimization

measures to reduce impacts on kit fox movement through the project site (i.e., specially designed perimeter fencing; installation of low-intensity, directional, and focused exterior lighting; and installation of artificial escape dens along the outside edge of the solar array).

The commenter suggests that the wildlife corridors proposed to aid in the movement of San Joaquin kit fox are within an existing electrical line easement area; are crossed by project access roads; and are not necessarily or consistently compatible with the needs of special-status and other native wildlife species because the areas are subject to management by utility companies. While the commenter accurately states that the wildlife corridors within the project site are associated with existing electric and gas transmission lines and currently managed as dry-farmed agricultural land, under the Proposed Action Alternative, those rights-of way would be revegetated in a low grassland condition. We anticipate that a low grassland condition will provide higher habitat value for San Joaquin kit fox than the current dry-farmed agriculture due to an increase in the prey base for kit fox and lack of regular disturbance.

Further, as requested by the commenter during a separate permitting process, Wright Solar Park, LLC (applicant) has agreed to modify the site design and establish a permanent buffer between the toe of the slope and the western edge of the project site that is at least 500-feet wide (Figure 1). This buffer would be on the flat part of the valley and would be revegetated and managed in a low grassland condition to increase prey availability and natural denning opportunities, and to provide a movement corridor past the project site. The buffer, which would encompass approximately 285 acres, would be placed under a conservation easement and protected in perpetuity.

The following measure has been added to the list of General Avoidance and Minimization Measures provided in Section 5.3.2 of the HCP to reflect the modified site design and establishment of a permanent western buffer. This modification is also reflected in the errata to the Draft EA.

- A buffer that is at least 500 feet wide shall be incorporated into the site layout on the west side of the project area, starting at the toe of the slope, or lands under the control of the applicant, if those lands are further into the project area than the toe of the slope. The buffer will extend into the project area. No solar panels or permanent structures will be placed in the buffer and the portion of the buffer under control of the project applicant will be placed under a conservation easement in perpetuity and managed as low grassland suitable for San Joaquin kit fox and associated grassland species.

We will consider the potential effects of the Proposed Action Alternative on San Joaquin kit fox habitat and movement corridors in our decision on whether or not to issue an incidental take permit (ITP) to the applicant.

Response to Comment SA1-2

The applicant has applied for a State ITP from the California Department of Fish and Wildlife (CDFW) to authorize the incidental take of three state-listed species: California tiger salamander, Swainson's hawk, and San Joaquin kit fox. The applicant is negotiating the terms of the State ITP with the commenter (CDFW).

Response to Comment SA1-3

Comment noted. Artificial dens are not proposed under the HCP.

Response to Comment SA1-4

Section 3.3.1 (pages 3.3-11 to 3.3-12) in the Draft EA describes the status, range, habitat, and potential occurrence of blunt-nosed leopard lizard within and adjacent to the project site. As suggested by the commenter, the more heavily grazed annual grasslands at the project site represent potential habitat for the species, while steeper areas, croplands, and patches of annual grasslands within the croplands provide low quality habitat.

Species-specific avoidance and minimization measures for blunt-nosed leopard lizard are provided in Section 5.5.3 of the Draft HCP (pages 5-7 to 5-8) and Table 2-1 in the Draft EA (pages 2-14 to 2-15). These measures include a requirement for preconstruction surveys of suitable habitat prior to ground-disturbing activities; removal or relocation of occupied burrows in collaboration with CDFW and the Service, and in accordance with approved protocols; development of a CDFW and Service-approved relocation plan; a prohibition on the use of monofilament plastic for erosion control; and limits (based on air temperature) on when mowing is allowed onsite.

In response to comments, the applicant has revised the HCP avoidance measure for pre-construction surveys to strengthen avoidance procedures for blunt-nosed leopard lizard. All other components of that avoidance measure remain the same:

- To minimize the potential for take of blunt-nosed leopard lizards during O&M activities, a qualified biologist will survey areas of suitable habitat for blunt-nosed leopard lizards 24 hours prior to ground disturbance to determine suitability for blunt-nosed leopard lizards. These areas include remnant patches of annual grassland that occur along roadsides and in other areas that have not been cultivated. Roads will also be surveyed because blunt-nosed leopard lizards utilize roadways for basking on warm days. A qualified biologist will search the work area for ground squirrel or gopher burrows and mark any burrows within the work area with visible pin flags. A buffer distance of at least 50 feet will be maintained around burrows to avoid collapsing them. If burrows cannot be avoided and it is determined that the activities will destroy the burrows, the burrows will be excavated by hand under the direct supervision of the supervisory project biologist. If it is determined that the burrow is occupied by a blunt-nosed leopard lizard, the lizard will be allowed to leave the burrow and move to an area that will not be disturbed.
- During the active season for blunt-nosed leopard lizards (generally starting April 15; but any time of year with temperatures of 77 degrees Fahrenheit as measured 2 centimeters above the ground), prior to any planned ground-disturbing construction, O&M, or decommissioning activities, such as the regrading of project site roads, a biologist with experience in surveying for blunt-nosed leopard lizard shall assess site conditions for supporting the species.
    - If site conditions are determined to be suitable for blunt-nosed leopard lizard at that time, then presence/absence surveys for the species shall be conducted within and adjacent to the proposed area of ground disturbance. Surveys shall be conducted according to the most recent agency-approved survey protocol (i.e., CDFW protocol unless the Service develops survey protocols for this species during the permit term). A qualified biologist shall search the work area for ground squirrel or gopher burrows and mark any burrows within the work area with visible pin flags. A buffer distance of at least 50 feet shall be maintained around burrows to avoid collapsing them. If burrows cannot be avoided and it is determined that the activities will destroy the burrows, the

burrows shall be excavated by hand. If it is determined that the burrow is occupied by a blunt-nosed leopard lizard, the lizard shall be allowed to leave the burrow and move to an area that will not be disturbed.

- No ground-disturbing maintenance activities shall occur in or adjacent to areas where blunt-nosed leopard lizard have been detected until a Service- and CDFW-approved avoidance and monitoring plan is in place.

If a blunt-nosed leopard lizard is observed on the project site, work would not progress until an agency-approved avoidance plan is in place. Approval and implementation of an avoidance plan would ensure take avoidance of this species without creating a buffer equal to the distance of expected movement within the home range, as suggested by the commenter. The appropriate buffer would be determined based on the circumstances of the site, the species observation, and the type of activity that is occurring at the time.

Response to Comment SA1-5

Comment noted. The applicant acknowledges that direct take of blunt-nosed leopard lizard is prohibited by the California Fish and Game Code and that a Streambed Alteration Agreement may be required for any impacts on waters of the State. We also note that under the Federal Endangered Species Act of 1973, as amended (16 United States Code [U.S.C.] 1531 *et seq*.) (ESA), the Service can exempt (under ESA Section 7) or issue an ITP (under ESA Section 10) for any federally listed species under our jurisdiction. This take may include species protected under various state or local laws or regulations. However, compliance with the ESA does not alleviate or exempt an applicant's responsibility to comply with all applicable laws, including all relevant portions of the California Fish and Game Code, prior to implementing a proposed project.

Response to Comment SA1-6

Comment noted. The development of the environmental impact report (EIR) by Merced County and the EA by the Service are independent actions subject to independent timelines and comment/response processes. Changes, corrections, and clarifications have been made to the Draft EA and Draft HCP based on public and agency comment on the EA, HCP, and EIR (where appropriate), and modifications to the project as a result of the California Endangered Species Act (CESA) compliance process. These changes are summarized in errata to the Draft EA and in the Final HCP and are intended, in part, to reflect the revised site plan and conservation strategy developed in response to comments by CDFW. Both of these documents are provided as attachments to the decision documents for the proposed action.

All revisions to the EA are within the scope and analysis of the Draft EA and do not change our consideration or conclusions regarding the environmental consequences of the proposed action or alternatives.

Comment Letter NGO1

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March 16, 2015

Letter NGO1

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Comments Delivered Via Facsimile: (916) 414–6713.

RE: **Wright Solar Park Habitat Conservation Plan and Environmental Assessment**

Dear Mr. Thomas:

Thank you for the opportunity to provide comments to the U.S. Fish and Wildlife Service ("Service") on the draft Habitat Conservation Plan (HCP) and Environmental Assessment (EA) prepared for the Wright Solar Park (Project). These comments are submitted on behalf of Defenders of Wildlife (Defenders) and our more than one million members and supporters in the United States - 200,000 of which reside in California, as well as on behalf of the Center for Biological Diversity's more than 825,000 staff, members and supporters in California and throughout the western states.

Defenders is dedicated to protecting all wild animals and plants in their natural communities. To that end, Defenders employs science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions in order to prevent the extinction of species, associated loss of biological diversity, habitat alteration, and destruction.

Defenders strongly supports the emission reduction goals found in the Global Warming Solutions Act of 2006 (AB 32), including the development of renewable energy in California. However, we urge that in seeking to meet our renewable energy portfolio standard in California, project proponents design their projects in the most sustainable manner possible. This is essential to ensure that project approval moves forward expeditiously and in a manner that does not sacrifice our fragile landscapes and wildlife in the rush to meet our renewable energy goals.

The Center for Biological Diversity (the Center) considers the development of renewable energy to be a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of global warming, and to assist California in meeting its required emission reductions. The Center strongly supports the development of renewable

energy production, and the generation of electricity from solar power, in particular. However, like any project, proposed solar power projects should be thoughtfully planned to minimize impacts to the environment. In particular, renewable energy projects should avoid impacts to sensitive species and habitats, and should be sited in proximity to the areas of electricity end-use in order to reduce the need for extensive new transmission corridors and lines and the efficiency loss associated with extended energy transmission. Only by maintaining the highest environmental standards with regard to local impacts, and effects on species and habitat, can renewable energy production be truly sustainable.

As we transition toward a clean energy future, it is imperative for our future and the future of our wild places and wildlife that we strike a balance between addressing the near term impact of industrial-scale solar development with the long-term impacts of climate change on our biological diversity, fish and wildlife habitat, and natural landscapes. To ensure that the proper balance is achieved, we need smart planning for renewable power that avoids and minimizes adverse impacts on wildlife and lands with known high-resource values.

The proposed Project is a 2,731± acre, 200 mw solar PV power project located approximately 1 mile north of the Los Banos Creek Reservoir and 5 miles southeast of the San Luis Reservoir. Current land use within the Project site is primarily dry-farmed agriculture in the form of winter wheat, and cattle grazing. Most of the Project area has been disked and tilled annually, with these disturbed areas focused upon for permanent solar development within the Project area. Running through the middle of the Project site from the southeast to the northwestern corners is the Los Banos – Panoche 230 kV transmission line owned by PG&E that will be used to carry the Project's generated solar power output to the grid.

Grazing lands and almond orchards surround the Project site on nearly all sides, with the San Luis Reservoir State Recreation Area and Agua Fria Multi-Species Conservation Bank directly adjacent to the south and west respectively. Clearly the project may conflict with the existing conservation investments in these areas as well as an important movement corridor between these existing conservation areas. Indeed, the movement corridor in this region of the kit fox range is particularly important as it is part of a pinch point between the northern and southern kit fox populations and is considered critical to the continued existence and genetic diversity of the northern population.

The proposed Wright Solar Park would include the following components:

- Access roads
- PV Solar modules
- Tracker components
- Direct current (dc) to ac power inverters
- Medium voltage transformers
- Medium voltage collection system
- Project substation
- Interconnection switching station
- Battery energy storage system (BESS)

- Project transmission line
- Operations and Maintenance (O&M) facility
- Security fencing and lighting

As part of the Project, the Applicant is proposing to construct a new switching station to be located directly adjacent to the single substation on site. Upon completion, the high-voltage 230 kV switching station would be owned by Pacific Gas and Electric (PG&E) and would connect the Project substations to PG&E's Los Banos – Panoche 230 kV Transmission Line directly adjacent to the proposed switching station.

The proposed HCP permit area includes both the project site (2,371 acres) and the proposed mitigation lands (2,450 acres) located approximately five miles southeast of the Project. The covered activities include the construction, operations and maintenance, and the decommissioning of the Project. The covered species are the San Joaquin kit fox (*Vulpes macrotis mutica*), the blunt-nosed leopard lizard (*Gambelia sila*), and the California tiger salamander (*Ambystoma californiense*). As noted in the draft HCP (page 5-2) the permit area and the lands immediately adjacent have been identified as an important movement corridor for the San Joaquin kit fox.

Cumulative impacts to these species and the movement corridor include two large residential developments have been approved, but not constructed as yet, to the north and northeast of the site; these developments would convert 7,450 acres of open agricultural land into residential and commercial land uses. These and many other cumulative projects need to be further considered.

General Comments

These comments are in response to the July 2014 draft HCP and EA which was circulated for public review on January 13, 2015, by the U.S. Fish and Wildlife Service (USFWS). While we are supportive of the proposed project seeking a permit under Section 10 of the ESA for impacts to the critically endangered "covered" species, Defenders and the Center have reviewed the HCP and find that the purposed conservation plan fails to provide adequate avoidance, minimization and mitigation measures to fulfill permitting requirements for incidental take authorization and fails to provide a comprehensive conservation strategy for the suite of protected species which are likely to be impacted by the project. NGO1-1

The draft HCP also is significantly out of sync with the Project's Final Environmental Impact Report (FEIR) certified by Merced County on March 3, 2015, repeated recommendations by the California Department of Fish and Wildlife (CDFW) (Attachment 1), and Incidental Take Permits (ITP) being considered by CDFW. This has resulted in a proposed conservation strategy that is not consistent with the project approved by the County based on the FEIR or CDFW's recommendations. NGO1-2

In addition, as the Service is aware, CDFW can only issue a "take" permit for the blunt-nosed leopard lizard and golden eagle – both fully protected species under the Fully Protected Species statute – through issuance of a Natural Communities Conservation Plan NGO1-3

(NCCP), a NCCP should be developed as part of this HCP or at a minimum closely coordinated with this HCP. NGO1-3 cont.

Environmental Assessment

NEPA is the "basic charter for protection of the environment." 40 C.F.R. § 1500.1(a). In NEPA, Congress declared a national policy of "creat[ing] and maintain[ing] conditions under which man and nature can exist in productive harmony." *Or. Natural Desert Ass'n v. Bureau of Land Mgmt.*, 531 F.3d 1114, 1120 (9th Cir. 2008) (quoting 42 U.S.C. § 4331(a)). NEPA is intended to "ensure that [federal agencies] … will have detailed information concerning significant environmental impacts" and "guarantee[] that the relevant information will be made available to the larger [public] audience." *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998).

Inadequate Alternatives Provided

While the EA states that the Service and the applicant "considered a full range of alternatives to meet the purpose and need of the proposed action, including the proposed *Wright Solar Park Habitat Conservation Plan* (HCP), consideration of alternate site locations in Merced County, construction of a smaller solar facility within the project site, and relocation of infrastructure within the project site to reduce impacts on federally listed species" (EA at 2-1), the EA still includes only two alternatives – the no project alternative and the proposed project alternative. NEPA requires a discussion of the "alternatives to the proposed action." 42 U.S.C. §§ 4332(C)(iii),(E). The discussion of alternatives is at "the heart" of the NEPA process, and is intended to provide a "clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. §1502.14.

The EA dismisses an alternative site location based on the statement that "No other location in Merced County (or the surrounding area) would provide the unique combination of high solar irradiance in close proximity to an electrical transmission line as that of the project site." (at 2-23). However, the EA fails to provide the list of potential locations that were reviewed, their irradiance levels and their adjacency to transmission. Indeed in comments on the DEIR (Attachment 2), we suggested the Westlands CREZ as a feasible alternative that would significantly reduce impacts to threatened and endangered species, is adjacent to transmission, and likely has similar irradiance levels as the proposed project. NGO1-4

The EA further dismisses the reduced footprint alternative based on economic concerns of the project applicant – renegotiating the LGIA between the project applicant and PG&E, delays that would make the proposed project ineligible for the Federal Investment Tax Credit (FITC). The EA states that: "Without this tax credit, the applicant considers the proposed solar facilities uneconomic." (at 2-24). We do not believe that the applicants conclusory statements are sufficient basis for the Service to reject consideration of any reduced footprint alternative particularly here where such an alternative could avoid or minimize impacts to listed species, core

habitats, and/or critical movement corridors. Moreover, if the project financing is so tenuous, we strongly suggest that bonding be put in place through the life of the project so that end-of-life restoration requirements of this HCP will have adequate funding to be implemented as required.

NGO1-4 cont.

Key Minimization, Mitigation and Monitoring Plans Not Provided

The EA fails to include key plans for public review. The EA states that these plans will be relied upon for adequate mitigation but they are unavailable include:

- detailed decommissioning and site reclamation plan (EA at 2-10 and other places);
- site-specific revegetation plan (EA at 2-10 and 13 and other places);
- relocation plan for California tiger salamander (EA at 2-14);
- relocation plan for blunt-nosed leopard lizards (EA at 2-14);
- grazing management plan (EA at 2-17) for both the project site grazing and the mitigation lands;
- compliance monitoring plan (EA at 2-17);
- effects monitoring plan (EA at 2-17);
- effectiveness monitoring plan (EA at 2-17);
- construction fugitive dust control plan (EA at 2-19);
- cultural resources response plan (EA at 2-20);
- stormwater pollution prevention plan (EA at 2-21)
- hazard materials emergency response plan (EA at 2-21)
- spill prevention, control, and countermeasure plan (EA at 2-21)
- fire prevention plan (EA at 2-21);
- Habitat Management Plan for the offsite mitigation lands (EA at 3.3-34 and other places)
- operations and management plan where protections for elderberry trees will be put in place (EA at 3.3-36); and
- Avian Protection Plan (EA at 3.3-38)

NGO1-5

In addition to no Avian Protection Plan being provided (see below), we are particularly concerned about the lack of an onsite habitat management plan as well as the habitat management plan for the mitigation lands, both of which involve livestock grazing. The focus for the grazing management needs to be to enhance impacted species habitat – that must be the guiding principle for any livestock grazing utilize don site or on the mitigation lands. The absence of these plans, as part of the public review process, makes it is impossible for the public and decisionmakers to know what is being proposed regarding livestock grazing, much less the adequacy of meeting conservation standards.

Specific Comments on the Habitat Conservation Plan

Migratory Birds

The conservation organizations are surprised to see that the HCP did not cover migratory bird impacts under the Migratory Bird Treaty Act (MBTA). We are concerned about the effect of this project on migratory birds, both rare and common. Recent evidence from a large PV solar project (Desert Sunlight) and a solar trough project (Genesis) documented many water bird mortalities[1]. Indeed, Desert Sunlight reported a state and federally endangered species bird mortality – the Yuma clapper rail (*Rallus longirostrus yumanensis*)[2], despite the fact that on-site surveys never identified this species as occurring on the site, nor was habitat present on site; another Yuma clapper rail mortality was found at a PV project in Imperial County as well[3]. The Ivanpah Solar Electric Generating System site has also reported the mortality of the fully protected peregrine falcon (among many other migratory birds) on its project site[4]. Few, if any, of the bird species that died on the project sites were recorded as occurring on site in the pre-construction avian surveys. While studies of the causes of these mortalities are not yet complete, some scientists believe that these large solar projects may in fact be attracting migratory birds to them, through the birds mistaking the project infrastructure as water – the "lake effect"[5].

NGO1-6

Because the San Joaquin Valley is a bird migration corridor rich in resources, the proposed project could impact numerous migratory bird species, including threatened and endangered species, if they run into the panels and/or land and are unable get airborne. The HCP relies upon an undrafted Avian Protection Plan (EA at 3.3-38) to address this issue which does not provide the public any ability to review adequacy of the plan.

NGO1-7

Because large-scale PV projects apparently pose a significant hazard to migratory birds and especially water birds, the HCP needs to discuss these potential impacts and propose alternatives to avoid and minimize the impact, as well as a robust monitoring scheme to actually collect data. The Service should also provide the draft Avian Protection Plan as part of the draft HCP for public review.

NGO1-6 cont.

NGO1-7 cont.

Golden Eagles

The draft HCP neglects to include Golden Eagle which is also a state fully protected species despite the fact that two nests are known from within five miles of the

NGO1-8

[1] http://www.kcet.org/news/rewire/solar/water-birds-turning-up-dead-at-solar-projects-in-desert.html ; http://docketpublic.energy.ca.gov/PublicDocuments/09-AFC-08C/TN200657_20130930T120056_August_2013_Monthly_Compliance_Report.pdf

[2] http://www.kcet.org/news/rewire/solar/water-birds-turning-up-dead-at-solar-projects-in-desert.html

[3] http://www.eenews.net/eenewspm/stories/1060004104/search?keyword=Interior+grants+final+approval+for+latest+large-scale+S.+Calif.+Project

[4] http://docketpublic.energy.ca.gov/PublicDocuments/07-AFC-05C/TN200642_20130930T090221_Avian_Mortality_Report_912013.xlsx

[5] http://www.kcet.org/news/rewire/solar/water-birds-turning-up-dead-at-solar-projects-in-desert.html

proposed project site. Because golden eagles are protected under both the Bald and Golden Eagle Protection Act (BGPA) and California law (Fish and Game Code §5050), it is imperative that they be a covered species under the HCP. Impacts to golden eagles were not adequately considered in the draft HCP or EA even though the proposed project site is noted to "*provides suitable foraging habitat for golden eagles*" (HCP A-5). Based upon the information contained in the FEIR for this Project, aerial surveys for eagle nests were not completed on/adjacent to the proposed project site, nor were the actual number of eagles' nests and territories documented. In fact the FEIR failed to include protocol surveys as recommended by U.S. Fish and Wildlife Service in their Interim Golden Eagle Inventory and Monitoring Protocols.[6] It is likely that because of the size of the proposed project, impacts to significant amounts of eagle foraging habitat will , particularly when looked at in light of other cumulative projects in the area, decrease carrying capacity of the landscape for the golden eagle territories and other raptors and will result in a potential loss of habitat needed to support a nesting pair, which would in turn impact reproductive capacity and result ultimately in "take" of the species under the Bald and Golden Eagle Protection Act. Golden eagles have also been documented to avoid industrialized areas that are developed in their territory.[7] The "take" of Golden Eagles should be included in the proposed HCP.

NGO1-8 cont.

Take Of Fully Protected Species

As briefly discussed above, the HCP intends to provide "take" authorization for one fully protected species under California law – the blunt-nosed leopard lizard. As discussed directly above, we believe the project will likely result in "take" of golden eagles over the life of the project too, and golden eagles are also a fully protected species.

As the Service is aware, in order to allow for take under California's fully protected species statute, the proposed project must pursue a NCCP which would allow for take of fully protected species and, under California law, the CDFW cannot allow for the take of a fully protected species through the issuance of an Incidental Take Permit under the California Endangered Species Act (CESA).

The NCCP should be closely coordinated with this HCP. Indeed usually HCPs and NCCPs are joint processes where the state and federal wildlife agencies work in tandem to protect and provide recovery opportunities for the imperiled "covered species". We urge the U.S. Fish and Wildlife Service to coordinate an NCCP/HCP with CDFW.

NGO1-3 cont.

[6] www.fws.gov/.../usfws_interim_goea_monitoring_protocol_10march
[7] Walker et al. 2005

Inadequate Impact Assessment

Construction

The construction related take assessment in section 4.4.1 mistakenly considers construction activities to be less intensive than dry-farming. Dry-farming involves sporadic activities related to planting and harvesting. The rest of the time there is very little human activity. Whereas the construction activities will be an intense source of continuous human activity, machinery, vibration, noise, dust, and potential spills over 2.25 years of construction. The construction activity will result in continued disruption of the air quality, sights, sounds, and smells in the Project area which has to be expected to be disturbing and stressful to wildlife including the covered species.

NGO1-9

Blunt Nosed Leopard Lizard

Section 4.5.1 discusses the various actions which can be expected to cause "take" of the fully protected blunt nosed leopard lizard (BNLL). The discussion dismisses construction activities as a potential source of "take". While the HCP calls for a BNLL translocation plan to be developed so that any BNLL encountered on site (during construction or operation) could be moved out of harm's way, translocations of reptiles often result in mortality[8], and therefore "take" under CESA would occur. The HCP should be revised to fully address construction related "take" of BNLL and consider additional ways to avoid impacts to BNLL during construction and minimize the need for any translocations.

NGO1-10

Inadequate Analysis of Cumulative and Indirect Impacts in the EA

The HCP needs to broaden the analysis of cumulative effects to the range of the "covered species". Indeed close to thirty projects have been built, are permitted, or are going through the environmental review process now, and must be considered in the cumulative effects analysis.

NGO1-11

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

The EA identifies only two cumulative projects in the general vicinity of the proposed project, but does not identify the numerous other projects that have been built, are permitted but unbuilt, or are proposed to be built in the vicinity of the

NGO1-12

[8] Dodd and Seigel 1991

project or across the ranges of these highly imperiled species that are "covered species" under the HCP.

The EA also fails to consider all reasonably foreseeable impacts in the context of the cumulative impacts analysis. *See Native Ecosystems Council v. Dombeck, et al,* 304 F.3d 886 (9thCir. 2002) (finding future timber sales and related forest road restriction amendments were "reasonably foreseeable cumulative impacts"). Finally, the EA fails to provide the needed analysis of how the impacts might combine or synergistically interact to affect the environment in the range of the "covered species". *See Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995-96 (9th Cir. 2004). NGO1-12 cont.

The NEPA regulations also require that indirect effects include changes to land use patterns. "Indirect effects" include those that "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include *growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.*" 40 C.F.R. §1508.8(b) (emphasis added).

The proposed Project is located in within a key pinch point for wildlife movement and its development could have regional impacts to wildlife movement and the covered species in particular. NGO1-13

In addition to projects in western Merced County, the cumulative effects assessment should have but did not consider projects in other Counties including but not limited to: oil and gas development in the Elk-Hills/LoKern Core Area, renewable energy development in Carrizo Core Area and potentially in the Panoche Core Area, numerous other types of developments in key connectivity areas. NGO1-12 cont.

Further, paragraph 2 of Section 4.7 states "*…an additive effect to the constraints on movement around the I-5/SR 152 pinch point is not anticipated to result from project construction or operation.*" This is not supportable. 1,400 acres of solar panels and related support facilities surrounded by fencing (even if kit fox friend fencing is used) is not equivalent to open space and natural habitat. The development of the Project will, in fact, exacerbate the pinch point and that is a significant cumulative effect of the Project. NGO1-11 cont.

Close to 30 solar projects, many oil and gas projects and numerous other development projects including housing projects have been recently built, are permitted, or are going through environmental review within areas identified as high conservation value for the San Joaquin kit fox and other rare species. The cumulative impacts analysis needs to include all projects throughout the "covered species" ranges, not just the subset in Merced County. NGO1-13 cont.

Among the cumulative impacts to resources that have not been fully analyzed are population-wide impacts to the "covered species" and impacts to golden eagles. The cumulative impacts to the resources of the ranges and connectivity for the "covered species" has not been fully identified or analyzed, and mitigation measures have not been fully analyzed as well. NGO1-12 cont.

Inadequate Conservation Strategy

If the HCP is to be approved there are numerous conservation strategies that must be significantly improved to provide the needed conservation to covered species. The Defenders and the Center request that the following revisions and alternatives be included in a revised and recirculated HCP:

Conservation Strategy Language
Passive language is used throughout the conservation strategy in the HCP which is not clear, defers judgment, or creates ambiguity in determining adequate completion of the measures. Terms such as "should" and "will" must be revised to active requirements using the term "shall."

NGO1-14

Use of Qualified and Approved Biologists
All biological monitors must be approved by CDFW and the Service must require that no biologists or other resource specialist, consultants, or contractors will be required to sign any confidentiality agreements or non-disclosure agreements regarding any survey or monitoring work related to the project including, but not limited to, the presence or absence of or the condition of any wildlife, plants, plant communities, water resources, water quality, air quality, soils, or other resources on the project site or the mitigation lands. The Service must require that the neither the landowner or permit holder can claim any confidentiality or trade-secrets exception applies that would inhibit full public disclosure to any local, state or federal agency or to the public, of any information resulting from any survey or monitoring work related to the project including, but not limited to, the presence or absence of or the condition of any wildlife, plants, plant communities, water resources, water quality, air quality, soils or other resources on the project site or the mitigation lands.

NGO1-15

Environmental Training
The environmental training provided for in Section 5.3.2 of the HCP should also be provided to consultants, contractors, and grazing lessees for both the Project site and the off-site mitigation lands.

NGO1-16

Preconstruction Surveys
All preconstruction surveys should be submitted to the Wildlife Agencies for review and approval **prior** to commencement of construction.

NGO1-17

Consistency with CDFW Recommendations
CDFW has provided extensive recommendations[9],[10] for avoidance, minimization and mitigation during the EIR process. These

NGO1-2 cont.

[9] California Department of Fish and Wildlife. August 20, 2014 Comment Letter on Draft Environmental Impact Report (DEIR) for Wright Solar Park
[10] California Department of Fish and Wildlife. January 13, 2015 Comment Letter on Final Environmental Impact Report (FEIR) for Wright Solar Park

recommendations have not been fully included in the conservation strategy in the HCP. The HCP should be revised to include these recommendations to provide a cohesive and coordinated suite of conservation strategies. In particular the following require revision:

- Wildlife entrapment avoidance procedures (HCP page 5-5)
- All use of rodenticides, herbicides, and pesticides to be prohibited at both the Project site and mitigation site(s)
- Erosion control measures

NGO1-2 cont.

Blunt Nosed Leopard Lizard

Surveys[11] for BNLL should be conducted **prior to construction activities** and during O&M activities. (HCP page 5-7)

NGO1-18

Offsite Mitigation Land

Page 6-4 of the HCP refers to a "*40-year conservation easement on the 2,450 acre mitigation site.*" The offsite mitigation land must be protected in perpetuity in order to qualify as mitigation. In fact, conservation easements in California are, by definition,[12] perpetual.

The conservation easement must be held by a fully qualified conservation organization which is approved by USFWS and CDFW and is either accredited by the Land Trust Accreditation Commission and/or is a member in good standing with the California Council of Land Trusts.

NGO1-19

The mitigation lands must be occupied habitat for the suite of "covered species" under the HCP and any "layering" or "nesting" of mitigation for various covered species must assure that all species are present in those areas. Therefore the proposed mitigation lands must be surveyed to assure that the "covered species" are present. Additionally the Habitat Management Plan must lay out specific, measurable, achievable, relevant, and time bound management strategies, so that the mitigation land is managed exclusively for the benefit of the "covered species".

NGO1-20

NGO1-21

Inadequate Long Term Mitigation Property Management Costs

The long term management of mitigation lands includes enforcement and defense of those lands from violations of the conservation easement terms as well as external actions such as eminent domain takings and infringement from adjoining properties. Table 6-3 does not provide for these costs. Funding must also be provided for adaptive management activities. Table 6-3 should be revised to include the funding necessary for the enforcement and defense of the conservation easement as well as tasks related to adaptive management.

NGO1-22

[11] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83829

[12] California Civil Code 815 et seq

The cost estimates in Table 6-3 appears to be very low in comparison to other mitigation projects. We request these costs be reviewed and validated by the Wildlife Agencies and an outside expert such as the Center for Natural Lands Management. NGO1-23

Inadequate Decommissioning Costs

The cost estimates in Table 6-6 for decommissioning and restoration are remarkably low in comparison to those for biological monitoring during construction. The avoidance and minimization and conservation strategies include survey and monitoring for the kit fox, BNLL and CTS, and relocation for BNLL and CTS during decommissioning. These costs do not appear to be fully provided for in the decommissioning cost estimate. Also, please provide an explanation on how cost of inflation was incorporated into the decommission estimate. As noted above, the Service should also consider requiring bonding for decommissioning and restoration actions. NGO1-24

Conclusion

Thank you for considering our comments on the Wright Solar Park Habitat Conservation Plan and Environmental Assessment. We look forward to reviewing the revised documents. If you have any questions, please contact Kim Delfino at (916) 313-5800 x1 or via email at kdelfino@defenders.org or Ileene Anderson at 323-654-5943 or via email at ianderson@biologicaldiversity.org

Respectfully submitted,

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Response to Comment NGO1-1

Please refer to the following responses regarding the commenter's specific concerns about the adequacy of the conservation strategy.

Response to Comment NGO1-2

As described in Response to Comment SA1-6, the development of the EIR by Merced County and the EA by the Service are independent actions subject to independent timelines and comment/response processes. Where appropriate, changes, corrections, and clarifications have been made to the Draft EA and Draft HCP to reflect public and agency comment on the EA, HCP, and EIR (where appropriate), as well as modifications to the site design and conservation strategy resulting from the State ITP application process. These changes are summarized in errata to the Draft EA and in the Final HCP, both of which are also provided as attachments to our decision documents on the proposed action.

Response to Comment NGO1-3

Comment noted. As described in Response to Comment SA1-5, under the ESA, the Service can exempt (under ESA Section 7) or issue an ITP (under ESA Section 10) for any federally listed species under our jurisdiction. This take may include species protected under various state or local laws or regulations. However, compliance with the ESA does not alleviate or exempt an applicant's responsibility to comply with all applicable laws, including all relevant portions of the California Fish and Game Code, prior to implementing a proposed project.

Project proponents in California have essentially two mechanisms to comply with CESA: (1) prepare a natural community conservation plan (NCCP) (in compliance with the Natural Community Conservation Planning Act); or (2) apply for a State ITP in compliance with CESA Section 2081(b). The applicant has chosen to comply with CESA through a 2081(b) application, and is currently negotiating the terms of that permit with CDFW. Requiring the applicant to prepare an NCCP is outside the jurisdiction of the Service, and outside the scope of the proposed action being considered by the Service.

Response to Comment NGO1-4

NEPA requires the analysis of a reasonable range of alternatives that are consistent with the proposed federal action and its related purpose and need. As described in Section 1.5 of the Draft EA (page 1-3), the purpose and need of the proposed federal action is to achieve the following goals:

- Protect, conserve, and enhance the survival of the covered species (i.e., California tiger salamander, blunt-nosed leopard lizard, and San Joaquin kit fox) and their habitat in the covered lands.
- Provide a means and take steps to conserve the ecosystems on which the covered species depend.
- Contribute toward the long-term survival and recovery of the covered species through protection and management of the covered species and their habitat.
- Respond to Wright Solar Park's application for an ITP based on the covered activities proposed in the HCP and in consideration of the applicant's objectives, which are to develop an economically viable and commercially financeable solar energy facility that can provide

> renewable energy to the Northern California power grid. To achieve these objectives, the applicant has indicated it must place the proposed facility in a location with the potential to produce solar power exceeding 480 gigawatt hours, and in an area with a low cost connection to an existing electrical transmission system.

This purpose and need establishes the basis for determining whether other viable alternatives to the proposed action may meet the intended purpose, applicant's objectives, and reduce potential effects.

Given that the proposed federal action would not specifically authorize development, but rather respond to an application for an ITP, evaluating a range of development scenarios that the applicant has not proposed, or development on lands that the applicant does not own and for which incidental take authorization has not been requested, is beyond the scope of the proposed action. The Service is responding to the application for an ITP and the applicant's proposed HCP, including the HCP's proposed permit area. The ESA does not direct the Service to evaluate the merits of the underlying lawful activities that trigger the applicant's need for an ITP; rather, the Service is directed to evaluate the HCP against the statutory and regulatory permit issuance criteria. Accordingly, potential alternatives to the proposed issuance of an ITP based on the HCP, and not the merits of the proposed solar park, are the focus of the Service's analysis.

The discussion of alternatives eliminated from further consideration in Section 2.3 of the EA (pages 2.2-23 through 2.2-24), as referenced by the commenter, were included to provide the public with the context necessary to understand why those alternatives would not meet the applicant's objectives, which is the trigger for the applicant's application for an ITP. Neither an offsite nor a reduced footprint alternative, as described in the EA, would be responsive to the applicants request for an ITP for the covered activities described in the HCP, and would not meet the Service's purpose and need for the proposed action. However, as noted in our Response to Comment SA1-1, the proposed site design has been modified by the applicant in response to comments provided by CDFW during the State ITP application process. The revised site design would reduce the footprint of the proposed solar facilitate to allow for a buffer along the western perimeter of the site. Specifically, the site design now includes establishment of a permanent buffer between the toe of the slope and the western edge of the project site that is at least 500-feet wide (Figure 1). This buffer would be on the flat part of the valley and would be revegetated and managed in a low grassland condition to increase prey availability and natural denning opportunities for San Joaquin kit fox, and to provide a movement corridor past the project site. The buffer, which would encompass approximately 285 acres, would be placed under a conservation easement and protected in perpetuity.

The commenter also recommends that bonding be put in place to ensure adequate funding of decommissioning actions. Financial assurance is a requirement of the project decommissioning and reclamation plan provided in support of Merced County's Conditional Use Permit for the project (CUP No. 12-017). Specifically, prior to issuance of a building permit by Merced County, the applicant is required to provide financial assurance of the costs associated with decommissioning (as provided in the decommissioning and reclamation plan) in the form of a surety bond; irrevocable letter of credit; trust fund in accordance with the approved financial assurances to guarantee that deconstruction shall be completed in accordance with the approved decommissioning plan; or other financial assurances as reviewed and approved by Merced County (Alexander Project Services 2013).

The commenter also states the Service should ensure "end-of-life restoration requirements of this HCP will have adequate funding to be implemented as required." The HCP includes avoidance and minimization measures that must be implemented during decommissioning to reduce potential effects on covered species as a result of decommissioning activities (see Draft HCP Section 5.3.2 and 5.3.3, pages 5-4 through 5-8); however, the HCP conservation strategy does not rely on decommissioning as an avoidance, minimization, or mitigation measures. The Service's issuance criteria related to assured funding (50 Code of Federal Regulations [CFR] 17.22(b) and 17.32(b)) is meant to apply to the operating conservation strategy (i.e., the mitigation, management/adaptive management, and monitoring program), as well as funding and procedures to deal with unforeseen circumstances. The applicant is not required to ensure all impacts associated with covered activities are conducted or funded. See Response to Comment NGO1-24 for additional discussion of the adequacy of decommissioning costs.

Response to Comment NGO1-5

Most of the plans mentioned by the commenter would be developed as part of the construction process and, in part, as required components of the grading permit application submitted to Merced County. It is commonplace for these plans to be developed following ITP issuance, and most are subject to review and approval by the Service, County, or both. Many of the plans noted by the commenter would be developed as part of the Habitat Management Plan (HMP), which would guide management of the offsite mitigation lands and would include specifics regarding the grazing program. Where necessary, the EA or EIR include performance standards that would be met by the applicable plan in order to reduce an effect identified in the EA or to reduce an impact to a level below significance in the EIR. From a timing perspective, the HMP would be prepared after all federal, state, and local permit conditions are final to ensure they are accurately captured in the plan, which would become part of the conservation easement placed over the mitigation lands.

As suggested by the commenter, the grazing program on the offsite mitigation lands would be for the sole purpose of managing habitats for species. Performance criteria for grassland habitats would be written based on species biology and grazing operator(s) would be required to manage to those metrics. The site would be monitored on an at least an annual basis to determine whether performance metrics are being met.

The Avian Protection Plan (APP) is currently being reviewed by the Service's Migratory Bird Division. A copy of that plan, which was specifically required by Merced County, was also provided as an appendix to the Draft EIR and available for public review during the California Environmental Quality Act (CEQA) process. The APP includes design and operational measures to avoid and minimize waterfowl and shorebird mortality or injury from project infrastructure, including new transmission lines and lighting association with construction and operation of the solar facility. Similar to the HCP, the APP includes a training program to educate facility staff on relevant federal and state regulations, the consequences of non-compliance, and the process for reporting dead or injured wildlife. The APP also includes monitoring and reporting requirements, including ongoing monitoring by staff for dead and injured birds during the first 3 years of the project, routine reporting by facility staff over the life of the project, and an avian mortality study for the first 3 years of project operations. Annual reports on avian mortality and monitoring results must be submitted to the Service, CDFW, and Merced County. The APP also includes an adaptive management requirement, where adaptive management measures may include actions to reduce raptor mortality, such as the installation of perch discouragers to prevent raptors from using facilities, and

measures to reduce the risk of collision with solar panels, such as a hazing program with visual or auditory deterrents.

Response to Comment NGO1-6

The submission of a application for an ITP under Section 10(a)(1)(B) of the ESA is a voluntary action. If an application is submitted, an HCP must be developed and submitted to address the take of federally listed animal species associated with covered activities (ESA Section 10(a)(2)(A)); the inclusion of proposed, candidate, or unlisted species in an HCP is not required and is at the discretion of the applicant (U.S. Fish and Wildlife Service and National Marine Fisheries Service 1996). In general, applicants typically consider various criteria in determining what species to cover in an HCP, such potential impacts; species current and potential future status; the potential for the species to occur on the project site; and whether habitat or other life history requirements may be present on site. Species covered in the Wright Solar Park HCP were selected based on their probability to occur within the project site during construction and operation of the project, and the need for incidental take authorization for those species.

A more robust discussion of the importance of the San Joaquin Valley to migratory birds has been added to the environmental setting section of the EA. Potential effects on migratory birds as a result of the Proposed Action Alternative are described in Section 3.3.2 of the Draft EA (pages 3.3-37 through 3.3-38). The Draft EA analysis acknowledges that the proposed solar arrays have the potential to attract migratory waterfowl and shorebirds that could mistake the grouped panels for a body of water. The attraction of waterfowl to the project site could result in mortality from the collision with panels, fences, and transmission lines and by attracting water birds that are dependent on water for taking flight (e.g., grebes). The use of anti-reflecting coating to reduce reflection from the solar panels, a site design requirement provided in Chapter 2 of the Draft EA, may reduce this impact. In addition, the applicant would be required to develop an APP prior to implementation of the Proposed Action Alternative to monitor avian mortality and injury from collisions with proposed solar infrastructure. Monitoring results may inform design and operational measures over the life of the proposed action to further reduce this impact if it occurs.

Compliance with the Migratory Bird Treaty Act (MBTA), and issuance of a Migratory Bird Permit for take of MBTA-protected species (as defined under the MBTA), is independent of the ITP process. An HCP can only serve as a special use permit under the MBTA when it covers an ESA listed migratory bird; the Wright Solar Park HCP does not cover any federally-listed birds. In instances where take of MBTA-protected species is anticipated, an applicant would need to apply for a Migratory Bird Permit from the Service's Regional Migratory Bird Permit Office. Also see Response to Comment NGO1-8 for additional information about the assessment of migratory birds in the EA, including golden eagle.

Response to Comment NGO1-7

Please refer to Response to Comment NGO1-5 on the availability of the APP for public review.

Response to Comment NGO1-8

As noted in Response to Comment NGO1-6, species selected for coverage under an HCP are at the discretion of the project applicant. Species covered in the Wright Solar Park HCP were selected

based on their probability to occur within the project site during construction and operation of the project and the need for incidental take authorization for those species.

The potential for golden eagles to occur in the project vicinity is summarized in Table 3.3-2 (page 3.3-17), and the loss of foraging habitat as a result of the Proposed Action Alternative is described in Section 3.3.2 (page 3.3-37). There are no known golden eagle nest locations close enough to the project site to be affected by construction or operation of the facility, nor are there any nest sites available in the project area where golden eagles could nest in the future. Since no nest locations are in or near the project area, potential effects on golden eagles would be limited to the loss of foraging habitat. Cultivated agricultural land without a robust population of small mammals, such as California ground squirrels, provides low quality foraging habitat for golden eagles, which rely on rodents as their primary prey base. Since nearly all of the impacts from the Proposed Action Alternative would be on cultivated agricultural land, the impact on golden eagles would be minimal. The grasslands that exist within the project footprint are remnant patches along roadsides or on steep slopes, and are not large enough to support a prey base for golden eagles.

The commenter states that protocol-level aerial surveys for eagle nests were not completed during preparation of the Draft EIR. The protocol the commenter refers to is a 2010 Service survey protocol, *Interim Golden Eagle Inventory and Monitoring Protocols and Other Recommendations*. This survey protocol appears on the Service's Oklahoma Ecological Services Field Office's website in a section under wind energy. This protocol, or ones similar to it, are typically used for wind energy projects, especially in California, where the potential for take under the Bald and Golden Eagle Protection Act (Eagle Act) is high due to the placement of wind turbines in areas of heavy golden eagle use, and because there have been documented golden eagle deaths from collisions with spinning turbines.

The proposed project has a low likelihood of take of golden eagles. "Take" under the Eagle Act is defined to include actions to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb" (16 U.S.C. 668c). *Disturb* is defined in the regulations as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle; (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." The Eagle Act is not a habitat management law and habitat loss, by itself, is not take under the act. To constitute take under the Eagle Act definition of *disturb*, a loss of habitat must agitate or bother an eagle to the extent that the loss causes or is likely to cause an injury to, a decrease in the productivity of, or nest abandonment by, an eagle.

As discussed above, there are no eagle nests in the vicinity of the project site, and implementation of the proposed project would not substantially interfere with normal feeding behavior because the site only provides low quality foraging habitat for eagles. Accordingly, the loss of foraging habitat under the Proposed Action Alternative would not result in take of eagles, as defined under the Eagle Act. Additionally, as described in Section 3.3 of the Draft EA (page 3.3-37), the permanent protection of 2,450 acres of land for covered species is also expected to result in beneficial impacts to special-status and migratory birds, including golden eagles.

Response to Comment NGO1-9

Section 4.4.1 in the Draft HCP does not compare the impacts caused by construction of the solar project with impacts caused by activities related to dry-farming. Rather, the section acknowledges that the baseline condition of the project site is dry-farmed agricultural land, which does not provide high quality habitat for San Joaquin kit fox. This low quality habitat would support few, if any, individual foxes, especially for more than just transient movements. Accordingly, construction-related impacts associated with the proposed project are considered in the context of that baseline condition.

Both Section 4.4.1 in the Draft HCP (page 4-3) and Section 3.3.2 of the Draft EA (pages 3.3-29 through 3.3-30) describe potential construction-related impacts on San Joaquin kit fox, including disruption of normal behavior due to construction noise and increased human activity, direct mortality, loss or degradation of habitat, and disruption of San Joaquin kit fox movement. Species-specific avoidance and minimization measures to reduce these construction-related effects are also identified in the HCP and summarized in the Draft EA (Table 2-1), and include compensatory mitigation to offset effects that cannot be avoided.

Response to Comment NGO1-10

Section 4.5 of the Draft HCP (page 4-6) states that is unlikely for blunt-nosed leopard lizards to occur within the portions of the project site where construction would occur due to low quality habitat conditions. Despite this low probability, to avoid any potential for take of this species during construction, the conservation strategy for this species requires the applicant to complete preconstruction surveys prior to ground disturbance (see Section 5.5.3). If any blunt-nosed leopard lizards are sighted during those surveys, full avoidance would be required.

In response to comments and at the request of CDFW, the applicant has revised the HCP avoidance measure specific to preconstruction surveys for blunt-nosed leopard lizard. The revised text specific to this measure is provided in Response to Comment SA1-4.

Response to Comment NGO1-11

Section 10(a)(2)(A) of the ESA requires applicants to specify "the impact which will likely result from [the] taking." The impact of the taking refers to the impact that take associated with covered activities will have on covered species. It does not specifically identify a requirement to analyze the range wide condition of each covered species, nor does it specifically require an applicant to evaluate cumulative effects. However, as stated in the *Habitat Conservation Planning and Incidental Take Permit Processing Handbook* (HCP Handbook), "the applicant should help ensure that those considerations required of the Services by Section 7 have been addressed in the HCP" (U.S. Fish and Wildlife Service and National Marine Fisheries Service 1996:3-15). Accordingly, the Wright Solar Park HCP addresses the cumulative effects of the covered activities over the permit term in relation to past, present, and reasonably foreseeable future projects in western Merced County. This discussion of cumulative effects is intended to support the internal consultation that the Service will conduct to satisfy our requirements under Section 7 of the ESA. The Service will further consider and analyze cumulative effects on each covered species in our biological opinion.

The referenced sentence in Section 4.7 of the Draft HCP (page 4-11) indicating the proposed project would not have an additive effect on San Joaquin kit fox movement around the I-5/SR 152 pinch point was focused on the area between that highway interchange and San Luis Reservoir, including

O'Neill Forebay and the town of Santa Nella Village. The solar project would be located 2.5 miles south of that location. While there could be a regional effect on movement, it would not add to the existing movement constraints from urbanization and infrastructure (roadways and reservoirs) at the specific location of the I-5/SR 152 interchange. These cumulative effects are further described in Section 4.4 of the Draft EA (pages 4-4 through 4-6). Please refer to Response to Comment SA1-1 and NGO1-12 regarding cumulative effects on San Joaquin kit fox.

Response to Comment NGO1-12

Section 4.4 in the Draft EA (pages 4-2 through 4-9) considers ongoing land management activities and other future land use planning efforts or large scale projects in the vicinity of the project site that could contribute to the cumulative effects of the proposed action. In general, the geographic boundary used in the cumulative effects analysis extended through western Merced County to account for other reasonably foreseeable regional or landscape level projects that could contribute to a combined cumulative impact on resources directly or indirectly affected by the proposed action, consistent with Council on Environmental Quality (CEQ) guidance (Council on Environmental Quality 1997). For some resource areas, such as air quality, the cumulative effects analysis area was expanded to reflect the scope of potential cumulative impacts (e.g., to include the entire air basin).

The analysis in the Draft EA is not limited to the consideration of two development projects, as suggested by the commenter. Instead, the analysis considers ongoing non-cultivated agricultural practices in Merced County; ongoing development associated with the Santa Nella and Los Banos communities; continued operation of the Los Banos Reservoir, San Luis Reservoir, O'Neil Forebay, and Billy Wright County Landfill; and future development of the Fox Hills urban, mixed-use community. The Service determined that these ongoing and reasonably foreseeable projects could contribute to cumulative impacts under the proposed action and should be considered in the EA to provide the public and decisions makers with the analysis necessary to make an informed decision on the proposed action.

Consideration of other projects in the cumulative impact analysis—including oil and gas development in the Elk-Hills/Lokern Core Area (Kern County), renewable energy development in the Carrizo Core (San Luis Obispo County) and Panoche Core Area (Fresno County), and other regional developments—are not warranted because the potential impacts of those projects would be attenuated by a large distance. Further, the stressors on San Joaquin kit fox populations in each of those locations is different than those disclosed in the Draft EA for the low density population of San Joaquin kit foxes that persists between the Panoche Core Area and the Santa Nella satellite population. Similarly, the analysis adequately considers a reasonable range of cumulative projects in the vicinity of the proposed action to determine the cumulative effects on the other covered species, including California tiger salamander and blunt-nosed leopard lizard.

The Service's proposed federal action – issuance of an ITP to the applicant for activities covered in the HCP - does not approve or entitle the solar development proposed at the project site. The cumulative effects analysis attempts to delineate the cause-effect relationships between the underlying federal action and the subsequent decisions of other federal, state, regional, and local entities that have direct jurisdiction over the specifics of the development. It is not practical or feasible to analyze all indirect effects related to the possible construction of the solar facility. The cumulative analysis therefore considers a reasonable range of attenuated, project-specific effects that would be subject to review by other agencies at a level of detail sufficient to meet the goals of determining the reasonably foreseeable environmental consequences of each of the alternatives.

See Response to Comment NGO1-8 for a discussion of the potential effects of the project on golden eagles and why that analysis is adequate.

Response to Comment NGO1-13

Please refer to the response to SA1-1 for a discussion of the potential cumulative impacts of the Proposed Action Alternative on San Joaquin kit fox movement corridors.

Response to Comment NGO1-14

Avoidance and minimization measures described in the conservation strategy provided in the Draft HCP were revised to be more actionable. Terms such as "should" and "will" were replaced with the word "shall," when describing a commitment by the applicant. Those changes are reflected in the Final HCP, which is provided as an attachment our decision documents.

Response to Comment NGO1-15

As described in Section 5.3.2 of the Draft HCP (page 5-4), at least 30 days prior to the onset of ground-disturbing activities, the applicant will submit the name(s) and credentials of a supervisory project biologist to the Service for approval. The supervisory project biologist will be responsible for approving and overseeing all project biological monitors and other biologists performing biological work on the project site.

Section 5.3.2 of the Draft HCP (page 5-5) specifies reporting requirements under the HCP and does not provide any exemptions due to trade secrets or confidentially. Moreover, requiring the applicant report observations of covered species to the California Natural Diversity Database (CNDDB) would ensure species information is not withheld from the public under a confidentiality agreement or non-disclosure statement.

Response to Comment NGO1-16

Comment noted. The first sentence under Section 5.3.2 of the Draft HCP was modified as follows:

> "All employees, consultants, and contractors will receive environmental training prior to the commencement of construction activities."

Environmental training for grazing operators is not specifically included in this measure, although the applicant anticipates coordinating with the landowner during development and implementation of the HMP. Grazing operations were found in the Section 4(d) rule for California tiger salamander to be important to the continued survival of the species and exempt from the take prohibitions of the ESA (69 FR 47212). Moreover, it is unlikely that grazing operations will result in take of kit fox or blunt-nosed leopard lizard; therefore, measures to minimize the potential for take of these species—including the need for environmental training—are not warranted.

Response to Comment NGO1-17

By definition "preconstruction" surveys are completed prior to the commencement of construction. Section 5.3.2 of the Draft HCP (page 5-5) has been revised to state:

§ A map of the location of all observations of covered species observed during preconstruction surveys and during monitoring ~~will~~ shall be prepared and submitted to the Wildlife Agencies. This information ~~will~~ shall be presented to the CNDDB.

Response to Comment NGO1-18

Please see response to comment NGO1-10 for changes to the blunt-nosed leopard lizard avoidance and minimization measures.

Response to Comment NGO1-19

The reference to a 40-year conservation easement over the offsite mitigation lands in Section 6.3.1 of the Draft HCP (page 6-4) was an error. The following changes were made to that section to reflect the conservation easement would be provided in perpetuity.

> All totals include a 10% contingency that could be used for additional costs such as changes in management or monitoring needs in response to adaptive management. This contingency fund could also be used to address unforeseen circumstances at the discretion of the Applicant. The one-time costs exclude the cost of acquiring the ~~40-year~~ conservation easement on the 2,450-acre mitigation site (i.e., land acquisition and transactional costs). This cost would be borne by the Applicant as part of overall project costs. There are no costs identified in perpetuity on the project site, because the project site would be returned to pre-project conditions prior to permit expiration and no further mitigation would be required after the permit term ends. Because there would be 1,200 acres of permanent impacts to kit fox habitat, annual management and maintenance of the mitigation site must be implemented in perpetuity. Therefore, those costs are identified as occurring in perpetuity.

The conservation easement will be held by a Service- and CDFW-approved third party organization with experience holding, monitoring, and reporting on conservation easements.

Response to Comment NGO1-20

The offsite mitigation lands are occupied by San Joaquin kit fox, whereas no San Joaquin kit fox have been documented using the project site. Use of the project site by San Joaquin kit fox has been assumed based on its location within the range of the species, the type of habitat present, and the proximity to species occurrences in the region. The same is true for California tiger salamander and blunt-nosed leopard lizard. Neither species has been documented on the project site, but suitable habitat is present on the offsite mitigation lands (and presence is likely) due to occurrence records on adjacent properties—similar to the project site. In fact, take coverage has only been sought by the applicant for these two species because of the prospect that they could move into the project site during the anticipated 40-year operational life of the solar facility as habitat conditions improve once cultivated agricultural activities cease.

The Service considers the offsite mitigation lands as suitable habitat and believes that presence of both species is highly likely due to the close proximity of known occurrences and suitable aquatic breeding habitat for California tiger salamander (see Draft HCP Section 5.4.3, page 5-10). Additionally, as noted in the Draft HCP (see Section 5.4.3, page 5-10), the offsite mitigation lands include a known and presumed extant occurrence of blunt-nosed leopard lizard along the western boundary (CDFW 2013; see Occurrence 8).

We agree that occupancy of the offsite mitigation lands should be confirmed. Similarly, as suggested by the commenter, species surveys would be conducted on the offsite mitigation lands as part of the inventory period during the development of the HMP.

Response to Comment NGO1-21

As suggested by the commenter, the HMP will outline specific, measureable, achievable, and time bound objectives that are informed by the biological objectives of the HCP, the needs of covered species, and the best scientific data available on species habitat function in response to management. Please refer to the Response to Comment NGO1-5 for a discussion of the timing and development to of the HMP.

Response to Comment NGO1-22

The cost of adaptive management is one reason that a contingency fund is established and maintained as part of the endowment. See the revised Final HCP text in Response to Comment NGO1-19. Additional easement and infringement defense costs have been added to Table 6-3 in the Draft HCP as follows:

Table 6-3. Estimated Costs of Long-Term Management of Mitigation Property

Management Action[a]	Total Units Per Year	Cost Per Unit	Total Cost Per Year
Maintain Fences and Gates	2 events	$600	$1,200
Road Maintenance	0.20 event	$600	$600
Maintain Existing Livestock Water Features	1 event	$300	$1,500
Vandalism Monitoring	Assume this will be completed by livestock operator	–	–
Habitat Monitoring	0.5 events	$3,000	$1,500
Easement Monitoring	1 event	$1,500	$1,500
Easement & Infringement Defense	0.025 event (1 time in 40 years)	$50,000	$1,250
Annual Reporting to Wildlife Agencies	1 event	$2,000	$2,000
Subtotal			$9,550
Contingency 10%			$955
Total Long-Term Management Cost			$10,505
Total Endowment (Assumes a 2.5% Net Rate of Return)			$420,200

[a] Livestock grazing operation is assumed to be revenue neutral.

Response to Comment NGO1-23

The commenter did not provide the names of "other mitigation projects" where cost estimates for long-term management activities are higher, nor did the commenter provide the higher costs

associated with those projects. Therefore, the Service cannot directly respond to these comments. However, in general, the costs for management actions associated with the Wright Solar HCP are expected to be low relative to other mitigation projects because management of the grassland-dominated habitat associated with the offsite mitigation lands would be a livestock grazing regime very similar to that which is currently in place. However, when the final easement is recorded and HMP written, final costs will be be reviewed by the Service (and likely CDFW since the applicant has applied for a CESA 2081(b) permit) and the easement holder to verify that final costs include all necessary mitigation and management actions.

Response to Comment NGO1-24

Table 6-4 in the Draft HCP (page 6-7) has been updated to include costs associated with completing biological surveys during decommissioning, which were inadvertently left out of the Draft HCP.

The applicant has not included a cost of inflation in the decommissioning estimate. This is due to the financial assurances for decommissioning required by Merced County's Conditional Use Permit (see Response to Comment NGO1-4) and the anticipated salvage value of the steel, cooper, and panels (which will far exceed removal costs).

Table 6-4. Estimated Cost of the Labor Required to Decommission the Wright Solar Park

	Labor	Unit	$/Unit	Estimated Cost
Biological Surveys				
	Biological Monitoring during Construction	120 days	$800	$96,000
	Conduct Employee & Contractor Training/Education	2 training sessions	Included in monitoring line item	$0
	Preconstruction Surveys	6 surveys before new ground disturbance	Included in monitoring line item	$0
	Blunt-Nosed Leopard Lizard & California Tiger Salamander Relocation Plan	1 plan	$2,500	$2,500
	Blunt-Nosed Leopard Lizard Relocation	1 relocation	$500	$500
	California Tiger Salamander Relocation	1relocation	$500	$500
	Exclusion Fencing – to be installed between the work area and the alkali vernal pool	500 feet	$10/foot	$5,000

	Labor	Unit	$/Unit	Estimated Cost
Removal Summary	Civil Removal			
	Road/Surfaces	688 hours	$75	$51,600.00
	Fence/Signage	168 hours	$50	$8,400.00
	MV Collection System			
	Above Ground	32 hours	$75	$2,400.00
	Below Ground	830 hours	$65	$53,950.00
	Inverters	160 hours	$100	$16,000.00
	Panel System			
	Pier	3,000 hours	$75	$225,000.00
	Racking	8,000 hours	$35	$280,000.00
	Panel Removal	11,840 hours	$35	$414,400.00
	Substation			
	Steel/Equipment Removal	416 hours	$50	$20,800.00
	Foundation	160 hours	$65	$10,400.00
	Rock and Ground Grid	48 hours	$50	$2,400.00
	Gen Tie			
	Wire	8 hours	$100	$800.00
	Poles	0 hours	$75	$0.00
	Foundation	0 hours	$65	$0.00
	O&M Building			
	Removal of Structure	0 hours	$20	$0.00
	Foundation	0 hours	$30	$0.00
Restoration	Soil			
	Ripping/Grading/Leveling	640 hours	$75	$48,000.00
Total Labor Costs				$1,238,650.00

Comment Letter NGO2

Letter NGO2

~~EXPLOITERS~~
FRIENDS
of ANIMALS

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MAR 23 2015

SACRAMENTO FISH
& WILDLIFE OFFICE

March 16, 2015

VIA US FIRST CLASS MAIL

Mike Thomas, Chief
Conservation Planning Division
Sacramento Fish and Wildlife Office
2800 Cottage Way, W-2605
Sacramento, CA 95825

Re: Wright Solar Park Comments, FWS-R8-ES-2014-N240-FF08E00000-FXES11120800000-145, Document No. 2015-00390

Dear Chief Thomas,

Friends of Animals (FoA) submits these comments on the Environmental Assessment (EA) and Habitat Conservation Plan (HCP) for Wright Solar Park LLC's ("Applicant") application for incidental take permits (ITPs) under the Endangered Species Act (ESA), in line with its plan to construct a solar energy facility in Merced County, California.[1] The Applicant has applied for federal and state ITPs for three listed species. While FoA generally supports the use of renewable sources of energy, we fear that the solar park would endanger several species in the area, as well as their habitat, in a way that is significant and irreversible, and that these risks have been greatly overlooked in the EA and HCP. When all risks are concurrently considered, it is clear that the Applicant should not be granted ITPs under the ESA.

California's push for renewable energy has been fomented by an admirable goal of obtaining 33% of its energy from renewable sources by 2020. However, meeting this goal should not inhibit the State of California and the federal government from recognizing possible detrimental impacts to wildlife that could result from the construction, operation, maintenance, and decommissioning of renewable energy projects. Thus, FoA asks FWS to deny the incidental take permits (ITPs) to the Applicant.

BACKGROUND

In order to plan for reasonably foreseeable takes of ESA-listed species during construction and operation of the proposed solar park, the Applicant has applied for ITPs for three species covered under the Endangered Species Act ("covered species"). These

[1] FoA is a nonprofit animal advocacy organization, incorporated in New York since 1957. With nearly 200,000 members worldwide, FoA advocates for the just treatment of animals, both domestic and wild.

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species are the blunt-nosed leopard lizard ("lizard"), the San Joaquin kit fox ("fox"), and the California tiger salamander ("salamander"). The duration of the federal permits, if granted, would be forty years, as the project is projected to have a useful life of 35 years. The Applicant has also applied for ITPs for the fox and salamander under the California Endangered Speices Act (CESA). Construction of the solar park will take 26 months and is scheduled to begin later this year.

Under federal law, in order to get an ITP, an applicant must show that the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.[2] The California Fish and Game Code requires a similar guarantee for incidental take permits. The Applicant has not met this criterion, as its actions could facilitate the increased decline in habitat and quality of life for each species, and most notably, the fully-protected blunt-nosed leopard lizard.

Status of the blunt-nosed leopard lizard

The blunt-nosed leopard lizard is listed endangered under the ESA, endangered under the CESA, and is a fully-protected species under California law, a designation that prohibits its take except under **very limited circumstances.** "Except as provided in Section 2081.7, 2081.9, or 2835, fully protected reptiles and amphibians or parts thereof may not be taken or possessed at any time. No provisions of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected reptile or amphibian, and no permits and licenses heretofore issued shall have any force or effect for that purpose."[3]

The lizard is endangered because it lives in an area of less than 500 square kilometers, its distribution is very fragmented, and its range, the number of lizards overall, and the quality of habitat continue to decline.[4] The IUCN reports that "there are extreme fluctuations in the number of mature individuals."[5] "There are not many more than a few dozen distinct populations. The total population size is unknown but probably includes more than 1,000 adults. The species has been eliminated from 94% of the original range since the mid-1800s (Jennings 1995)."[6]

The Applicant has applied for an ITP for the lizard under the federal ESA but not under the CESA, because the lizard is precluded from takes under the CESA due to its fully-protected status. Applying for an ITP for the lizard under federal law indicates that the Applicant fully expects to come into contact with or possibly take a blunt-nosed leopard

NGO2-1

[2] 50 CFR 17.22 Section (2)(1)(D)
[3] California Fish and Game Code Section 5050
[4] G.A. Hammerson, "Gambelia sila," *The IUCN Red List of Threatened Species*, Version 2014.3, http://www.iucnredlist.org/details/40690/0.
[5] *Id.*
[6] *Id.*

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lizard. However, Applicant says that they can avoid taking of the lizard, and thereby avoid violating California state law.[7] Thus, Applicant's actions are inconsistent, as it applied for a federal ITP but claims it will not come into contact with the lizard and violate its fully-protected status. The Applicant's federal ITP application should be denied, as issuing a federal ITP for a state-listed, fully-protected species could facilitate violations of state law.

NGO2-1 cont.

Status of the San Joaquin kit fox

The San Joaquin kit fox is a small member of the canine family and is listed as endangered under the ESA and the CESA; it does not have designated critical habitat, which makes the lands it occupies in and around the proposed project site of utmost importance to the local fox populations. Defenders of Wildlife has coined the fox as "one of the most endangered animals in California," with less than 7,000 individuals in the wild today.[8]

The fox's range has been diminished to only a fraction of what it once was. As reported by the EPA, "By 1930 its range may have been reduced to half, mostly in the southern and western San Joaquin Valley and foothills. In 1979 only 6.7% of land south of Stanislaus County remained undeveloped. Today the San Joaquin kit fox inhabits a highly fragmented landscape of scattered remnants of native habitat and adoptable, altered lands within and on the fringe of development."[9]

Status of the California tiger salamander

The California tiger salamander is currently listed as threatened under both the ESA and CESA. The salamander has lost over half of its historic range, largely due to division of habitat from development.[10] It has been extirpated from many regions and "...natural colonization after a local extirpation event may be unlikely."[11] Tiger salamanders frequently fall prey to mammal damage control programs that aim to decrease the squirrel populations in order to benefit grazing, because salamanders often inhabit squirrel burrows.[12]

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[7] "Wright Solar Park Habitat Conservation Plan," *ICF International*, July 2014, http://www.fws.gov/sacramento/outreach/2015/01-13/docs/2014-10-7-Wright%20Solar%20HCP.pdf, at 1-1 (hereinafter HCP at XX).
[8] "Fact Sheet: San Joaquin Kit Fox," *Defenders of Wildlife*, accessed March 16, 2015, http://www.defenders.org/san-joaquin-kit-fox/basic-facts.
[9] "San Joaquin Kit Fox," *U.S. Environmental Protection Agency*, February 2010, http://www.epa.gov/espp/factsheets/san-joaquin-kitfox.pdf.
[10] "California Tiger Salamander—Ambystoma californiense," *CaliforniaHerps.com*, accessed March 116, 2015, http://www.californiaherps.com/salamanders/pages/a.californiense.html#description.
[11] HCP at 3-18 and 3-23.
[12] *Id.*

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Other non-covered species in the area

While 56 total special-status plant and animals species known to be in the immediate area of the proposed project site were considered to be included as covered species, the Applicant found that only three, or just about 5%, warranted coverage.[13] Additionally, the Applicant notes that the "white-tailed kite is the only fully-protected species with potential to occur on the site."[14] However, after a study of the range maps of special status species in California, FoA believes that not only could the blunt-nosed leopard lizard and white-tailed kite be present in the project area, but so could three other fully-protected species—the Morro bay kangaroo rat, the golden eagle, and the ring-tailed cat. Moreover, the proposed project site is located extremely near to Los Banos Reservoir, the San Luis Reservoir Area, the Agua Fria Multi-species Conservation Bank, the San Luis Reservoir SRA, and the O'neill Forebay Wildlife Area. Wildlife could move in and out of the proposed project area while transiting to and from these protected areas.

NGO2-2

Given that there is the potential for other special status species to occur in the area, that the area is home to many wildlife protected zones, and that effects on even common animals in the area could be significant, it is clear that the Applicant has not fully analyzed all of the effects of the solar park on wildlife. Applicant makes sure to note that, "many other special status species and common species are expected to benefit from the conservation strategy of this HCP."[15] If wildlife can benefit from said measures, they must then be in the immediate area. Thus, it is unclear how wildlife can benefit from the proposed project and its conservation area and yet not also be eligible to be harmed by it.

THE PROPOSED SOLAR PARK WOULD HAVE SIGNIFCANT EFFECTS ON COVERED SPECIES AND THEIR HABITAT

The three covered species, as well as non-covered species, could experience harassment, injury, or death from the solar park at any of its stages of operation, both directly and indirectly.[16] Threats facing the species include risk of electrocution and chemical or pesticide poisoning, exposure to fire, and possible entrapment in burrows, which all three species use to carry out some component of their life processes. An increase in traffic and machinery operation in the area increases the risk that the species will be run over. Fences could impale wildlife or severely restrict their movement and the movement of their prey or predators, disrupting the natural life processes and behaviors of these species and non-covered species as well. Grading of the land could endanger the wildlife,

[13] "Draft Wright Solar Park Habitat Conservation Plan Draft Environmental Assessment," *US Fish and Wildlife Services and ICF International*, October 2014, http://www.fws.gov/sacramento/outreach/2015/01-13/docs/WrightSolar-DraftEA.pdf, at 1-3 (hereinafter EA at XX).
[14] HCP at 1-11.
[15] HCP at 1-4.
[16] For this paragraph, see generally HCP and EA.

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and trash or other materials left at the site could attract unnatural amounts of predators into the area.

These are just some of the many risks that the covered species will face during solar park construction, operation, maintenance, and decommissioning. Yet, somehow, the Applicant believes that over a 40-year period, with constant exposure to these aforementioned risks, actual takes of the covered species will be one or fewer for the entire project life. The HCP estimates one take by injury or mortality for each species, including the blunt-nosed leopard lizard, once again proving that it fully intends to come into contact with the lizards and may violate California law in doing so.[17] If the Applicant acknowledges that a take can of a lizard occur, then construction should not be allowed to proceed. NGO2-3

Moreover, while the Applicant argues that the project site lacks suitable habitat or evidence of the presence of these three covered species, the Applicant fails to acknowledge that wildlife can have large home ranges and often change their behavior seasonally, as well as in the presence of human development. It is nearly impossible for the Applicant to predict how wildlife will react to its presence in the area. Additionally, foxes have been detected within ten miles of the study area, with consistent detections in the southern part of the county, enough to classify a resident population of foxes.[18] There are nine records of the tiger salamander within ten miles of the project site, with two records of it only three miles from the site.[19] There are also some aquatic features that are not directly on the site but are close by, and these could attract salamanders into the area as well. NGO2-4

Moving forward with the solar park project could lead to the permanent disturbance of up to 2,731 acres within the 5,181-acre permit area (about 4.27 square miles within a permit area of 8.1 square miles).[20] In fact, contrary to the Applicant's assertion, there is plenty of evidence to support that implementing the solar park plan would decrease available habitat for the covered species in a significant way.

On the project site, there is habitat suitable for both kit fox movement and salamander breeding.[21] Close by to the project, areas have been ranked medium-high suitability for fox habitat, though the Applicant notes that area on project site is of low suitability.[22] However, this starkly contradicts the fact that "kit foxes will den within small parcels of native habitat that are surrounded by intensively maintained agricultural lands and adjacent to dryland farms," as they prefer land with less vegetation so that they can NGO2-4 cont.

[17] HCP at 4-13.
[18] HCP at 3-11.
[19] HCP at 3-19.
[20] 80 Fed. Reg. 1660 at 1661 (Jan. 13, 2015).
[21] HCP at 3-8 and 3-9.
[22] HCP at 3-11.

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better see their prey.[23] This type of land exactly describes the type of land that the solar park would be built upon (70% of the project site is currently planted in dry-farm crops); therefore, it must be expected the kit foxes will use lands on the project site. [24] Under the project, as currently proposed, about 1200 acres of fox habitat will be lost and will not provide suitable habitat even after revegetation.[25] NGO2-4 cont.

Moreover, California grasslands are important for burrowing rodents, which are the main prey source for fox, and home for endangered rats.[26] California annual grassland occupies 655 acres of the project site.[27] Also, foxes are known for their preference of many different types of habitat and their regular movement through these varied habitats.[28] Foxes' homes ranges vary greatly, correlated most likely with prey availability, so movement must not be restricted and corridors are needed to link together isolated fox populations.[29] Thus, reducing any amount of available fox habitat is a blow to the species, which lacks critical habitat and relies on connected habitat in order to move and interact with different populations. NGO2-5

As far as the blunt-nosed leopard lizard, little is known about its population, distribution, or range and "...density can vary over time and can be affected by environmental factors such as drought."[30] Drought and other chance happenings are possible in the next 40 years, especially as climate change continues. This could cause changes in lizard locations, as well as an expansion into the project site; it could also cause extreme strain for local populations and possibly lead to local extinction. The HCP notes that, "once the project site is built and areas of temporary disturbance are restored, there is potential for blunt-nosed leopard lizards to move into the Permit Area."[31] Thus, it becomes increasingly difficult to rationalize how the Applicant can assume that it will not come into contact with a blunt-nosed leopard lizard. NGO2-4 cont. NGO2-1 cont.

Additionally, "During adverse conditions, reproduction (of the lizards) may be delayed up to 2 months or even forgone for a season."[32] Adverse conditions, such as climactic changes or stress from development could further decrease the chances for survival for the lizard. Since the 1870s, more than 95% of the lizard communities in San Joaquin Valley alone have been destroyed because of development."[33] Moving forward with NGO2-6

[23] HCP at 3-12.
[24] HCP at 4-2.
[25] HCP at 4-4.
[26] HCP at 3-6.
[27] HCP at 3-6.
[28] HCP at 3-11.
[29] HCP at 3-13 and 14.
[30] HCP at 3-17.
[31] HCP at 4-6.
[32] HCP at 3-16.
[33] HCP at 3-17.

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the solar park would further jeopardize lizard habitat. Further, "the complex life cycle of California tiger salamanders necessitates that each individual use a mixture of habitats."[34] The solar park's construction and operation could eliminate the diversity of habitats available in the area.

NGO2-6 cont.

All of these impacts to wildlife and their habitats demonstrate that the covered species face significant risks from the proposed solar park and their chances for survival may be further eroded. FWS should not grant ITPs to the Applicant when such high risks and such inconsistent analysis of the project site exists, especially since these risks could contribute to the demise of listed species.

APPLICANT LACKS ADEQUATE MONITORING AND MITIGATION STRATEGIES

The Applicant also lacks adequate monitoring and mitigation measures, which are required for the HCP. First of all, monitoring by biological monitors will occur only during construction period.[35] Secondly, mitigation lands effectiveness monitoring will occur annually for the first five years and then taper off.[36] Moreover, proposed camera monitoring of foxes will only occur from February-August, and only for the first five years of the forty-year permit term, with intermittent scat studies.[37] For a project that would affect three ESA-listed species, including one extremely endangered lizard species, these mitigation measures leave much to be desired.

NGO2-7

Human error must also be calculated into the determination of how many takes of covered species are likely to occur. The Applicant has proposed environmental training for its employees.[38] This training does not substitute for sustained expertise on the site project. Further, employees are not likely to have high incentives to go out of their way to protect wildlife or to report encounters with or takes of wildlife.

NGO2-8

As a way to mitigate the effects of possible takes and destruction of habitat, the Applicant has proposed the cultivation of 2,450 acres as a conservation area, which would be located outside of the project footprint but in the project area. In this area, grazing would likely be allowed year-round to "manage vegetation."[39] FoA fails to see how grazing is an adequate use of conservation lands, as grazing severely deteriorates the quality of land for the species living there and is known to cause conflicts with ground squirrels and the burrows they dig that house tiger salamanders.

NGO2-9

[34] "California Tiger Salamander," *Stanford University Habitat Conservation Plan*, accessed March 16, 2015, *http://hcp.stanford.edu/salamander.html*.
[35] EA at 2-12.
[36] EA at 2-17.
[37] EA at 2-18.
[38] EA at 2-12.
[39] EA at 2-16 and 2-17.

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Lastly, FWS notes in its EA at "The primary source of uncertainty under the Proposed Action Alternative (to build the solar park), relative to the biological goals and objectives identified in the HCP, involves the likelihood that the mitigation lands would provide habitat for the covered species over time."[40] FWS is unconvinced that the proposed conservation area **would even be used by the species**. As Applicant's HCP conservation plan and mitigation strategies are unsatisfactory, it should not be granted ITPs. NGO2-10

RENEWABLE ENERGY PROJECTS OFTEN HAVE UNINTENDED EFFECTS ON WILDLIFE

Large-scale renewable energy projects that have already taken root have shown how detrimental they can be to wildlife populations. For example, birds can be killed by being burnt up or by running into large solar facilities. Scientific American reports that, "Much of the problem appears to lie in the "lake effect," in which birds and their insect prey can mistake a reflective solar facility for a water body, or spot water ponds at the site, then hone in on it."[41] No one knows for sure how many birds this affects, but, "the numbers are high enough to concern bird and conservation groups -- regardless of the environmental benefits of solar power."[42] Wind turbines are also a source of mortality for birds. This all points to the vital need to address not only what kind of energy development takes place, but *how* it takes place. NGO2-11

California, as one of the most geographically-varied and most economically-important states in the country, has a duty to set the tone for management of wildlife under renewable energy projects. California is home to the most endangered animals out of any US state, and it ranks only behind Hawaii in terms of most endangered plants.[43] For these reasons, it is critical for the US and California to be global leaders, select a more sustainable approach to solar power, and protect its endangered species before its too late.

FWS MUST PREPARE AN EIS IN ORDER TO FULLY ADDRESS THE IMPACTS OF ISSUING ITPS FOR THE COVERED SPECIES

Due to the high risk of the solar park excessively harming extremely vulnerable species and habitat, as well as the long duration of the proposed permits, FWS must prepare an Environmental Impact Statement (EIS) for effects of issuing ITPs to the Applicant. NGO2-12

At minimum, FWS must prepare an EIS in order to analyze the potential mitigations for the aforementioned issues, to weigh alternatives, to communicate all relevant information

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[40] EA at 2-18.
[41] John Upton and Climate Central, "Solar Farms Threaten Birds," *Scientific America*, August 27, 2014, http://www.scientificamerican.com/article/solar-farms-threaten-birds/.
[42] *Id.*
[43] Russell McLendon, "Which U.S. states have the most endangered species? [Infographic], *Mother Nature Network*, May 16, 2014, http://www.mnn.com/earth-matters/wilderness-resources/blogs/which-us-states-have-the-most-endangered-species.

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to the public, and to adequately measure the impacts to nature, animals, humans, and their resources that could result from the execution of the ITPs. An Environmental Assessment is simply not enough for this project. The National Environmental Policy Act (NEPA) was created in order to assist federal agencies in their decision-making processes; one way in which agencies are held accountable by NEPA is through the creation of Environmental Impact Statements ("EIS"). Proposed agency plans that significantly affect the human and natural environment necessitate an EIS.

The need to prepare an EIS is determined by the type of action being proposed and its significance. The definition of an action includes "new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies."[44] Additionally, it should also be noted that, "projects include actions approved by permit or other regulatory decision as well as federal and federally assisted activities."[45] The solar park ITPs fits into each of these definitions, and, as such, should be subject to an EIS.

NGO2-12 cont.

The solar park ITPs also fit the definition of being a significant action, as determined by the proposed plan's context and intensity. In evaluating the proposed action's intensity, agencies must consider "the degree to which the proposed action affects public health or safety; unique characteristics of the geographic area such as...ecologically critical areas; the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks; the degree to which the action may establish a precedent for future actions; whether the action is related to other actions with individually insignificant but *cumulatively significant impacts*; and the degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973."[46]

Under this definition, issuing the ITPs would indeed be considered an intense action, as issuing the permits would unquestionable adversely affect listed species and their habitat. Additionally, issuing the permits involves a high degree of uncertainty about the actual distribution and abundance of the animals in question, as well as the ability of this action to establish precedent for other solar projects in California and the potentially cumulative significant impacts of prolonged harassment of wildlife or disruption of land or natural life processes over the course of forty years.

These issues must be addressed in full in an EIS. The EIS must consider a full range of alternatives to the proposed plan, not just an action and no action alternative, including, but not limited to, denying the application for the permits.

[44] 40 C.F.R. § 1508.18.
[45] *Id.*
[46] 40 C.F.R. § 1508.27.

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FWS MUST CONSIDER THE ETHICAL REASONS TO DENY THE PERMITS

It is time for FWS to recognize that individual animals have intrinsic value, and this in turn demands that FWS incorporate ethics into its consideration of wildlife management activities, especially for highly vulnerable species. There is a growing recognition among conservationists and biologists that ethics must play a greater role in wildlife policy.[47] But as Fox and Bekoff point out: "[w]hile many agree that ethics must play a central role in any project involving [animals], it is often interesting to note that in many books on human-animal interactions . . . there is often no mention of ethics. This needs to change."[48] The same must be said for the regulation of animals. NGO2-13

Undoubtedly, discussions in the context of policy development about ethics and animals can make some people uncomfortable. But, of course, just a generation ago it was also unheard of for an agency like FWS to even incorporate the humane treatment of animals into its decision-making process. This has changed dramatically. Our generation must now adopt the same approach to educating the decision-makers and the public as to the role of ethics in making wildlife management decisions. Indeed, it is our jobs as conservationists, animal advocates and scientists "to work toward public education and information dissemination to address real and perceived fears held" by others.[49] What is missing in FWS's current regulations, policies, and environmental analysis is the viewpoint of the animals. Again, from Fox and Bekoff:

> The growing body of literature on animal cognition and emotions demonstrates undeniably that animals have interests and points of view. Like us, they avoid pain and suffering and seek pleasure. They form close social relationships, cooperate with other individuals, and likely miss their friends when they are apart. Emotions have evolved, serving as "social glue," and playing major roles in the formation and maintenance of social relationships among individuals. Emotions also serve as "social catalysts," regulating behaviours that guide the course of social encounters when individuals follow different courses of action, depending on their situations. If we carefully study animal behaviour, we can better understand what animals are experiencing and feeling and how this factors into how we treat them.

Id. at 131.

In preparing the EIS, FWS should not merely focus the attention of the public and the decision-maker on the human perspective of the wildlife-human relationship. Instead, it must include a legitimate discussion of ethics, and the rights of wildlife, to assist the reader in fully considering the best alternative to choose to help manage wildlife-human interactions. This is approach would be consistent with the purposes of NEPA. NGO2-13 cont.

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[47] Camilla Fox and M. Bekoff, "Integrating Values and Ethics into Wildlife Policy and Management—Lessons from North America," *Animals* 1 (2011): 126-143.
[48] *Id.* at 129.
[49] *Id.* at 128.

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CONCLUSION

While it is certainly imperative to develop renewable energy sources, these developments cannot come at the expense of wildlife or their habitat. Indeed, progress gained by sacrificing wildlife is not progress at all. Balanced growth of renewable energy sources is possible and must be intentionally pursued by both government and private entities.

In the end, the benefits of any conservation area proposed under this HCP do not outweigh the costs posed by the issuance of the ITPs. Under federal law, ITPs cannot be granted where they would be likely to inhibit the long-term survival of listed species.[50] The potential of ITPs to alter behavioral processes, destroy habitat, and produce unforeseen consequences over four decades assert that Wright Solar Park does not in fact qualify for ITPs under the ESA. Much can change in forty year's time, and FoA believes that ensuring the survival of species like the blunt-nosed leopard lizard depends heavily on the decisions we make as a nation in the next few years.

FoA respectfully submits these comments and hopes that FWS will consider the ethical, ecological, and legal implications of issuing the ITPs for the proposed solar project.

Sincerely,

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[50] 50 CFR 17.22 Section (2)(1)(D)

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Response to Comment NGO2-1

As described in the Response to Comment NGO1-10, it is unlikely for blunt-nosed leopard lizards to occur within the portions of the project site where construction would occur due to low quality habitat conditions. Despite this low probability, to avoid any potential for take of this species during construction, the conservation strategy requires the applicant to complete preconstruction surveys for this species prior to ground disturbance (see Section 5.5.3 in the HCP). If any blunt-nosed leopard lizards are sighted during those surveys, full avoidance of those individuals would be required. Similarly, avoidance and minimization measures for blunt-nosed leopard lizard during operation of the solar facility—such as limitations on mowing—are provided in the event the species is attracted to the site as a result of improved habitat conditions.

Once the project is built, and areas of temporary construction disturbance are restored, there is potential for blunt-nosed leopard lizards to move into the project site and be affected by project operations. Therefore, the applicant has requested take authorization from the Service for the removal of a small amount of low-quality habitat for the species (1.2 acres of annual grassland removed permanently and 1.9 acres of annual grassland removed temporarily) and the low likelihood of take from project operations.

The Service's decision to issue an ITP will be based on whether the HCP meets the following statutory and regulatory permit issuance criteria found in ESA Section 10(a)(1)(2)(A) and 50 CFR 13.21(b), and 50 CFR 17.22(b) and 17.32 (b), respectively.

- Take will be incidental.
- Take will not appreciably reduce the likelihood of survival and recovery of the species in the wild.
- The applicant will mitigate and minimize the impacts of the take, to the maximum extent practicable.
- The applicant will ensure adequate funding for the conservation plan.
- The applicant will provide procedures to deal with unforeseen circumstances.
- Any other measures required by the Service.

As described in Response to Comment SA1-5, under the ESA, we can exempt (under ESA Section 7) or issue an ITP (under ESA Section 10) for any federally listed species under our jurisdiction. This take may include species protected under various state or local laws or regulations. However, compliance with the ESA does not alleviate or exempt an applicant's responsibility to comply with all applicable laws, including all relevant portions of the California Fish and Game Code, prior to implementing a proposed project. The applicant acknowledges that direct take of blunt-nosed leopard lizard is prohibited by the California Fish and Game Code and is working with CDFW to ensure that the avoidance and minimization measures proposed in the HCP will allow for avoidance of take of blunt-nosed leopard lizard according to the definition of take in the California Fish and Game Code.

Response to Comment NGO2-2

As noted in Response to Comment NGO1-6, the submission of an application for an ITP under Section 10(a)(1)(B) of the ESA is a voluntary action. If an application is submitted, an HCP must be

developed and submitted to address the take of federally listed animal species associated with covered activities (ESA Section 10(a)(2)(A)); the inclusion of proposed, candidate, or unlisted species in an HCP is not required and is at the discretion of the applicant (U.S. Fish and Wildlife Service and National Marine Fisheries Service 1996). In general, applicants typically consider various criteria in determining what species to cover in an HCP, such as potential impacts; species current and potential future status; the potential for the species to occur on the project site; and whether habitat or other life history requirements may be present on site. Species covered in the Wright Solar Park HCP were selected based on their probability to occur within the project site during construction and operation of the project, and the need for incidental take authorization for those species from project construction or operation. White-tailed kite and ring-tailed cat are not federally listed species and therefore do not require take authorization. Morro Bay kangaroo rat was determined to have no potential to occur on the project site. Golden eagle is not federally listed under the ESA but is covered by the Eagle Act. The applicant has determined that an Eagle Permit under the Eagle Act is not required as take of golden eagles would not occur from project construction or operations. Please refer to Response to Comment NGO1-8.

Response to Comment NGO2-3

The potential effects of the Proposed Action Alternative on covered species, including the specific impacts noted by the commenter, are described in Section 3.3 of the Draft EA and Chapter 4 of the Draft HCP.

Estimated levels of take of covered species in the Draft HCP were provided by the applicant. If an ITP is issued for the proposed action, we will articulate the level of take authorized over the permit term, including the methodology used to determine the level of take.

Please refer to the Response to Comment NGO2-1 for a discussion of the criteria the Service considers when issuing an ITP.

Response to Comment NGO2-4

Response to Comment NGO1-20 provides a discussion of the use of the project site by covered species. As described in that response, use of the project site by San Joaquin kit fox has been assumed based on its location within the range of the species, the type of habitat present, and the proximity to species occurrences in the region. The same is true for California tiger salamander and blunt-nosed leopard lizard. Neither species has been documented on the project site, but low quality habitat is present on portions of the project site.

Section 3.3.1 of the Draft EA (Pages 3.3-8 through 3.3-12) includes discussion of the status, habitat, and suitability of the project site to support covered species. That section (pages 3.3-9 through 3.3-10) notes that San Joaquin kit foxes occur in some areas of suitable habitat on the floor of the San Joaquin Valley and in the surrounding foothills of the Coast Ranges, Sierra Nevada, and Tehachapi Mountains from Kern County north to Contra Costa, Alameda, and San Joaquin Counties (U.S. Fish and Wildlife Service 1998). It also references San Joaquin kit fox CNDDB occurrences within 10 miles of the study area, including records in western Merced County and on the offsite mitigation lands, and provides a discussion of movement corridors in the vicinity of the project site. Similarly, known occurrences of California tiger salamander in the vicinity are summarized on pages 3.3-10 through 3.3-11 in the Draft EA. As suggested by the commenter, there are nine records of California tiger salamander within approximately 10 miles of the project site, two of which are approximately

3 miles west of the project site (California Department of Fish and Wildlife 2013). Aquatic features that may provide breeding habitat for California tiger salamander on the project site (i.e., alkali vernal pool in the southwest corner of the project site) and in the vicinity (various unnamed streams and pools) are described on page 3.3-11 of the Draft EA. .

Response to Comment NGO2-5

Please refer to the Response to Comment SA1-1 for a discussion of the effects of the proposed solar facility on kit fox movement corridors and prey populations.

Response to Comment NGO2-6

The Service does not agree that construction and operation of the solar park could eliminate the diversity of habitats available to blunt-nosed leopard lizard or California tiger salamander in the area. The project site has been maintained in cultivated agriculture for decades, greatly reducing the quality of habitat for these species. Furthermore, neither species has been documented on the project site. In fact, take coverage has only been sought by the applicant for these two species because of the prospect that they could move into the project site during the anticipated 40-year operational life of the solar facility, as habitat conditions improve once cultivated agricultural activities cease. Moreover, as described in Response to Comment NGO1-20, the offsite mitigation lands provide suitable habitat of equal or greater value to both species relative to the project site.

Response to Comment NGO2-7

The measures highlighted by the commenter are those which would be implemented on the project site. The primary purpose of monitoring on the project site is to make sure impacts on covered species are adequately avoided and minimized. Because of the types of activities associated with construction (e.g., ground disturbance, truck trips), and those immediately following construction (e.g., potential new uses of the project site by covered species), there is an increased risk to species and thus a higher level of monitoring. Once the project is operational, monitoring frequency would be reduced because the overall risk to the species would be reduced. However, monitoring during operations and maintenance activities would still be required through the life of the project.

Additional monitoring requirements for the conservation easement on the offsite mitigation lands will be identified in an HMP. The HMP will be prepared by the applicant and approved by the Service. It will include a robust species- and habitat-based monitoring plan which will extend through the life of the ITP. The results of that monitoring will be included in annual reports required for the project. The standards and criteria for the HMP are described in Section 5.5.1 of the HCP. In making a decision on the proposed action, we will determine whether the monitoring on the offsite mitigation lands described in the HCP meets the permit issuance criteria.

Response to Comment NGO2-8

The take limits established by the ITP cannot be exceeded during the permit term. If that occurs, incidental take of covered species must be reported to the Service as part of the required annual reports.

As suggested by the commenter, the HCP includes a requirement that environmental training be completed prior to the commencement of construction activities (see HCP Section 5.3.2, page 5-6). While this training is intended to make contractors, consultants, or operators on the project site

aware of required HCP avoidance and minimization measures, it does not negate the need for a qualified biologist to complete certain survey, monitoring, and reporting tasks. Sections 5.3.2 and 5.3.3 in the Draft HCP identify occasions where the expertise of a qualified biologist—approved by the Service and CDFW—must be on the project site prior to or during implementation of covered activities.

Response to Comment NGO2-9

As described in Section 2.2.2 of the Draft EA (pages 2-16 through 2-17), the conservation easement for the offsite mitigation lands would require continuation of current land management practices, including livestock grazing. These current grazing practices favor upland habitat for California tiger salamander, blunt-nosed leopard lizard, and San Joaquin kit fox. These lands, which have been grazed for over 100 years, are currently occupied by San Joaquin kit fox and support a thriving ground squirrel population. The importance of moderate levels of livestock grazing has been recognized by the Service as essential to the conservation of many native species, including California tiger salamander and the San Joaquin kit fox, in its listing decisions and recovery plans.

Livestock grazing on the mitigation lands needs to continue at the same or similar levels to ensure that populations of covered species and their habitat are maintained. All future management and monitoring of the mitigation site would be detailed in a Service-approved HMP. Livestock grazing would be conducted under a grazing management plan with specific guidance on grass height and onsite residual dry matter aimed at protecting the grasslands and allowing them to continue to function as species habitat. Onsite grazing management would focus on keeping grasses short (less than 12 inches) while also retaining enough residual dry matter to protect soil health and prevent erosion. Grazing would be year-round during normal and wet years, and the number of livestock onsite at any time would vary to meet habitat objectives. During years of extreme weather, such as drought, the grazing intensity would be adjusted to properly meet the grass height and residual dry matter criteria provided in the grazing management plan. Decisions on the approach for grazing management would be made by the landowner based on grassland monitoring in the spring and fall of each year, and would be monitored by a third party easement holder to ensure consistency with the conservation easement.

Response to Comment NGO2-10

The sentence in the Draft EA referenced by the commenter was provided to frame the adaptive management strategy provided in the HCP, which is focused on ensuring the offsite mitigation lands are managed to the benefit of covered species, and that activities associated with construction and operation of the solar facility are not more substantial or different than those anticipated in the HCP. This sentence was not meant to imply that covered species are not known to use the offsite mitigation lands, or that they would not occur there in the future.

San Joaquin kit fox was documented on the offsite mitigation lands as recently as 2013. Although surveys were not conducted in 2014, site conditions and habitat quality remain the same and it is assumed that the species is still present. The natural grassland condition of the offsite mitigation lands, including the extensive network of ground squirrel burrows, also provide suitable upland habitat for California tiger salamander and underground refugia for blunt-nosed leopard lizard that is of higher quality than the habitat present on the project site. As described in Response to Comment NGO1-20, the presence of both California tiger salamander and blunt-nosed leopard lizard on the offsite mitigation lands is highly likely due to the close proximity of known occurrences and

suitable aquatic breeding habitat for California tiger salamander (see Draft HCP Section 5.4.3, page 5-10). Additionally, as noted in the Draft HCP (see Section 5.4.3, page 5-10), the offsite mitigation lands include a known and presumed extant occurrence of blunt-nosed leopard lizard along the western boundary (California Department of Fish and Wildlife 2013: Occurrence 8).

Finally, after construction is complete, the project site is expected to provide a better habitat condition for covered species than it currently does in dry-farmed agriculture.

Response to Comment NGO2-11

The potential effects of the proposed action on wildlife are considered in Section 3.3.2 of the Draft EA (pages 3.3-28 to 3.3-38). As suggested by the commenter, the potential for the solar array to attract migratory waterfowl to the project site (i.e., the "lake effect") is considered on page 3.3-38 of the Draft EA. As required by Merced County, the applicant has prepared an APP to address potential impacts to migratory waterfowl. Please refer to the Response to Comment NGO1-5 for a discussion of the APP.

Response to Comment NGO2-12

The Service agrees that the issuance of a Section 10 ITP is a federal action subject to NEPA review (see Section 1.1 of the Draft EA [page 1-2]). However, the Service disagrees that issuance of an ITP to any applicant would automatically result in significant impacts that would require preparation of an environmental impact statement (EIS). The Service has issued over 650 ITPs under Section 10 since the ESA was amended in 1982 to allow for non-federal permits. Most of those ITPs have been issued with EAs and did not require preparation of an EIS.

The Service also disagrees that the issuance of an ITP to the applicant would result in significant impacts that would require preparation of an EIS. NEPA requires an EIS be prepared when a federal action would "significantly affect the quality of the human environment" (42 U.S.C. 4332(B)). As suggested by the commenter, the evaluation of "significance" must consider both the *context*—timeframe and geography, and *intensity*—the severityof potential impacts (40 CFR 1508.27(a)-(b)). The Draft EA describes the potential direct, indirect, and cumulative impacts of two alternatives—the Proposed Action Alternative and No Action Alternative—on thirteen different resource areas, including biological resources. The context and intensity of impacts are framed according to resource-specific "action areas," and articulated as both short- and long-term impacts. The Draft EA identified no significant impacts as a result of the Proposed Action Alternative. This conclusion was based, in part, on the conservation measures set forth in the Draft HCP to avoid, minimize, or mitigate impacts on covered species (see Section 2.2.2 in the Draft EA [pages 2-11 through 2-15]). The lack of significant impacts was also due to the environmental commitments incorporated into the Proposed Action Alternative to reduce the effects on the human environment during project construction (see Section 2.2.2 in the Draft EA [pages 2-18 through 2-22]). The commenter's assertion that an "EA is simply not enough for this project" does not provide the specificity necessary for the Service to understand where a potential flaw in the NEPA analysis may exist, or where a significant impact may occur that is not currently identified.

Neither the potential for an adverse impact or uncertainty associated with a proposed action require preparation of an EIS, unless those considerations would result in a *significant* effect on the human environment. As described above, the Service does not agree that the severity of any adverse

impact, or the degree of uncertainty associated with the proposed action in general, warrant preparation of an EIS.

Finally, the commenter suggests an alternative that considers "denying the application for the permit" be considered by the Service as an alternative to the proposed action. The No Action Alternative in the EA is defined as a situation in which the applicant would not construct the proposed solar facility. Although this alternative could occur under a variety of circumstances, the denial of an ITP by the Service would be one circumstance that could result in the applicant not building the proposed solar facility. Accordingly, the analysis of the No Action Alternative in the Draft EA provides the alternative analysis requested by the commenter. Also see Response to Comment NGO1-4 for further discussion of the adequacy of the alternatives evaluated in the Draft EA.

Response to Comment NGO2-13

The Service appreciates the suggestion by the commenter that the EA consider ethics and the rights of wildlife in the environmental analysis. Please refer to Response to Comment NGO2-1 for a discussion of the criteria we will consider in our decision to issue an ITP to the applicant.

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