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DOCKET	
07-AFC-8	
DATE	MAY 20 2009
RECD.	MAY 27 2009

May 20, 2009

Theresa Miller
 URS Corporation
 1615 Murray Canyon Road, Suite 1000
 San Diego, California 92108-4314

Subject: Incidental Take Permit Application for the Carrizo Energy Solar Farm

Dear Ms. Miller:

The Department of Fish and Game has reviewed the draft State Incidental Take Permit Application (Application) submitted for the Carrizo Energy Solar Farm (Project). This Application was submitted in draft form for Department feedback in anticipation of meeting the requirements pursuant to the California Endangered Species Act (CESA) Incidental Take Permit application process, as described in the California Code of Regulations (CCR), Title 14, Section 783.2. Incidental take of State-listed species in association with the Project will ultimately be permitted by the California Energy Commission (CEC), pursuant to the Warren Alquist Act. Although CEC will serve as the permitting agency, the substantive criteria in CESA must still be met. The Department is assisting CEC in determining the scope and nature of incidental take coverage and will be providing CEC with recommendations to this effect. This letter serves to identify informational gaps that must be remedied prior to securing incidental take coverage. It is important to note that incidental take of fully protected and unlisted species cannot be authorized under CESA.

The Application is not sufficiently responsive to some of the required elements of the application process (Title 14, Section 783.2) and is lacking in some critical information. We therefore would deem this Application as incomplete were it to be formally submitted to the Department. Because the information required by the application process is necessary for the permitting agency's "take" analysis and compliance with CESA, incidental take coverage cannot be conferred absent this information. We offer the following comments on specific elements in your Application, as well as suggestions on how to correct deficient items. We anticipate that when the items deemed incomplete are corrected in the suggested way the Department will be able to indicate to CEC that all the information required to deem an application as complete has been submitted. We are happy to evaluate a draft of your new Application prior to formal submission if so desired. Our specific comments follow, in order of the application requirements as presented in Title 14, Section 783.2.

PROOF OF SERVICE (REVISED 5/11/09) FILED WITH
 ORIGINAL MAILED FROM SACRAMENTO ON 5/27/09
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783.2(a)(1): This section requires the “Applicant's full name, mailing address, and telephone number(s). If the applicant is a corporation, firm, partnership, association, institution, or public or private agency, the name and address of the person responsible for the project or activity requiring the permit, the president or principal officer, and the registered agent for the service of process.”

The Application does not state the name or address of the person responsible for the Project and the success of mitigation, the president or principal officer, or the registered agent.

783.2(a)(2): The Application should state more clearly for which species “take” authorization is being requested. Section 4.1.3 of the Application states that “take” authorization is required for the State endangered California condor (*Gymnogyps californianus*) and State threatened San Joaquin kit fox (*Vulpes macrotis mutica*). The California condor is a fully protected species for which “take” authorization cannot be granted under California law (Fish and Game Code §3511). The remainder of this letter assumes that “take” authorization is being requested only for San Joaquin kit fox.

783.2(a)(3): This section is complete.

783.2(a)(4): This section is complete.

783.2(a)(5), 782.2(a)(6): These Sections require “An analysis of whether and to what extent the project or activity for which the permit is sought could result in the taking of species to be covered by the permit” and an analysis of the impacts of the proposed taking. Identifying the extent and impacts of the “take” is necessary to identify what constitutes full mitigation.

The application describes the Project site as “marginal pass-through habitat” for kit fox. We do not consider this to be an accurate characterization of the Project site, and as such, we consider the “take” analysis to be insufficient. The limited kit fox surveys performed for this Project do not support the conclusion that foxes merely pass through the site. However, permeability is one of the functions that make this Project location critical to the recovery of the species. It is highly likely that San Joaquin kit fox utilize the site for denning and foraging as well. No den monitoring has been completed on-site to determine whether foxes are utilizing the potential dens which have been identified on-site, including badger dens, abandoned structures, and old farm equipment, all of which are known to be used by kit fox. The two opportunistic kit fox observations made immediately adjacent to the Project site suggest that foxes are more than occasional visitors to this area. California Natural Diversity Database (CNDDDB) occurrence number 1112 is a September 2006 record of a road-killed kit fox on State

Route 58 next to the proposed laydown area. This is the same vicinity where a second road-killed fox was found on Route 58 during blunt-nosed leopard lizard surveys conducted for this Project in August 2007.

Further, the Application incorrectly assumes that the presence of American badgers (*Taxidea taxus*) on-site precludes or deters the presence of San Joaquin kit fox. Badgers and kit fox may actually have a commensalistic relationship benefiting kit fox. Badgers and kit fox co-occur throughout kit fox range and competitive exclusion or other types of competition are not believed to affect kit fox habitat use patterns. Department staff have observed San Joaquin kit fox awaiting small mammals to emerge as badgers excavate in search of prey. Kit foxes also likely benefit from badgers' rapid and prolific burrow construction.

Please note that the figure to which the Application references from the recovery plan (USFWS 1998) does not reflect all of the recovery goals, which include maintaining and enhancing habitat linkages between the Salinas River watershed, western Kern County, and the Carrizo Plain National Monument. The Project site is in the area that provides all of these linkages. The linkage to the north end of the Carrizo Plain National Monument is naturally confined by unsuitable plant communities and steep topography which define the east and west boundaries of the Carrizo Plain. The Project would permanently fence 1 square mile of habitat in this linkage, reducing the linkage width by approximately 10 percent. The Department considers this reduction a significant impact. In addition, the draft results of the South Coast Wildlands landscape permeability analysis indicate that the Project lies within the central and highest-value portion of the linkage in terms of permeability, as opposed to the western edge of the linkage as the Application describes. This is due in part to the low relief of the site, which makes it highly conducive to kit fox movements. Considering the impacts of the proposed Topaz Solar Farm and the Carrizo Solar Ranch, the cumulative constriction on this linkage may amount to a 50 to 70 percent reduction in linkage width, and a substantial loss of the portion most conducive to facilitating dispersal and other habitat connectivity functions which promote population viability.

783.2(a)(7): This section assists the permitting agency in determining whether incidental take authorization for the Project would jeopardize the continued existence of the species. The Application should discuss the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of (A) known population trends; (B) known threats to the species; and (C) reasonably foreseeable impacts on the species from other related projects and activities. We did not find any analysis related to known population trends and the effect this Project and related projects may have on the species as a whole. Specifics about the mitigation proposal, as described under 783.2(a)(8), are required to make a jeopardy determination as well.

The jeopardy analysis should consider the effectiveness of proposed mitigation, in light of related projects, at maintaining existing habitat connectivity levels and kit fox population levels. These items are further discussed below.

783.2(a)(8): This section requires a description of the measures to minimize and fully mitigate the impacts of the proposed taking. The Application proposes "the purchase of sufficient lands" within Sections 32 and 33, Township 29 South, Range 18 East, Mount Diablo Baseline and Meridian. The amount and location of lands proposed for conservation within those Sections is unspecified. The mitigation proposal should specify the amount of area within these Sections that is proposed for conservation. The application should also substantiate how conserving areas within these two Sections would fulfill two of the primary requirements for fully mitigating the Project impacts to kit fox: a) maintaining the existing level of habitat connectivity, and b) providing for at least the same number of individual kit foxes as the baseline conditions. In other words, the Application should demonstrate how preservation of existing land maintains existing population levels and ecological functions despite the net loss of habitat area and connectivity that would result from Project implementation.

The selection of the mitigation lands must consider that the Project's permanent footprint, and the other proposed projects in the area, may compromise the mitigation lands' potential to fully mitigate the impacts. While Sections 32 and 33 are important for wildlife movement, they will become less so with construction of all three proposed solar projects. Kit foxes (and pronghorn) moving north across these Sections would immediately encounter the Project's impermeable fencing and the Topaz Solar Farm. The Topaz Solar Farm would also inhibit or completely block wildlife access to Sections 32 and 33 from the north side. Mitigation measures must first maintain existing levels of habitat connectivity given a reduced corridor width in order for us to concur that the Project's impacts are fully mitigated. Therefore, we first encourage selecting mitigation lands that would facilitate wildlife movement through the remaining linkage width between the proposed projects' footprints.

South Coast Wildlands' landscape permeability analysis will help clarify the cumulative effects on landscape permeability and thus on potential mitigation sites. The least-cost paths remaining upon Project implementation (of all three solar projects) are likely to require higher-cost movements by kit foxes and will be in different locations than the existing least-cost paths. Locating mitigation sites first in the resulting least-cost path would provide the most effective mitigation. The Department encourages the continued participation in this analysis to help inform mitigation site selection.

The proposed wildlife road-crossing location would not be in a least-cost path for kit fox or other wildlife after construction of the proposed solar projects. The State Route 58 road-crossing location proposed on the north side of Section 32 would lead to a small

habitat patch fragmented by residences on 40-acre parcels. In addition, this habitat patch north of the highway would be isolated by existing residential development on the west, this Project on the east, and the Topaz Solar Farm to the north. Additional factors would make the proposed road-crossing crossing location ineffective at mitigating kit fox habitat connectivity and road mortality impacts. Most importantly, a kit fox would not be expected to select one specific at-grade highway crossing point over any other point where suitable habitat intersects the highway. Lastly, the animal detection/driver warning system proposed for reducing road mortality has been shown to be effective only for large mammals (Huijser et al. 2009). We recommend considering such a system for a pronghorn crossing, but not for kit fox.

To offset the increased road mortality risk and the reduced habitat connectivity, we recommend developing additional habitat compensation measures which improve the habitat functions within the remaining linkage, given the cumulative effects of known projects. The proposed mitigation lands should be assessed in part using the CEC/South Coast Wildlands model to demonstrate their effectiveness at improving habitat suitability and permeability within the remaining, constricted habitat linkage.

All lands proposed for CESA mitigation would need to be protected in perpetuity for conservation purposes. This can be accomplished by transferring fee title on the mitigation lands to the Department under terms approved by the Department and CEC. Alternatively, a Department/CEC-approved non-profit organization qualified pursuant to California Government Code section 65965 may hold fee title or a conservation easement over the mitigation lands. In the event an approved non-profit holds title, a conservation easement must be recorded in favor of the Department, in a form approved by the Department; in the event an approved non-profit holds a conservation easement over the mitigation lands, the Department must be named third-party beneficiary. In addition, in the case of a conservation easement, the Department would need to have periodic access to the mitigation lands to insure that the terms and conditions of the conservation easement are being met.

783.2(a)(9): This Section requires a proposed plan to monitor compliance with the minimization and mitigation measures and the effectiveness of the measures. The Application currently contains no mitigation monitoring and reporting plan. The Application should include a mitigation, monitoring, and reporting plan with performance criteria, monitoring methods, and contingency measures.

783.2(a)(10): This Section requires a description of the funding source and the level of funding available for implementation of the minimization and mitigation measures. The Application currently contains no discussion on funding assurances. Generally, the requirement for funds to manage mitigation lands in perpetuity is satisfied by


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establishment of a non-wasting endowment to be held by the Department or a Department-approved non-profit organization qualified to hold endowment funds. The endowment must be of an amount sufficient to generate annual interest in the amount necessary to meet expected annual maintenance and monitoring costs of the mitigation lands. The amount of the endowment should be determined by using a Property Analysis Record (PAR) or PAR-like analysis once the mitigation lands are identified. If Project implementation is anticipated in advance of conveying the mitigation lands and endowment and enhancement funding, security in the form of a pledged savings account or an irrevocable letter of credit would need to be provided prior to ground-disturbing activities. The security amount would need to be sufficient to purchase acreage equal to the amount to be set aside for mitigation and would also need to take into account current land values and inflation. In addition to covering land costs, the security would need to include endowment and enhancement costs determined for the mitigation acreage. The Department and CEC will conservatively estimate the required endowment amount if specific mitigation lands have not been identified and a PAR or PAR-like analysis has not yet been conducted at the time that permitting details must be specified by the Department.

The Department has determined, based on both the Project description, as well as our familiarity with the biological resources present on the Project site and Project area vicinity, that Project-related "take" of State-listed species is likely, and that it is appropriate to obtain a State incidental take authorization for this Project prior to commencing any ground-disturbing activities. Thus, any "take" that occurs prior to the issuance of a permit is not authorized. We look forward to working with you towards permit finalization.

If you have any questions regarding these comments, please contact Dave Hacker, Staff Environmental Scientist, at 3196 Higuera Street, Suite A, San Luis Obispo, California 93401, by telephone at (805) 594-6152, or by e-mail at dhacker@dfg.ca.gov.

Sincerely,



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Literature Cited

M.P. Huijser, T.D. Holland, A.V. Kociolek, A.M. Barkdoll, J.D. Schwalm. 2009. Animal-vehicle crash mitigation using advanced technology. Phase II: system effectiveness and system acceptance. Federal Highway Administration, Washington, D.C. FHWA-OR-TPF-09-14.



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
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**APPLICATION FOR CERTIFICATION
FOR THE *CARRIZO ENERGY*
*SOLAR FARM PROJECT***

**Docket No. 07-AFC-8
PROOF OF SERVICE
(Revised 5/11/2009)**

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DECLARATION OF SERVICE

I, Hilarie Anderson, declare that on May 27, 2009, I served and filed copies of the attached CDFG's Letter to the Applicant Regarding Incidental Take Permit Application. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: **[<http://www.energy.ca.gov/sitingcases/carrizo/index.html>]**. The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

For service to all other parties:

sent electronically to all email addresses on the Proof of Service list;

by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below **(preferred method)**;

OR

depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 07-AFC-8
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

Original Signature in Dockets
Hilarie Anderson