



**DOCKET**

**07-AFC-8**

DATE 8/6/2009

RECD. 8/6/2009

August 6, 2009

Mr. John Kessler  
Project Manager  
Attn: Docket No. 07-AFC-8  
California Energy Commission  
1516 Ninth Street, MS-15  
Sacramento, CA 95814-5512

Subject: Carrizo Energy Solar Farm (07-AFC-8)  
Applicant's Response to CDFG Comments (dated May 20, 2009) on the  
Incidental Take Permit Application for the Carrizo Energy Solar Farm  
URS Project No. 27658060.02100

Dear Mr. Kessler:

On behalf of Ausra CA II, LLC (dba Carrizo Energy, LLC), URS Corporation Americas (URS) hereby submits the Applicant's Response to CDFG Comments (dated May 20, 2009) on the Incidental Take Permit Application for the Carrizo Energy Solar Farm (Carrizo Energy Solar Farm 07-AFC-8).

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to submit the Applicant's Response to CDFG Comments (dated May 20, 2009) on the Incidental Take Permit Application for the Carrizo Energy Solar Farm on behalf of Carrizo Energy, LLC.

Sincerely,

URS CORPORATION

Angela Leiba  
Project Manager



ausra

Ausra, Inc.  
303 Ravendale Drive phone: 650.424.9300  
Mountain View, CA 94043 fax: 650.494.3893

August 3, 2009

Mr. Jeffery Single, Ph.D.  
Regional Manager  
California Department of Fish and Game  
Central Region  
1234 East Shaw Avenue  
Fresno, CA 93710

**Subject: Incidental Take Permit Application for the Carrizo Energy Solar Farm –  
Letter to URS from CDFG, Dated May 20, 2009**

#### **BACKGROUND/GENERAL COMMENTS**

On behalf of the Applicant, Carrizo Energy, LLC, URS has reviewed the above-referenced document (“May 20, 2009 Letter” or “Letter”), which is a response from CDFG to an informal review of the Applicant’s Incidental Take Permit Application (“Application”). URS and the Applicant have the following comments:

#### **GENERAL COMMENTS**

URS expected, based on a meeting held with CDFG, USFWS, and Carrizo Energy at the Central Region Office on February 5, 2009, that the Application would receive an **informal** review by staff at CDFG and USFWS. This informal review process was undertaken as part of our efforts to work together in the permitting process, to minimize multiple iterations of the Application, and to be sure we provided the information you needed. This agreement was made to allow for frank and open dialog between CDFG and Carrizo Energy. To our surprise, rather than providing guidance in the informal manner which was agreed upon by all participants in the February 5, 2009 meeting, CDFG docketed the response with the CEC. URS was not informed of this change in the process and feels that the team effort is not being reciprocated by the agencies.

The following are responses to specific comments on Sections in the Application that were deemed incomplete in the letter:

**1. 783.2(a)(1):**

The Applicant’s name is provided in full detail on the Streambed Alteration Agreement Form which was not provided based on the expectation that the Application would be reviewed informally prior to formal submission of the full package. This information will be added to the Application as well.



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2. 783.2(a)(2):

Kit fox is the only species for which the Applicant is requesting 'take' authorization; however, the CESF Project is not anticipated to cause take of kit fox as defined in Section 86 of the Fish and Game Code:

Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "*to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.*"

CESA allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species populations and their essential habitats.

3. 783.2(a)(3) : Complete

4. 783.2(a)(4): Complete

5. 783.2(a)(5) and 783.2(a)(6):

Additional discussion on incidental take has been added to the Application; however, URS maintains that the CESF site only provides foraging habitat and marginal pass-through habitat for kit fox. Because of the history and current altered use of the CESF site, the site should be called out as dryland crops and given the proper rating of habitat quality based on research and information that has been provided in the current habitat connectivity modeling process.

URS biologists have spent over two years conducting surveys on the CESF site. The site regularly is used for dryland crops such as carrots, wheat and barley; however, in response to a request from CDFG and USFWS to discontinue farming during project-related surveys in 2008-2009, it has not been used for farming and has become fallow. The baseline model for the Habitat Connectivity Planning for Selected Focal Species in the Carrizo Plain ("Corridor Model") identified the CESF site as **poor kit fox habitat** in Figure 8 (Attachment 1) of the first task, to which kit fox expert B. Cypher (from ESRP, California State University, Stanislaus) agreed. The vegetation was then arbitrarily changed by CDFG from dryland crops to a more suitable vegetation type (Annual Grassland - Avena) which resulted in a moderate to high quality kit fox habitat value in the Corridor Model and extended the corridor through the CESF site. On July 1, 2009 URS revisited the CESF site to ground-truth this classification, and found that this characterization still does not accurately represent current ground conditions on the CESF site as shown in the attached photograph log (Attachment 2). The site is currently comprised of ruderal, successional vegetation dominated by disturbance species such as mustard and fiddleneck, and is also actively grazed. As stated earlier, the CESF site would be used for dryland grain crops by the current landowner were it not for a direct request from CDFG to discontinue their current farming



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practices in 2008 and 2009. Therefore, although the CESF site is currently fallow, it should still be recognized as dryland grain crops or ruderal, disturbed habitat and not as annual grassland.

In the Corridor Model, dryland grain crops within 1 km (0.62 mi) of suitable natural habitat areas (suitability  $\geq 0.5$ ) were rated as 0.4, and dryland grain crops more than 1 km from suitable natural habitat were rated as 0.1 (where a rating of 1 is very suitable, and a rating of 0 is unsuitable). The same parameters should be used in the take analysis for the CESF project, so by applying the suitability value for dryland grain crops from this model, the vegetation on the CESF site would be correctly rated as nearly unsuitable to moderately suitable for kit fox, consistent with how URS has previously characterized the site. Several studies show that kit fox habitat quality is poor on dryland crop agricultural lands because they are repeatedly disturbed and altered by semiannual disking. Retired or fallow agricultural lands can quickly become dominated by dense stands of non-native plants that inhibit or even prevent colonization by native plant species (Ritter and Lair 2007); which is the case recently observed on the CESF site. This results in a sub-optimal plant community composition for kit foxes and their prey, which prefer arid habitats with a relatively low, sparse vegetation structure (U.S. Fish and Wildlife Service 1998, Germano et al. 2001, Smith et al. 2006). Furthermore, disking on agricultural lands could preclude successful colonization by kit foxes because it greatly limits the establishment of rodent burrows, particularly for kangaroo rats, may inhibit den establishment by kit foxes, and may collapse occupied dens resulting in kit fox mortalities (Cypher et al. 2007).

Several studies have found that San Joaquin kit fox prefer kangaroo rats as prey, and that kit fox distribution and abundance are closely related to kangaroo rat distribution and abundance. (Constable et al. 2009, Warrick et al. 2007, Meaney et al. 2006). Results of the intensive small mammal trapping program on the CESF site in 2008 demonstrated that the site lacks a strong prey base for kit fox with only 44 rodents captured that represent only 3 different species. Most notably, kangaroo rats were not detected on the CESF site.

Kit fox den monitoring was not conducted because kit fox presence in and surrounding the CESF site was assumed, although the CESF site is likely only valuable as pass through and marginal foraging habitat (Warrick et al. 2007, Cypher et al. 2007). No evidence of kit fox occupation were made during two seasons of field effort on the site, including two seasons of intensive BNLL surveys involving many biologists knowledgeable of kit fox sign. It is important to note that in a recent study of kit fox use of agricultural lands in the San Joaquin Valley, kit fox were observed to use annual croplands less than expected during both years of the study (Warrick et al. 2007). This was attributed to low prey diversity and abundance, and the frequent ground disturbance that occurs in agricultural fields in the San Joaquin Valley, which parallels the typical conditions at the CESF site as shown in Figure 8 from Task 1 of the Corridor Model (Attachment 1).

Furthermore, the minimum patch size for kit fox is defined as a contiguous area of medium to high suitable habitat that is capable of supporting at least two individuals, and is estimated as 486 hectares (Warrick et al. 2007). Any suitable habitat less than 486 ha is defined as less than a



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patch; and in the Corridor Model, these areas were considered possible stepping stones between potential patches and core areas. The CESF site totals 259 ha of land that will be permanently developed, and 154 ha of temporary impacts. The permanent impacts represent slightly more than half of a patch size if the habitat were medium to high suitability, which the CESF site is not. Even if the CESF site were found in optimal habitat, 259 ha would not be large enough to support two kit fox individuals; at most it provides habitat capacity for less than a half of a territory.

**6. 783.2(a)(7)**

The Application has been amended to include discussion regarding jeopardy determination.

**7. 783.2(a)(8)**

The Application has been amended to clarify and provide additional discussion regarding mitigation.

Mitigation measures that were identified in the Application that include habitat enhancement and creation would increase the amount of suitable habitat that is available to kit fox within an area that maintains the linkage. Implementation of standard kit fox BMPs would preclude mortality of kit fox during project construction, and additional mitigation that is currently included and that has been added to the Application would further improve the species' continued capability to survive and reproduce.

Although the other two reasonably foreseeable projects as currently designed will likely remove a large portion of the assumed kit fox linkage near the CESF project site, the mitigation measures proposed in the Application would represent CESF's fair share for impacts to the overall linkage in the Plain. Based on the outcome of the Corridor Model, CESF proposes to provide additional mitigation lands that fall within the identified least-cost path for kit fox to the extent practicable. While cumulative impacts for reasonably foreseeable projects must be considered, CESF is not responsible for impacts caused by other projects. CESF is only responsible for the contribution that the project causes. The ongoing evolution of the designs of the other proposed projects should not affect the mitigation for the CESF project, as CESF should not be expected to mitigate for the future, speculative impacts of the other projects.

**8. 783.2(a)(9)**

A mitigation monitoring and reporting plan has been added to the Application.

**9. 783.2(a)(10)**

Discussion on a funding source has been added to the Application.



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We appreciate CDFG's review of our draft Application and look forward to continued discussions of the appropriate mitigation for the impacts of the Carrizo Solar Energy Farm and its contribution to the cumulative impacts of all three projects.

Sincerely,

Sean Kiernan  
Carrizo Energy, LLC

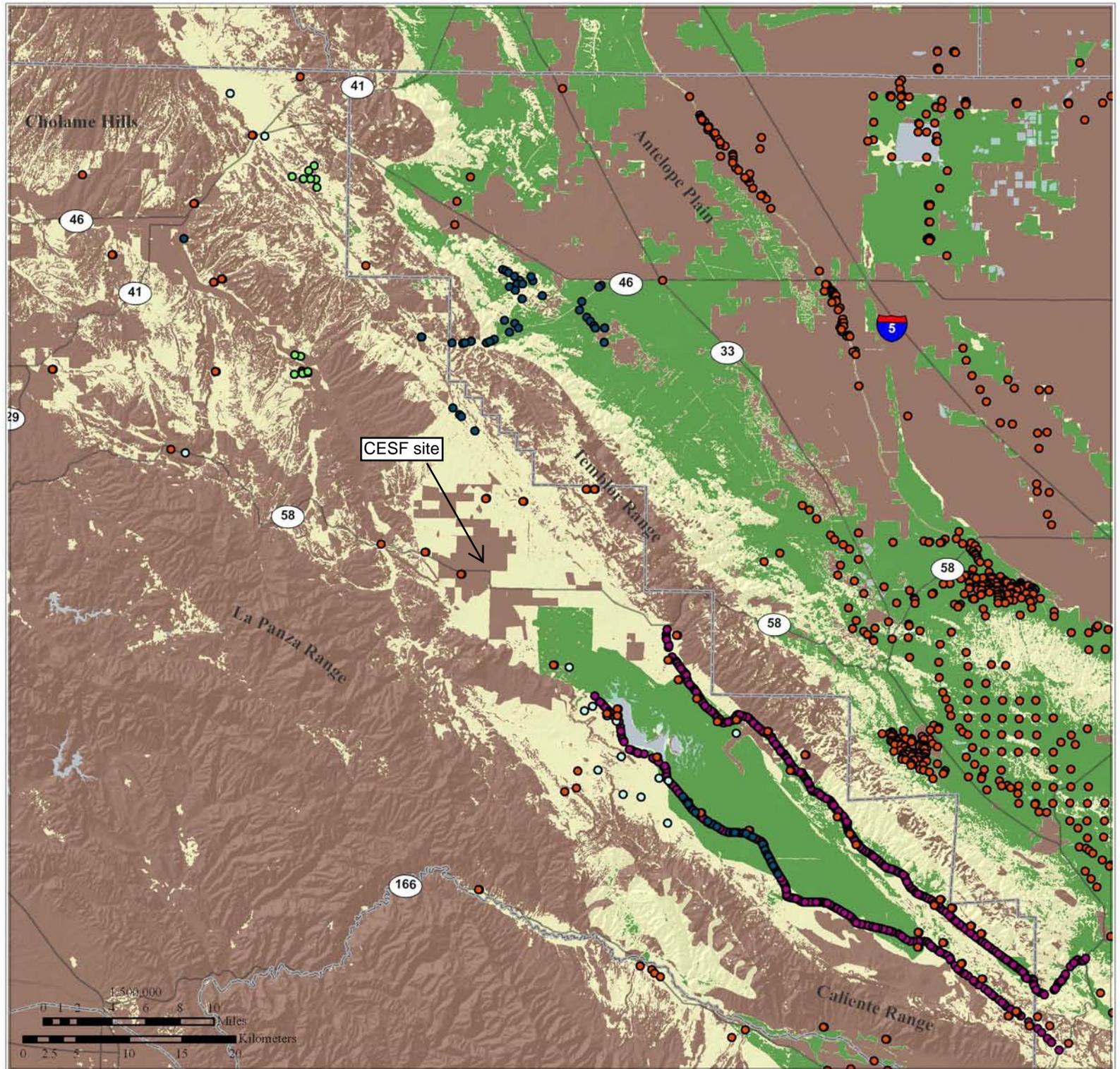
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**Figure 8**  
**Habitat Suitability**  
**for**  
**San Joaquin kit fox**

**Degree of Suitability**

- High
- Med
- Low
- Kit Fox Sightings
- ESRP Kit Fox Sightings
- Spotlight observations
- Incidental observations
- Telemetry locations
- Car Sightings
- CNDDDB Kit Fox
- Highways
- County Boundaries
- Hydrography



Map Produced By:



SC Wildlands  
 Science & Collaboration  
 for Connected Wildlands





**Photograph #1**

**Comments:**

View of CESF site in 2007. Recently disked cropland.



**Photograph #2**

**Comments:**

View of recently disked CESF site in 2007.



**Photograph #3**

**Comments:**  
View of CESF site in 2008. Dense and 2-3 foot high fiddleneck-dominated vegetation.



**Photograph #4**

**Comments:**  
View of CESF site in 2008. Dense and 2-3 foot high vegetation dominated by fiddleneck and mustard.



**Photograph #5**

**Comments:**

View of the northwestern corner of the CESF Project site in 2009.

Disturbed/ruderal vegetation. Barley is the dominant species, with mustard mixed in.



**Photograph #6**

**Comments:**

View of northeastern corner of the CESF site in 2009.

Disturbed area with barley and mustard species.



**Photograph #7**

**Comments:**

View of CESF site immediately to east from Tracy Lane in 2009. Disturbed and comprised of barley (dominant), bromus and mustard.



**Photograph #8**

**Comments:**

View of middle of CESF site in 2009: obviously disturbed and successional vegetation dominated by mustard.



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT  
COMMISSION OF THE STATE OF CALIFORNIA  
1516 NINTH STREET, SACRAMENTO, CA 95814  
1-800-822-6228 – [WWW.ENERGY.CA.GOV](http://WWW.ENERGY.CA.GOV)

APPLICATION FOR CERTIFICATION  
FOR THE *CARRIZO ENERGY*  
*SOLAR FARM PROJECT*

Docket No. 07-AFC-8

PROOF OF SERVICE

(Revised 7/27/2009)

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DECLARATION OF SERVICE

I, Kristen E. Walker, declare that on August 6, 2009, I served and filed copies of the attached Applicant's Response to CDFG Comments (dated May 20, 2009) on the Incidental Take Permit Application for the Carrizo Energy Solar Farm. 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**);

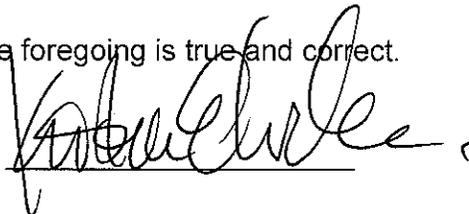
**OR**

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

**CALIFORNIA ENERGY COMMISSION**

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Sacramento, CA 95814-5512  
[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

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

  
\_\_\_\_\_