

DOCKET

09-AFC-6

DATE FEB 05 2010

RECD. FEB 11 2010

February 5, 2010

Alan Solomon
Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: **Blythe Solar Power Project, Docket No. 09-AFC-6**

Responses to January 28, 2010 CEC Email Queries

Technical Area:

Biological Resources - Additional Information – Couch's Spadefoot Toad

Dear Mr. Solomon:

In a January 28, 2010 Email, CEC staff requested additional information and clarification in the technical area of Biological Resources, specifically information on the Couch's Spadefoot Toad. Attached please find our responses to those specific questions.

If you have any questions on these data responses to the staff's email queries, please feel free to contact me directly.

Sincerely,



Alice Harron
Senior Director, Development

**STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION**

In the Matter of:
APPLICATION FOR CERTIFICATION
for the *BLYTHE SOLAR POWER PROJECT*

Docket No. 09-AFC-6
PROOF OF SERVICE
(Revised 1/26/2010)

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DECLARATION OF SERVICE

I, Carl Lindner, declare that on, February 5, 2010, I served and filed copies of the attached Blythe Solar Power Project Data Response Materials:

Data Responses to January 28, 2010 CEC Staff Email Queries
Technical Areas: Biological Resources – Additional Data – Couch’s Spadefoot Toad

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:

[\[http://www.energy.ca.gov/sitingcases/solar_millennium_blythe\]](http://www.energy.ca.gov/sitingcases/solar_millennium_blythe).

The document has been sent to 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:

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

 by personal delivery or by overnight delivery service or depositing in the United States mail at Camarillo, California with postage or fees 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:


 X 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, along with 13 CDs, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 09-AFC-6
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.



**Responses to CEC Email Query,
January 28, 2010
Biological Resources, Additional Data,
Couch's Spadefoot Toad**

**Blythe Solar Power Project
Docket No. 09-AFC-6**

Alice Harron
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Data Response Queries – CEC Email dated January 28, 2010

Couch's Spadefoot (*Scaphiopus couchii*) Background

Couch's spadefoot is a California Department of Fish and Game (DFG) species of special concern and is considered Bureau of Land Management (BLM) sensitive (DFG 2009).

Couch's spadefoot is tolerant of dry terrain. Suitable habitat includes shortgrass prairie, as well as mesquite savannah, creosote bush desert, thornforest and tropical deciduous forest (w. Mexico) and other areas of low rainfall (Stebbins 2003, Behler 1979). Road and railway construction and agricultural irrigation areas also create temporary pools that can be used by this species. Scattered populations of this species are found in California between Amos and Ogilby on eastern side of Algodones Dunes; Purgatory and Buzzard's Peak Washes, Imperial County; and 15 miles north of Vidal Junction, San Bernardino County. This species is found from near sea level to about 5600-feet (Stebbins 2003). The nearest known California Department of Fish and Game Natural Diversity Database (CNDDDB) occurrence from the Blythe and Palen sites is an observation from 1989 in an alfalfa field. This observation is approximately 12 miles to the south of the Blythe site and 32 miles to the southeast of the Palen site.

Spadefoots are mainly nocturnal with juveniles sometimes active in daylight. This species spends most of the year (dry period) within either self-made burrows or small mammal burrows (Stebbins 2003) and becomes active during spring and summer rains.

Spadefoots breed in pools that form after heavy rains or in slow streams, reservoirs or irrigation ditches (Stebbins 2003). Mating occurs after heavy rainfall in April through September. Because this species often breeds in temporary rainpools that may dry up soon after the rain ends, Couch's spadefoots have an accelerated development (Behler 1979). Eggs are laid on plant stems in temporary pools and if the spot is warm may hatch in 36 hours (Behler 1979) and as little as 15 hours at water temperatures of 86 °F. The total period of time from egg to tadpole to metamorphosed frog is generally two to six weeks before ponds dry up (Behler 1979) but can be as little as nine days.

Spadefoots are carnivorous as adults and an insect food base, especially including termites, must be available for this species (DFG 2009).
Blythe and Palen Sites

Both the Blythe and Palen sites occur within the range of Couch's spadefoot and contain sufficient forage (termites and other insects) to support this species. An essential element for this species to successfully breed on-site is artificial or temporary water catchments to would allow for ponding of water for a sufficient duration for tadpoles to metamorphose into frogs. The length of time for metamorphosis to occur for Couch's spadefoot is dependent on temperature but can be as quickly as nine days.

At both Blythe and Palen both the desert dry wash woodlands (and unvegetated ephemeral channels) occur in shallow compound channels with non-cohesive sandy banks comprised of entisol substrate; which are young, coarse, sandy soils which are fluvial depositional in origin. These soils have high infiltration rates even after a flooding event and have a low potential for surface ponding. Due to the permeability of this sandy substrate, even after a flooding event, water tables drop quickly within hours to a few days depending on the intensity and duration of the event. In normal events, these soils cannot support surface ponding. The situation is the same for the developed swales at both Blythe and Palen.

Ponding of water may have a potential to occur where service road crossings go over channels or swales at both Blythe and Palen, since the service roads create minor topographical obstructions that slow down surface flow velocity and the compaction of the soils create reduced infiltration rates.

Biological surveys during the 2009 season were intensive. Evidence of crusting of soils was observed, but was due to sporadic rainfall coalescing soils. The soil crusts at both sites were not well developed biological crusts and were predominantly mineral in origin and were mainly dependent on rainfall for development, not on pooling of water. Seasonal ponding or evidence of prior seasonal ponding that would be sufficient to support development of this species was not observed during surveys in the 2009 season. This species was not observed and is not expected within the disturbance area as described in the Application for Certification (AFC).

1) Was this species considered during surveys (it doesn't show up in the AFC or other documents)?

While this species was not included as a target species for our surveys, the rigor of our wildlife surveys is such that habitat and individuals of other species would be recorded if observed. This species is not anticipated to occur at the Palen or Blythe sites due to lack of suitable breeding habitat detected onsite.

2) Is there any topography that could allow for ponding? This may include:

- a. natural depressions
- b. disturbance that created artificial depressions or pits
- c. berms
- d. roads that could block water

As discussed above, no seasonal ponding or evidence of past seasonal ponding that would have been sufficient to support breeding of this species was observed in 2009. The most likely location for ponding at both sites is where service road crossings go over channels or swales.

3) Was there any indication that ponding may/does not occur at the base of dunes?

- a. Was there any evidence of ponding at the site?
- b. Is there any information the applicant can offer to eliminate the possibility of ponding at the site?

There was no indication during surveys conducted in 2009 that ponding occurs within the Palen site regularly to be sufficient to support breeding of this species, as no ponds were observed in 2009 at the base of the dunes or any other location.

Literature Cited

Behler, John L. 1979. National Audubon Society Field Guide to North America Reptiles and Amphibians. Alfred, A. Knopf, New York.

California Department of Fish and Game (DFG). 2009. State of California: The Natural Resources Agency, Department of Fish and Game, Biogeographic Data Branch, California Natural Diversity Database, Special Animals. Updated July 2009.

Stebbins, Robert C. A Field Guide to Western Reptiles and Amphibians. 3rd Edition. Houghton Mifflin Company, 2003.