State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
407 West Line Street
Bishop, CA 93514
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

February 14, 2013

Ms. Karen Douglas
Lead Commissioner
California Energy Commission
1516 Ninth Street, MS-29
Sacramento, CA 95814-5512

Subject: Hidden Hills Solar Electric Generating System
State Waters Compensatory Mitigation

Dear Commissioner Douglas,

The California Department of Fish and Wildlife (CDFW) reviews and provides comments and recommendations on project documents prepared pursuant to the California Environmental Quality Act (CEQA) to fulfill its trustee and responsible agency obligations. Further, the Legislature finds and declares that the protection and conservation of the fish and wildlife resources of this state are of utmost public interest and that the CDFW has jurisdiction over conservation for these resources. Pursuant to a Memorandum of Understanding between the California Energy Commission (CEC) and the CDFW (November 2008), a Renewable Energy Action Team was created to provide a streamlined permitting process for renewable energy projects. CDFW's Renewable Energy Program was created to help facilitate these goals and is responsible for coordination with the CEC relative to environmental review of proposed renewable energy projects. The CDFW Renewable Energy Program staff ensures compliance with CESA and lake and streambed alteration pursuant to Section 1600-1616 of the Fish and Game Code (FGC).

Section 1600 – 1616 of the FGC pertain to activities that will substantially obstruct or divert the natural flow of any river, stream, or lake; or change or use any material from the bed, channel, or bank of any river, stream, or lake. FGC §1602 applies to any river, lake, or stream, including those that are perennial, ephemeral, or intermittent.

The CDFW defines a stream as:

> "A body of water that flows perennially or episodically and that is defined by the area in which water currently flows, or has flowed over a given course during the historic hydrologic course regime, and where the width of its course can reasonably be identified by physical or biological indicators."

Ephemeral streams in dryland watersheds provide the same ecosystem services as perennial streams, largely determining the ecological health of the entire watershed. These desert streams and washes support biological communities that do not depend on mature woodland or stream corridor conditions and are the predominant fluvial forms in arid and semiarid environments, supporting high biodiversity and habitat values relative to drier uplands. Ephemeral streams provide ecosystem services such as: watershed and landscape hydrologic connections; water supply protection and water-quality filtering; wildlife habitat and movement/migration corridors; groundwater recharge and discharge; sediment transport, storage & deposition; nutrient cycling and movement, and vegetation community support. By way of example of the latter: summer 2012 stream flow from a modest rainfall event (± 1/4-inch) resulted in water ponding and the accumulation of seed from rattlesnake weed that was transported by water to the lower and terminal reaches of ephemeral streams within the project boundaries. Here the seeds of rattlesnake weed (one of the preferred native annual foods of desert tortoise) and other annuals were geminating and highly concentrated in the saturated soils, and providing a summer food source to wildlife, including desert tortoise.

Within the project boundaries of the Hidden Hills Solar Electric Generating System (hereafter Hidden Hills Solar Project, or Project), hydrologic function will be severed to ephemeral streams and nearly all habitat values for wildlife will be permanently lost by lining ephemeral channels with compacted riprap or geosynthetic matting, pipeline construction (regardless of whether it is via trenching or boring), construction of a storm detention berm at the western boundary, road construction, site grading for placement of thousands of heliostats, perimeter exclusion fencing, dust and weed control, vegetation mowing and removal, mirror washing, glare and lighting, and increased human-caused disturbance. The natural discharge flow patterns of the complex distributaries stream network will not remain untouched and unchannelized, as stated by the project applicant.

It is the CDFW's Policy (March 2012) to require full mitigation for impacts to fish and wildlife resources. The CDFW initially proposed a 3:1 replacement-to-impact ratio to compensate for permanent impacts to the Pahrump Playa stream network and associated ecosystem services lost as a result of project activities. However, the CDFW agreed in this instance to accept a minimum 2:1 ratio for these impacts based on the applicant's modification to a project design that permits natural flows and physical processes to continue unaltered on a portion of the streams within the project area.

Similarly, the CDFW rejects the applicant's contention that impacts to Desert Tortoise (DT) can be mitigated at a 1:1 ratio, or less as has been proposed by the applicant. Impacts to DT require full mitigation. Although the Project area is not within a Desert Wildlife Management Area, Designated Critical Habitat or Area of Critical Environmental Concern, DT have been observed (both direct and indirect sign) across the majority of the Project area. The Project will result in both direct and indirect (habitat loss) impacts to DT. Although DT population density is estimated through modeling tools, the actual

number of DT's present is likely greater, based on previous large-scale projects where the actual number of DT's present greatly exceed the number estimated. The CDFW agreed in this instance to accept a minimum of 1:1 ratio for impacts to desert tortoise habitat for areas dominated by shadscale scrub communities and a minimum 3:1 ratio for impacts to desert tortoise habitat for the balance of the Project area. This agreement is predicated on the same mitigation ratio values applied to compensatory habitat.

The CDFW rejects the applicant's contention that they should not be held to any higher mitigation standard than the lowest 1:1 ratio used elsewhere. The CDFW's acceptance of differing mitigation ratios for other renewable energy projects has no bearing on and is not precedent setting from one project to the next; each renewable energy project is located in a unique and varied location and includes a different array of biological resources and associated project impacts. The CDFW comments from prior renewable energy projects do not take precedence over comments specific to the Hidden Hills Solar Electric Project or to the CDFW's Policy of seeking a full mitigation replacement-to-impact ratio for fish and wildlife resources.

Questions regarding this letter and further coordination on these issues should be directed to Ms. Debra Hawk, Habitat Conservation Supervisor, at (760) 872.1126 or by electronic mail at: Debra.Hawk@wildlife.ca.gov.

Sincerely,

Debra C. Hawk

for Leslie MacNair
Environmental Program Manager

cc: Carol Watson, California Energy Commission
Chron