

Data Response 1C

Hidden Hills

Solar Electric Generating System

(11-AFC-2)

DOCKET

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Application for Certification
Hidden Hills Solar I, LLC; and Hidden Hills Solar II, LLC

December 19, 2011

With Technical Assistance from



CH2MHILL®

Hidden Hills Solar Electric Generating System (HHSEGS)

(11-AFC-2)

**Data Response, Set 1C
(Response to Data Requests 77 though 96)**

Submitted to the
California Energy Commission

Submitted by
**Hidden Hills Solar I, LLC; and
Hidden Hills Solar II, LLC**

December 19, 2011

With Assistance from
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Introduction

Attached are Hidden Hills Solar I, LLC, and Hidden Hills Solar II, LLC (collectively, “Applicant”) responses to the California Energy Commission (CEC) Staff’s data requests numbers 77 through 96 for the Hidden Hills Solar Electric Generating System (HHSEGS) Project (11-AFC-2). The CEC Staff served these data requests on November 17, 2011, as part of the discovery process for HHSEGS. The responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as CEC Staff presented them and are keyed to the Data Request numbers (77 through 96). New graphics or tables are numbered in reference to the Data Request number. For example, the first table used in response to Data Request 84 would be numbered Table DR84-1. The first figure used in response to Data Request 84 would be Figure DR84-1, and so on. AFC figures or tables that have been revised have “R1” following the original number, indicating revision 1.

Alternatives (77)

BACKGROUND

Subsection 6.2 of the Application for Certification (AFC) discusses alternative sites that were part of the screening analysis for off-site alternatives to the Hidden Hills Solar Energy Generating System (HHSEGS) project site. Alternative sites that were considered include the following:

- Centennial Flat
- Panamint Valley
- Chicago Valley
- Tecopa
- Sandy Valley
- Death Valley Junction
- Calvada South
- Trona

Of these eight off-site alternatives, the project applicant carried forward only the Calvada South and Trona sites for further analysis. The remaining six were not retained by the project applicant for further analysis based on a limited review of the sites' characteristics compared to the screening criteria. Section 6.2.1.1, "Alternative Sites That Are Not Feasible," briefly discusses the reasons for eliminating the six alternatives. Some of the stated reasons are excessively long linears (i.e., long transmission lines and natural gas pipelines), biological sensitivity (e.g., in known ranges of desert tortoise or Mohave ground squirrel), possible shortfalls of contiguous private land acreage, location relative to the China Lake Naval Air Weapons Station, and high visual sensitivity.

Water supply for the six rejected alternatives is described either as "uncertain," "medium," or "poor." Section 6.2.1.3, "Alternative Sites Would Fail to Satisfy Some of the Project Objectives," states that the Panamint Valley, Tecopa, Chicago Valley, and Death Valley Junction alternative sites have constrained transmission capacity requiring system upgrades "that would make it more difficult, if not impossible, for those areas to be available by 2015." Chicago Valley is identified as the only location that has sufficient contiguous private land to meet the development schedule. Tecopa and Sandy Valley are identified as being too small to allow for the project as proposed.

Based partially on information provided in the AFC, staff concurs with the project applicant's rejection of the Centennial Flat, Panamint Valley, Chicago Valley, Tecopa, and Death Valley Junction alternative sites. The U.S. Geological Survey (USGS) desert tortoise habitat rating for the Trona and Calvada South alternative sites is 0.8 or 0.9, and the required mitigation ratios for these sites would be commensurately high. Based on the USGS rating for tortoise habitat and other environmental issues, these sites are not being retained for analysis by staff. Additional information is needed documenting the applicant's decision to reject the Sandy Valley site.

Alternatives Table 1 includes information provided by the project applicant for the Sandy Valley alternative site. Staff's data requests pertaining to this alternative follow the table.

Alternatives Table 1 Information from the Application for Certification on the Sandy Valley Alternative Site	
Criteria	Sandy Valley Alternative Site
Area and slope	Uncertain whether contiguous land of adequate size is available. No information on slope is provided.
Ability to obtain site control	Sufficient private land may be available, but many parcels are in agricultural use.
General plan and zoning	No information provided.
Transmission lines	Approximately 50 miles of new transmission line required.
Natural gas pipeline	The Kern River Gas Transmission pipeline is about 25 miles away.
Water supply	Individual wells supply water.
Desert tortoise	The site is among the alternatives with the highest ratings for tortoise habitat suitability; however, much of the land has already been disturbed by agricultural use. Staff notes that the USGS habitat rating is 0.6, and the site is adjacent to areas with ratings of 0.5 and 0.6.
Mohave ground squirrel	No information provided, but staff notes that the site is not within the range of Mohave ground squirrel.
Visual quality	No information provided.
Economic viability	"Medium" because the linears are long, but not as long as for other alternative sites. Staff notes that the linears for the Sandy Valley alternative are comparable to those proposed for the HHSEGS project. The proposed project would require either 39 miles or 67 miles of new transmission line, depending on the selected transmission option.

DATA REQUESTS

77. Sandy Valley – Please provide the following:

- a. Information on slope and potential available acreage in the area, including potentially available contiguous acreage in the northeast corner of San Bernardino County. Include a map showing a possible project site and footprint. Describe the topography and elevations in the area.

Response: The Sandy Valley area was eliminated from further analysis primarily as a result of the number of private property owners (see Figure DR77-1) and private parcels that make it very difficult (if not impossible) for an entity without the power of eminent domain to assemble parcels of sufficient size and shape to make the project work.

Specifically, as set forth in Section 6.0 of the AFC (Alternatives):

Sandy Valley may have a sufficient amount of private land to accommodate the HHSEGS project, but many of the private parcels located in Sandy Valley are currently being used for agricultural purposes. Even assuming that the agricultural lands might be available for sale, land consolidation and landowner cooperation is expected to be too time consuming and costly to obtain site control within a reasonable time period and certainly not in time for planned commercial operations, targeted for the first/second quarter of 2015. (HHSEGS AFC, Section 6.2.1.1.2, p. 6-6.)

The AFC includes this important discussion on the infeasibility of Sandy Valley, and, as discussed below, the Applicant is aware of no new facts or circumstances that change this fundamental conclusion.

- b. Information on the number of landowners with property in the area. Discuss land ownership for the area and the acreage of land that is privately owned.

Response: Land ownership information is depicted on Figure DR77-1.

- c. Information on public lands in the area. Describe applicability of the U.S. Bureau of Land Management's plan for the Northern and Eastern Mojave Planning Area to land uses in the area.

Response: Please refer to Data Response 77a above. As described in the AFC, the ownership of the Sandy Valley lands is private, mostly used for agricultural purposes. Applicant does not possess this information because this alternative was not carried forward due to the infeasibility of acquiring site control for the necessary acreage due to the vast number of private owners.

- d. Information on Inyo County's general plan designation and zoning for private land in the area.

Response: Based on review of the information available on the Inyo County website, the Sandy Valley lands appear to be in the Agriculture (A) General Plan designation. Zoning appears to primarily be Open Space with a minimum 40 acre parcel size (OS-40).

- e. Description of existing land uses at the site and in the surrounding area. Include acreage figures for areas in agricultural uses.

Response: Many of the private parcels located in Sandy Valley are currently being used for agricultural purposes. Beyond this basic information, Applicant does not possess this information because this alternative was not carried forward due to the infeasibility of acquiring site control for the necessary acreage due to the vast number of private owners.

- f. Information on site access from public roads in the area.

Response: There are public roads in the surrounding vicinity, as demonstrated on local mapping software. Again, Applicant does not possess this information because this alternative was not carried forward due to the infeasibility of acquiring site control for the necessary acreage due to the vast number of private owners.

- g. Details and a map on a plan and route for a transmission line interconnection at the Eldorado Substation. Also address the feasibility of connecting to the Mt. Pass substation approximately 30 miles southeast. Estimate the cost for generation tie

(gen-tie) lines to the Eldorado and Mt. Pass substations. Compare those costs to the known or estimated cost for the gen-tie line for the HHSEGS project.

Response: The AFC notes that the Sandy Valley site would require approximately 50 miles of new transmission. (HHSEGS AFC, Section 6.2.1.1.3, p. 6.6; see also Table 6.2-2.) Applicant does not possess information beyond the information presented in the AFC because this alternative was not carried forward due to the infeasibility of acquiring site control for the necessary acreage due to the vast number of private owners.

- h. Information and a map showing a potential connection to the Kern River Gas Transmission pipeline.

Response: “The existing Kern River Gas Transmission (KRG T) pipeline is located approximately 25 miles from the Sandy Valley location.” (HHSEGS AFC, Section 6.2.1.1.3, p. 6-7; see also Table 6.2-2.) Applicant does not possess any additional information because this alternative was not carried forward due to the infeasibility of acquiring site control for the necessary acreage due to the vast number of private owners.

- i. Discussion of the state of groundwater levels in the basin, including a discussion of whether the basin is in an overdraft or recovery state. Identify opportunities to mitigate potential impacts to groundwater.

Response: Individual wells supply water to the Sandy Valley area. (HHSEGS AFC, Section 6.2.1.1.3, p. 6-7; see also Table 6.2-2.) While Applicant has no additional data, given that this alternative was not carried forward due to the infeasibility, it may be the case that the existing use of groundwater for agricultural purposes in Sandy Valley exceeds the anticipated water use of a dry-cooled facility of the HHSEGS design.

- j. Details on the individual water supply wells in the area, including the number of wells and current uses. Discuss any water allocations for agricultural use, and identify the potential source(s) of water for this alternative.

Response: Applicant does not possess this information, and the Applicant believes it would have been economically wasteful to attempt to gather such data. This alternative was not carried forward due to the infeasibility of acquiring site control for the necessary acreage due to the vast number of private owners.

- k. Information on the visual quality of the area. Include a discussion of how the project might impact views from the Pahrump Valley Wilderness. Compare the visual quality of this alternative location to the HHSEGS project area.

Response: Applicant does not possess this information because this alternative was not carried forward due to the infeasibility of acquiring site control for the necessary acreage due to the vast number of private owners.

- l. Information on habitat types and protected plant and wildlife species that could be present in the area. Include data obtained from a California Natural Diversity Database record search for the area.

Response: Figure 6.2-1 of the AFC, “USGS Tortoise Habitat Model,” provides a high-level summary of available information. [AFC, Section 6 (figures are at the end of the Section).] Beyond this reconnaissance level of information, which is of value to a CEQA alternatives analyses, Applicant does not possess this information because this alternative was not carried forward

due to the infeasibility of acquiring site control for the necessary acreage due to the vast number of private owners.

- m. Information on the sensitivity of the area for cultural resources and the potential for discovery of cultural artifacts.

Response: Applicant does not possess this information because this alternative was not carried forward due to the infeasibility of acquiring site control for the necessary acreage due to the vast number of private owners.

- n. Description of how the economic viability of this alternative compares to the HHSEGS project.

Response: The time and resources required to attempt to assemble private land holdings for an entity without eminent domain powers makes the Sandy Valley site economically infeasible, especially within the development timeframe which is one of the Applicant's basic project objectives: "...land consolidation and landowner cooperation is expected to be too time consuming and costly to obtain site control within a reasonable time period and certainly not in time for planned commercial operations, targeted for the first/second quarter of 2015". (AFC, Section 6.2.1.1.2, p. 6-6.)

Contiguous Private Land Owners

PPC No.: 651-34 - T19N R12E and T19N R13E, San Bernadino County, California

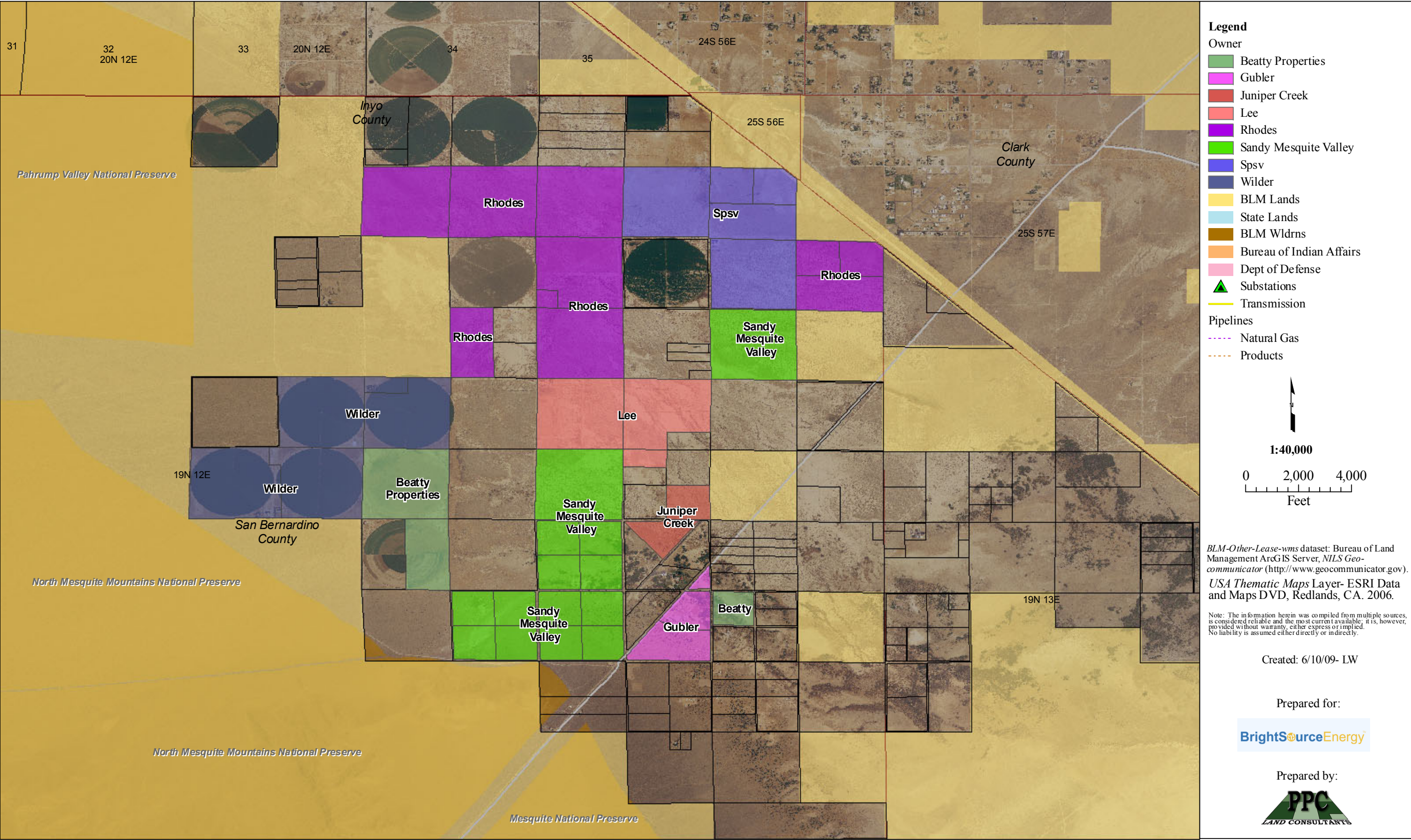


FIGURE DR77-1
Private Land Ownership
Hidden Hills Solar Electric Generating System

Biological Resources (78-92)

DESERT KIT FOX

BACKGROUND: In AFC Section 5.2.6.7, the applicant did not include desert kit fox as a species observed or likely to occur within the site nor was it included in Appendix 5.2B, Potentially Occurring Special-status Wildlife; however, in the burrowing owl discussion (Section 5.2.6.7.2), owls were discussed as occupying old kit fox natal dens. Appendix 5.2F, Desert Tortoise Survey Report, which also includes results and discussion of other sensitive wildlife (burrowing owl and American badger) indicates kit fox sign was observed within the main project site although does not discuss results or sign of these observations. Although the AFC does not discuss this species occurrence in the project site or identify the location any kit fox sign found during field surveys, the applicant's Data Adequacy Supplement A briefly discussed project impacts to denning and foraging habitat for desert kit fox with impacts being less than significant and not requiring any further mitigation. Data Adequacy Supplement B provided some additional information on construction impact avoidance measures and a Record of Conversation with Craig Bailey of the California Department of Fish and Game (CDFG).

Desert kit fox is not listed or protected under the federal or state Endangered Species Acts; however, take of this species is defined and covered under Title 14 of the California Code of Regulations and Fish and Game Code Section. Further, California Fish and Game Code (§ 4000 - 4012) defines kit fox as a fur-bearing mammal and take is not allowed without the proper fur-bearing take permit. Therefore, desert kit fox is a special-status species and should be considered during staff's CEQA review of this project. If desert kit fox does occupy the project site either as a foraging or breeding mammal, staff must analyze the potential for impacts to this species, especially if natal or satellite dens occur within the site.

DATA REQUEST

78. As indicated in AFC Appendix 5.2F, please provide a discussion of the type of kit fox sign (scat, tracks, and dens) found during field surveys and a map showing the locations of kit fox sign. If potential kit fox dens or complexes were observed, identify the number of burrows and whether they are likely to be natal or satellite dens.

Response: Applicant disagrees with Staff's statement that desert kit fox is a special-status species. Notwithstanding this disagreement, a discussion of kit fox occurrence, maps, data and potential impacts are included in APPENDIX 5.2F-R1 Presence/Absence Survey for the Desert Tortoise (*Gopherus agassizii*) and other Sensitive Wildlife on the proposed Hidden Hills SEGS Project, San Bernardino County, California. Revision 1. November 18, 2011 (submitted with Data Response Set 1B). The following is an excerpt:

The desert kit fox inhabits arid and semi-arid regions encompassing desert scrub, chaparral, halophytic, and grassland communities and generally avoid rugged terrain. Loose textured soils may be preferred for denning. Burrows were generally concentrated along the central region of the northeast border of the site between 2,600 and 2,650 feet elevation. Active burrow complexes were scattered randomly amongst inactive burrow complexes. Although all sign encountered was recorded, no time or effort was put into determining whether the burrows were likely to be natal or satellite dens.

NELSON'S BIGHORN SHEEP

The applicant reported in the AFC (Section 5.2.6.7.3) that Nelson's bighorn sheep (BHS) signs (pellets and horn fragment) were observed on the project site during botanical surveys, and this species is known to occupy the Nopah and Kingston ranges surrounding the project site. The applicant also indicated in Data Adequacy Supplement A (Section 7, page 15) that the site does not provide BHS cover and foraging habitat. In the spring when annual plants are available, BHS tend to disperse downhill to bajadas and alluvial fans to forage. Staff believes the site may provide foraging habitat given the presence of several desert washes throughout the site, sheep sign observed during field surveys, and known occurrences of BHS in nearby mountain ranges. Since this is a BLM sensitive species, potential impacts to regional movement between occupied territories is also of concern to staff and the resource agencies.

DATA REQUESTS

79. Please provide data on the occurrence of BHS metapopulations and demes (isolated subpopulations) in the project area. Also, provide maps of likely BHS movement corridors across the project site and in the greater vicinity of the project, and a discussion of whether the potential project site could be in a BHS movement corridor between occupied or potentially BHS occupied mountain ranges.

Response: No bighorn sheep are known for the project area. This area is not a likely corridor for bighorn sheep because it is far from escape habitat. An occasional sheep may wander into this area and die but would probably use other corridors between mountains (Longshore, 2011).

Literature Cited

Longshore, K. 2011. Personal communication by telephone on December 13, 2011. USGS, Las Vegas, Nevada.

80. Please provide an analysis of the potential for use of the project site by BHS for spring forage. Please provide an acreage table that identifies how much BHS spring foraging habitat occurs within the project site, and a map depicting the extent of suitable on-site foraging habitat.

Response: Suitable foraging habitat for the Nelson's bighorn sheep does not exist on the project site or in the project area. Browse plant (woody shrubs) forage is the dominant food of the desert bighorn sheep. Their forage includes desert holly (*Atriplex hymenelytra*), honeysweet (*Tidestromia oblongifolia*), brittlebush or encelia (*Encelia spp.*), hairy mountain-mahogany (*C. breviflorus*), Wright silktassel (*Garrya wrightii*), desert mallow (*Sphaeralcea ambigua*), Russian-thistle (*Salsola kali*), ratany (*Krameria spp.*), desert lavender (*Hyptis emoryi*), mesquite (*Prosopis glandulosa*), catclaw (*Acacia greggii*), and pincushion (*Coryphantha spp.*). Dry grasses are eaten throughout the year and are an important food reserve, especially near waterholes (Chapman and Feldhamer, 1982). Vegetation on the project site consists of Mojave Desert scrub and shadscale scrub, which are not forage for Nelson's bighorn sheep.

Escape habitat, provided by rugged, mountainous terrain, a crucial element of Nelson's bighorn sheep habitat, is not present on or near the site. The ability to traverse steep and rugged terrain is the species' main defense against predators. Coupled with visibility over their surroundings, it enables them to escape threats. The distribution of ewes depends on

the availability of escape terrain (Holl and Bleisch, 1983; McKinney et al. 2004). Ewes with lambs are rarely more than 300 feet from escape habitat. This is consistent with numerous publications that identify proximity to escape habitat (less than 300 meters to rough areas greater than 2 hectare exhibiting greater than 80 percent [greater than 36 degrees] slope) (Smith and Flinders 1991, Smith et al. 1991, Singer et al. 2000a,b) as an essential and limiting habitat factor for Nelson's bighorn sheep. In contrast, the project area is nearly flat with rugged terrain many miles distant. Therefore, the lack of escape habitat on or near the HHSEGS project site precludes use of the area as spring forage by Nelson's bighorn sheep.

Other factors preclude use of the project site as spring forage by bighorn sheep. The closest cover habitat is more than 7 miles away to the west, which is too far to be useful to Nelson's bighorn sheep. Available water is not present onsite, which is another critical habitat element. The distance of ewes from a dependable water source was determined by Longshore et al. (2009) to be 2.4 km (SE 0.51 km) or 1.5 miles (SE .32 mi.). The absence of an open dependable water source is another factor that makes this site unsuitable for Nelson's bighorn sheep foraging habitat. Sheep in the low mountains near the project site do not change elevation seasonally and they do not use shadscale or creosote as spring forage (Longshore, 2011).

Literature Cited

Chapman, Joseph A. and Feldhamer, George A., eds. 1982. Wild mammals of North America. Baltimore, MD: The Johns Hopkins University Press. 1147 p.

Holl, S.A and V. C. Bleich. 1983. San Gabriel Mountain sheep: biological and management considerations. San Bernardino National forest. San Bernardino. California.

Longshore, K. 2011. Personal communication by telephone on December 13, 2011. USGS, Las Vegas, Nevada.

Longshore, K.M., C. Lowrey and D.B. Thompson. 2009. Compensating for diminishing natural water: Predicting the impacts of water development on summer habitat of desert bighorn sheep. *Journal of Arid Environments* 73 (2009) 280–286

McKinney, T., S.R. Boe and J.C. deVos, jr. 2004. GID-based evaluation of escape terrain and desert bighorn sheep population in Arizona. *Wildlife society Bulletin* 31:1229 - 1236.

Singer, F. J., V. C. Bleich, and M.A. Gudorf. 2000a. Restoration of bighorn sheep metapopulations in and near western national parks. *Restoration Ecology* 8:14–24.

Singer, F. J., C. M. Papouchis, and K. K. Symonds. 2000b. Translocations as a tool for restoring populations of bighorn sheep. *Restoration Ecology* 8:6–13.

Smith, T. S., and J.T. Flinders. 1991. The bighorn sheep of Bear Mountain: ecological investigations and management recommendations. Utah Division of Wildlife Resources, Salt Lake City, USA.

Smith, T. S., J.T. Flinders, and D. S. Winn. 1991. A habitat evaluation procedure for Rocky Mountain bighorn sheep in the intermountain west. *Great Basin Naturalist* 51:205–225.

OTHER POTENTIALLY OCCURRING WILDLIFE SPECIES

BACKGROUND: Staff's verification of the applicants' list of species potentially impacted by the project is a fundamental part of staff's evaluation of the HHSEGS project. A thorough species list is important, as CEQA is intended to disclose all environmental impacts of a project. The project site occurs in the Northern and Eastern Mojave (NEMO) plan area, as designated by the BLM. Appendix I of NEMO (Special Species of Concern within NEMO) identifies several wildlife species not included in AFC Tables 5.2-4 or 5.2-7. Three bird species - LeConte's thrasher, Cooper's hawk, and Ferruginous hawk - were observed during field surveys, but omitted from AFC Tables 5.2-4 and 5.2-7, and are known to occur within the NEMO planning area.

DATA REQUEST

81. Please discuss the potential for the following special status wildlife species known to occur within the NEMO planning area and what effect the project may have on the species:

Birds:

Swainson's hawk (*Buteo swainsoni*)
 Southwestern willow flycatcher (*Empidonax traillii extimus*)
 Inyo California towhee (*Pipilo crissalis*)
 Tricolored blackbird (*Agelaius tricolor*)
 LeConte's thrasher (*Toxostoma lecontei*)
 Long-eared owl (*Asio otus*)
 Cooper's hawk (*Accipiter cooperi*)
 Ferruginous hawk (*Buteo regalis*)
 Western snowy plover, inland pops. (*Charadrius alexandrinus nivosus*)
 Yellow warbler (*Dendroica petechia brewsteri*)
 Yellow-breasted chat (*Icteria virens*)
 Western least bittern (*Ixobrychus exilis hesperis*)
 California gray-headed junco (*Junco hyemalis caniceps*)
 White-faced ibis (*Plegadis chihi*)
 Virginia's warbler (*Vermivora virginiae*)

Mammals:

Occult little brown bat (*Myotis lucifugus occultus*), California Species of Concern (CSC)
 Fringed myotis (*Myotis thysanodes*), BLM Sensitive
 Western mastiff bat (*Eumops perotis*), BLM Sensitive, CSC
 Spotted bat (*Euderma maculatum*) BLM Sensitive, CSC
 Western small-footed bat (*Eumops perotis*), BLM Sensitive
 Long-eared myotis (*Myotis evotis*), BLM Sensitive
 California leaf-nosed bat (*Macrotus californicus*), BLM Sensitive, CSC

Amphibians: Black toad (*Bufo exsul*)

Fish: Shoshone pupfish (*Cyprinodon nevadensis shoshone*)

Response:**BIRDS****Swainson's Hawk (*Buteo swainsoni*)**

The Swainson's hawk is an uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Very limited breeding has been reported from the far western Mojave Desert: Lanfair Valley, Owens Valley, Fish Lake Valley, and Antelope Valley (Bloom 1980, Garrett and Dunn 1981). It breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Swainson's hawk forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures soaring at low and high levels in search of prey. It may also walk on ground to catch invertebrates and other prey. Swainson's hawks roost in large trees, but will roost on ground if no trees are available. Nests are typically a platform of sticks, bark, and fresh leaves in a tree, bush, or utility pole in open riparian habitat, scattered trees or small groves in sparsely vegetated flatlands (Bloom 1980). They are usually found near water in the Central Valley, but also nest in arid regions. Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves. In southern California, they are now mostly limited to spring and fall transient populations. Migrating individuals move south through the southern and central interior of California in September and October, and north March through May (Grinnell and Miller 1944).

The Swainson's hawk was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. The nearest reported sightings have been in the vicinity of the relatively well-watered areas of Red Rock Canyon, 25 miles east of the project, and 40 miles north at Ash Meadows National Wildlife Refuge (eBird, 2011). There is very low potential for this species to occur on the site. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

Bloom, P. H. 1980. The status of the Swainson's hawk in California, 1979. U.S. Dep. Inter., Bur. Land Manage., Sacramento. Proj. W-54-R-12, Job II-8. Final Rep. 42pp.

eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at: <http://ebird.org/ebird/map/wilfly?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>

Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.

Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

The southwestern willow flycatcher is a rare to locally uncommon, summer resident in wet meadow and riparian habitats at 300-2500 m (1000-8000 ft). They occur most often in broad, open river valleys or large mountain meadows with lush growth of shrubby willows (Serena 1982) or, in the Colorado River drainage, salt cedar. Southwestern willow

flycatchers make short sallies for flying insects from exposed perches in willow thickets or from low perches in adjacent meadows. Dense willow thickets are required for nesting and roosting as well as low, exposed branches for singing posts and hunting perches. In the Sierra Nevada, flycatchers are consistently absent from otherwise apparently suitable areas where the lower branches of willows had been browsed heavily by livestock (Serena 1982). Their open, cup nest is placed in an upright fork of willow or other shrub, or occasionally on a horizontal limb. They are most numerous where extensive thickets of low, dense riparian thickets edge on wet meadows, ponds, or backwaters. Willow flycatchers are migratory at lower elevations, primarily in riparian habitats throughout the state exclusive of the North Coast (Grinnell and Miller 1944, Gaines 1977a, 1977b, Remsen 1978, McCaskie et al. 1979, Garrett and Dunn 1981).

Southwestern willow flycatcher was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. The nearest reported sightings have been in riparian and spring areas in Galileo Hill, just outside of California City, California, 116 miles southwest of the project, and 150 miles southeast in the Bill Williams River National Wildlife Refuge, Arizona (eBird, 2011). There is very low potential for this species to occur on the site. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

- eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at: <http://ebird.org/ebird/map/wilfly?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>
- Gaines, D. 1977a. Current status and habitat requirements of the yellow-billed cuckoo in California. Calif. Dep. Fish and Game, Sacramento. 94pp.
- Gaines, D. 1977b. Birds of the Yosemite Sierra. California Syllabus, Oakland. 153pp.
- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp.
- Remsen, J. V., Jr. 1978. Bird species of special concern in California. Calif. Dep. Fish and Game, Sacramento. Wildl. Manage. Admin. Rep. No. 78-1. 54pp

Inyo California Towhee (*Pipilo crissalis*)

The California towhee is a common, characteristic resident of foothills and lowlands in most of cismontane California. It frequents open chaparral and coastal scrub, as well as brushland patches in open riparian, hardwood-conifer, cropland, and urban habitats. California towhee commonly uses edges of dense chaparral and brushy edges of densely wooded habitats. Also occurs in lowest montane habitats of similar structure in southern California. California

towhee prefers to forage on open ground adjacent to brushy cover such as chaparral. Margins of dense chaparral, willow thickets, and brushy understory of open wooded habitats provide cover. Nests are concealed in low, dense foliage of a shrub or tree, or occasionally on the ground. It breeds and seeks cover in brush and dense thickets and forages in adjacent open areas. The California towhee is non-migratory.

Inyo California towhee was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. The nearest reported sightings have been in riparian and spring areas at China Ranch, 20 miles to the west and the next closest location is in Death Valley 84 miles to the northwest. (eBird, 2011). There is very low potential for this species to occur on the site. The project is not expected to have any significant effect on this species.

Literature Cited

eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at:
<http://ebird.org/ebird/map/caltow?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>

Tricolored Blackbird (*Agelaius tricolor*)

The tricolored blackbird is common throughout the Central Valley and in coastal districts from Sonoma County south. It breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose and tall herbs. Tricolored blackbirds feed in grassland and cropland habitats. Foraging occurs on the ground in croplands, grassy fields, flooded land, and along edges of ponds. Breeding populations are found in northeastern California where they usually nest in dense cattails or tules; they also nest in thickets of willow, blackberry, wild rose and tall herbs. Nests are usually located a few feet over, or near, fresh water; also may be hidden on the ground among low vegetation. In winter, tricolored blackbirds become more widespread along the central coast and San Francisco Bay area (Grinnell and Miller 1944, McCaskie et al. 1979, Garrett and Dunn 1981).

The nearest reported sightings have been in riparian and spring areas in the Kingston Range, 13 miles south of the project, and near Tecopa and Shoshone, 20 miles to the west (eBird, 2011). There is very low potential for this species to occur on the site. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at:
<http://ebird.org/ebird/map/wilfly?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>

Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.

Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp.

McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp

Le Conte's Thrasher (*Toxostoma lecontei*)

Le Conte's thrasher is an uncommon to rare, local resident in southern California deserts from southern Mono County south to the Mexican border, and in the western and southern San Joaquin Valley. It occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; also occurs in Joshua tree habitat with scattered shrubs. Although formerly found north to Fresno County, Le Conte's thrasher has been rarely recorded north of Kern County since the 1950s (Grinnell and Miller 1944, McCaskie et al. 1979, 1988, Garrett and Dunn 1981). Le Conte's thrasher forages mostly on the ground by probing and digging in soil and litter with its bill. It uses scattered desert shrubs and cactus for cover as well as saltbush and cholla. Le Conte's thrasher commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat. It is non-migratory.

Le Conte's thrasher was observed within a 10-mile radius of the site during the eagle surveys. It was also seen on the project site during the May 2011 desert tortoise surveys. The habitat adjacent to and within the project area provides suitable cover for nesting and may be suitable for foraging (Hidden Hills Solar, 2011).

Le Conte's thrasher was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. The nearest recorded sightings have been in riparian and spring areas in the Kingston Range, 13 miles south of the project and the next closest location at Ash Meadows NWR 38 miles to the northwest (eBird, 2011). The project is not expected to have a significant effect on this species.

Literature Cited

- eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at: <http://ebird.org/ebird/map/lecthr?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>
- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp.
- Hidden Hills Solar I, LLC; and Hidden Hills Solar II, LLC. 2011. Hidden Hills Solar Electric Generating System - Application for Certification. August.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1988. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. Reprinted with suppl. 108pp.

Long-eared Owl (*Asio otus*)

The long-eared owl is an uncommon yearlong resident throughout the state except the Central Valley and Southern California deserts where it is an uncommon winter visitor. Long-eared owls require riparian habitat and are also known to use live oak thickets and other dense stands of trees. Resident populations in the state of California have been declining

since the 1940s, especially in southern California (Grinnell and Miller 1944, Remsen 1978). Shuford and Fitton (1998) suggested populations of long-eared owl are still abundant in the Great Basin regions of California. All reasons for decline are not known, but destruction and fragmentation of riparian habitat and live oak groves have been major factors (Remsen 1978). Urban development and agriculture have been the major causes for decline in coastal southern California (Bloom 1994). Long-eared owls usually hunt in open areas and occasionally in woodland and forested habitats. They search for prey in low, gliding flight; pounce on prey on ground. The long-eared owl breeds from valley foothill hardwood up to ponderosa pine habitats; requiring riparian or other thickets with small, densely canopied trees for roosting and nesting. Long-eared owls make only local movements in California, although some migration may occur.

The long-eared owl was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. The nearest reported sightings have been in riparian areas at Horse Thief Springs, 13 miles south of the project area and at the China Ranch Date Farm, 20 miles southwest of the project area. (eBird, 2011). There is very low potential for this species to occur on the site. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

Bloom, P. H. 1994. The biology and current status of the long-eared owl in coastal southern California. Bull. So. Calif. Acad. Sci. 93: 1-12

eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at: <http://ebird.org/ebird/map/wilfly?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>

Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp

Remsen, J. V., Jr. 1978. Bird species of special concern in California. Calif. Dep. Fish and Game, Sacramento. Wildl. Manage. Admin. Rep. No. 78-1. 54pp.

Shuford W. D., and S. D. Fitton. 1998. Status of owls in the Glass Mountain region, Mono County, CA. Western Birds. 29(1): 1-20.

Cooper's Hawk (*Accipiter cooperi*)

The Cooper's hawk is a breeding resident throughout most of the wooded portion of the state of California. It breeds in the southern Sierra Nevada foothills, New York Mountains., Owens Valley, and other local areas in southern California. The Cooper's hawk ranges from sea level to above 2700 m (0-9000 ft). Dense stands of live oak, riparian deciduous or other forest habitats near water are used most frequently. The Cooper's hawk hunts in broken woodland and habitat edges; catches prey in the air, on ground, and in vegetation. It is seldom found in areas without dense tree stands, or patchy woodland habitat where it usually nests in second-growth conifer stands, or in deciduous riparian areas, usually near streams. The Cooper's hawk is mostly a yearlong resident although some individuals from more northern areas migrate into California. The Cooper's hawk nests in deciduous, conifer,

and mixed woodlands. In southern California it generally favors extensive riparian bottomlands (Garrett and Dunn, 1981). Cooper's hawks have been found breeding at low densities virtually throughout the state, predominantly in oaks and pines. In California, as reported for Wisconsin, Cooper's hawks tended to use older, taller, and less dense woodlots (Rosenfield and Bielefeldt, 1993). The range of nest height in several studies was 20 to 60 feet (Bent, 1961; Meng, 1951; Reynolds et al., 1982; Palmer, 1988; Rosenfield and Bielefeldt, 1993). During migration, Cooper's hawks use a mixture of habitat types with vegetative cover, often hunting on the edges of wooded areas (Palmer, 1988). Winter habitat requirements are poorly quantified. Christmas Bird Count data from southern California, suggest that Cooper's hawks use essentially the same habitats during winter and summer. Water and cover are probably the limiting factors for prey species and, therefore, may determine the distribution of hawks. Accordingly, riparian areas are probably important habitat on wintering grounds, providing foraging and roosting opportunities (Grindrod, 1998).

The Cooper's hawk was seen at the project site during GANDA's fall 2010 surveys (GANDA, 2011). The closest reports are at Crystal Spring, Death Valley, California, 12 miles to the south and 21 miles northwest at Shoshone Village, California. Since many Cooper's hawks are simply moving through the area in winter, they may be observed briefly at any location (Grindrod, 1998). Habitat within the 10-mile radius does not match the habitats described for this species. It is highly unlikely that this species nests in this area or forages extensively in the area. The Cooper's hawk observed on the site may have been moving through the area. It is not expected that the project will have a significant effect on this species.

Literature Cited

Bent, A.C. 1961. Life Histories of North American Birds of Prey. Part 1. Dover Publications, Inc., New York.

Garrett, K. and J. Dunn. 1981. Birds of Southern California: status and distribution. Los Angeles Audubon Society, Los Angeles, California.

Garcia and Associates (GANDA). 2011. Draft Hidden Hills Area 1, Late-season Special-status Plant Survey, Inyo County, California.

Grindrod, P. 1998. Cooper's Hawk. Available online at:
http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pdfs/cdd_pdfs.Par.2fb9c91b.File.pdf/coha.pdf

Hidden Hills Solar I, LLC; and Hidden Hills Solar II, LLC. 2011. Hidden Hills Solar Electric Generating System - Application for Certification. August.

Meng, H.K. 1951. Cooper's Hawk, *Accipiter cooperii*. Ph.D. Diss., Cornell University, Ithaca, New York.

Palmer, R.S. (Ed.). 1988. Handbook of North American birds. Volume 4. Yale Univ. Press, New Haven, Connecticut.

Reynolds, R.T., E.C. Meslow, and H.M. Wight. 1982. Nesting habitat of coexisting *Accipiter* in Oregon. *J. Wildlife Manag.* 46:124-138.

Rosenfield, R.N., and J. Bielefeldt. 1993. Cooper's Hawk (*Accipiter cooperii*). In: A. Poole and F. Gill (eds.), *The Birds of North America*, No. 75. Philadelphia, Pennsylvania: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.

Ferruginous Hawk (*Buteo regalis*)

The Ferruginous hawk is an uncommon winter resident and migrant at lower elevations and open grasslands in the Modoc Plateau, Central Valley, and Coast Ranges. This species is a fairly common winter resident of grasslands and agricultural areas in southwestern California (Garrett and Dunn 1981). The Ferruginous hawk frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats. They roost in open areas, usually in a lone tree or utility pole. No breeding records from California are known (Bent 1937, Olendorff 1973, Call 1978). Nesting requires large, open tracts of grasslands, sparse shrub, or desert habitats with elevated structures for nesting. The Ferruginous hawk is migratory and generally arrives in California in September and departs by mid-April. Winter and migratory habitat requirements largely depend on prey availability. Grassland, pasture, and fallow winter croplands in which there is an abundance of prairie dogs, lagomorphs, or gophers are used extensively (Schmutz and Fyfe, 1987; Allison, et al., 1995; Plumpton, 1996).

The Ferruginous hawk was seen at the project site by the URS field crews during their wetland surveys in January/February 2011 (URS, 2011) and in March during the point-count surveys. The closest reports are at Spring Mountain Ranch State Park, Nevada, 26 miles northeast and 40 miles north at Ash Meadows NWR, Nevada. The observed individuals were likely migrants or winter residents. This project may remove a small fraction of winter or migration habitat. It is not expected that the project will have a significant effect on this species.

Literature Cited

- Allison, P.S., A.W. Leary, and M.J. Bechard. 1995. Observations of wintering ferruginous hawks (*Buteo regalis*) feeding on prairie dogs (*Cynomys ludovicianus*) in the Texas panhandle. *Texas J. Sci.* 47:235-237.
- Bent, A. C. 1937. Life histories of North American birds of prey. Part 1. U.S. Natl. Mus. Bull. 167. 409pp.
- Call, M. W. 1978. Nesting habits and survey techniques for common western raptors. U. S. Dep. Inter., Bur. Land Manage., Portland, OR. Tech. Note No. 316. 115pp.
- Garrett, K., and J. Dunn. 1981. *Birds of southern California*. Los Angeles Audubon Soc. 408pp
- Hidden Hills Solar I, LLC; and Hidden Hills Solar II, LLC. 2011. Hidden Hills Solar Electric Generating System - Application for Certification. August.
- Olendorff, R. R. 1973. The ecology of the nesting birds of prey of northeastern Colorado. U.S. Dep. Inter. Natl. Res. Ecol. La., Colorado State Univ., Fort Collins. Biol. Prog. Tech. Rep. No. 211. 233pp.
- Plumpton, D.L. 1996. Anthropogenic effects on winter habitat use by ferruginous hawks in Colorado. M.S. Thesis, Univ. Minnesota, St. Paul, Minnesota.

Schmutz, J.K., and R.W. Fyfe. 1987. Migration and mortality of Alberta ferruginous hawks. *Condor* 89:169-174.

URS. 2011. Approved Jurisdictional Determination Report. Hidden Hills Ranch Solar Project. Inyo County, California. Submitted to Mr. Bruce Henderson US Army Corps of Engineers. North Coast Branch, Regulatory Division, Ventura, CA. Submitted by: BrightSource Energy Inc. Report Prepared by: URS Corporation. Tucson, Arizona 85705. May 6.

Western Snowy Plover (*Charadrius alexandrinus nivosus*)

The western snowy plover is common on sandy marine and estuarine shores in the fall and winter. Snowy plovers nest locally in these same habitats from April through August, but the major nesting habitat now appears to be on salt pond levees (Cogswell 1977). Inland nesting areas occur at the Salton Sea, Mono Lake, and at isolated sites on the shores of alkali lakes in northeastern California, in the Central Valley, and southeastern deserts (Jurek and Leach 1973, Page et al. 1979, 1983, Garrett and Dunn 1981). Snowy plovers forage for insects and amphipods from the dry sand of upper beaches along the coast and occasionally forage in wet sand for young sand crabs (Cogswell 1977). Snowy plovers require a sandy, gravelly or friable soil substrate for nesting. Their nests are frequently located near or under objects such as driftwood, rocks, or defoliated bushes. Nests may also be on barren ground with no nearby cover (Bent 1929, Jurek and Leach 1973). Beginning in July and August, snowy plovers may move from northwest Oregon to as far as Baja California and will remain on wintering grounds from September through March. Smaller numbers remain year-round at the Salton Sea and at salt ponds on San Francisco Bay (Cogswell 1977).

The western snowy plover was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. The nearest reported sightings have been at Grimshaw Lake, Death Valley, 20 miles southwest of the project area and 39 miles north at Horseshoe Reservoir. (eBird, 2011). There is very low potential for this species to occur on the site. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

Bent, A. C. 1929. Life histories of North American shorebirds. Part 2. U.S. Natl. Mus. Bull. 146. 412pp.

Cogswell, H. L. 1977. Water birds of California. Univ. California Press, Berkeley. 399pp.

eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at: <http://ebird.org/ebird/map/wilfly?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>

Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.

Jurek, R. M., and H. R. Leach. 1973. California shorebird study: Accelerated research program on shore and upland migratory game birds. Calif. Dept. Fish and Game, Sacramento. P. R. project W-54-R. Final Rep. 233pp.

Page, G. W., D. F. Winkler, and C. W. Swarth. 1979. Breeding success of snowy plovers at Mono Lake, California. U. S. Fish and Wildl. Serv., Portland OR. Refuge and Wildl. Resour. Dep. Rep. 21pp.

Page, G. W., L. E. Stenzel, D. W. Winkler, and C. W. Swarth. 1983. Spacing out at Mono Lake: breeding success, nest density, and predation in the snowy plover. *Auk* 100:13-24.

Page, G. W., L. E. Stenzel, and C. M. Wolfe. 1979. Aspects of the occurrence of shorebirds on a central California estuary. Pages 15-32 in F. A. Pitelka, ed. *Shorebirds in marine environments*. Studies in Avian Biol. No. 2. Cooper Ornithol. Soc. Lawrence, KA. 261pp.

Yellow Warbler (*Setophaga (Dendroica) petechia brewsteri*)

The yellow warbler's breeding distribution begins with the coast range in Del Norte County, extending east to Modoc plateau, south along the coast range to Santa Barbara and Ventura counties and along the western slope of the Sierra Nevada Mountains and south to Kern County. Yellow warblers also breed along the eastern side of California from the Lake Tahoe area south through Inyo County. Yellow warblers breed in riparian woodlands from coastal and desert lowlands up to 2500 m (8000 ft) in the Sierra Nevada. They can also breed in montane chaparral, and in open ponderosa pine and mixed conifer habitats with substantial amounts of brush. Yellow warblers are usually found in riparian deciduous habitats in summer: cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland. Also they can be found breeding in montane shrubbery in open conifer forests which may be a more recent phenomenon (Gaines 1977b). Yellow warblers winter in the Imperial and Colorado River valleys. During migration they visit woodland, forest, and shrub habitats.

The yellow warbler was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. The nearest reported sightings have been in riparian areas at Crystal Springs, Death Valley and 20 miles southwest of the project area at the China Ranch Date Farm. (eBird, 2011). There is very low potential for this species to occur on the site. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at: <http://ebird.org/ebird/map/wilfly?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>

Gaines, D. 1977b. *Birds of the Yosemite Sierra*. California Syllabus, Oakland. 153pp.

Yellow-breasted Chat (*Icteria virens*)

The yellow-breasted chat is an uncommon summer resident and migrant in coastal California and in foothills of the Sierra Nevada. It is found up to about 1450 m (4800 ft) in valley foothill riparian, and up to 2050 m (6500 ft) east of the Sierra Nevada in desert riparian habitats (Gaines 1977b, DeSante and Ainley 1980, Garrett and Dunn 1981). Uncommon along the coast of northern California east to the Cascades the yellow-breasted

chat occurs only locally south of Mendocino County (McCaskie et al. 1979). In southern California, this species breeds locally on the coast and very locally inland (Garrett and Dunn 1981). Yellow-breasted chats require riparian thickets of willow and other brushy tangles near watercourses for cover. In migration, it may be found in lower elevations of mountains in riparian habitat (McCaskie et al. 1979). Yellow-breasted chats usually arrive in April and depart by late September for wintering grounds in Mexico and Guatemala. There are a few late fall and winter records, mostly from southern California where migrants sometimes pass through lower elevations in mountains.

The yellow-breasted chat was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. The nearest reported sightings have been in riparian areas at Big Morongo Canyon Preserve, 137 miles southwest of the project area and at Lake Havasu, 148 miles southeast of the project area (eBird, 2011). There is very low potential for this species to occur on the site. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

- Desante, D. F., and D. G. Ainley. 1980. The avifauna of the South Farallon Islands, California. Studies in Avian Biol. No. 4. Cooper Ornithol. Soc., Lawrence, KA. 104pp.
- eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at: <http://ebird.org/ebird/map/wilfly?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>
- Gaines, D. 1977b. Birds of the Yosemite Sierra. California Syllabus, Oakland. 153pp
- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp

Western Least Bittern (*Ixobrychus exilis hesperis*)

In southern California, the western least bittern is a common summer resident (especially April to September), at the Salton Sea and Colorado River, in dense emergent wetlands near sources of freshwater, and in desert riparian (saltcedar scrub). It probably nests only in emergent wetlands. In deserts and coastal lowlands, it is quite rare, but breeds locally in the Owens Valley and Mojave Desert. Least Bitterns are rare to uncommon April to September in large, fresh emergent wetlands of cattails and tules in San Diego County, and the Sacramento and San Joaquin Valleys, and where it nests (Cogswell 1977, McCaskie et al. 1979). In northeastern California, recent breeding records exist in Siskiyou, Modoc and Lassen counties (Sterling, 2008). Least Bitterns use dense, emergent vegetation for cover, foraging and nesting. Most of the California population migrates south to Mexico for winter (mainly October to March). The remaining population in southern California is apparently non-migratory.

The western least bittern was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and

Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. The nearest reported sightings have been in riparian areas at Horseshoe Reservoir, 39 miles north of the project area and 50 miles east of the project area at the Henderson Bird Viewing Preserve (eBird, 2011). There is very low potential for this species to occur on the site. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

Cogswell, H. L. 1977. Water birds of California. Univ. California Press, Berkeley. 399pp

eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at:
<http://ebird.org/ebird/map/wilfly?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>

McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp.

Palmer, R. S., ed. 1962. Handbook of North American birds. Vol. 1. Yale University Press, New Haven, CT. 567pp

Sterling, J. 2008. Least Bittern (*Ixobrychus exilis*) in Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Dark-eyed Junco (Gray-headed) (*Junco hyemalis caniceps*) (5.2B)

The gray-headed junco is one of six races of dark-eyed Junco and is a common to abundant, breeding and wintering species in California. It is found mostly in forests and woodlands from montane hardwood-conifer forests up through alpine dwarf-shrub habitat of the Sierra Nevada. Gray-headed juncos breed in mountains and foothills throughout the state, including higher desert ranges (McCaskie et al. 1979, Garrett and Dunn 1981). In the Great Basin and desert ranges, breeders occur in pinyon-juniper woodland. *J. h. caniceps* (the "gray-headed" race) breeds locally in White and Grapevine Mountains and on Clark Mountain in southeastern California (McCaskie et al. 1979). In the winter, gray-headed juncos are found in lowland and foothill habitats that provide shrub or tree cover for retreat, and open areas for foraging; they frequent residential areas. They winter from sea level up to snow line in the mountains where they use forests, woodlands and edges for breeding. In the winter, gray-headed juncos frequent openings, edges, stream corridors when foraging. In winter they require trees and shrubs for cover in addition to open ground for feeding.

The gray-headed race of Dark-eyed Junco was not observed during surveys. It breeds in the Grapevine Mountains (45 miles northwest of the project) and White Mountains (160 miles northwest). In addition, it breeds on Clark Mountain (36 miles southwest) (Hidden Hills Solar, 2011). The project is not expected to have any significant effect on this species.

Literature Cited

Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp

Hidden Hills Solar I, LLC; and Hidden Hills Solar II, LLC. 2011. Hidden Hills Solar Electric Generating System - Application for Certification. August.

McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp.

White-faced Ibis (*Plegadis chihi*)

The white-faced ibis is an uncommon summer resident in sections of southern California, a rare visitor in the Central Valley, and is more widespread in migration. It prefers to feed in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands. White-faced Ibis nests in dense, fresh emergent wetland. Formerly more common, especially in the San Joaquin Valley, this species no longer breeds regularly anywhere in California (Remsen 1978). In suitable habitat, the white-faced Ibis prefers to nest in dense marsh vegetation near foraging areas in shallow water or muddy fields. This species is a distant and local migrant and is non-migratory in some locations. White-faced ibis winter mainly in San Joaquin Valley and Imperial Valley, but have been recorded widely as a transient.

The White-faced Ibis was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. The nearest reported sightings have been at Grimshaw Lake, Death Valley, 20 miles to the southwest of the project area and 21 miles northwest in Shoshone Village (eBird, 2011). There is very low potential for this species to occur on the site. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at: <http://ebird.org/ebird/map/wilfly?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>

Remsen, J. V., Jr. 1978. Bird species of special concern in California. Calif. Dept. of Fish and Game, Sacramento. Wildl. Manage. Admin. Rep. No. 78-1. 54pp.

Virginia's Warbler (*Oreothlypis (Vermivora) virginiae*) In AFC

Virginia's warbler is a rare to uncommon, very local, summer resident along the eastern slope of southern Sierra Nevada and in several desert ranges. Virginia's warbler breeds in arid, shrubby, mixed conifer, pinyon-juniper, montane chaparral, and possibly montane riparian habitats from about 2200-2800 m (7000-9000 ft). Specific breeding localities include White Mountains, Inyo Mountains, Clark Mountain, New York Mountains, northeastern San Bernardino Mountains (upper Arrastre Creek and upper Santa Ana River drainage), along eastern slope of Sierra Nevada from Monitor Pass, Mono County, south at least to Symmes Creek, Inyo County, and probably other localities in the southeastern Sierra Nevada and higher desert ranges (Johnson 1976, Gaines 1977b, Remsen 1978, Garrett and Dunn 1981). Nesters frequent arid slopes with moderate to dense stands of tall shrubs with scattered trees. Characteristic shrubs include mountain mahogany, manzanita, serviceberry, and snowberry, trees include pinyon pine, limber pine and white fir. Virginia's warbler also may

nest in riparian thickets of willow or wild rose along streams in desert ranges (e.g., Wyman Canyon in White Mountains, Mono County). This species is a rare fall migrant (late August-late September) in brushy habitats along the coast from Los Angeles County south, and a very rare spring and fall transient in wooded habitats in deserts.

The Virginia's warbler was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. The nearest reported sightings have been at Mount Charleston, 25 miles northeast of the project area and Spring Mountain Ranch State Park, 26 miles northeast of the project area (eBird, 2011). There is very low potential for this species to occur on the site. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

- eBird. Org. 2011. Interactive Map of Bird Sightings. Accessed online at: <http://ebird.org/ebird/map/wilfly?bmo=1&emo=12&byr=2005&eyr=2009&gp=true>
- Gaines, D. 1977b. Birds of the Yosemite Sierra. California Syllabus, Oakland. 153pp.
- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- Johnson, N. K. 1976. Breeding distribution of Nashville and Virginia's warbler. Auk 55:176-178.
- Remsen, J. V., Jr. 1978. Bird species of special concern in California. Calif. Dept. of Fish and Game, Sacramento. Wildl. Manage. Admin. Rep. No. 78-1. 54pp.

MAMMALS

Occult little brown bat (*Myotis lucifugus occultus*), California Species of Concern (CSC)

Myotis lucifugus is most common in mid- to high-elevation forests. This species is moderately common in bitterbrush, alkali desert scrub, sagebrush, montane chaparral, and wet meadow habitats. It is found from the Oregon border south along the coast into San Francisco Bay and possibly into Monterey County. In addition, it is found along the Cascades, Sierra Nevadas, and Great Basin south to Kern County (Harris 2005).

Myotis lucifugus is an insectivore that flies low across the water along the edges of ponds, lakes, and streams to hunt for insects. *Myotis lucifugus* frequently returns to the same feeding areas (Hough 1957, Buchler 1976, Belwood and Fenton 1976, Anthony and Kunz 1977, Whitaker et al. 1977, 1981, Fenton and Bell 1979).

Myotis lucifugus utilizes different hibernation, nursery, day, and night roosts. Day roosts include trees, buildings, under rocks, and sometimes caves. This species may use the same site for day and night roosts. However, preferred night roosts are more confined and usually have a higher temperature since more *Myotis lucifugus* occupy the space together (McManus 1974b, Burnett and August 1981, Barclay 1982). *Myotis lucifugus* leave the roost at dusk and are nocturnal with peak activity occurring two or three hours after dusk. This species returns to the roost by four or five o'clock in the morning and usually enters a daily

torpor (Barbour and Davis, 1969; Cockrum, 1956; Nowak, 1994). Nursery roosts are usually in buildings with a higher temperature (Fenton and Barclay 1980).

Myotis lucifugus can migrate up to several hundred kilometers to hibernacula sites. Most migration occurs in the fall and large swarms develop during mating time (Davis and Hitchcock 1965, Humphrey and Cope 1976, Thomas et al. 1979). Southern populations of *Myotis lucifugus* begin hibernation in November and end hibernation in mid-March. Hibernacula sites are often caves or mines with high humidity and temperatures above freezing (Fenton and Barclay, 1980; Koopman and Gudmundsson, 1966; Nowak, 1994; Wilson and Ruff, 1999).

Occult little brown bat was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. None were observed during surveys. The project is not expected to have any significant effect on this species.

Literature Cited

Harris, J. "Little Brown Bat (*Myotis lucifugus*)". California Department of Fish and Game (CDFG), California Wildlife Habitat Relationships (CWHR) System, Life History Accounts and Range Maps. August 2005. Accessed December 6, 2011:
<http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2315&inline=1>

And these references within:

Hough, F. 1957. Set hunting pattern of a little brown bat. *J. Mammal.* 38:121-122.

Buchler, E. R. 1976. Prey selection by *Myotis lucifugus* (*Chiroptera: Vespertilionidae*). *Amer. Nat.* 110:619-628.

Belwood, J. J., and M. B. Fenton. 1976. Variation in the diet of *Myotis lucifugus* (*Chiroptera: Vespertilionidae*). *Can. J. Zool.* 54:1674-1678.

Anthony, E. L. P., and T. H. Kunz. 1977. Feeding strategies of the little brown bat, *Myotis lucifugus*, in southern New Hampshire. *Ecology* 58:775-786.

Whitaker, J. O., Jr., C. Maser, and L. E. Keller. 1977. Food habits of bats of western Oregon. *Northwest Sci.* 51:46-55.

Whitaker, J. O., Jr., C. Maser, and S. P. Cross. 1981. Food habits of eastern Oregon bats, based on stomach and scat analyses. *Northwest Sci.* 55:281-292.

Fenton, M. B., and G. P. Bell 1979. Echolocation and feeding behavior in four species of *Myotis* (*Chiroptera*). *Can. J. Zool.* 57:1271-1277.

Fenton, M. B., and R. M. R. Barclay. 1980. *Myotis lucifugus*. *Mammal. Species No.* 142. 8pp.

McManus, J. J. 1974b. Activity and thermal preference of the little brown bat, *Myotis lucifugus*, during hibernation. *J. Mammal.* 55:844-846.

Burnett, C. D., and P. V. August. 1981. Time and energy budgets for day roosting in a maternity colony of *Myotis lucifugus*. *J. Mammal.* 62:758-766.

B7arclay, R. M. R. 1982. Night roosting behavior of the little brown bat, *Myotis lucifugus*. J. Mammal. 63:464-474.

Davis, W. H., and H. B. Hitchcock. 1965. Biology and migration of the bat, *Myotis lucifugus*, in New England. J. Mammal. 46:296-313.

Humphrey, S. R., and J. B. Cope. 1976. Population ecology of the little brown bat, *Myotis lucifugus*, in Indiana and north central Kentucky. Amer. Soc. Mammalogists Spec. Publ. 4:1-81.

Thomas, D. W., M. B. Fenton, and R. M. R. Barclay. 1979. Social behaviour of the little brown bat, *Myotis lucifugus*. I. Mating behaviour. Behav. Ecol. Sociobiol. 6:129-136.

Havens, A. and P. Myers. "Myotis lucifugus" (On-line), Animal Diversity Web. 2006. Accessed December 6, 2011:

http://animaldiversity.ummz.umich.edu/site/accounts/information/Myotis_lucifugus.html

And these references within:

Barbour, R., W. Davis. 1969. Bats of America. Lexington, Kentucky: The University Press of Kentucky.

Cockrum, E. 1956. Homing, movements and longevity of bats. J. Mammal, 37: 48-57.

Nowak, R. 1994. Walker's Bats of the World. Baltimore, Maryland: The Johns Hopkins University Press.

Fenton, M., R. Barclay. 1980. *Myotis lucifugus*. Mammalian Species, 142: 1-8.

Koopman, K., F. Gudmundsson. 1966. American Museum Novitates. New York: American Museum of Natural History.

Wilson, D., S. Ruff. 1999. The Smithsonian book of North American mammals. Washington D.C.: Smithsonian Institution Press in association with the American Society of Mammalogists.

Fringed myotis (*Myotis thysanodes*), BLM Sensitive

Fringed myotis prefers valley foothill hardwood, hardwood-conifer, and pinyon-juniper from 1300 to 2200 meters (Harris 1990). This species does not occur in the Central Valley, Colorado desert, and Mojave desert. It slowly forages for beetles, arachnids, and moths over open areas and water (Black 1974). Fringed myotis sometimes hovers and lands on the ground while foraging (Harris 1990).

This species roosts in caves, crevices, mines, and buildings (Harris 1990). *Myotis thysanodes* is nocturnal and is most active one to two hours after sunset. Most return to the roost within five hours of sunset. This species hibernates from October through March (Studier et al. 1973). Fringed myotis will migrate short distances to hibernacula (Harris 1990).

Fringed myotis was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not

present in the nearby area. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited

Harris, J. "Fringed Myotis (*Myotis thysanodes*)". California Department of Fish and Game (CDFG), California Wildlife Habitat Relationships (CWHHR) System, Life History Accounts and Range Maps. 1990. Accessed December 6, 2011:

<http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2325&inline=1>

And these references within:

Black, H. L. 1974. A north temperate bat community: structure and prey populations. *J. Mammal.* 55:138-157.

Studier, E. H., J. W. Proctor, and D. J. Howell. 1970. Diurnal body weight loss and tolerance of weight loss in five species of *Myotis*. *J. Mammal.* 51:302-309.

Western mastiff bat (*Eumops perotis*), BLM Sensitive, CSC

Western mastiff bat inhabits semi-arid to arid habitats, such as chaparral, annual and perennial grasslands, conifer and deciduous woodlands, desert scrub, and coastal scrub (Ahlborn 1990). This species is uncommon in the San Joaquin Valley and Coastal Ranges from Monterey County into Southern California. In addition, it is rare from the coast east towards the Colorado Desert (Ahlborn 1990).

This nocturnal species can forage for insects further than 24 kilometers from roost sites (Vaughan 1959). In areas with rugged terrain, it hunts up to 60 meters above the ground (Kruttsch 1955, Vaughan 1959, Cockrum 1960). Western mastiff bat has a lengthy foraging period of up to 6 to 7 hours per night (Vaughan 1959).

Western mastiff bat roosts in trees, tunnels, high buildings, and crevices in cliff faces (Howell 1920, Dalquest 1946, Barbour and Davis 1969). It requires vertical rock faces to drop off and take flight when roosting in rock crevices (Ahlborn 1990). This species is non-migratory and may utilize multiple daytime roosts (Howell 1920, Kruttsch 1955). However, it usually does not use night roosts (Cockrum 1960). Nursery roosts are in buildings or tight rock crevices at least 5 centimeters wide and 90 centimeters deep (Howell and Little 1924).

From December through February, western mastiff bat typically undergoes daily torpor. It usually resumes activity to feed every night, unless the temperature falls below 5 degrees C (Leitner 1966).

Western mastiff bat was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. None were observed during surveys. The project is not expected to have any significant effect on this species.

Literature Cited

Ahlborn, G. "Western Mastiff Bat (*Eumops perotis*)". California Department of Fish and Game (CDFG), California Wildlife Habitat Relationships (CWHR) System, Life History Accounts and Range Maps. 1990. Accessed December 6, 2011: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2357&inline=1>

And these references within:

Vaughan, T. A. 1959. Functional morphology of three bats: *Eumops*, *Myotis*, *Macrotus*. Univ. Kans., Mus. Nat. Hist. Publ. 12:1-153.

Krutzsch, P. H. 1955. Observations on the Mexican free-tailed bat, *Tadarida mexicana*. J. Mammal. 36:236-242.

Cockrum, E. L. 1960. Distribution, habitat and habits of the mastiff bat, *Eumops perotis*, in North America. J. Arizona Acad. Sci. 1:79-84.

Howell, A. B. 1920. Contributions to the life history of the California mastiff bat. J. Mammal. 1:111-117.

Howell, A. B., and L. Little. 1924. Additional notes on California bats, with observations upon the young of *Eumops*. J. Mammal. 5:261-263.

Dalquest, W. W. 1946. The daytime retreat of a California mastiff bat. J. Mammal. 27:87-88.

Barbour, R. W., and W. H. Davis. 1969. Bats of America. Univ. of Kentucky Press, Lexington. 286pp.

Leitner, P. 1966. Body temperature, oxygen consumption, heart rate and shivering in the California mastiff bat, *Eumops perotis*. Comp. Biochem. Physiol. 19:431-443.

Spotted bat (*Euderma maculatum*) BLM Sensitive, CSC

Spotted bat is found in the following habitats: mixed conifer forests, arid deserts, and grasslands (Harris 2000). This species has been found at elevations below sea level in California (Black and Cosgriff 1999). It has only been observed in a few areas; mostly in the mountains, foothills, and desert regions of southern California (Watkins 1977).

It is one of the rarest mammals in North America (IUCN 1972-78). Moths are the primary food source, but it may also eat beetles to supplement its diet. *Euderma maculatum* forages for prey by flying low near the ground or the surface of water. It forages later in the night than other bat species and catches most of its prey after midnight (Harris 2000).

This species prefers cliffs with plenty of rock crevices for roosting and nesting. Spotted bat has occasionally been found in buildings and caves. It may migrate from forests to lowlands in the fall (Harris 2000).

Spotted bat was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not

present in the nearby area. None were observed during surveys. The project is not expected to have any significant effect on this species.

Literature Cited

Harris, J. "Spotted Bat (*Euderma maculatum*)". California Department of Fish and Game (CDFG), California Wildlife Habitat Relationships (CWHR) System, Life History Accounts and Range Maps. May 2000. Accessed December 6, 2011:

<http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2345&inline=1>

And these references within:

Black, H. and R. Cosgriff. 1999. Spotted bat: *Euderma maculatum*. Pages 118-199 in Wilson, D. E. and S. Ruff, editors. The Smithsonian book of North American mammals. Smithsonian Institution Press, Washington and London. 750pp.

International Union for Conservation of Nature and Natural Resources. 1972-1978. Red data book. I. Mammalia. Morges, Switzerland.

Watkins, L. C. 1977. *Euderma maculatum*. Mammal. Species No. 77. 4pp.

Western small-footed bat (*Myotis ciliolabrum*), BLM Sensitive

Western small-footed bat is mainly found in arid, upland habitats near water from sea level to 2700 meters. It prefers open areas in forests and woodlands. This species has been observed along the coast from Contra Costa County south to the Mexican border. In addition, it has been found in the Great Basin, the west and east sides of the Sierra Nevada, and in the desert from Modoc to Kern and San Bernardino counties. This species forages for a variety of insects, such as moths, beetles, and flies, over water and among trees (Harris 1990). Western small-footed bat is nocturnal with peak activity periods 30 minutes and 2 to 3 hours after sunset (Cockrum and Cross 1964, Jones 1965).

This species likes humid roost sites in cliff crevices, mines, caves, and buildings. Sometimes it will roost under bark or bridges. Western small-footed bat likely migrates locally to hibernacula sites to hibernate from November to March. Nesting colonies of 12 to 20 females can be found in mines, caves, and buildings (Harris 1990).

Western small-footed bat was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. None were observed during surveys. The project is not expected to have any significant effect on this species.

Literature Cited

Harris, J. "Western small-footed *Myotis* (*Myotis ciliolabrum*)". California Department of Fish and Game (CDFG), California Wildlife Habitat Relationships (CWHR) System, Life History Accounts and Range Maps. 1990. Accessed December 6, 2011:

<http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2331&inline=1>

And these references within:

Cockrum, E. L., and S. P. Cross. 1964. Time of bat activity over waterholes. J. Mammal. 45:635-636.

Jones, C. 1965. Ecological distribution and activity records of bats of the Mogollon Mountains area of New Mexico and adjacent Arizona. Tulane Studies Zool. 12:93-100.

Long-eared myotis (*Myotis evotis*), BLM Sensitive

Long-eared myotis prefers forests and coniferous woodlands. It has been observed in woodland, forest and brush habitats from sea level to at least 2700 meters. Its range is along the entire California coast. *Myotis evotis* also ranges from the Cascades, Sierra Nevada Mountains, and Great Basin from the Oregon border south to through the Tehachapi Mountains to Coast Ranges. This species forages in the late evening for arthropods, such as beetles, spiders, moths, and flies, over water and up to 12 meters above ground among trees (Harris 1990).

Long-eared myotis roosts singly or in small groups in crevices, spaces under bark, and buildings during the day. It will utilize caves for night roosts. This species likely migrates locally to hibernacula sites. Nursery roosts are found in crevices, spaces under bark, and buildings with 12 to 30 individuals (Harris 1990).

Long-eared myotis was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. None were observed during surveys. The project is not expected to have any significant effect on this species.

Literature Cited

Harris, J. "Long-Eared Myotis (*Myotis evotis*)". California Department of Fish and Game (CDFG), California Wildlife Habitat Relationships (CWHHR) System, Life History Accounts and Range Maps. 1990. Accessed December 6, 2011:

<http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2323&inline=1>

California leaf-nosed bat (*Macrotus californicus*), BLM Sensitive, CSC

California leaf-nosed bat has been observed in San Bernardino, San Diego, Riverside, and Imperial Counties south towards the Mexican border. Desert and coastal basin populations have been declining. This species is more common along the mountain ranges bordering the Colorado River. It is found in the following habitats below 600 meters: desert scrub, desert succulent shrub, alkali desert scrub, desert riparian, desert wash, and palm oasis (Harris 1990).

This species forages for beetles, moths, and cicadas by flying close to the ground and hovering. *Macrotus californicus* begins foraging at sunset in the winter and 1 to 2 hours after sunset in the summer. This species is gregarious and groups may emerge from the roost together to hunt. A second activity peak happens around 10 P.M. Typically individuals return to their day roost approximately 1 hour before sunrise (Harris 1990). California leaf-nosed bat forages up to 1.3 kilometers from the day roost (Vaughan 1959).

California leaf-nosed bat prefers roosts with high ceilings and has been found in groups of up to 500 individuals. Day and night roosts include cave, mine tunnels, buildings and bridges. Nesting colonies are typically found in caves and tunnels in the summer. This species is active yearlong and does not hibernate. Some individuals may use different roosts in the summer and winter. It is possible that some migrate to Mexico during the winter (Harris 1990).

California leaf-nosed bat was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. None were observed during surveys. The project is not expected to have any significant effect on this species.

Literature Cited:

Harris, J. "California Leaf-Nosed Bat (*Macrotus californicus*)". California Department of Fish and Game (CDFG), California Wildlife Habitat Relationships (CWHHR) System, Life History Accounts and Range Maps. 1990. Accessed December 6, 2011:

<http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2311&inline=1>

And these references within:

Vaughan, T. A. 1959. Functional morphology of three bats: *Eumops*, *Myotis*, *Macrotus*. Univ. Kans., Mus. Nat. Hist. Publ. 12:1-153.

AMPHIBIAN

Black Toad (*Bufo exsul*) IUCN Red Listed as Vulnerable

The black toad is a common, but highly restricted species, occurring only in Deep Springs Valley, about 145 miles to the northwest between the White and Inyo Mountains in Inyo County, elevation 1515 m (5000 ft) to 1580 m (5200 ft). The species occurs in or near springs, water courses, marshes and wet meadows in this topographically and hydrographically isolated basin.

When active, terrestrial individuals seek cover under and between clumps of vegetation and under surface objects near watercourses and in marshy situations. Such individuals often attempt to escape capture by hopping into the water and seeking the shelter of undercut banks of watercourses. Breeding and egg laying occur primarily in the shallow water where the current is not strong. In winter individuals appear to seek shelter in rodent burrows or in depressions under surface objects. Cooler periods (late fall to early spring) are spent in hibernation with some dispersal to and from hibernacula and breeding sites occurring annually. The extent of this movement is unknown but is potentially extensive.

The black toad was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. None were observed in surveys. The project is not expected to have any significant effect on this species.

FISH

Shoshone pupfish (*Cyprinodon nevadensis Shoshone*)

This species is a non-migratory, benthopelagic species, and can survive in freshwater from 18 °C to 24 °C. *Cyprinodon nevadensis Shoshone* occurs in the Shoshone Spring in Inyo County, California. Shoshone Spring is a tributary of Amargosa River located 21 kilometers north of Tecopa, California. Until the 1960s, this species occurred throughout the outflow of Shoshone Spring. *Cyprinodon nevadensis Shoshone* was considered to be likely extinct in November 1969, but it was rediscovered in the outflow of Shoshone Spring in 1986 (Taylor and Pedretti 1994).

Shoshone pupfish was not reported in CNDDDB queries for the 10-mile radius of the project site. BLM identified it as a Special Species of Concern (SSC) in the Northern and Eastern Mojave (NEMO) Area Plan. However, suitable habitat is not present on the project site and is not present in the nearby area. None were observed in surveys. The project is not expected to have any significant effect on this species.

Literature Cited:

Taylor, Frances R. and John W. Pedretti. 1994. Morphometric Comparison of Pupfish Populations, *Cyprinodon nevadensis*, at Shoshone and Tecopa, California. The Southwestern Naturalist. 39(3): 300-303. Accessed December 8, 2011 at: <http://www.jstor.org/stable/3671602>

Searchfish.org. "Cyprinodon nevadensis Shoshone". Accessed December 8, 2011: <http://www.searchfish.org/fish/8885/cyprinodon-nevadensis-shoshone/>

IMPACTS OF GROUNDWATER PUMPING ON PLANTS AND WILDLIFE SPECIES

BACKGROUND: The cone of depression created by groundwater drawdown could affect groundwater dependant, or phreatophytic, vegetation both locally and well beyond the project site. Staff must evaluate the spatial extent of the drawdown, as well as the potential for species impacts stemming from that drawdown. Impacts to vegetation communities, as well as associated special status species of wildlife and plants, must be presented to the public, as well as a well-designed mitigation plan for any significant impacts. An area of particular concern is the Amargosa River which is located approximately 22 miles west of the project site. Per a recent personal conversation with the BLM (C. Otahal, Nov. 3, 2011), concern was regarding the potential of the project to adversely impact the Amargosa River Area of Critical Environmental Concern (ACEC) and Wild and Scenic River (WSR) segment which is habitat for several sensitive species of plants and animals. Potential impacts to the Amargosa River, the Amargosa WSR, and the Amargosa River ACEC, are not mentioned within the AFC. The BLM has indicated that applicant's AFC lacked sufficient detail for staff to analyze the potential for impacts to the Amargosa ACEC phreatophytic plant communities and associated special status wildlife species.

DATA REQUESTS

82. Please provide a map (no greater than 1:25,000) depicting the cone of depression of drawdown including predicted groundwater drawdown relative to the Amargosa River, Amargosa Wild and Scenic River (WSR), and the Amargosa River Area of Critical Environmental Concern (ACEC). Also, please provide an analysis which evaluates the potential for this drawdown to affect the Amargosa ACEC/WSR. This

analysis should include a discussion regarding the carbonate aquifer which may connect the proposed project to the Amargosa River hydrologic system.

Response: Figure DR82-1 is a map illustrating the modeled extent of drawdown in the basin fill aquifer in response to the most conservative alternative for project pumping as provided in Scenario 2, Appendix 5.15G, Groundwater Modeling Technical Memorandum, July 20, 2011 (CardnoENTRIX 2011). In this scenario, the distance between the one-foot drawdown contour and the closest reach of the Amargosa River is approximately 12 miles. Therefore, even if the basin-fill aquifer extended all the way to the Amargosa River (which it cannot due to intervening structural discontinuities discussed below), there would not be a measurable drawdown at the Amargosa River as a result of the project's groundwater pumping. Therefore, because the basin fill aquifer is not laterally-continuous between the project site and the Amargosa River and the predicted drawdown would not extend that far even under the most conservative of the selected modeling alternatives, project pumping will not affect the Amargosa River.

Additionally, the Nopah Mountain Range, an upturned fault block which consists of Paleozoic carbonate rock of Permian to Cambrian age and Tertiary consolidated deposits (Plume and Carlton 1988), is located between the project site and the Amargosa River. The Nopah Range trends approximately north-south and truncates the basin fill aquifer a few miles west of the project site. Thus, the basin fill aquifer is not continuous between the project site and the Amargosa River and cannot propagate drawdown from pumping from the basin-fill aquifer at the project site to the Amargosa River.

At depths below the basin fill aquifer, the Paleozoic carbonate basement forms a regionally-extensive aquifer system from its recharge areas in the Spring Mountains on the east side of the Pahrump Valley, through the valley floor, and westward through the Nopah Range, and into the Chicago Valley toward its discharge point in the Amargosa River between Shoshone and Tecopa (Harrill, 1986). Although there are no wells completed in the carbonate aquifer in the Pahrump Valley, its properties can be determined from investigations in nearby areas. The carbonate aquifer is a confined groundwater system and has been demonstrated to have water levels (measured as pressure or "piezometric surface" levels associated with the confined aquifer conditions) that are higher than the water levels of the unconfined basin-fill aquifer (Bredehoeft et al., 2005; Winograd and Thordarson, 1975). This upward gradient will cause any water flow between the aquifers to be from the regional carbonate into the overlying basin fill sediments. These conditions are evident in places such as where faults disrupt the confining layers between the two aquifers and groundwater flows upward along the faults and forms lines of springs (Winograd and Thordarson, 1975, Harrill, 1986). Because of the confined nature of the carbonate aquifer and the upward water level gradient across the aquifer units, drawdown in the basin fill aquifer will not affect the regional flows through the carbonate aquifer.

References:

- Bredehoeft, J., C. Friedrich, and M. King, 2005, The Lower Carbonate Aquifer as a Barrier to Radionuclide Transport, In the Proceedings of 2005 Waste Management Symposia, February 27 – March 3, 2005, Tucson, AZ, WM Symposia, Inc.
- Harrill, J.R., 1986. Ground-Water Storage Depletion in Pahrump Valley, Nevada-California, 1962-75. USGS Water-Supply Paper 2279.

Plume, R.W., and S.M. Carlton, 1988. Hydrogeology of the Great Basin Region of Nevada, Utah and Adjacent States. USGS Hydrologic Atlas HA-694A

Winograd, I. J., and W. Thordarson, 1975. Hydrogeologic and Hydrochemical Framework, South-Central Great Basin, Nevada-California. Geological Society of America Bulletin, v. 100, p. 1738-1757.

83. Please provide a list of wildlife species dependent upon riparian and or phreatophytic vegetation that could be impacted by groundwater drawdown associated with the proposed project, particularly within five miles of the project site and within the Amargosa River ACEC/WSR. Please provide a list of migratory birds and their habitats in the region that could potentially be affected by drawdown associated with the proposed project.

Response: Groundwater use associated with project will not result in a significant impact to riparian and/or phreatophytic vegetation, and therefore will not impact wildlife species such as migratory birds that are dependent on riparian and/or phreatophytic vegetation. As stated in the Data Response 82, the project does not have the potential to affect the Amargosa ACEC/WSR, which is approximately 12 miles from the project site and hydrologically separated from the project site by the Nopah Range. This is also supported by first-order geophysical and regional hydrologic considerations.

Potential impacts to riparian and/or phreatophytic vegetation within five miles of the project site were addressed in Data Response 49. There are two concentrations of groundwater-dependent vegetation, or phreatophytes, in the study area: the mesquite (*P. glandulosa* and *P. pubescens*) thickets on coppice dunes and in arroyos along the Stateline fault system; and Salt cedar (*Tamarix aphylla*) thickets in the Charleston View area. Both clusters of groundwater-dependent vegetation are associated with spring complexes created by artesian flow and shallow groundwater in fault fractures in the confined groundwater aquifer. These two clusters of groundwater-dependent vegetation have persisted despite the significant groundwater drawdown of up to 40 feet in the vicinity. The incremental groundwater draw-down associated with the project will not significantly affect the phreatophytic vegetation within five miles of the project site.

Accordingly, there will be no impacts to wildlife species dependent on riparian and/or phreatophytic vegetation.

- 84 Please provide a table showing projected drawdown in acre-foot-per-year (AFY), over the projected 30-year life of the project.

Response: The information requested has been supplied in previous submissions, specifically in the information provided in Data Responses 44 through 47. Based on discussions with the CEC at the December 1, 2011 workshop, it is our understanding that this request has been satisfied

IMPACTS ON NATIVE VEGETATION

The AFC indicates that the entire project site is Mojave Desert scrub and shadscale scrub, with various associated vegetation types occurring on the site. The AFC also notes that “numerous small washes occur scattered throughout the site...”. However, other habitats noted on the site include mesquite thicket, typically a community of special concern to CDFG, as well as several low areas where water ponds. The AFC does not quantify

acreages of impacts to the various plant communities or map the locations of these features. Staff must provide an accurate description of impacts for each vegetative community type for each type of project construction impact. AFC Figure 5.2-3 shows location of mesquite thickets adjacent to the project, but fails to show the mesquite thickets known to occur onsite.

DATA REQUESTS

85. Please provide a table depicting impact acreage calculations to existing on-site native habitat. The table should differentiate between permanent and temporary impacts, clearly reference the associated project features, and the plant community affected. Please also include acreages of areas where water regularly ponds.

Response: A table showing acreage calculations of existing onsite native habitat communities (which are shown in AFC Figure 5.2-3) are provided below. There are two types of vegetative communities identified on the project site, shadscale scrub and Mojave Desert scrub. Their distribution is shown below in Table DR85-1.

TABLE DR85-1

Onsite Vegetation Acreages

Vegetation Type¹	Approx. Acres
Shadscale Scrub	1,647
Mojave Desert Scrub	1,611
Ruderal (Disturbed)	19
TOTAL	3,277

¹ See AFC Figure 5.2-3

Mesquite thicket communities do not occur onsite. This type of vegetative community (mesquite thicket) was encountered off the project site in the 1-mile buffer area, and was shown in AFC Figure 5.2-3 and in Figure DR48-1 (Data Response, Set 1A). It is not included in the impact acreage calculations.

Areas of potential water ponding were identified in the Wetland Delineation Report (AFC Appendix 5.2E). A rough approximation of the ponding areas is about 31.6 acres.

86. Please provide a map depicting locations of mesquite thickets and areas of water ponding.

Response: AFC Figure 5.2-3 depicts the locations of mesquite thickets. They are shown in more detail in Figure DR48-1 (Data Response, Set 1A). There are no mesquite thickets on the project site; they are only present in Nevada to the east of the project.

In its Wetland Delineation Report (AFC Appendix 5.2E), URS identified areas where potential ponding might occur following rain events. AFC Figure 5.2-12 shows those areas, which appear to occur along the graded roads. They are shown in greater detail in the Appendix C maps provided in Data Adequacy Supplement B, Attachment B2.

IMPACTS TO STATE JURISDICTIONAL WATERS

BACKGROUND: Pursuant to the Warren-Alquist Act, the Energy Commission issues Fish and Game Code Section 1600 Lake and Streambed Alteration Agreements in lieu of CDFG. Because staff will be responsible for verifying information in the agreement, staff requests additional data on existing state waters within the project site. Also, the AFC does not include a description of the anticipated direct, indirect, temporary, and permanent impacts for the temporary construction area and common area.

DATA REQUESTS

87. For state jurisdictional waters, please provide a table showing expected impact acreages that would be addressed under a state Streambed Alteration Agreement. Please also provide an assessment of what effect the project would have on state waters adjacent to the proposed project site.

Response: Delineation of State waters per Fish and Game Code Section 1600 is ongoing. The draft State delineation report, which will be informed by the recently issued Federal determination, will be submitted in January 2012. (See Data Response 90 below for additional information on the Federal determination.) The draft state delineation report will include an assessment of impacts to state waters.

88. Please delineate the state waters in the common area and temporary construction area and provide an updated state waters map and survey data (acreages) to staff. Please provide an explanation of what assumptions were made to determine what areas qualify as state waters.

Response: The draft state delineation report will include the temporary construction area and common area. The draft report will include assumptions and field measurements used to determine state waters.

IMPACTS TO WATERS OF THE U.S.

BACKGROUND: Staff must present a full accounting of the waters of the U. S. (WOUS) on the project site. Waters of the U. S. are regulated by the U.S. Army Corps of Engineers (USACE) under Sections 401 and 404 of the federal Clean Water Act. Determination of WOUS and formulation of mitigation is regulated by the USACE. Section 5.2.8 of the AFC and Appendix 5.2E reference the existence of nine USGS-mapped blue line streams within the project site, and discuss the lack of hydric soils on the project site. Staff needs to verify this determination, and thoroughly evaluate the potential for impacts to blue line streams from the HHSEGS project.

DATA REQUEST

89. Please provide maps of locations of soil pits which indicated a lack of USACE parameters for jurisdictional wetlands or waters, such as hydric soils, hydric vegetation, or hydrologic features.

Response: The URS Wetland Delineation Report (AFC Appendix 5.2E) described the soils on the project site as lacking hydric characteristics. That report does not mention anything about soil pits. The Preliminary Geotechnical Report (AFC Appendix 5.4A) has information on test pits that were dug as part of that investigation. A map of their location is found in Figures 3 and 4 of that report. Appendix A provides soil logs of those test pits.

90. Please provide a copy of the USACE jurisdictional determination for waters of the U. S. (for all Section 404 regulated waters).

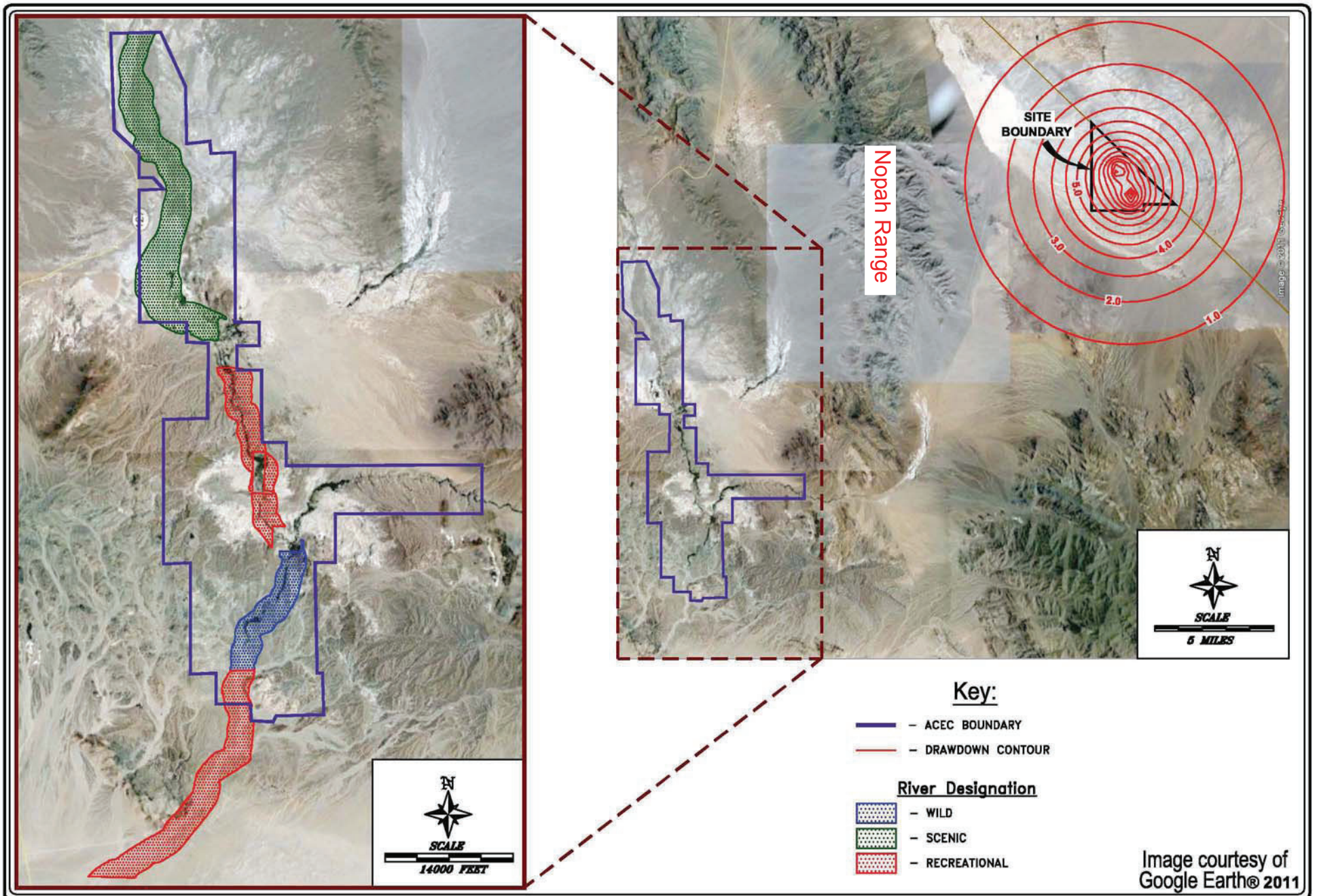
Response: The USACE has made its determination on which blue line waters are waters of the U.S. It has taken jurisdiction on Drainage 50-1 and Drainage 24-1, as indicated in the attached letter from the USACE dated December 14, 2011. A copy is provided as Attachment DR90-1.

91. When available, please provide a copy of the Nationwide Permit Application submitted to the USACE subsequent to receipt of the jurisdictional determination.

Response: Submittal of a Nationwide Permit Application is not required at this point in the permitting process, but submittal is anticipated in mid-2012. At that time, a copy will be filed with the Energy Commission.

92. When available, please provide staff a copy of the USACE letter of concurrence which grants authorization to fill waters of the U. S.

Response: The USACE letter of concurrence is not anticipated until mid-2012. At that time, a copy of the USACE letter of concurrence will be provided to the Energy Commission.



PROJECT NAME: BRIGHTSOURCE ENERGY HIDDEN HILLS
PROJECT NUMBER: 33153001.00

DWG. NUMBER: P3153001gs2
DATE: 12/01/11

FIGURE DR82-1 MAP SHOWING SITE DRAWDOWN CONTOURS RELATIVE TO AMARGOSA RIVER AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC), MAXIMUM DRAWDOWN SCENARIO AT 140 ACRE-FEET/YEAR.



ATTACHMENT DR90-1

DEPARTMENT OF THE ARMY

VENTURA REGULATORY FIELD OFFICE
2151 ALESSANDRO DRIVE, SUITE 110
VENTURA, CA 93001

December 14, 2011

REPLY TO
ATTENTION OF

Regulatory Division

Gary Kazio
BrightSource Energy Inc.
410 S. Rampart Blvd., Suite 390
Las Vegas, Nevada 89145

SUBJECT: Determination regarding Corps jurisdiction over interstate drainages on the Hidden Hills Ranch Project Site near Pahrump, Nevada

Dear Mr. Kazio:

I am responding to your request (File No. SPL-2011-00089-BAH) dated May 6, 2011 for a jurisdictional determination for BrightSource Energy's Hidden Hills Ranch Solar Project located in southeastern Inyo County, California near the town of Pahrump, Nye County, Nevada. We examined project information dated May 6, 2011 prepared by URS Corporation on your behalf, and conducted a site visit on May 31, 2011 by Regulatory project manager Bruce Henderson and Jean Paul Charpentier of URS Corporation. Based on this review and assessment of on-site conditions, we have determined the Hidden Hills Ranch Solar Project site contains waters of the United States pursuant to 33 C.F.R. §325.9, as well as additional drainage features we have determined to not be subject to Corps jurisdiction.

The Corps' evaluation process for determining if a Department of the Army permit would be required depends on whether the project is located within the Corps' geographic jurisdiction and if the proposed project includes an activity potentially regulated under Section 10 of the River and Harbor Act or Section 404 of the Clean Water Act. The project site is located immediately adjacent to the California/Nevada state boundary and drainage features that cross that boundary are identified as interstate waters pursuant to 33 C.F.R. 328.3(a)(2), provided they exhibit an ordinary high water mark. Of the interstate drainage features identified by URS Corporation as potentially jurisdictional, the May 31 site visit concluded that only two drainages, identified as Drainage 50-1 and Drainage 24-1, have an identifiable ordinary high water mark. These two drainages also demonstrated other characteristics to indicate they conveyed water at a somewhat greater frequency or duration, including supporting a vegetation community that differed from surrounding uplands and suggesting a wetter regime within the channels, and sorting of particle sizes within the drainage.

It is our understanding the solar energy project you propose would likely require maintenance and/or upgrading of the existing earthen roads, as well as potential road access within the project area. Your project may also require other utility infrastructure be installed. Therefore, we have determined your proposed project may involve a regulated activity located within the geographic jurisdiction of Section 404 of the Clean Water Act and a Section 404 permit would be required from our office.

This letter contains an approved jurisdictional determination for the Hidden Hills Ranch Solar Project site. If you object to this decision, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet (Appendix A) and Request for Appeal (RFA) form. If you request to appeal this decision you must submit a completed RFA form to the Corps South Pacific Division Office at the following address:

Tom Cavanaugh
Administrative Appeal Review Officer,
U.S. Army Corps of Engineers
South Pacific Division, CESPD-PDS-O, 2042B
1455 Market Street, San Francisco, California 94103-1399

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. Part 331.5, and that it has been received by the Division Office within 60 days of the date on the NAP. Should you decide to submit an RFA form, it must be received at the above address by February 13, 2012. It is not necessary to submit an RFA form to the Division office if you do not object to the decision in this letter.

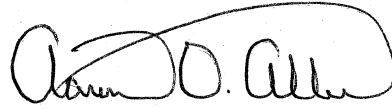
This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. If you wish to submit new information regarding the approved jurisdictional determination for this site, please submit this information to Bruce Henderson at the letterhead address by February 13, 2012. The Corps will consider any new information so submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior determination. A revised or reissued jurisdictional determination can be appealed as described above.

This determination has been conducted to identify the extent of the Corps' Clean Water Act jurisdiction on the particular project site identified in your request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

If you have any questions, please contact Bruce Henderson of my staff at 805-585-2145 or via e-mail at Bruce.A.Henderson@usace.army.mil. Please be advised that you can now

comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at: <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,

A handwritten signature in black ink, appearing to read "Aaron O. Allen". The signature is stylized with a large, sweeping loop at the top and a distinct "A" at the beginning.

Aaron O. Allen, Ph.D.
Chief, North Coast Branch
Regulatory Division

Enclosures

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Gary Kazio, BrightSource Energy Inc.	File Number: SPL-2011-00089-BAH	Date: 12/14/2011
Attached is:		See Section below
☐	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
☐	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
☐	PERMIT DENIAL	C
☒	APPROVED JURISDICTIONAL DETERMINATION	D
☐	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

DISTRICT ENGINEER
Los Angeles District, Corps of Engineers
ATTN: Chief, Regulatory Division
P.O. Box 532711
Los Angeles, CA 90053-2325
Tel. (213) 452-3425

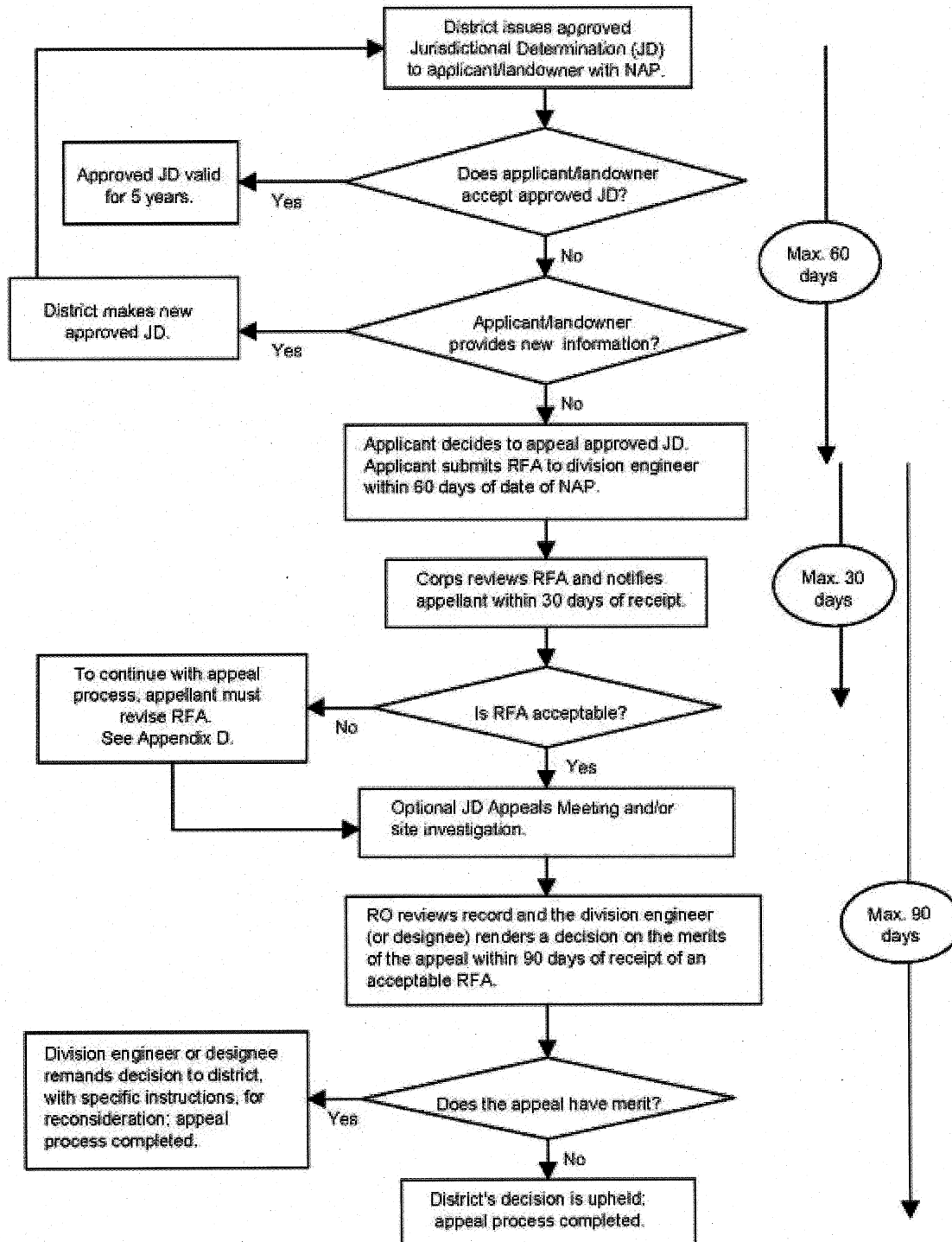
If you only have questions regarding the appeal process you may also contact:

DIVISION ENGINEER
South Pacific Division, Corps of Engineers
Attn: Tom Cavanaugh
Administrative Appeal Review Officer
South Pacific Division, CESPD-PDS-O, 2052B
1455 Market Street, San Francisco, California 94103-1399
Phone: (415) 503-6574 Fax: (415) 503-6646
Email: thomas.j.cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:
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Administrative Appeal Process for Approved Jurisdictional Determinations



Land Use (93-94)

BACKGROUND

The Application for Certification (AFC) Land Use Section 5.6 refers to the Inyo County General Plan and Solar and Wind Renewable Energy General Plan Amendment (REGPA) as the primary planning document applicable to the project site. The REGPA provided the basis for approvals of solar or wind renewable energy facilities and established policies to encourage development of renewable energy facilities in overlay zones in any zoning district identified in Title 18 of the Inyo County Code.

Proposed renewable energy projects submitted under the REGPA were also subject to Title 21 (Renewable Energy Development) of Inyo County. Title 21 remains in effect and states that any person proposing to construct a renewable energy facility within Inyo County must obtain either a renewable energy permit, or enter into a renewable energy development agreement with Inyo County in lieu of applying for a permit. On September 6, 2011, the Inyo County Board of Supervisors rescinded the County's REGPA, effectively eliminating the overlay zone that was discussed in the AFC. The California Energy Commission has statutory authority over the licensing for the proposed Hidden Hills Solar Electric Generating System (HHSEGS) and staff is reviewing the applicability of Inyo County Title 21 requirements.

As a result of the revocation of the REGPA, the proposed project is now inconsistent with existing general plan and zoning designations on the project site (Open Space and Recreation, and Open Space with a 40-acre minimum parcel size, respectively). Had the HHSEGS project been subject to permitting by Inyo County, the applicant would have been required to submit an application to amend the general plan and either apply for a renewable energy permit and zoning reclassification, or enter into a renewable energy development agreement pursuant to Title 21. The HHSEGS project will be analyzed and a determination will be made as to whether the project is consistent with local laws, regulations, ordinances and standards (LORS). For staff to prepare the land use analysis section, additional information is needed as follows.

DATA REQUESTS

93. Please state whether the applicant has submitted or intends to submit to Inyo County an application for a General Plan Amendment and Zoning Reclassification to bring the project into conformity with local LORS. Please indicate when the application will be submitted to the county and provide a copy to Energy Commission staff.

Response: Applicant has not submitted to Inyo County an application for a General Plan Amendment and Zoning Reclassification. The Applicant is currently discussing with the County whether such filings are necessary and, if so, the timing of such filings. We will provide the Commission Staff with a copy of any such filing.

94. Please provide information to Inyo County that would normally be submitted in an application for a renewable energy permit (or renewable energy development agreement) to facilitate the county's review of the project so that Inyo County can provide adequate input to the Energy Commission on appropriate mitigation measures, development standards, reclamation plan, and financial assurances

pursuant to Title 21 (Sections 21.20.010, 21.20.020, 21.20.030, and 21.20.040). Please submit copies to Energy Commission staff (Staff will consider the county's input when developing its proposed conditions of certification for the project).

Response: Given that the HHSEGS is subject to the California Energy Commission's exclusive permitting jurisdiction, HHSEGS would not "normally" apply to Inyo County for a renewable energy permit. Because this permit is a new requirement and because HHSEGS is outside the scope of the permit, we are not able to identify what information would be "submitted" to Inyo County.

However, based on a review of the Inyo County Code sections governing renewable energy permits, renewable energy development agreements, CEQA procedures, and development agreements, it appears that the Application for Certification for the HHSEGS project contains all of the information necessary for Inyo County's review of a renewable energy project if it was not otherwise subject to CEC jurisdiction. Applicant will ensure that Inyo County has sufficient copies of the AFC necessary to facilitate the County's review, in addition to all other informational documents submitted by Applicant in this proceeding.

Worker Safety and Fire Protection (95-96)

BACKGROUND

Hidden Hills SEGS will bring a large scale industrial facility into the jurisdiction of Southern Inyo Fire Protection District (SIFPD). First responder and fire protection services will be required for the project and will be provided by the unfunded and understaffed SIFPD. As the construction and operation of the project will increase the assets that the fire district must protect and potentially increase call frequency for emergency first aid and medical services, Energy Commission staff requires assurance that SIFPD's increased responsibility will not adversely affect its ability to continue providing service to the public.

DATA REQUESTS

- 95 Please provide a letter, email, or record of conversation with SIFPD that confirms the absence of any expected impacts on the local fire district resulting from construction and operation of the proposed project.

Response: The Applicant is currently in discussions with Inyo County. Information regarding this data request will be provided in the near future.

96. In the absence of such letter or communication, please provide a Fire and Emergency Services Risk Assessment and a Fire Protection and Emergency Services Needs Assessment for the construction and operation of the project that provides an objective estimate of both equipment and staffing shortfalls (if any) and the associated recommended mitigations (if any) that would be required by SIFPD to maintain its current level of readiness to respond.

The Fire Risk Assessment and a Fire Protection Needs Assessment should be considerate of the guidance provided by NFPA 1720: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments and NFPA 551: Guide for the Evaluation of Fire Risk Assessments. The Fire Protection and Emergency Services Needs Assessment should address emergency fire and medical response and equipment, staffing, and location needs while the Risk Assessment should be used to establish the risk (chances) of significant impacts occurring. The Fire Protection and Emergency Services Needs Assessment and Risk Assessment should evaluate the following: (a) the risk of impact on the local population that could result from potential unmitigated impacts on local fire protection and emergency services (i.e. "drawdown" of emergency response resources, extended response times, etc.) and (b) recommend an amount of funding that should be provided to mitigate any identified impacts on local fire protection and emergency medical response services.

Response: The Applicant is currently in discussions with Inyo County. Information regarding this data request will be provided in the near future.



**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**

**APPLICATION FOR CERTIFICATION
FOR THE *HIDDEN HILLS SOLAR ELECTRIC
GENERATING SYSTEM PROJECT*
HIDDEN HILLS SOLAR HOLDINGS, LLC**

DOCKET NO. 11-AFC-2

**PROOF OF SERVICE
(Revised 11/21/2011)**

APPLICANT

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*indicates change

DECLARATION OF SERVICE

I, Mary Finn, declare that on, December 19, 2011, I served and filed copies of the attached Hidden Hills Solar Electric Generating Station (11-AFC-2) Data Response 1C, dated December 19, 2011. The original document, filed with the Docket Unit or the Chief Counsel, as required by the applicable regulation, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [www.energy.ca.gov/sitingcases/hiddenhills/index.html].

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 or Chief Counsel, as appropriate, in the following manner:

(Check all that Apply)

For service to all other parties:

- x Served electronically to all e-mail addresses on the Proof of Service list;
- Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "e-mail preferred."

AND

For filing with the Docket Unit at the Energy Commission:

- x by sending an original paper copy and one electronic copy, mailed with the U.S. Postal Service with first class postage thereon fully prepaid and e-mailed respectively, to the address below (preferred method); **OR**
- by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT

Attn: Docket No. 11-AFC-2
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

- Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
mlevy@energy.state.ca.us

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.



Mary Finn, CH2M Hill