

Appendix 5.2D
Golden Eagle Nest Survey Report

Hidden Hills Golden Eagle Nest Search

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The Hidden Hills Project Site in southeastern Inyo County, California is being considered by BrightSource Energy as a solar power site. As part of the ecological investigation for the site, golden eagle nest searches were conducted within a 10-mile buffer of the project footprint based on established CDFG parameters for the protection of this species. Golden eagle is listed by the CDFG as Fully Protected in the state of California. The purpose of these searches was to determine the use by golden eagles within a 10-mile buffer of the Hidden Hills Project Site during the eagle breeding season.

A CH2M HILL biologist completed two days of nest searches in the aforementioned 10-mile buffer between May 12th and 13th, 2011. What follows is an account of how the searches took place, a figure showing locations of nests found, and a table detailing all wildlife encountered within the buffer during those days.

Description of Site and Buffer

The habitat on the site could generally be described as open desert scrub populated extensively with creosote and sagebrush, crossed by a few intermittent washes, and sitting in a wide valley framed by mountains.

Elevation on the site ranges from approximately 2,585 to 2,685 feet. Peaks over 6,300 feet exist within the buffer in the Nopah Range to the west, and elevations over 4,000 feet exist in the Kingston Range within the buffer to the south. These mountains and the foothills below them provide appropriate nesting habitat for golden eagle (canyons with cliff ledges) adjacent to open desert scrub which is appropriate foraging habitat for the species.

The lowland desert scrub in the buffer was found to be occupied by cottontails, jackrabbits, antelope squirrels, whiptails, and patch-nosed snake, while the cliffs and slopes of the ranges contained chuckwallas, collared-lizards, and rock squirrels. The presence of all these species in the buffer indicates that there is an appropriate prey base for golden eagles to potentially attempt nesting in the area.

Methodology

Over two days the biologist explored on foot as completely as possible portions of the 10-mile buffer which seemed to provide the most appropriate nesting habitat for golden eagles. These areas included sections of the Nopah Range, small ranges in the California Valley, and parts of the Pahrump Valley Wilderness. These surveys are usually conducted by

helicopter, but restrictions to protect bighorn sheep in the area prevented the immediate use of this method.

Day One: Biologist parked at the junction of Tecopa Road and Hafen Ranch Road and hiked south through the northern base of a small range examining outcrops for nests or sign of eagle presence. Then the biologist crossed Tecopa Road and explored the southeast section of the Nopah Range, then explored from the vehicle the remainder of the small range to the south of Tecopa Road, and into the California Valley to Mesquite Valley Road. Biologist scanned as much of the Kingston Range as possible from this southern most road, but access was very limited. Finally at the end of the afternoon, the canyons and cliffs near Emigrant Pass were searched.

Day Two: Biologist returned to Emigrant Pass at dawn since it seemed the most appropriate accessible habitat for golden eagle within the buffer. Then the portion of Nopah Range just to the east was explored on foot, followed by a drive up Hafen Ranch Road and a hike along the eastern slope of the Nopah Range west of the dry lake bed. Finally, the area southeast of Tecopa Road between the state border and Front Sight was examined for any potential sections of appropriate habitat.

Results

Only two large nests were found during these efforts. A large nest that had probably belonged to a pair of raptors (perhaps golden eagles) earlier that season was located on a cliff ledge in the Emigrant Pass area (Photo 1), while a smaller but still rather bulky nest (perhaps belonging to a pair of ravens) was located on the eastern slope of the Nopah Range (Photo 2).

Since no raptors were observed on or near the large nest at Emigrant Pass the afternoon it was found, the biologist returned there the following morning, but still no raptors were observed. The nest appeared to be at least 3-4 feet across and 1 foot deep. It was on a remote cliff ledge about a quarter mile from any safe access, so it was difficult for the biologist to see any sign of recent presence, or clues with regards to fail or fledge from such a distant vantage point.

No raptors or ravens were observed in the vicinity of the smaller nest on the east slope of the Nopah Range either. The biologist was able to observe this nest from a much closer distance (200 meters or so). It was deeper (perhaps 2 feet), but not as wide (2-3 feet) as the raptor nest at Emigrant Pass. There much whitewash on the rocks surrounding the nest, but no sign that would indicate raptor presence (mammal bones, feathers, etc.) was observed.

Photo 1



Large nest near Emigrant Pass, belonging at one point to raptors, possibly golden eagles (bottom left)

Photo 2

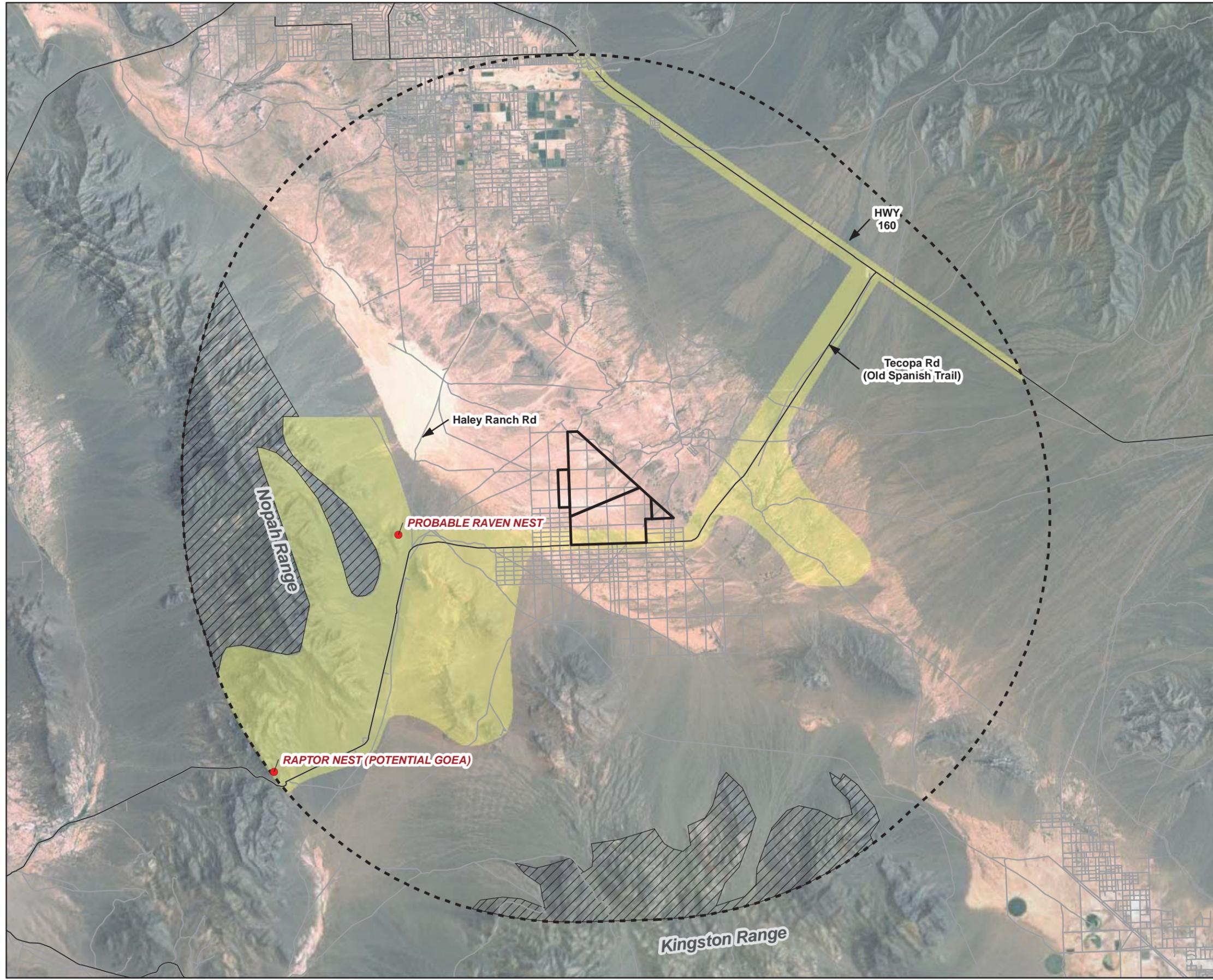


Large nest on east slope of Nopah Range (possibly inactive raven nest)

Wildlife Species Observed in HHR 10 mile Buffer – May 12-13, 2011		
Common Name	Scientific Name	Comments
BIRDS		
Turkey vulture	<i>Cathartes aura</i>	Only one seen over SE section of Nopah Range
Red-tailed hawk	<i>Buteo jamaicensis</i>	Only one seen on Nevada side of buffer near HWY 160
Rock pigeon	<i>Columba livia</i>	Around residential areas on site
Mourning dove	<i>Zenaida macroura</i>	Around residential areas on site
White-throated swift	<i>Aeronautes saxatalis</i>	Flying around (perhaps nesting in) cliffs of Emigrant Pass
Gray flycatcher	<i>Empidonax wrightii</i>	Probable migrant observed near small range south of Tecopa Road just east of Calvada Springs
Say's phoebe	<i>Sayornis saya</i>	Many pairs in cliffs of Nopah Range and foothills below (juveniles seen)
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>	Several seen and heard calling in foothills of Nopah Range
Loggerhead shrike (California Species of Special Concern)	<i>Lanius ludovicianus</i>	Multiple pairs and family groups with juveniles seen in foothills of Nopah Range (mainly south and west portions)
Common raven	<i>Corvus corax</i>	Only a couple of pairs seen soaring high over Nopah Range
Horned lark	<i>Eremophila alpestris</i>	Numerous family groups in grassy lowlands of Nopah foothills
Violet-green swallow	<i>Tachycineta thalassina</i>	A single juvenile observed hawking insects near Old Spanish Trail kiosk on Nevada side near Front Sight
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	Quite numerous in south and east foothills of Nopah Range where several juveniles were seen
Rock wren	<i>Salpinctes obsoletus</i>	Throughout Nopah Range and especially vocal near Emigrant Pass
Black-tailed gnatcatcher	<i>Poliophtila melanura</i>	One heard and briefly seen near small range south of Tecopa Road just east of Calvada Springs
Northern mockingbird	<i>Mimus polyglottos</i>	Quite numerous singing from yuccas and creosote throughout Nopah foothills and lowlands near site
Le Conte's thrasher	<i>Toxostoma lecontei</i>	One heard singing and briefly seen near small range south of Tecopa Road just east of Calvada Springs

Wildlife Species Observed in HHR 10 mile Buffer – May 12-13, 2011		
Common Name	Scientific Name	Comments
Phainopepla	<i>Phainopepla nitens</i>	One adult male in California Valley just east of Mesquite Valley Road
European starling	<i>Sturnus vulgaris</i>	Residential areas near site
Black-headed grosbeak	<i>Pheucticus melanocephalus</i>	Probable migrant observed at Emigrant Pass
Black-throated sparrow	<i>Amphispiza bilineata</i>	One of the most numerous birds on the site and throughout the buffer with several groups of juveniles observed as well as singing adults
Scott's oriole	<i>Icterus parisorum</i>	A few pairs observed and heard singing from yuccas in south and east foothills of Nopah Range
MAMMALS		
Audubon's cottontail	<i>Sylvilagus audubonii</i>	Several seen in the lowlands near Tecopa Road
Black-tailed jackrabbit	<i>Lepus californicus</i>	Several seen in the lowlands near Tecopa Road
White-tailed antelope squirrel	<i>Ammospermophilus leucurus</i>	Quite numerous throughout lowlands and foothills of Nopah Range where several juveniles were seen
Rock squirrel	<i>Spermophilus variegates</i>	OUT OF MAPPED RANGE: A large squirrel was seen among boulders in the southeast section of the Nopah Range. Given its size and coloration (rather uniform sandy gray) it was clearly not the abundant antelope squirrel that I had seen throughout the lowlands. This species and California ground squirrel were the only candidates, and it looked much more like a rock squirrel to me. All the literature I have consulted say the nearest known population is in the Providence Mountains of San Bernardino County about 25 miles to the SE, while the closest population of California ground squirrels is probably Death Valley, about 40 miles to the west.
REPTILES		
Common chuckwalla	<i>Sauromalus ater</i>	Several observed in the high boulders of Nopah Range and atop small range south of Tecopa Road
Zebra-tailed lizard	<i>Callisaurus draconoides</i>	Several observed in washes below Nopah Range

Wildlife Species Observed in HHR 10 mile Buffer – May 12-13, 2011		
Common Name	Scientific Name	Comments
Great Basin collared lizard	<i>Crotaphytus bicinctores</i>	One observed well near Emigrant Pass
Side-blotched lizard	<i>Uta stansburiana</i>	Several observed in washes below Nopah Range
Great Basin whiptail	<i>Aspidoscelis tigris</i>	Throughout site and buffer
Mohave patch nosed snake	<i>Salvadora hexalepis mojavnensis</i>	One observed along Tecopa Road at SW bend below Nopah Range



- LEGEND**
- Golden Eagle Nest Search Results
 - Interstate
 - Highway
 - Major Road
 - Local Road
 - ▭ Project Boundary
 - ⋯ 10-mile Buffer of Project Site Boundary
 - Golden Eagle Nest Search Area
 - ▨ Helicopter Surveys Recommended

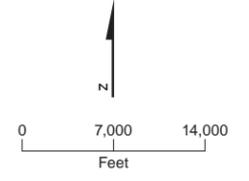


FIGURE 1
Golden Eagle Nest Search
 Hidden Hills Solar Electric Generating System