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Pierre Martinez
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California Energy Commission
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Subject: Applicant's Supplemental Response #9 to CEC Staff Data Request Set 1A (DR 45)
Rio Mesa Solar Electric Generating Facility (11-AFC-04)

Dear Mr. Martinez:

On behalf of Rio Mesa Solar I, LLC and Rio Mesa Solar II, LLC, collectively the "Applicant" for the Rio Mesa Solar Electric Generating Facility project ("Rio Mesa SEGF"), we submit the Applicant's Supplemental Response #9 to CEC Staff Data Request Set 1A (DR 45) – 2012 Gila Woodpecker and Breeding Bird Survey Summary Report.

Sincerely,

Angela Leiba, Vice President
Senior Project Manager/ Environmental Department Manager

Enclosure

cc: POS List
Project File

R E P O R T

SPRING 2012 GILA WOODPECKER AND BREEDING BIRD SURVEY SUMMARY REPORT FOR THE RIO MESA SOLAR ELECTRIC GENERATING FACILITY, RIVERSIDE COUNTY, CALIFORNIA

Prepared for

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BCC	Birds of Conservation Concern
BLM	Bureau of Land Management
BSA	Biological Study Area
CDFG	California Department of Fish and Game
CNDDB	California Natural Diversity Database
FP	Fully Protected
Gen-tie line	Generator tie-line
GIS	Geographic Information System
GPS	Global Positioning System
Hz	Hertz
MW	Megawatt
MWD	Metropolitan Water District
Rio Mesa SEGF	Rio Mesa Solar Electric Generating Facility
REAT	Renewable Energy Action Team
SE	State Endangered (California Endangered Species Act)
ST	State Threatened (California Endangered Species Act)
SSC	Species of Special Concern
USFWS	U.S. Fish and Wildlife Service
WL	Watch List

SECTION 1 INTRODUCTION

1.1 SUMMARY OF FINDINGS

During the breeding season from March 7 to May 31, 2012, eight full-coverage Gila Woodpecker surveys were conducted by URS as requested by the Renewable Energy Action Team (REAT) for the Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF or Project). Each survey was conducted to fully cover approximately 2,266 acres of microphyll woodlands located within the survey study area (as described more fully below). No Gila Woodpeckers were detected during the formal spring 2012 surveys conducted by URS utilizing call-broadcast techniques. A single individual was both seen and heard by U.S. Fish and Wildlife Service (USFWS) biologists visiting the study area in April 2012. Follow-up Gila Woodpecker surveys conducted near the site of the USFWS detection did not detect Gila Woodpeckers.

A total of 24 nests from 12 species were detected in accordance with REAT protocols during the Gila Woodpecker surveys, including 5 Red-tailed Hawk nests, 4 Cactus Wren nests, 3 Mourning Dove nests, two Black-tailed Gnatcatcher nests and 2 Ash-throated Flycatcher nests. Single nests for Anna's Hummingbird, Great-horned Owl, Ladder-backed Woodpecker, Lesser Nighthawk, Loggerhead Shrike, Verdin and White-winged Dove were also observed within the study area.

1.2 PURPOSE OF REPORT

This report describes the methodology and results of the spring 2012 Gila Woodpecker and breeding bird surveys conducted for BrightSource Energy, Inc. (Applicant) by URS Corporation (URS) within a study area that includes the proposed Project site and a ¼-mile buffer area surrounding the Project fenceline.

During 2011, URS Project biologists detected Gila Woodpecker at five locations located within or adjacent to microphyll woodlands (see Figure 1). Microphyll woodlands are a common nesting habitat for resident birds in the Colorado/Sonoran deserts and potential nesting habitat for Gila Woodpecker. Based on these observations and the presence of microphyll woodlands in the Project, the REAT agencies, including representatives from the California Energy Commission (CEC), USFWS, California Department of Fish and Game (CDFG), and the U.S. Bureau of Land Management (BLM), requested that additional Gila Woodpecker surveys be conducted in spring 2012 to further characterize the species' potential occurrence in the vicinity of the Project (Blair and White 2012).

1.3 SPECIES BACKGROUND

The Gila Woodpecker (*Melanerpes uropygialis*) is currently listed as a State Endangered species under the California Endangered Species Act and is listed as a Bird of Conservation Concern by the USFWS. Gila Woodpeckers are conspicuous, permanent residents across their range in southeastern California, southern Nevada, central Arizona and southwestern New Mexico (Alcorn 1988, Edwards and Schnell 2000, Hubbard 1978). Small populations are also found throughout Baja California and western Mexico from the U.S.–Mexico border south to Central Mexico (Wilbur 1987, Howell and Webb 1995; AOU 1998).

Gila Woodpeckers are better adapted morphologically for soft-wood excavation, therefore nesting habitat is restricted to desert mesas supporting large saguaro cacti or riparian woodlands, xeric-riparian woodlands, and human-altered environments with large softwood tree species, hardwoods with pre-existing cavities or decaying hardwood snags (Hunter 1984). Dominant tree species used by Gila Woodpecker for nesting include: (1) riparian woodlands- Fremont cottonwood (*Populus fremontii*) and Goodding's willow (*Salix gooddingii*); (2) xeric-riparian woodlands-blue palo verde (*Cercidium floridum*) and ironwood (*Olneya tesota*); (3) saguaro scrub communities-giant saguaro (*Carnegia gigantea*); and (4) human-altered environments-various palms, eucalyptus (*Eucalyptus spp.*), and Athel tamarisk (*Tamarix aphylla*) (Edwards and Schnell 2000). Average territory size during the breeding season is habitat dependent. Rosenberg et al. (1991, 1987) found that breeding Gila Woodpeckers prefer large patches (exceeding 49 acres) of woody riparian vegetation for nesting, while other studies have documented that the species use areas ranging from 11-200 acres in various habitat types such as open-desert and residential areas (Hensley 1954, Mills et al. 1989, Edwards and Schnell 2000, McCreedy 2008). During the non-breeding season, Gila Woodpeckers tend to be sedentary and remain in similar habitat used during breeding, though small-scale movements from higher elevations to lower elevations and utilization of concentrated food sources have been noted (Kaufman 1996, Edwards and Schnell 2000).

In California, Gila Woodpeckers tend to be restricted to areas with dense riparian woodlands along the Lower Colorado River Valley and eastern Imperial Valley where ample nesting habitat exists. Many of the few remaining patches of dense riparian woodlands in California that support Gila Woodpecker are found in public parks and private residential settings with a high amount of human disturbance (Hunter 1984). In the mid-1980s, the California Gila Woodpecker population was estimated to include approximately 200 individuals (Hunter 1984) with roughly 30 breeding pairs (Laymon and Halterman 1986). Along the Arizona side, the Lower Colorado River (Rosenberg et al. 1991) reported a declining Gila Woodpecker population with 650 individuals in 1976, 600 in 1983, and 561 in 1986. Rosenberg et al. (1991) estimated a total of 1,000 Gila woodpeckers along the whole stretch of the Lower Colorado River.

Little data have been collected on the Gila Woodpecker population in California post Hunter 1984 and Rosenberg et al. 1991. There are 16 recent occurrences (since 1990) of Gila Woodpeckers documented in the California Natural Diversity Database (CNDDB) (CDFG 2012). All of the recent documented occurrences in the CNDDB are along or in close proximity to the Colorado River and within the eastern portion of the Imperial Valley. All but three sighting locations occurred on public lands (e.g. BLM, USFWS, U.S. Bureau of Reclamation, or Imperial County property) (CDFG 2012). California Christmas Bird Counts from 1970-2011 have typically recorded between 1 to 3 Gila Woodpeckers per count and recorded a high count of 19 individuals in 2003.

There have been two recorded occurrences of nesting Gila Woodpecker within a 20 mile radius of the Project site in the last four years. In 2008, a small population of 4-5 pairs (10+ individuals) was discovered in the Milpitas Wash near Palo Verde, California (McCreedy 2008). Since 2008, the Milpitas Wash area has annually supported approximately 4-5 Gila Woodpecker territories within approximately 800 acres of desert woodland. Milpitas Wash is a dense old-growth desert wash/woodland dominated by palo verde (*Cercidium*) and ironwood (*Olneya*) located in Imperial County approximately 15 miles south of the Project site. Milpitas Wash, however, supports significantly higher quality habitat than occurs in

the Project study area due to the prevalence of higher stem densities, tall old-growth trees, and an abundance of dead snags and cavities. In 2012, a pair of Gila Woodpeckers was observed at Peter McIntyre County Park in Blythe, California throughout the breeding season and was assumed to nest in the park (personal observations by URS biologists Phillip Howard and Ryan Randall). Peter McIntyre County Park is an 87-acre campground located in Riverside County, along the Colorado River, approximately 12 miles east of the Project. The park is characterized by riparian woodlands with an abundance of large cottonwoods, willows and exotic (non-native) palms and eucalyptus that provide potential softwood nesting areas for the Gila Woodpecker. The parkland's riparian-dominated habitat is significantly different from the habitats that occur in the study area and provides substantially higher quality habitat for the Gila Woodpecker.

1.4 PROJECT SITE AND STUDY AREA

The Project site is located on the east side of the Mule Mountains approximately 13 miles southwest of Blythe, California (see Figure 2). The Project site is within the Colorado Desert region of the Sonoran Desert on the Palo Verde Mesa in Riverside County, California. The Project site is located solely on private land owned by the Metropolitan Water District (MWD), and the proposed gen-tie line, 33kV service line, and access road for the Project crosses land administered by the BLM. At the time the Gila Woodpecker surveys were initiated in March 2012, the proposed Project included three solar concentrating thermal power plants each with a single solar power tower, shared common areas, a switchyard, a gas metering yard, a temporary construction logistics area, a right of way (ROW) corridor and a fenceline that would be constructed around the site. In July 2012, the Applicant filed an Environmental Enhancement Proposal with the CEC that reduced the proposed Project to two solar concentrating thermal power plants. This amendment removed the northern portion of the original site from the current Project area. The area removed from the proposed Project is depicted as the "Additional Area of Original Fenceline Boundary" in Figures 1, 3, 4 and 5. The proposed Project boundaries and associated infrastructure are also depicted in Figures 1, 3, 4, and 5.

As requested by the REAT agencies, the Gila Woodpecker study area included all microphyll woodlands documented to occur within the original proposed Project fenceline (the Project area prior to the July Environmental Enhancement Proposal) and within a ¼-mile buffer surrounding the fenceline. In 2011, URS mapped all vegetation within the study area using desktop Geographic Information Systems (GIS) and high-resolution aerial photography (VTN 2011). The mapping effort identified the locations where sparsely vegetated desert wash areas dominated by palo verde (*Cercidium*) and ironwood (*Olneya*) occurred. After the desktop analysis was completed, a team of four URS biologists field-verified the results and confirmed all areas where microphyll woodlands occurred. Based on this analysis, the survey biologists identified approximately 2,266 acres of microphyll woodlands (1,136 acres inside the original Project fenceline) within the study area (see Figure 3). The amount of microphyll woodlands within the Project included in the July 2012 Environmental Enhancement Proposal has been reduced to approximately 708 acres. All eight Gila Woodpecker surveys conducted in 2012 covered the 2,266 acres of microphyll woodlands in the proposed Project fenceline, the additional area of the original fenceline, and ¼-mile buffer area around the original fenceline.

SECTION 2 METHODOLOGY

There is no established survey protocol for Gila Woodpecker detection. The REAT agencies requested that focused survey techniques be utilized to determine the distribution and abundance of Gila Woodpecker and to document all nesting birds in the microphyll woodlands in the study area. The following methodology was utilized to implement the surveys requested by the REAT agencies (Blair and White 2012).

During the breeding season, eight full coverage surveys of the microphyll woodland within the survey area were conducted for Gila Woodpecker and other nesting birds. These surveys occurred from March 7 to May 31, 2012. Each survey included full coverage of the 2,266 acres of microphyll woodlands within the survey area. March-May surveys were conducted on 8-11 day intervals for the first 5 surveys. The survey interval was reduced for the final three surveys to 6-7 days to ensure completion of all eight surveys by the end of May (see Table 1). Surveys were conducted during all hours of daylight starting at sunrise and lasting till mid-afternoon or starting mid-afternoon and lasting till sunset. Table 1 lists each of the survey starting and ending times.

During the start and end of each survey day, the time, temperature, cloud cover, and wind speed were recorded on data sheets (see Appendix A). The survey protocol consisted of biologists, working in teams of 1 to 3 persons depending on the size of the washes being surveyed, slowly walking meandering transects through microphyll woodland habitat and playing recorded Gila Woodpecker calls every 100 meters to elicit a response from any Gila Woodpeckers that might have been in the vicinity. Due to the Gila Woodpecker's aggressive nature toward conspecifics and other species (Gilman 1915, Brenowitz 1978, Brush et. al. 1983, Martindale and Lamm 1984), call broadcast surveys are considered an effective way of eliciting responses from the species (Shook 2008). Broadcasted vocalizations included both drumming and calls from the Sibley iPhone App and iBird iPhone App using 200-20,000Hz AUVIO® MP3 folding speakers at max volume. During call broadcast periods, the biologist would stop walking for roughly one minute scanning the surrounding area for bird movement and listening for Gila Woodpeckers. In areas with dense vegetation or where Gila Woodpeckers were previously detected (e.g., in 2011 and by USFWS biologists in April 2012), taped calls were broadcasted every 50 meters. All trees and dead snags with potential to support a Gila Woodpecker nesting cavity were visually searched for signs of nesting. The average tree height for Gila Woodpeckers nesting in similar habitat in southeastern California has been documented to be 7.3 meters with an average diameter at breast height (DBH) of 39 centimeters and diameter at ground height (DGH) of 46 centimeters (McCreedy 2008). GPS track logs were taken daily and checked by the field lead to ensure that 100% coverage of microphyll woodland habitat was achieved during each survey (Figure 3). If a Gila Woodpecker was detected, the following data would be recorded on the data sheets: GPS ID, coordinates, grid number, detection method (audio/visual), nest found (yes/no), and number of individuals along with any additional information observed such as age class, flight direction and if the observation was near a previously known location (see Appendix A) .

As discussed above, microphyll woodlands are known to provide nesting habitat for certain resident birds in the Colorado/Sonoran deserts, but only marginal nesting habitat for the Gila Woodpecker. As part of the 2012 surveys, the REAT agencies requested that nest searches be performed for any birds displaying signs of nesting or breeding behavior (Blair and White 2012). These nest searches occurred concurrently

with the eight rounds of Gila Woodpecker surveys conducted in the 2,266 acre microphyll woodland survey area. Nest searching techniques included following behavioral clues, systematic searches of shrubs and trees and investigation of locations where flushed birds were first seen. If a nest was found, a GPS waypoint was taken and the following information was recorded on the field data sheet: date found, species, nest stage, grid number, GPS coordinates, GPS identifier, and notes on the substrate supporting the nest (see Appendix B). Occasionally, a bird species would display signs of nesting outside of the microphyll woodlands survey area. In such cases, the surveying biologist would follow the bird to determine if the species was nesting outside the microphyll woodland survey area. If a nest was found outside of the microphyll woodlands, the nest location was logged and information was recorded in accordance with the documentation in Appendix B. In accordance with the REAT agencies' request (Blair and White 2012), all bird species incidentally seen or aurally detected during each round of the Gila Woodpecker and concurrent breeding bird surveys was recorded on a standard data sheet (see Appendix A).

SECTION 3 BIOLOGISTS' QUALIFICATIONS

All individuals conducting the Gila Woodpecker and nesting bird surveys possessed a Bachelor of Science or higher college degree in biology or a suitable level of applicable avian survey experience, prior experience conducting bird surveys for similar bird species, and the ability to identify birds visually while in flight as well as by their call. The resumes of the Gila Woodpecker and nesting bird survey team are attached to this report in Appendix C.

SECTION 4 RESULTS

4.1 GILA WOODPECKER SURVEYS

During the breeding season, eight full coverage surveys were conducted for Gila Woodpecker from March 7 to May 31, 2012. Each survey included all microphyll woodlands (approximately 2,266 acres) within the study area. No Gila Woodpeckers were detected during the 2012 formal surveys performed by URS utilizing call-broadcast techniques.

One incidental Gila Woodpecker was both seen and heard by non-Project biologists during a site visit on April 11, 2012 (USFWS biologists Nisa Marks and Pete Sorensen). The USFWS detection is depicted in Figure 1 and was located outside of the proposed Project fenceline. During the five rounds of Gila Woodpecker surveys (4/16 – 5/31) following this observation, including site surveys that covered the April 11 detection area, no Gila Woodpeckers were subsequently detected.

URS previously conducted spring and fall migratory bird surveys within and adjacent to the Project site in 2011. The 2011 surveys utilized the BLM's Solar Facility Point Count Protocol (2009). Five observations of Gila Woodpecker were detected in 2011, including four observations during the spring surveys and one observation during the fall survey. All five of these observations were located within or adjacent to microphyll woodlands. No Gila Woodpecker nests or nesting behaviors were observed during the 2011 surveys. The locations of the 2011 species detections and the single 2012 USFWS detection are depicted in Figure 1. As shown in Figure 1, two observations were recorded within the proposed Project fenceline. Four were recorded in locations to the north or east of the Project site (see Figure 1).

4.2 NESTING BIRD SURVEYS

A total of 24 nests from 12 species were detected during the breeding bird surveys conducted concurrently with the Gila Woodpecker surveys, including 5 Red-tailed Hawk nests, 4 Cactus Wren nests, 3 Mourning Dove nests, two Black-tailed Gnatcatcher nests and 2 Ash-throated Flycatcher nests. Single nests for Anna's Hummingbird, Great-horned Owl, Ladder-backed Woodpecker, Lesser Nighthawk, Loggerhead Shrike, Verdin and White-winged Dove were also observed within the study area. The detected nests are summarized in Table 3 and depicted in Figure 4. One nest was detected in February, 11 nests were detected in April, and 12 nests were detected in May. No state or federally listed species were observed nesting during the surveys, with the exception of a single Loggerhead Shrike (CDFG: SSC) nest. The most common nesting substrates for non-raptors were palo verde and ironwood in the microphyll woodlands. For raptors, existing transmission line towers were the most common nesting location.

4.3 INCIDENTAL BIRD SPECIES

A total of 65 bird species were incidentally detected during the eight rounds of Gila Woodpecker and breeding bird surveys, 16 of which were special status species (see Table 2).

One Willow Flycatcher (CESA: State Endangered, USFWS: Bird of Conservation Concern) was seen and heard on May 30, 2012 approximately 1000 meters east of the Project site in agricultural fields along

Bradshaw Trail (see Figure 5). This bird displayed no signs of breeding or nesting, and was not observed over the Project area or the buffer surrounding the proposed Project fenceline. This was likely a migrating adult passing through the agricultural fields.

Four Swainson's Hawks (CESA: State Threatened, USFWS: Bird of Conservation Concern) were observed during surveys on April 3, 2012 (one individual), April 4, 2012 (two individuals), and April 28, 2012 (one individual) (see Figure 5). Swainson's Hawks are not known to nest in the Lower Colorado River region and no signs of nesting or breeding activity was observed. The detected Swainson's Hawks were likely migrating individuals.

A single Burrowing Owl (BLM: Sensitive, CDFG: Species of Special Concern, USFWS: Bird of Conservation Concern) was observed in agricultural fields located approximately 1,000 meters east of the study area along the Bradshaw Trail. This bird displayed no signs of breeding or nesting activity, and no suitable nesting burrows were found near the observation location.

SECTION 5 DISCUSSION AND CONCLUSIONS

Based on the Gila Woodpecker and breeding bird survey results, the microphyll woodlands in the study area supported a relatively low number and diversity of nesting bird species. No state or federally threatened or endangered bird species were observed nesting or are expected to nest within the Project site and the study area. The number of nesting species in these areas is limited by the lack of nesting site diversity. In desert dry wash communities, the extent of nesting activity is related to the amount of structural diversity in the vegetation community that provides foraging habitat and nesting opportunities for breeding birds (McCreedy et al. 2009). The structural diversity observed in the study area was low as indicated by the fact that many nesting species commonly found in more diverse desert washes, such as Phainopepla, Thrashers, Mockingbird and Lucy's Warbler, were not observed during the surveys (McCreedy et al. 2009).

The survey results also indicate that no Gila Woodpeckers nested on or in areas adjacent to the survey area site in 2012. Sporadic detections in 2011 and a single 2012 incidental observation suggest that it is possible the species irregularly uses microphyll woodlands in the study area for foraging and/or dispersal. More significant survey area use by the species is unlikely to occur because of the lack of preferred nesting habitat, the absence of territorial response to call-broadcasts during the surveys, and the sporadic nature of Gila Woodpecker sightings over a two-year survey period.

The microphyll woodlands found on the Project site consist of sparsely vegetated desert wash areas dominated by palo verde and ironwood. The study area lacks the higher stem densities, tall old-growth trees, and abundance of dead snags with cavities commonly found in Milpitas Wash that support nesting Gila Woodpeckers. The majority of potential nesting trees in the survey area were observed to be alive and generally well below the average size used by Gila Woodpecker for nesting (7.3 meters height with an average DBH of 39 centimeters and DGH of 46 centimeters; McCreedy 2008). Only a small number of abandoned nesting tree cavities were present in the study area, and only two were observed to be used for nesting by a pair of Ash-Throated Flycatcher and a pair of Ladder-backed Woodpecker. Both of these species are known to use a wider range of nesting habitats, cavity sizes and tree species than the Gila Woodpecker (Lowther 2001, Cardiff and Dittmann 2002). Gila Woodpecker nesting cavities have also been documented to be used for several years in succession (Edwards and Schell 2000) and the species will act very territorially while nesting (Gilman 1915, Brenowitz 1978, Brush et. al. 1983, Martindale and Lamm 1984). Due to this aggressive nature toward conspecifics and other species while nesting (Gilman 1915, Brenowitz 1978, Brush et. al. 1983, Martindale and Lamm 1984), call broadcast surveys are considered an effective way of eliciting responses from nesting Gila Woodpeckers if present in a survey area (Shook 2008).

In southwestern New Mexico, Shook (2008) observed a moderate response to Gila Woodpecker broadcast calls along the Gila Valley River and noted the species to be relatively easy to detect since the response call could be heard over a long distance. URS biologists field-tested the Gila Woodpecker survey techniques at the Peter McIntyre County Park near Blythe, California utilizing the same broadcasted vocalizations used in the study area surveys. As discussed above, Gila Woodpeckers have been documented to occur within the park. During the field tests, positive responses to the recorded vocalizations were observed in less than one minute at a maximum distance of 300 meters by both a male and female Gila Woodpecker during early morning, mid-afternoon, and sunset. The lack of response to

the broadcasted vocalizations used in Gila Woodpecker surveys strongly suggests that no Gila Woodpeckers nested in or adjacent to the study area during the 2012 breeding season.

Gila Woodpeckers tend to be sedentary and remain year-round in habitat that is similar to locations used for breeding. Small-scale movements from higher elevations to lower elevations and utilization of concentrated food sources have also been noted (Kaufman 1996, Edwards and Schnell 2000). Rare sightings of wandering Gila Woodpeckers have been made as far west as Los Angeles County in 1933 (Willett 1933), the Coachella Valley in Riverside County in 1981 (Garrett and Dunn 1981) and in Corn Springs, Riverside Country in 1994 (Small 1994). It is possible that dispersing individuals from the two documented local breeding areas (Milpitas Wash and Peter McIntyre County Park) may sporadically use the survey area on a transient basis. However, the absence of any detections in 2012 other than the single 2012 USFWS detection in April, and the lack of 2012 detections in any location where the species was observed in 2011, is consistent with the observation that the survey area supports poor and marginal habitat for the species.

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Table 1
Gila Woodpecker Survey Dates and Weather Conditions at Rio Mesa During 2012 Breeding Season

Round	Date	Observer (s)	Start Time	End Time	Start Temp (◦F)	End Temp (◦F)	Start Wind (mph)	End Wind (mph)
1	3/7/12	JK, AO	0600	1400	52	77	-	-
1	3/8/12	RR, JK, AO, JAS, JSw, IK	0800	1730	50	75	-	-
1	3/9/12	JK, AO, RR, JAS, JSw, IK	0645	1630	51	81	-	-
2	3/21/12	IK, JMR, JSw, JAS	0600	1945	67	80	-	-
2	3/22/12	IK, JMR, JSw, JAS, RR, KR	0700	1945	55	89	-	-
2	3/23/12	IK, JMR, JSw, JAS, RR, KR	0700	1545	55	80	-	-
2	3/26/12	PH, RB	0700	1000	54	68	-	-
3	4/3/12	PH, JK, JSw, IK	1000	1900	70	78	-	-
3	4/4/2012	PH, JK, JSw, IK	0600	1030	56	82	-	-
3	4/5/12	PH, JK, JSw, IK	1530	1830	87	85	-	-
4	4/16/12	PH, IK, JSw	1030	1930	75	85	3	2
4	4/17/12	PH, JK, JSw, IK	0615	1040	59	80	0	0
4	4/18/12	PH, JK, JSw, IK	1430	1930	93	92	7	6
5	4/26/12	PH	1455	1800	79	77	13	12
5	4/27/12	PH, RO, MN, AO	0600	1200	65	82	0	2
5	4/28/12	MN, CHM, SLK, RO, PLH	0640	1357	70	102	3.5	3
5	4/29/12	CHM, PLH	0620	1100	66	90	0.5	2
5	5/1/12	CHM	0605	1445	69	95	1	10
5	5/2/12	CHM	0615	1315	71	89	4	2
6	5/9/12	PH, RB, JSw, IK	0731	1100	78	94	0	1
6	5/10/12	PH, CHM	0600	1400	68	90	0	5

Observer Initials	Observer Full Name	URS or Sub
AO	Alicia Omlid	URS
CHM	Catherine MacGregor	URS
IK	Ingrid Klongland	SNEI
JAS	Julie Stout	URS
JMR	Jason Rose	SNEI
JSw	Jesse Swift	SNEI
KR	Kathryn Riley	URS
MN	Mikaila Negrete	Sub
PH	Philip Howard	URS
PLH	Patrick Hord	Sub
RB	Rick Bailey	URS
RO	Renee Owens	Sub
RR	Ryan Randall	URS
SLK	Stefanie Krantz	GANDA
SMR	Steve Ritt	Sub
SR	Steve Rowe	Sub

Table 1
Gila Woodpecker Survey Dates and Weather Conditions at Rio Mesa During 2012 Breeding Season

Round	Date	Observer (s)	Start Time	End Time	Start Temp (◦F)	End Temp (◦F)	Start Wind (mph)	End Wind (mph)
6	5/11/12	CHM	0550	1244	74	104	0	3.5
7	5/18/12	PH, JSw, IK, SLK, RR	0530	1230	75	88	3	4-6
7	5/22/12	SMR, PH	0730	1210	80	108	2.3	4.3
7	5/23/12	SMR, PH	0530	1200	78	98	3.5	1.4
7	5/24/12	SMR, PH	0530	1130	70	98	6	2
8	5/30/12	JSw, AO, RR	0545	1152	73	97	1	3
8	5/31/12	SR, SMR, PH, JSw, IK	0540	1150	77	96	1.8	0

Observer Initials	Observer Full Name	URS or Sub
AO	Alicia Omlid	URS
CHM	Catherine MacGregor	URS
IK	Ingrid Klongland	SNEI
JAS	Julie Stout	URS
JMR	Jason Rose	SNEI
JSw	Jesse Swift	SNEI
KR	Kathryn Riley	URS
MN	Mikaila Negrete	Sub
PH	Philip Howard	URS
PLH	Patrick Hord	Sub
RB	Rick Bailey	URS
RO	Renee Owens	Sub
RR	Ryan Randall	URS
SLK	Stefanie Krantz	GANDA
SMR	Steve Ritt	Sub
SR	Steve Rowe	Sub

Table 2
Bird Species Observed During 2012 Gila Woodpecker and Nesting Bird Surveys at Rio Mesa

Spring 2012 Gila Woodpecker Survey Results			
Common Name	Scientific Name	Special Status	Rounds Detected
Waterbirds			
Shorebirds & Relatives	Order Charadriiformes		
Black Tern	*Chlidonias niger*	SSC	7
Raptors			
Vultures & Hawks	Order Accipitriformes		
Cooper's Hawk	*Accipiter cooperii*	WL	4
Northern Harrier	*Circus cyaneus*	SSC	1
Red-tailed Hawk	*Buteo jamaicensis*		1, 2, 4, 5, 6, 7, 8
Swainson's Hawk	*Buteo swainsoni*	ST, BCC	3, 5
Turkey Vulture	*Cathartes aura*		1, 4, 5, 6, 7, 8
Falcons	Order Falconiformes		
American Kestrel	*Falco sparverius*		5
Prairie Falcon	*Falco mexicanus*	BCC, WL	7, 8
Owls	Order Strigiformes		
Burrowing Owl	*Athene cunicularia*	SSC, BCC BLM: S	8
Great Horned Owl	*Bubo virginianus*		4, 6
Other Non-Passerines			
Game Birds	Order Galliformes		
Gambel's Quail	*Callipepla gambelii*		1, 2, 4, 5, 6, 7, 8
Doves and Pigeons	Order Columbiformes		
Eurasian Collared-Dove	*Streptopelia decaocto*		6, 7, 8
Mourning Dove	*Zenaida macroura*		4, 5, 6, 7, 8
White-winged Dove	*Zenaida asiatica*		4, 5, 6, 7, 8
Cuckoos and Relatives	Order Cuculiformes		
Greater Roadrunner	*Geococcyx californianus*		2, 4, 5, 7
Nightjars and Relatives	Order Caprimulgiformes		
Lesser Nighthawk	*Chordeiles acutipennis*		4, 5, 6, 7, 8
Hummingbirds	Order Trochiliformes		
Anna's Hummingbird	*Calypte anna*		5
Woodpeckers and Relatives	Order Piciformes		

Table 2
Bird Species Observed During 2012 Gila Woodpecker and Nesting Bird Surveys at Rio Mesa

Spring 2012 Gila Woodpecker Survey Results			
Common Name	Scientific Name	Special Status	Rounds Detected
Ladder-backed Woodpecker	*Picoides scalaris*		1, 2, 4, 5, 6, 7
Passerines			
Perchingbirds	Order Passeriformes		
Ash-throated Flycatcher	*Myiarchus cinerascens*		1, 2, 4, 5, 7, 8
Barn Swallow	*Hirundo rustica*		4, 5, 6
Bewick's Wren	*Thryomanes bewickii*		5
Black-headed Grosbeak	*Pheucticus melanocephalus*		4, 5, 6, 7, 8
Black-tailed Gnatcatcher	*Polioptila melanura*		1, 2, 4, 5, 6, 7, 8
Black-throated Gray Warbler	*Setophaga nigrescens*		5
Black-throated Sparrow	*Amphispiza bilineata*		5, 8
Brewer's Sparrow	*Spizella breweri*	BCC	2, 4, 5, 6, 7
Brown-headed Cowbird	*Molothrus ater*		5, 6, 7, 8
Bullock's Oriole	*Icterus bullockii*		3, 4, 5, 6, 8
Cactus Wren	*Campylorhynchus brunneicapillus*		4, 5, 6, 7, 8
Cassin's Kingbird	*Tyrannus vociferans*		5
Chipping Sparrow	*Spizella passerina*		5
Cliff Swallow	*Petrochelidon pyrrhonota*		5
Common Raven	*Corvus corax*		5, 8
Crissal Thrasher	*Toxostoma crissale*	SSC	4, 8
Dusky Flycatcher	*Empidonax oberholseri*		6
Gray Flycatcher	*Empidonax wrightii*		4, 5, 6
Hammond's Flycatcher	*Empidonax hammondii*		5
Horned Lark	*Eremophila alpestris*	WL	4, 5, 7, 8
House Finch	*Carpodacus mexicanus*		1, 4, 5, 6, 7
Le Conte's Thrasher	*Toxostoma lecontei*	BCC, SCC	1, 5, 8
Loggerhead Shrike	*Lanius ludovicianus*	BCC, SSC	4, 5, 6, 7, 8
Lucy's Warbler	*Oreothlypis luciae*	BCC, SSC	4, 5, 7
Nashville Warbler	*Oreothlypis ruficapilla*		4, 5
Northern Mockingbird	*Mimus polyglottos*		1, 4, 5, 8
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*		4
Orange-crowned Warbler	*Oreothlypis celata*		4, 5, 6, 7

Table 2
Bird Species Observed During 2012 Gila Woodpecker and Nesting Bird Surveys at Rio Mesa

Spring 2012 Gila Woodpecker Survey Results			
Common Name	Scientific Name	Special Status	Rounds Detected
Pacific-slope Flycatcher	*Empidonax difficilis*		4, 5, 7
Phainopepla	*Phainopepla nitens*		1, 2, 4, 5, 6
Red-winged Blackbird	*Agelaius phoeniceus*		5, 6, 7
Sage Thrasher	*Oreoscoptes montanus*		1
Say's Phoebe	*Sayornis saya*		4, 5
Townsend's Warbler	*Setophaga townsendi*		4, 5, 6, 7
Tree Swallow	*Tachycineta bicolor*		4, 5, 6
Verdin	*Auriparus flaviceps*		2, 4, 5, 6, 7, 8
Violet-green Swallow	*Tachycineta thalassina*		4
Warbling Vireo	*Vireo gilvus*		5, 6, 7, 8
Western Kingbird	*Tyrannus verticalis*		4, 5, 6, 7, 8
Western Tanager	*Piranga ludoviciana*		5, 6, 7
Western Wood-Pewee	*Contopus sordidulus*		6, 7
White-crowned Sparrow	*Zonotrichia leucophrys*		4
Willow Flycatcher	*Empidonax traillii*	SE, BCC	8
Wilson's Warbler	*Cardellina pusilla*		4, 5, 6, 7
Yellow Warbler	*Setophaga petechia*	SSC, BCC	7
Yellow-headed Blackbird	*Xanthocephalus xanthocephalus*	SSC	6
Yellow-rumped Warbler	*Setophaga coronata*		4

Notes:
SE – State Endangered (California Endangered Species Act)
ST – State Threatened (California Endangered Species Act)
BCC - Birds of Conservation Concern (United States Fish and Wildlife Service)
FP - Fully Protected (California Department of Fish and Game)
SSC – Species of Special Concern (California Department of Fish and Game)
WL – Watch List (California Department of Fish and Game)
BLM: S – Bureau of Land Management Sensitive Species

Table 3
Nesting Bird Species Observed During 2012 Gila Woodpecker and Nesting Bird Surveys at Rio Mesa

Date found	Species	Nest Stage Found	Current Stage	GPS Coordinates	Substrate	Updates/Notes
2/22/2012	Great-horned Owl	unk	unk	unk	ironwood ~20'high	2/22/12- in nest 2/29/12- in nest 3/01/12- in nest 3/06/12- in nest 3/07/12- in nest 3/12/12- in nest 3/13/12- missing
4/3/2012	Anna's Hummingbird	Incubating	Incubating	0707427, 3708850	Palo Verde, 10 feet high	4/3/12- Female seen incubating
4/3/2012	Red-tailed Hawk	Incubating	Incubating	0708453, 3708986	Ironwood, 20 feet high	4/3/12-Female seen incubating. Male perched nearby.
4/3/2012	Verdin	Building	Building	706036, 3701990	Ironwood, eight feet high	4/3/12- 85% complete. Pair seen building
4/4/2012	Loggerhead Shrike	Eggs present, no adult	Chicks	0707124, 3706133	Palo Verde, 6 feet high	4/3/12- Adult seen nearby. 4/6/12- Eggs hatched. Adult seen feeding chicks
4/4/2012	Red-tailed Hawk	Incubating	Incubating	0707798, 3703640	Transmission line structure	4/3/12-Adult seen incubating.
4/4/2012	Red-tailed Hawk	Incubating	Incubating	0705801, 3708350	Transmission line structure	4/3/12-Adult seen incubating.
4/16/2012	Red-tailed Hawk	chicks	Chicks	0707609, 3705140	stick nest	
4/17/2012	Black-tailed Gnatcatcher	chicks	Chicks	0707055, 3705492	ironwood, 7ft high	
4/17/2012	Cactus Wren	unk	unk	0707184, 3704811	Palo Verde, 10 feet high	4/17/12- nest is 100% complete, pair seen entering nest.
4/18/2012	Ash-throated Flycatcher	chicks	Chicks	0706775, 3703193	cavity in palo verde	4/18/12- adult seen feeding chicks
4/28/2012	Black-tailed Gnatcatcher	incubating	Incubating	704928, 3707972	dead tree	4/28- adult seen incubating
5/9/2012	Cactus Wren	chicks	Chicks	0707809, 3714552	palo verde	
5/10/2012	Cactus Wren	building	Building	0705187, 3704684	ironwood	
5/10/2012	Cactus Wren	Building	Building	0708548, 3708853	dead tree, likely ironwood	

Table 3
Nesting Bird Species Observed During 2012 Gila Woodpecker and Nesting Bird Surveys at Rio Mesa

Date found	Species	Nest Stage Found	Current Stage	GPS Coordinates	Substrate	Updates/Notes
5/15/2012	Lesser Nighthawk	eggs	unk-eggs missing	0708171, 3710141	ground, under *Ambrosia dumosa*	5/15/12: 2 eggs 5/31/12- Eggs Missing, likely predation
5/18/2012	Ladder-backed Woodpecker	family	family	unk		5/18/12: family group. At least one recently fledged chick
5/18/2012	Red-tailed Hawk	chicks	Chicks	0707798, 3703261	power-line pole	5/18: one chick
5/22/2012	Ash-throated Flycatcher	chicks	Chicks	0705623, 3702351	cavity in dead tree	
5/23/2012	Mourning Dove	eggs	eggs	0703739, 3703947	Palo Verde	5/23: 2 eggs
5/23/2012	White-winged Dove	eggs	eggs	0708745, 3709861	Palo Verde	5/23: 1 egg
5/24/2012	Ladder-backed Woodpecker	chicks	Chicks	0705277, 3707861	cavity in dead tree	
5/24/2012	Mourning Dove	eggs	eggs	0708548, 3707861	Palo Verde	
5/24/2012	Mourning Dove	eggs	eggs	0708255, 3705146	Palo Verde	

Fall Bird Count Observations (2011)

Gila woodpecker (*Melanerpes uropygialis*) (BCC, SE, SSC) (1 Observed)

Spring Bird Count Observations (2011)

Gila woodpecker (*Melanerpes uropygialis*) (BCC, SE, SSC) (4 Observed)

Fish and Wildlife Visit Sighting (4-12-2012)

Gila woodpecker (*Melanerpes uropygialis*) (BCC, SE, SSC) (1 Observed)

Bird Point Survey Transects (A-P)

Microphyll Woodland

Quarter Mile Fenceline & Tline ROW Buffer

Project Features

Fenceline Boundary of Solar Field (3,805 acres)
*Includes Common Areas, Switchyard and Gas Metering Yard

Common Areas Boundary (19.5 acres) *Included in Fenceline acres

Switchyard (2.47 acres) *Included in Fenceline acres

Gas Metering Yard (0.52 acres) *Included in Fenceline acres

Temporary Construction Logistics Area (103 acres)

Additional Area of Original Fenceline Boundary

ROW Corridor approx. 1,641 ac.
(1,300 ft. corridor, approx 650ft. from c/l; approx acres: 1196 BLM, 445 Private)

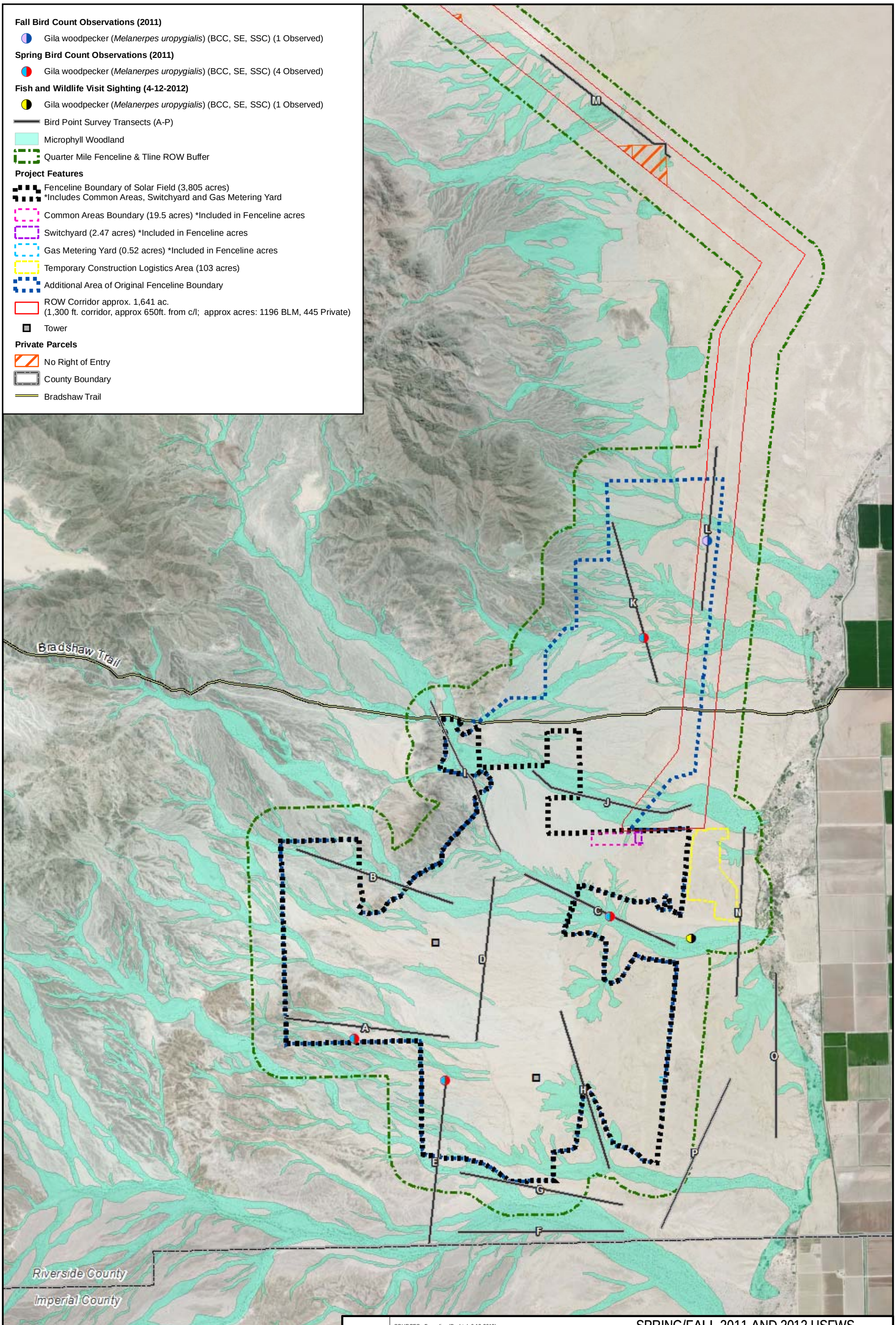
Tower

Private Parcels

No Right of Entry

County Boundary

Bradshaw Trail



SOURCES: Fenceline (Bechtel, 6-13-2012).
Transmission Line Corridor (URS, 6-14-2012).
Private Lands (BSE, 2012).
Aerial Imagery (Bing Maps, 2011).
County, Bradshaw Trail, Highway (ESRI, 2007).
Microphyll Woodland, Nesting Birds, Quarter Mile Buffer, Tower (URS, 2012).
Gila Survey Results (URS, 2011-2012). FWS Sighting (USFWS, 2012).

SPRING/FALL 2011 AND 2012 USFWS GILA WOODPECKER OBSERVATIONS AT RIO MESA SOLAR ELECTRIC GENERATING FACILITY

URS

1750 0 1750 3500 Feet

SCALE: 1" = 3,500' (1:42,000)
SCALE CORRECT WHEN PRINTED AT 11X17

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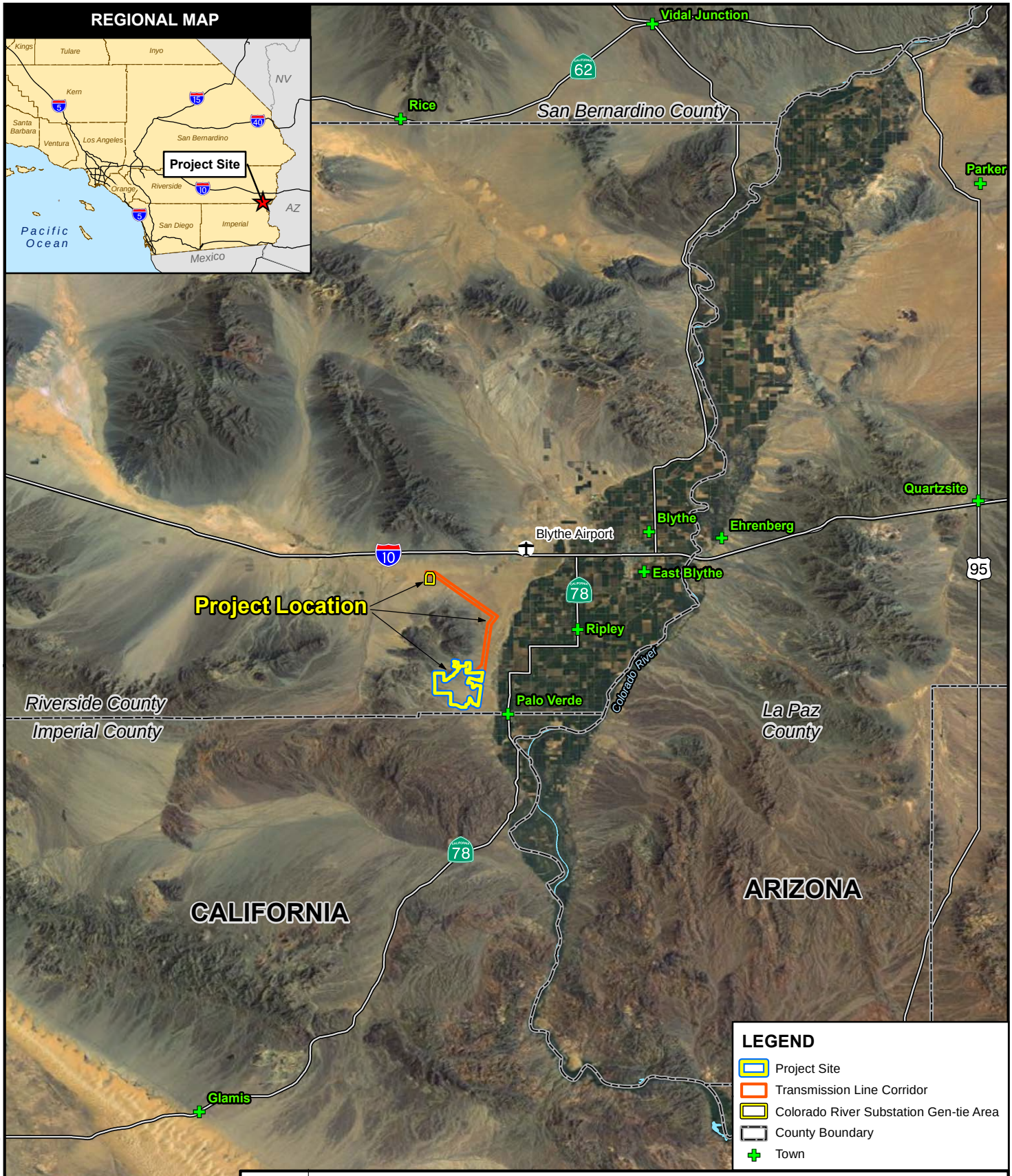

LEGEND

- Project Site
- Transmission Line Corridor
- Colorado River Substation Gen-tie Area
- County Boundary
- Town

SOURCES:
Draft Solar Field Layout & Fenceline (Bechtel, 6-13-2012).
Transmission line Corridor (URS, 6-14-2012),
Gen-tie Area, (Aspen, 3-11-2011)
Boundaries, Cities, Rivers, (ESRI, 2010)
Imagery (NAIP,2009).

SITE LOCATION MAP
RIO MESA SOLAR
ELECTRIC GENERATING FACILITY
RIVERSIDE COUNTY, CA

URS

5 0 5 10 Miles
SCALE: 1" = 10 miles (1:633,360)
SCALE CORRECT WHEN PRINTED AT 8.5X11

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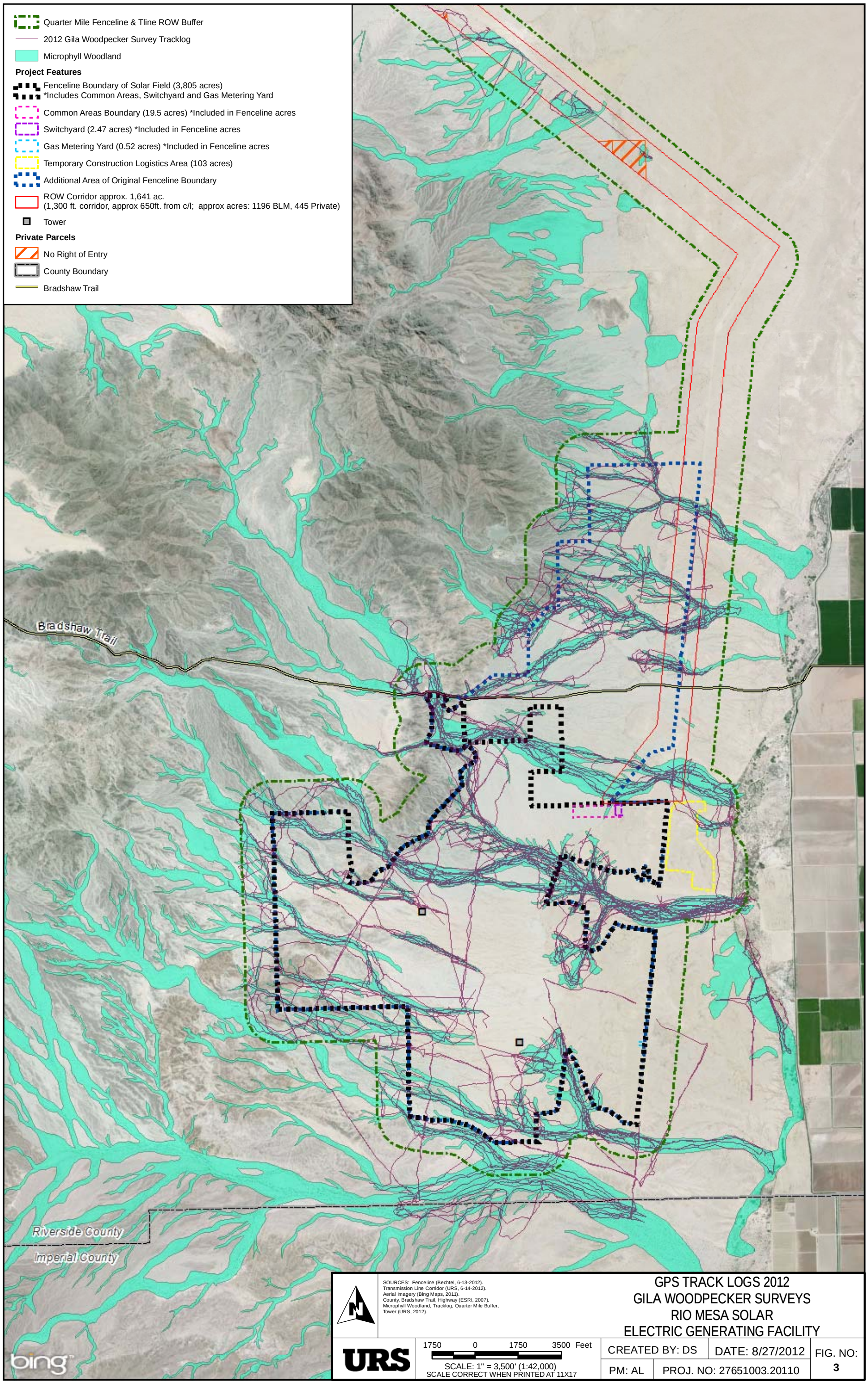

SOURCES: Fenceline (Bechtel, 6-13-2012).
Transmission Line Corridor (URS, 6-14-2012).
Aerial Imagery (Bing Maps, 2011).
County, Bradshaw Trail, Highway (ESRI, 2007).
Microphyll Woodland, Tracklog, Quarter Mile Buffer, Tower (URS, 2012).

GPS TRACK LOGS 2012
GILA WOODPECKER SURVEYS
RIO MESA SOLAR
ELECTRIC GENERATING FACILITY

URS

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SCALE: 1" = 3,500' (1:42,000)
SCALE CORRECT WHEN PRINTED AT 11X17

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Project Features

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- Common Areas Boundary (19.5 acres) *Included in Fenceline acres
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- Gas Metering Yard (0.52 acres) *Included in Fenceline acres
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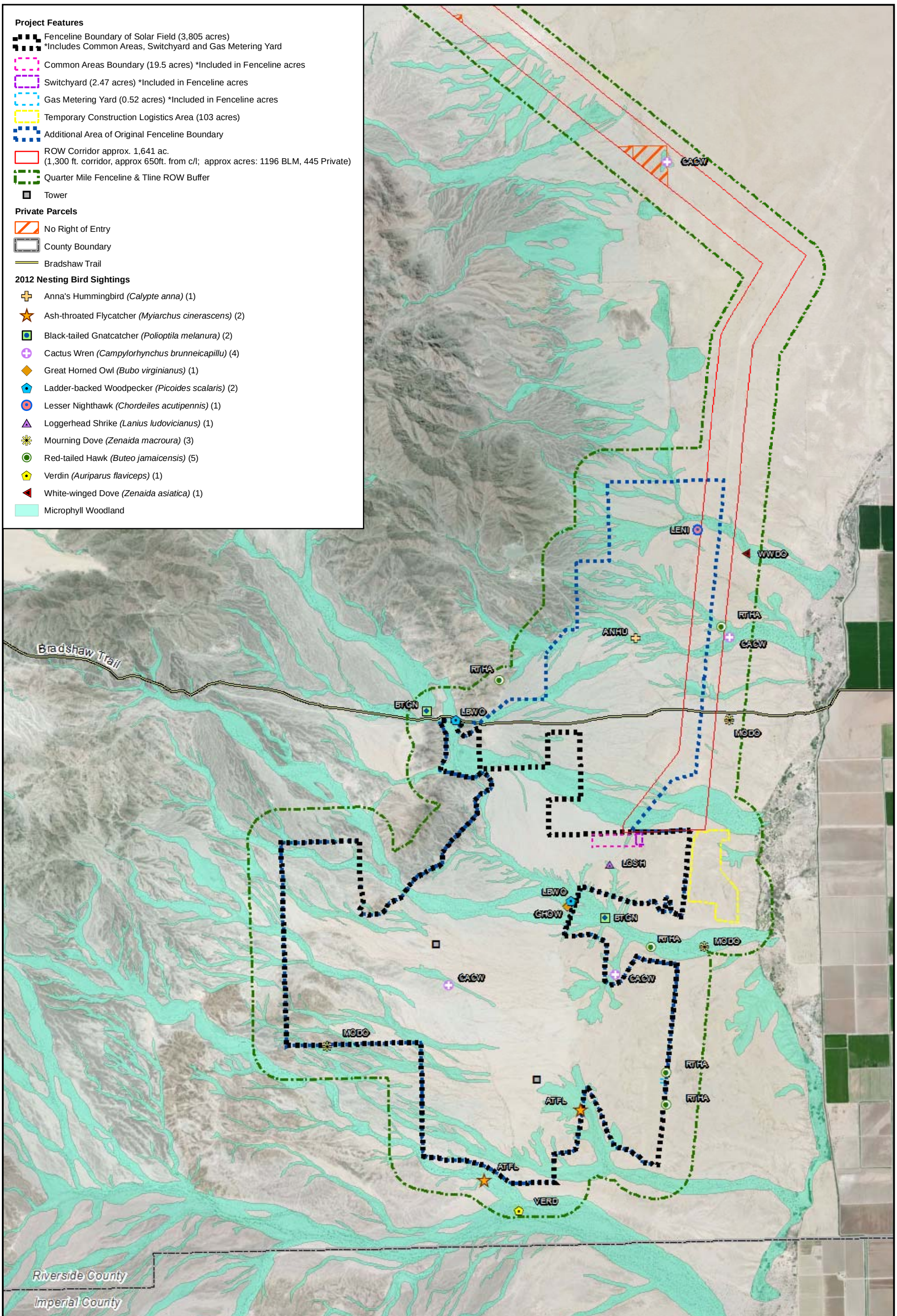
- Additional Area of Original Fenceline Boundary
- ROW Corridor approx. 1,641 ac. (1,300 ft. corridor, approx 650ft. from c/l; approx acres: 1196 BLM, 445 Private)
- Quarter Mile Fenceline & Tline ROW Buffer
- Tower

Private Parcels

- No Right of Entry
- County Boundary
- Bradshaw Trail

2012 Nesting Bird Sightings

- Anna's Hummingbird *(Calypte anna)* (1)
- Ash-throated Flycatcher *(Myiarchus cinerascens)* (2)
- Black-tailed Gnatcatcher *(Polioptila melanura)* (2)
- Cactus Wren *(Campylorhynchus brunneicapillu)* (4)
- Great Horned Owl *(Bubo virginianus)* (1)
- Ladder-backed Woodpecker *(Picoides scalaris)* (2)
- Lesser Nighthawk *(Chordeiles acutipennis)* (1)
- Loggerhead Shrike *(Lanius ludovicianus)* (1)
- Mourning Dove *(Zenaida macroura)* (3)
- Red-tailed Hawk *(Buteo jamaicensis)* (5)
- Verdin *(Auriparus flaviceps)* (1)
- White-winged Dove *(Zenaida asiatica)* (1)
- Microphyll Woodland



SOURCES: Fenceline (Bechtel, 6-13-2012).
Transmission Line Corridor (URS, 6-14-2012).
Private Lands (BSE, 2012).
Aerial Imagery (Bing Maps, 2011).
County, Bradshaw Trail, Highway (ESRI, 2007).
Microphyll Woodland, Survey Grids, Call Stations, Nesting Birds, Buffers, Tower (URS, 2012).

2012 NESTING BIRD LOCATIONS AT RIO MESA SOLAR ELECTRIC GENERATING FACILITY

URS

1750 0 1750 3500 Feet

SCALE: 1" = 3,500' (1:42,000)
SCALE CORRECT WHEN PRINTED AT 11X17

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2012 Incidental Observations

- Swainson's Hawk (4)
- Burrowing Owl (1)
- Willow Flycatcher (1)

Project Features

- Fenceline Boundary of Solar Field (3,805 acres) *Includes Common Areas, Switchyard and Gas Metering Yard
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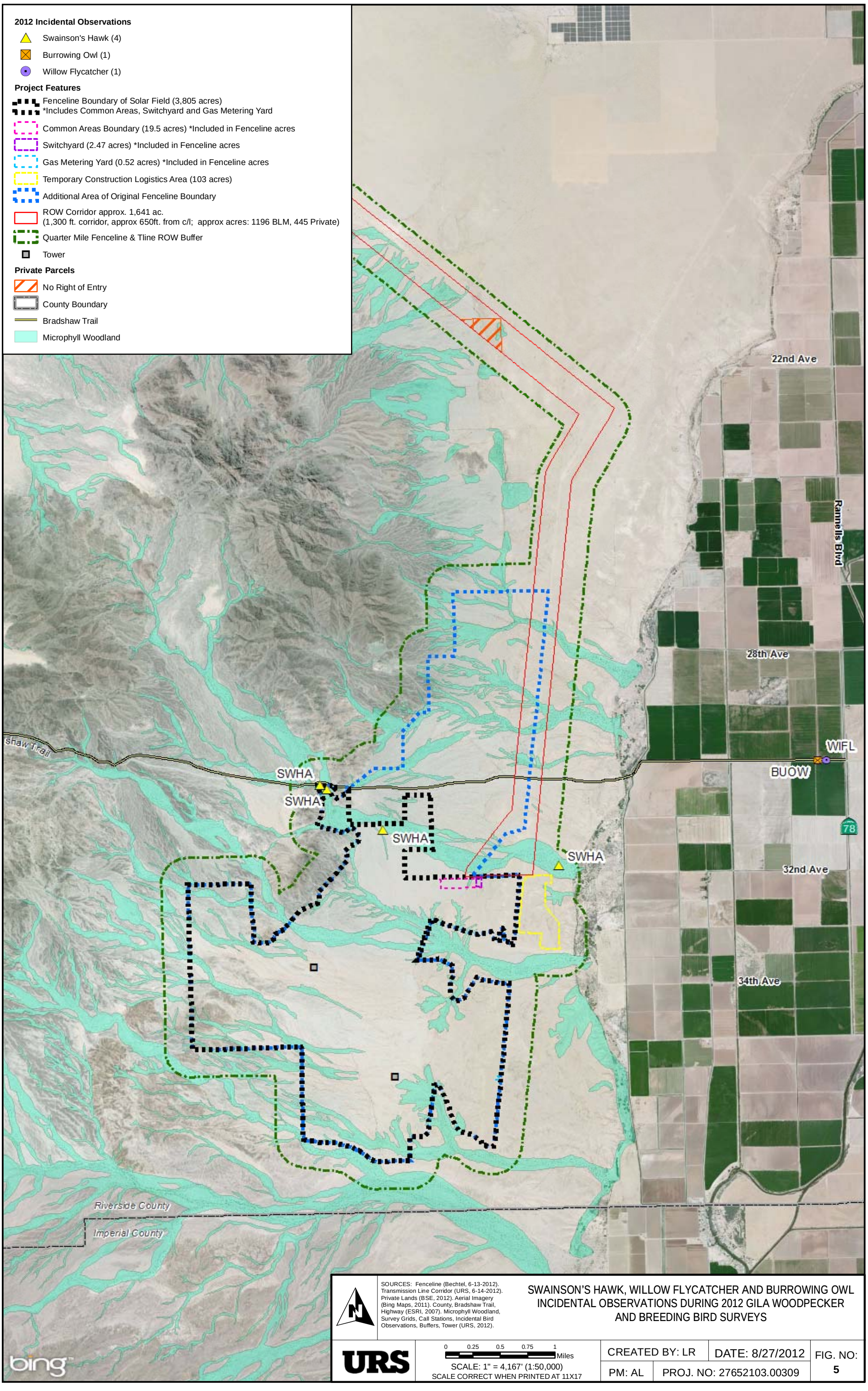
- Quarter Mile Fenceline & Tline ROW Buffer
- Tower

Private Parcels

- No Right of Entry
- County Boundary
- Bradshaw Trail
- Microphyll Woodland



SOURCES: Fenceline (Bechtel, 6-13-2012). Transmission Line Corridor (URS, 6-14-2012). Private Lands (BSE, 2012). Aerial Imagery (Bing Maps, 2011). County, Bradshaw Trail, Highway (ESRI, 2007). Microphyll Woodland, Survey Grids, Call Stations, Incidental Bird Observations, Buffers, Tower (URS, 2012).

SWAINSON'S HAWK, WILLOW FLYCATCHER AND BURROWING OWL INCIDENTAL OBSERVATIONS DURING 2012 GILA WOODPECKER AND BREEDING BIRD SURVEYS

URS

0 0.25 0.5 0.75 1 Miles

SCALE: 1" = 4,167' (1:50,000)

SCALE CORRECT WHEN PRINTED AT 11X17

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BSE Gila Woodpecker Surveys

Survey site:	Start time:	End time:
Round number:	Start temp:	End temp:
Date:	Start wind:	End wind:
Observer(s):		
Gila Woodpeckers found? (yes/no):	How many?:	

Location Grid #	GPS ID*	GPS Coordinates	Detection Method? (audio/visual)	Nest Found (yes/no)**	Notes (near previous observation point, sex, age, flight direction etc.)

*GPS ID: GIWO-01-R, GIWO-02-R (use R for Rio Mesa, W for Sonoran West, S for Siberia)

**If nest found use nest log sheet

Incidental observations (any rare or listed species, nesting species, etc)	Bird Species List
Include grid number and GPS point.	

Nest Log For BSE Rio Mesa

Date	Species	Nest Stage	Grid #	GPS Coordinates	GPS Identifier*	Notes (survey type nest found, nest description, substrate etc.)

*GPS Identifier: Label nests GIWO_N_001, GIWO_N_002

URS

Eric A. Bailey

Project Biologist

Overview

Mr. Bailey has 22 years of experience as an environmental biologist. His responsibilities include focused surveys for California gnatcatcher, least Bell's vireo, arroyo southwestern toad, and desert tortoise; exotic predator removal, vegetation mapping; and technical report preparation in conformance with CEQA, NEPA, and ESA.

Areas of Expertise

Endangered Species Surveys
Exotic Predator Removal
Construction Monitoring
Biological Assessment

Years of Experience

With URS: 12 Years
With Other Firms: 14 Years

Education

California Teaching Credential, Life Science, California State University Chico, 1986

BA, Biological Sciences, California State University, 1984

Registration/Certification

U.S Fish and Wildlife Service Recovery Permit Number TE-101151-1. California Gnatcatcher; Presence/Absence Surveys, and Nest Monitoring.

Project Specific Experience

Endangered/Sensitive Species Surveys

Imperial Valley Solar: 10 mile linear transmission corridor and 6,500 acre solar site, Plaster City, CA, 2007-2010:
Conducted focused surveys for flat-tailed horned lizard and rare plant species. Also monitored geotechnical and drilling crews to ensure avoidance of impacts. Recorded horned lizard locations and scat locations for the project.

BrightSource Rio Mesa Solar Electric Generating Facility, Palo Verde, CA, 2011:
Conducted focused surveys for desert tortoise, recorded tortoise locations, health indicators, and scat/burrow locations for the project. Additional surveys performed for burrowing owl, migratory bird species, Mojave fringe-toed lizard, and jurisdictional wetlands.

AUSRA Solar Blunt-nosed Leopard Lizard Surveys, 2007-2008:
Conducted focused protocol surveys for blunt-nosed leopard lizard on 1.5 square mile site near Carrizo plain.

Emergency Storage Project, San Diego County Water Authority, San Diego, CA, 1995:
Conducted focused surveys for arroyo toad and California gnatcatcher. Survey area included vicinity of Lake Hodges and San Vicente Reservoir. Prepared portions of the Environmental Impact Report for the project.

Effects of Aircraft Noise on Least Bell's Vireo at Marine Corps Air Station Camp Pendleton, U.S. Department of the Navy, San Diego, CA, 1995:
Recorded behavioral data of least Bell's vireo biweekly over five months. Behavioral data was compared to onsite noise data to test for possible effects on the species by aircraft noise.

Colorado River Aqueduct, MWD of Southern California: 90 mile linear study area, 2004-2005:
Conducted focused surveys for desert tortoise and rare plant species. Recorded plant and tortoise locations, health indicators, and scat/burrow locations for the project.

Calico Solar: 27 mile linear telecommunication corridor and 25,000 acre study area, Daggett to Pisgah, CA, 2007-2010:
Conducted focused surveys for desert tortoise, recorded tortoise locations, health indicators, and scat/burrow locations for the project. Additional surveys performed for burrowing owl, golden eagle nests, and jurisdictional wetlands.

Naval Hospital Camp Pendleton Replacement and Main Exchange Mall Complex, CA, 2009:
Managed the field trapping effort for Pacific pocket mouse. On site contact and coordinator for six permitted trappers conducting over 2,700 "trap nights". Additional surveys performed for habitat assessments and vegetation community classification. Recorded species locations for the project and produced the Biological Assessment.

CalNev Pipeline Expansion: 234 mile linear petroleum pipeline corridor, Clark County, Nevada and San Bernardino County, CA, 2008-2010:
Conducted focused surveys for arroyo toad, western yellow-billed cuckoo, southwestern willow flycatcher, least Bell's vireo, and California gnatcatcher. Additional surveys performed for habitat assessments and vegetation community classification. Recorded species locations for the project and produced the Biological Technical Report.

County of San Diego Pamo Road Bridge Replacement Project, Ramona, CA, 2008:
Conducted focused surveys for arroyo toad and least Bell's vireo. Additional surveys performed for habitat assessments and vegetation community classification. Recorded species locations for the project and produced the Biological Technical Report.

San Mateo Lagoon Exotic Predator Control, San Clemente, CA, 2002:
Conducted surveys for arroyo toad, southwestern pond turtle, and tidewater goby. Managed field task to remove non-native predators from the lagoon. Species removed include bullfrog, crayfish, and catfish. Prepared summary report for the project.

Gregory Canyon Sensitive Species Surveys, Pala, CA, 1995:
Conducted focused surveys for arroyo toad, least Bell's vireo, and California gnatcatcher in and around proposed landfill site. Prepared Biological Technical Report for the project.

San Mateo Lagoon Exotic Predator Control, San Clemente, CA, 2005:
Provided mitigation required for Interstate 5 bridge widening at San Mateo Creek. Conducted surveys for arroyo toad, southwestern pond turtle, and tidewater goby. Managed field task to remove non-native predators from the lagoon. Species removed include bullfrog, crayfish, and catfish. Prepared summary report for the project.

Kinder Morgan Energy Partners Arroyo Toad Exclusion, Camp Pendleton, CA, 2002:
Conducted surveys for arroyo toad in and around pipeline construction area over a two-year period. Maintained pit traps and exclusion fencing to prevent take of arroyo toad. Conducted bullfrog removal from portions of San Mateo Creek.

Wylie Construction Sewage Treatment Facility, Camp Pendleton, CA, 2002:
Conducted focused surveys for arroyo toad in and around construction site. Maintained pit traps and exclusion fencing to prevent take of arroyo toad.

Solar I Desert Tortoise Surveys, Barstow, CA, 2007-2010:
Conducted focused surveys for desert tortoise. Recorded tortoise locations, health indicators, and scat/burrow locations for the project.

State Route 76 Highway Improvement Project, Bonsall, CA, 2003:
Conducted focused surveys for arroyo toad and California gnatcatcher. Additional surveys performed for habitat assessments. Recorded species locations for the project.

State Route 73 Water Quality Basins, Orange County, CA, 2002:
Conducted focused surveys for California gnatcatcher and monitored nest sites. Communicated with construction supervisors to avoid impacts to active nests. Prepared summary report for the project.

Multiple Species Conservation Plan (MSCP) California Gnatcatcher Population Census, San Diego, CA, 2001:
Conducted focused surveys for California gnatcatcher at conservation areas throughout San Diego County. Prepared final report of gnatcatcher population with discussion of the relative quality of the conservation areas.

Solar II Flat-tailed Horned Lizard Surveys, El Centro, CA, 2008:
Conducted focused surveys for flat-tailed horned lizard and desert horned lizard. Recorded horned lizard locations and scat locations for the project.

Saint Michael's School Construction, Poway, CA, 2002:
Conducted focused surveys for California gnatcatcher and delineated territorial boundaries relative to construction. Prepared project report detailing conservation efforts on-site.

Federal Emergency Management Agency (FEMA) Fire Fuel Control, San Bernardino and Glendale, CA, 2000-2001:
Conducted focused surveys for California gnatcatcher at proposed fire fuel management sites. Prepared final report for the project.

Rancho San Diego California Gnatcatcher Study, Home Capital Corporation, CA, 1992:
Collected behavioral field data on California gnatcatchers throughout the breeding and non-breeding seasons. Assisted in mist netting and color banding of approximately 114 individuals. Analyzed territory size data for a gnatcatcher population of approximately 25 pairs.

Miramar Landfill General Development Plan, City of San Diego, CA, 1993:
Conducted focused surveys for California gnatcatcher, San Diego fairy shrimp, San Diego mesa mint, San Diego button celery, and willowy monardella. Contributed to the biological technical report and environmental impact statement for the proposed facilities.

South County Landfills, City and County of San Diego, CA, 1994:
Conducted comprehensive field surveys for sensitive species and focused surveys for California gnatcatcher and arroyo southwestern toad in six proposed landfill sites. Prepared constraints level report for each site.

Southern California Edison Kramer-Victor Power Line Replacement: 32 mile linear transmission corridor, Kramer Junction to Victorville, CA, 1989-1991:
Conducted focused surveys for desert tortoise and rare plant species. Also monitored construction crews to ensure compliance with Memorandum of Understanding. Recorded tortoise locations, health indicators, and scat/burrow locations for the project.

Escondido Parks Master Plan, City of Escondido, Escondido, CA, 1990:
Conducted field surveys for sensitive biological resources in proposed park sites and conservation areas.

Upham San Marcos Project, Chester R. Upham, San Marcos, CA, 1992:
Participated in biological resources survey of 35-acre site. Collected vernal pool soil samples for a fairy shrimp re-hydration study. Contributed to biological technical report.

Biological Resource Inventory, City of Poway, CA, 1999:
Conducted focused surveys for California gnatcatcher throughout the city and sphere of influence. Mapped habitats and sensitive resources.

South Santa Fe Avenue Widening and Realignment, San Diego County Department of Public Works, San Diego, CA, 1999:
Conducted field surveys to determine the presence or absence of least Bell's vireo in the project area. Recorded faunal species list and provided photographic documentation of habitat quality.

Rancho Del Rey, City of Chula Vista, CA, 1999:
Participated in a vernal pool study that included floral inventory and soil sample collection for a fairy shrimp re-hydration study.

First San Diego River Improvement Plan, City of San Diego, CA, 1990-1994:
Managed field task to collect data on a 20-acre revegetation site. Data used to determine whether the project met required standards for success.

Construction Monitoring

San Elijo Hills Open Space Management, San Marcos, CA, 2007:
Monitored fire fuel management task, invasive weed removal, habitat restoration, and prevention of unauthorized dumping. Conducted yearly on-site population census of California gnatcatcher to measure success of the conservation effort. Prepared yearly summary report.

Biological Construction Monitoring for Olivenhain Reservoir, CA, 2005:
Project biologist monitoring California gnatcatcher nesting locations in relation to construction activity. This information allowed client to avoid impacts to Federally-listed Threatened California gnatcatcher.

Biological Construction Monitoring for Dana Point Headlands, CA, 2006-2011:
Project biologist monitoring California gnatcatcher nesting locations in relation to construction activity, public use areas, and conserved habitat. This information allowed client to avoid impacts to Federally-listed Threatened California gnatcatcher, and to measure the success of the project conservation effort.

Gregory Canyon Geotechnical Studies, Pala, CA, 2009:
Conducted biological monitoring to ensure avoidance of impacts to arroyo toad along the San Luis Rey River. Coordinated with geotechnical personal to ensure that geotechnical access routes and activities did not affect arroyo toad.

Biological Construction Monitoring for VertRep Facility, U.S. Navy/Stronghold Electric, CA, 1999:
Project biologist monitoring construction of a helicopter landing facility. Vernal pools, coastal sage scrub, and California gnatcatchers were the resources protected.

Biological Construction Monitoring of San Elijo Hills, San Elijo Hills, LCC, CA, 2004:
Implemented monitoring of wetlands permit conditions.

California Gnatcatcher Study, Skyline Wesleyan Lutheran Church, CA, 1993:
Collected field data to assess construction noise impacts on the species over three years. Mist netted and color banded gnatcatchers within the study area. Delineated territories on site and recorded breeding behavior, nesting success, and dispersal of young. Prepared a letter report detailing the breeding home range of each pair onsite prior to construction.

Kramer-Victor Powerline, Southern California Edison, CA, 1989:
Conducted surveys for desert tortoise, Mojave ground squirrel, and rare plants along the Kramer-Victor power corridor. Additionally, monitored construction crews to prevent take of desert tortoise.

Biological Assessment

Escondido Parks Master Plan, City of Escondido, Escondido, CA, 1990:
Conducted field surveys for sensitive biological resources in proposed park sites and conservation areas.

Upham San Marcos Project, Chester R. Upham, San Marcos, CA, 1992:
Participated in biological resources survey of 35-acre site. Collected vernal pool soil samples for a fairy shrimp re-hydration study. Contributed to biological technical report.

Biological Resource Inventory, City of Poway, CA, 1990:
Conducted focused surveys for California gnatcatcher throughout the city and sphere of influence. Mapped habitats and sensitive resources.

South Santa Fe Avenue Widening and Realignment, San Diego County Department of Public Works, San Diego, CA, 1999:
Conducted field surveys to determine the presence or absence of least Bell's vireo in the project area. Recorded faunal species list and provided photographic documentation of habitat quality.

Rancho Del Rey, City of Chula Vista, Chula Vista, CA, 1990:
Participated in a vernal pool study that included floral inventory and soil sample collection for a fairy shrimp re-hydration study.

First San Diego River Improvement Plan, City of San Diego, San Diego, CA, 1990-1994:
Managed field task to collect data on a 20-acre revegetation site. Data used to determine whether the project met required standards for success.

Specialized Training

July/2010, California Department of Fish and Game Authorization/July, 2010/Flat-tailed Horned Lizard (Phrynosoma mcallii); Presence/Absence Surveys, Handling for Data Collection, and Transport out of Harm's Way during Construction Monitoring.

Recovery Permit, U.S. Fish and Wildlife Service Recovery Permit Number TE-101151-2. California Gnatcatcher; Presence/Absence Surveys, and Nest Monitoring.

Publications

Dispersal Capability of the California Gnatcatcher: A Landscape Analysis of Distribution Data. Western Birds 29:351-360, 1998. (P. Mock, coauthor).

California Gnatcatcher Territorial Behavior. Western Birds 29:242-257, 1998. (M. Grishaver, K. Preston, P. Mock, and D. King, coauthors).

Contact Information

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URS

Phillip Howard

Wildlife Biologist

Areas of Expertise

Ornithology
Wildlife Biology
Ecology
Environmental Consulting
Endangered Species, ESA
CEQA/NEPA, MBTA, Statistics
Mitigation, Field Studies

Years of Experience

With URS: 1 year
With Other Firms: 5 years

Education

M.S. Conservation Biology, 2010
Antioch University New England
Keene, NH
Thesis: Wintering ecology of migrant songbirds in St. Martin, West Indies

B.S. Environmental Studies, 2008
Shepherd University
Shepherdstown, WV
Concentration: Resource Management
Sr. Project: Impact of Surface Coal Mining on Bird Populations in WV, 1994-2006

Overview

Mr. Howard has experience as a biologist in a variety of sensitive habitats throughout the western hemisphere and a master's degree in conservation biology. Mr. Howard is grounded in both the applied and theoretical aspects of conservation, ecology, and policy design. He has conducted several large scale bird surveys performing nest searching, misting netting and banding of passerine, near passerine and seabird species leading to production of multiple professional papers in conformance with CEQA/NEPA, MBTA, CWA, and ESA. Over the course of his career Mr. Howard has banded nearly 1,000 birds and monitored nesting behavior from over 100 species. Additionally, Mr. Howard has experience with the application of GPS/GIS software and statistical analysis.

Project Specific Experience

Rio Mesa Solar Electric Generating Facility (SEGF) Widlife Biologist, March 2012 – Ongoing. 5,750 acre, 750 megawatt solar complex located near Blythe, CA. Field lead for Rio Mesa Brightsource Energy migratory bird observation points, line-transects and focal surveys for CA State listed Gila Woodpecker. Assisted in client data requests and interacted with multiple agencies to insure survey design and implementation met migratory bird monitoring needs.

Sunrise Powerlink, Avian Biologist, March 2011 – March 2012. 117-mile, $1.883 billion 500-kilovolt electric "superhighway" from Imperial County to San Diego with 1,000 megawatt capacity. Performed nesting bird surveys and nest monitoring for the entire Sunrise Powerlink right-of-way, as well as Reconductor lines, and various substation upgrades from El Centro to San Diego, including areas of Oceanside, Chula Vista, and Carlsbad, California. Surveyed for all non-listed species, raptors and federally/state listed species (Burrowing Owl, Coastal California Gnatcatcher, Least Bell's Vireo, and Southwestern Willow Flycatcher). Designed and implemented bird buffers to reduce incidental take to nesting eagles and other populations of migratory birds from a variety of sunrise related construction activities.

Additional responsibilities included the preparation of the Sunrise PowerLink Nesting Bird Management and Monitoring Plan submitted to CPUC and BLM. The goal of this plan were to minimize construction related impacts on nesting birds, while remaining compliant with the project's environmental mitigation measures.

Professional Societies/Affiliates

Association of Field Ornithologists
Society for Conservation Biology
Western Field Ornithologists
Wildlife Society

Wilson Ornithological Society

Awards

2009 Center for Tropical Ecology and Conservation Student Scholarship Grant for research project in Grenada

Languages

English

Specialized Training

May 2011 San Diego, CA
Nest searching and monitoring training workshop by Bloom Biological

April 2011 San Diego, CA
Nesting bird survey training by Chambers Group

March 2011 San Diego, CA
Training courses on Fire Prevention, SWEAP, Helicopter Safety, UXO, BMcD Safety, and Stormwater Prevention by Chambers Group

Publications

Phillip J. Howard and Adam Brown (2012). Nearctic-neotropical migrant wood-warbler populations in St. Martin, West Indies. The Journal of Caribbean Ornithology. [Accepted 2012].

Phillip J. Howard and Sarah C. Harvey (2012). Common nesting habitat and fledging weights for Wedge-tailed Shearwater on Tern Island. Western Birds. [In review]

Phillip J. Howard and Paula Hartzell. (2010) Analyses of the Effectiveness of Seawall Filling to Reduce Entrapments: 2001-2010 Tern Island, French Frigate Shoals, Hawaiian Islands National Wildlife Refuge, Papahānaumokuākea Marine National Monument. [Prepared for US Fish and Wildlife Service]

Phillip J. Howard. (2010) Wintering ecology of migrant songbirds in St. Martin, West Indies. [M.S. Thesis. Antioch University New England, NH]

Emily Beck, Mari Clemmer, Kevin Devine, Stephen Dialessi, Katrina Giese, Stephanie Goggin, Addison Helmke, Phillip Howard, Lila Joa, Rachel Laurie, Melissa Keevil, Tania Schusler, Sarah Stoner-Duncan, Christina Varnold and Jennifer Young (2009)

Mount Monadnock: Exploring Educational Possibilities and Stakeholder Interests. [Prepared for Antioch University New England and Monadnock Ecological Research and Education]

Phillip J. Howard, Tamarra Martz and Beth Kaplin. (2008) Nyungwe National Park Chimpanzee Fact Sheet. [Brochure]

Phillip J. Howard, Tamarra Martz and Beth Kaplin. (2008) Nyungwe National Park Bird Check-List. [Brochure]

URS

Chronology

03/2012 - Present. URS Corporation. San Diego, CA
Wildlife Biologist

Field lead for Rio Mesa Brightsource Energy migratory bird observation points, line-transects and focal surveys for CA State listed Gila Woodpecker.

03/2011 - 03/2012. Chambers Group Inc. San Diego, CA.
Avian Biologist

Performed pre-construction nesting bird surveys, nest monitoring and report writing. Surveyed for federally and/or state listed avian species (coastal California gnatcatcher, least Bell's vireo, golden eagle and willow flycatcher).

06/2010 - 12/2010. U.S. Fish and Wildlife Service. Tern Island, French Frigate Shoals, Northwestern Hawaiian Islands
Seabird Biologist

Monitored productivity success of breeding seabirds, captured and banded seabirds, conducted invasive-species removal and herbicide application, and designed a project researching the fledgling ecology of Wedge-tailed Shearwaters.

01/2010 - 06/2010. North Carolina State. Puerto Rico
Avian Field Assistant

Set-up MAPS stations for mist netting passerines and near passerines in Puerto Rico. Fitted focal study species with radio transmitters. Preformed point counts, radio telemetry, nest searching, and fruit surveys.

08/2009 - 10/2009. Antioch University New England. Keene, NH
Assistant bird bander

Mist netted passerines and near passerines following MAPS protocol. Collected banding data (age, sex, molt limits, skull ossification, weight, and any additional notes about plumage or abnormal characteristics) and color-banded focal species.

05/2009 - 08/2009. Grenada Cocoa Association and L.A. Burdick Chocolate. Grenada, West Indies
Lead Researcher.

Designed and conducted a research project to document the distribution of cocoa, determine environmental factors influencing distribution cocoa varieties, establish a base-line for future gastronomic analysis of cocoa varieties, and promote conservation of high quality cocoa for both economic and biological value. Organized a local research team of Grenada Cocoa Association extension agents to perform vegetation surveys and collect GPS data.

09/2008 - 12/2009. Center for Tropical Ecology and Conservation. Keene, NH
Research Assistant.

Assist CTEC directors with research projects, literature searches, fund raising and report writing. Created Chimpanzee fact sheet and bird check-list for Nyungwe National Park, Rwanda.

05/2007 - 08/2007. U.S. Fish and Wildlife Service. Shepherdstown, WV.
Intern

Intern for the USFWS national archives; created an online digital library of historic glass bird slides.

Contact Information

Phillip Howard
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La Jolla, CA 92037
Cell: 301.642.8433
Email: Phillip.Howard@urs.com

Ingrid Klongland
Lead Biologist

EDUCATION
B.A. Geography, 2007, University Of Wisconsin-Platteville
Major: Geography
Minor: Environmental Sciences

CERTIFICATIONS &TRAINING
USFWS Authorized Desert Tortoise Biologist in NV, CA, and UT
NDOW Special Purpose Permit for Desert Tortoises and Gila Monsters
First Aid and CPR

EMPLOYED AT SNEI
1 Year 3 Months

YEARS AS PROFESSIONAL BIOLOGIST
3+ Years

PROFESSIONAL RESPONSIBILITIES
- Provide Endangered Species Act Section 7 and Section 10 compliance consultations and perform mitigation actions as necessary.
- Coordination with the Agencies, the Contractors and the project proponent to ensure project-wide compliance with the protective measures stated in the biological opinion.
- Oversee daily project activities and manage logistic to ensure the activities and staffing levels are in accordance with the Biological Opinion.
- Work directly with the contractor to find appropriate solutions to project problems and the strategies to implement the solutions.
- Manage and mobilize teams of authorized biologists to meet our clients ever changing needs.
- Write project status reports for clients and overseeing agencies.
- Participate in desert tortoise clearances and surveys.
- Perform Biological Surveys for threatened, endangered and sensitive species (federal and state-listed species of concern).
- Provide Migratory Bird Treaty Act compliance consultations and perform mitigation actions as necessary.

PROFESSIONAL EXPERIENCE
- Perform Section 7 and Section 10 mitigation in accordance with the protocols set forth by USFWS Biological Opinions and Habitat Conservation Plans.
- Ability to locate and document all signs of the desert tortoise including: nests, scat, tracks, burrows, dens, courtship rings, drinking sites, carcasses, and shell and egg fragments.
- Perform inspections of desert tortoise exclusionary fencing.
- Ability to use a probing camera to effectively excavate animal burrows.
- Able to use a dichotomous key to identify unrecognizable flora and fauna of the southwest.
- Conducted surveys for noxious/invasive weeds for Weed Risk Assessments and Weed Management Plans.
- Able to attach and remove VHF radio-transmitters to desert tortoises as specified by USFWS protocol.
- Able to track and locate desert tortoises using radio-telemetry.
- Conduct habitat surveys for translocation sites of desert tortoises.
- Ability to use aseptic technique to health assess, draw blood, measure and weigh, notch, and oral swab desert tortoises as specified by USFWS protocol.

- Conducted radio-telemetry triangulation on Oceola wild turkeys (*Meleagris gallopavo osceola*), which also included banding, fixing backpack transmitters, injecting vitamin E, and weighing turkeys as specified by Florida Fish and Wildlife Conservation Commission (FWC) protocol.
- Conduced habitat and vegetation surveys for Oceola wild turkeys.
- Volunteered for color band reading and habitat assessment of the endangered red-cockaded woodpecker (*Picoides borealis*) for FWC in central Florida.
- Volunteered for Alaska Department of Fish and Game doing a mark and recapture study of coho salmon (*Oncorhynchus kisutch*).
- Active bird watcher since 2008: North American and Hawaii Life List – 387, International Life List – 475, Total species on Life List – 862.

SNEI PROJECT EXPERIENCE

- ***VEA Stirling Mountain to Northwest Transmission Line*** – Project Lead/AB – Provide ESA Section 7 desert tortoise mitigation, responsible for coordinating with the agencies to ensure compliance with the B.O., overseeing compliance with protective stipulations for listed species, desert tortoise surveys and clearances, construction monitoring, desert tortoise worker education presentation, attend project meetings; Johnnie, NV to N. Las Vegas, NV (10/2010 – present).
- ***UNEV Pipeline*** –Project Lead/AB – Provide ESA Section 7 desert tortoise mitigation, responsible for coordinating with the agencies to ensure compliance with the B.O., overseeing compliance with protective stipulations for listed species, desert tortoise surveys and clearances, construction monitoring, desert tortoise worker education presentation, attend project meetings; St. George, UT to Apex, NV (12/2010 – present).
- ***Apex Reinforcing Area*** – Biologist II – Provide ESA Section 7 desert tortoise mitigation, conduct survey and clearance; Apex, NV (10/20/10).

SNEI USFWS PROJECT APPROVAL

- Stirling to Northwest project (File no. 1-5-07-F-456)
- UNEV Pipeline Project (File no. 84320-2011-TA-0351 and 6-UT-09-F-023)
- Kern River Gas Transmission Project (File no. 1-5-02-F-476)
- NV Energy (File nos. 1-96-F-023R and 1-5-97-F-251)
- Coyote Springs Investment (File nos. 1-5-93-F-067R and 1-5-05-FW-526)

Jason Rose
Biologist I

EDUCATION
B.S. Wildlife and Conservation Biology, 2009, Ohio University, Athens, OH

CERTIFICATIONS &TRAINING
USFWS Authorized Desert Tortoise Biologist

EMPLOYED AT SNEI
4 Months

YEARS AS PROFESSIONAL BIOLOGIST
2 + Years

PROFESSIONAL RESPONSIBILITIES
- Provide Endangered Species Act Section 7 and Section 10 compliance consultations and perform mitigation actions as necessary.
- Provide construction site monitoring during all phases of projects.
- Present Desert Tortoise Worker Education Program.
- Perform Desert Tortoise Exclusionary Fence inspections.
- Participate in desert tortoise clearances and surveys.
- Perform Biological Surveys for threatened, endangered and sensitive species (federal and state-listed species of concern).
- Provide Migratory Bird Treaty Act compliance consultations and perform mitigation actions as necessary.

PROFESSIONAL EXPERIENCE
- Monitoring of desert tortoises and sensitive biological/botanical species during project development.
- Perform Section 7 and Section 10 mitigation in accordance with the protocols set forth by USFWS Biological Opinions and Habitat Conservation Plans.
- Perform Zone of Impact and Zone of Influence surveys and clearances for desert tortoises.
- Ability to locate and document all signs of the desert tortoise including: nests, scat, tracks, burrows, dens, courtship rings, drinking sites, carcasses, and shell and egg fragments.
- Perform compliance inspections of desert tortoise exclusionary fencing.
- Perform site inspections and characterizations.
- Ability to use a probing camera to effectively excavate animal burrows.
- Able to use a dichotomous key to identify unrecognizable flora and fauna of the southwest.
- Provide desert tortoise worker education programs.
- Biological Technician for BLM conducting stream profiles for flora and fauna in Rawlings, WY.
- Biological Technician for BLM monitoring ferruginous hawk (*Buteo regalis*) nests, sage grouse (*Centrocercus urophasianus*) vegetation and nest surveys, Wyoming toad (*Anaxyrus baxteri*) transects and invasive plant removal in Rawlings, WY.
- North Pacific Groundfish Observer for TechSea International Inc. collecting commercial fishing data for the National Marine Fisheries Service.
- Research Technician for the San Diego Zoo assisting ongoing research of the desert tortoise, including animal husbandry, handling, health checks, artificial burrow construction, and use of infared camers to locate tortoises in burrows at the Desert Tortoise Conservation Center (DTCC) in Apex, NV.
- Aquatic Biology Intern for Ohio University Biological Sciences Department collecting fish and turtle data for population study in Athens, OH.

SNEI PROJECT EXPERIENCE

- ***Duke Energy Searchlight Wind Project*** – Biologist I - Conduct 2010 100% Coverage USFWS Protocols to Inventory the 3,600-acre proposed wind farm walking transects spaced 15m apart. Species inventoried include: desert tortoise, Gila monster, common chuckwalla, burrowing owl, golden eagle and desert bighorn sheep; Searchlight, NV (5/2011).
- ***UNEV Pipeline*** – Biologist I – Provide ESA Section 7 desert tortoise mitigation, overseeing compliance with protective stipulations for listed species, desert tortoise surveys and clearances, construction monitoring, desert tortoise worker education presentation, attend project meetings; St. George, UT to Apex, NV (2/2011 – 5/2011).
- ***VEA Stirling Mountain to Northwest Transmission Line*** – Biologist I – Provide ESA Section 7 desert tortoise mitigation, desert tortoise survey and clearance, construct artificial desert tortoise burrow, construction monitoring, desert tortoise worker education presentation, attend project meetings; Johnnie, NV to N. Las Vegas, NV (2/2011).

SNEI USFWS PROJECT APPROVAL

- Stirling to Northwest project (File no. 1-5-07-F-456)
- UNEV Pipeline Project (File no. 84320-2011-TA-0351 and 6-UT-09-F-023)
- Kern River Gas Transmission Project (File no. 1-5-02-F-476)
- NV Energy (File nos. 1-96-F-023R and 1-5-97-F-251)
- Duke Energy Searchlight Wind Project

Jesse Swift
Lead Biologist

EDUCATION
B.S. Biology, 2002, University of Central Florida, Orlando
A.A. Natural Science, 2000, Saint Petersburg College, St. Petersburg

CERTIFICATIONS &TRAINING
USFWS Authorized Desert Tortoise Biologist in NV, CA, and UT
NDOW Special Purpose Permit for Desert Tortoises and Gila Monsters
UW - Sage Grouse Lek Monitoring
First Aid and CPR
Wildland Firefighter Type 2

EMPLOYED AT SNEI
1 Year 3 Months

YEARS AS PROFESSIONAL BIOLOGIST
7+ Years

PROFESSIONAL RESPONSIBILITIES
- Provide Endangered Species Act Section 7 and Section 10 compliance consultations and perform mitigation actions as necessary.
- Coordination with the Agencies, the Contractors and the project proponent to ensure project-wide compliance with the protective measures stated in the biological opinion.
- Oversee daily project activities and manage logistics to ensure the activities and staffing levels are in accordance with the Biological Opinion.
- Work directly with the contractor to find appropriate solutions to project problems and the strategies to implement the solutions.
- Manage and mobilize teams of authorized biologists to meet our clients ever changing needs.
- Write project status reports for clients and overseeing agencies.
- Participate in desert tortoise clearances and surveys.
- Perform Biological Surveys for threatened, endangered and sensitive species (federal and state-listed species of concern).
- Provide Migratory Bird Treaty Act compliance consultations and perform mitigation actions as necessary.

PROFESSIONAL EXPERIENCE
- Perform Section 7 and Section 10 mitigation in accordance with the protocols set forth by USFWS Biological Opinions and Habitat Conservation Plans.
- Monitor of desert tortoises and sensitive biological and botanical species during development projects.
- Perform site inspections and characterizations.
- Perform Zone of Impact and Zone of Influence surveys and clearances for desert tortoises.
- Ability to locate and document all signs of the desert tortoise including: nests, scat, tracks, burrows, dens, courtship rings, drinking sites, carcasses, and shell and egg fragments.
- Perform inspections of desert tortoise exclusionary fencing.
- Ability to use a probing camera to effectively excavate animal burrows.
- Able to use a dichotomous key to identify unrecognizable flora and fauna of the southwest, southeast, northeast, and northwest USA.
- Conduct native plant inventories and surveys for sensitive plant species.
- Conducted surveys for noxious/invasive weeds for Weed Risk Assessments and Weed Management Plans.
- Provided Desert Tortoise worker education programs.

- Conducted multi-species avian point counting and observation of birds across a wide range of habitats to help guide forest management practices in the ecologically significant southern Cascade Mountains.
- Performed broadcast vocalization surveys for mountain quail (*Oreortyx pictus*), hairy woodpeckers (*Picoides villosus*), and flammulated owls (*Otus flammeolus*) in the southern Cascade Mountains.
- Conducted avian point-counts and searched for the endangered ivory-billed woodpecker (*Campephilus principalis*) in bottomland hardwood forests of northern Florida.
- Performed research in northern California which included early morning double observer bird point-count surveys, area-constrained searches (nest searching via behavioral observation), gill netting for salmonids, frog and garter snake mark and recapture surveys (pit-tagging), emergence trap and sticky trap surveys for terrestrial and aquatic insect sampling, odonate exuvia surveys, evening bat surveys, and anabat II bat detector maintenance.
- Performed avian bird point-count surveys for pileated woodpeckers (*Dryocopus pileatus*), a management indicator species in National Forests of Idaho.
- Performed avian broadcast vocalization surveys species included pileated woodpeckers, northern goshawks (*Accipiter gentilis*), and flammulated owls in the mountains of central Idaho.
- Performed radio-telemetry demographics research on the Osceola wild turkey (*Meleagris gallopavo osceola*) in central Florida.
- Performed vegetation plots in central Florida's pine flatwood, dry prairie, and wet prairie habitats.
- Performed radio-telemetry demographics research on the greater sage grouse (*Centrocercus urophasianus*) in northwestern Wyoming.
- Construction, installation, sampling of drift fences and drops bucket traps, and salamander traps in pine flatwood habitat of central Florida.
- Performed electrofishing surveys searching for the presence of endangered bull trout (*Salvelinus confluentus*) in high elevation mountain streams of Central Idaho.
- Performed a mark and recapture study of Chinook (*Onchorhyncus tsawathya*) and Coho (*Onchorhyncus kisutch*) Salmon via coded wire tags and adipose fin removal in a remote camp setting on the Chickamin River, a management indicator watershed located in the Misty Fjords National Wilderness, Alaska.
- Monitored a captive population of mule (*Odocoileus hemionus*) and black-tailed (*O. h. columbianus*) deer to study the effects of an introduced species of louse (*Damalina cervicola*), the cause of an exotic disease known as "deer hair-loss transmission syndrome" in the Pacific Northwest.
- Performed line-transect surveys in a dense/wet sub-boreal spruce/fir forest quantifying snowshoe hare (*Lepus americanus*) pellets to determine hare-lynx (*Lynx* canadensis) demographics in central Maine.
- Collected garter snake (*Thamnophis sirtalis parietalis*) blood to ascertain the effects of melatonin and steroid levels on hibernation behavior in a controlled research hibernation chamber.
- Surveyed conifer trees in Experimental Conifer Forests throughout Oregon's Coastal and Cascade mountain ranges measuring height, depth at breast height, radii, and basal diameter.
- Ability to determine migration patterns and demographic information for a gopher tortoise (*Gopherus polyphemus*) population via monitoring burrows and categorized them as active, inactive, or abandoned.
- Actively birdwatching since 2000. North America & Hawaii Lifelist: 536 species. International Lifelist: 473 species. Total avifauna species seen worldwide: 1009.

SNEI PROJECT EXPERIENCE

- ***UNEV Pipeline*** –Project Lead/AB – Provide ESA Section 7 desert tortoise mitigation, responsible for coordinating with the agencies to ensure compliance with the B.O., overseeing compliance with protective stipulations for listed species, desert tortoise worker education presentation, coordination and mobilization of biologists to meet the client's needs, attend project meetings; St. George, UT to Apex, NV (9/2010 – present).
- ***VEA Stirling Mountain to Northwest Transmission Line*** –Biologist II/AB – Provide ESA Section 7 desert tortoise mitigation, desert tortoise surveys and clearances, construction monitoring, desert tortoise worker education presentation, attend project meetings; Johnnie, NV to N. Las Vegas, NV (10/2010 – present).
- ***C&S Companies, Wildlife Hazard Assessment for McCarran International Airport*** – Biologist II - Conduct avian point count surveys, provide vegetation surveys, and collect field camera data for small birds and mammals encroaching on the Air Operational Area, assess wildlife hazard to operation of aircraft; Las Vegas, NV (11/2010 – 4/2011).
- ***KRGT Mountain Pass*** – Biologist I - Provide ESA Section 7 desert tortoise mitigation, desert tortoise survey; Ivanpah, NV (10/2010).
- ***Apex Reinforcing Area*** – Biologist I - Provide ESA Section 7 desert tortoise mitigation, desert tortoise survey and clearance; Primm, NV (10/2010).

SNEI USFWS PROJECT APPROVAL

- Stirling to Northwest project (File no. 1-5-07-F-456)
- UNEV Pipeline Project (File no. 84320-2011-TA-0351 and 6-UT-09-F-023)
- Kern River Gas Transmission Project in Nevada, California, and Utah (File no. 1-5-02-F-476)
- NV Energy (File nos. 1-96-F-023R and 1-5-97-F-251)

John K. Konecny (760) 489-5276
1501 East Grand Avenue, # 2403 jkonecny@cox.net
Escondido, CA 92027

EXPERIENCE

Wildlife Biologist – Konecny Biological Services, Escondido, CA. April 1998 to Present
Contracted by various southern California consulting firms and clients. Conducted biological assessment, construction monitoring, and general biological surveys. Conducted focused surveys for the California gnatcatcher, least Bell's vireo, western yellow-billed cuckoo, Yuma and light-footed clapper rail, California black rail, Belding's Savannah sparrow, arroyo toad, desert tortoise, southwestern willow flycatcher, and Gila woodpecker. Conducted nest monitoring of the California least tern, western snowy plover, least Bell's vireo, light-footed clapper rail, and California gnatcatcher; construction monitoring for the arroyo toad, desert tortoise, least Bell's vireo, and California gnatcatcher; and brown-headed cowbird trapping. Participated in a two-year long general avifaunal survey of the Salton Sea, and have a featured chapter in Guide to the Birds of the Salton Sea (ISBN 1-886679-21-5). Research Associate for the Clapper Rail Study Team from 1998 to 2011, conducting the range-wide annual census, captive breeding program, banding, and radio telemetry for the light-footed clapper rail in southern California.

California Least Tern Biologist Seasonally from 1986 to 2001
On a seasonal basis, contracted by the California Department of Fish and Game, Port of Los Angeles, United States Navy, and Army Corps of Engineers, to monitor California least tern and western snowy plover nesting sites throughout San Diego County. Mapped nesting sites and collected data on colony size, clutch size, hatching and fledging success, and predator impacts. Banded and weighed chicks. Conducted tern foraging surveys at the Naval Submarine Base and Naval Amphibious Base in San Diego, Marine Corps Base Camp Pendleton, and Seal Beach Naval Weapons Station.

Fish and Wildlife Biologist – U.S. Fish and Wildlife Service, Carlsbad, CA. May 1992 to April 1998
Conducted ecological investigations of water and land development proposals including Corps of Engineers section 10/404 permit applications, and environmental impact reports and statements in western Riverside, San Bernardino, Orange, San Diego, and Los Angeles Counties. Conducted section 7 consultations and conferences, investigated unauthorized destruction of wetland habitat, and participated in multi-species planning. Familiarity with the California Environmental Quality Act, Endangered Species Act, Clean Water Act, Rivers and Harbors Act, Fish and Wildlife Coordination Act, and National Environmental Policy Act. Wrote objective reports and summaries, developed recommendations and alternatives for resource protection and enhancement. Investigated and determined habitat requirements and recovery needs for various wildlife species, including listed endangered and threatened species, candidate species for listing, and other species of special or local concern. Represented the Service at meetings with other Federal, State, and private interests, and presented and explained Service policies, positions, and recommendations.

Biologist – Ogden Environmental Services, San Diego, CA (formerly ERCE). April 1989 to May 1992
Conducted surveys and censuses of wildlife populations. Mapped vegetation communities, wildlife habitat, sensitive resources, and rare and endangered species. Determined potential impacts to sensitive resources and developed mitigation measures to offset these impacts. Performed habitat assessments using aerial photographs and topographic maps. Wrote technical reports and assisted senior staff with presentation and proposal preparation.

Field Biologist 1985 to 1992
Contracted on a part-time basis by various San Diego based environmental consulting firms including Westec Services, Michael Brandman Associates, Sweetwater Environmental Biologists, and SJM Biological Consultants. Responsibilities included vegetation surveys and mapping; general bird surveys; focused surveys for the California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher; and least tern foraging surveys. Participated in the California Department of Fish and Game monitoring program for the least Bell's vireo population in San Diego and Riverside Counties, and maintained a trapping and monitoring program for brown-headed cowbirds. Prepared written summaries and suggested management practices incorporated into the following field season's methodology.

EDUCATION

Bachelor of Science Degree, Marine Biology, 1983, California State University Long Beach

CERTIFICATION

Small Business
California Small Business Certified (57302)
Professional Liability Insurance: $1,000,000 ($3,000,000 aggregate)
General Liability Insurance: $1,000,000 ($2,000,000 aggregate)
Vehicle Insurance: $1,000,000

Fish and Wildlife Service 10(a) Recovery Permit, TE837308-4 (expires October 1, 2012), and State of California Memorandum of Understanding (MOU): authorized to survey and handle the arroyo toad; survey, nest monitor, and band California least tern, western snowy plover, least Bell's vireo, southwestern willow flycatcher, California gnatcatcher; and survey for the Yuma clapper rail, light-footed clapper rail, California black rail, western yellow-billed cuckoo, elf owl, and Gila woodpecker throughout southern California, Arizona, and Nevada.

Mater Personal Bird Banding Permit, #22566, authorized for mist nets and auxiliary marking

Tracker - San Diego Tracking Team
Track and Sign Level I - CyberTracker Conservation

Desert Tortoise Surveying, Monitoring and Handling Techniques Workshop/Certification, 2008, 2000
Southwestern Willow Flycatcher Workshop, 2005, 1998
Mohave Ground Squirrel Workshop Certificate, 2005
Flat Tail Horned Lizard, BLM Certified to survey, handle, and relocate, 2001

Federal authorization letter and State of California MOU for brown-headed cowbird trapping and removal

PUBLICATIONS, TECHNICAL REPORTS, and PRESENTATIONS

Zembal, R., S. Hoffman, and J. Konecny. 2010. Status and Distribution of the Light-footed Clapper Rail in California 2010. Final Report to United States Fish and Wildlife Service, and California Department of Fish and Game. 17pp

Zembal, R., S. Hoffman, and J. Konecny. 2009. Status and Distribution of the Light-footed Clapper Rail in California 2009. Final Report to United States Fish and Wildlife Service, and California Department of Fish and Game. 17pp.

Zembal, R., S. Hoffman, and J. Konecny. 2008. Status and Distribution of the Light-footed Clapper Rail in California 2008. Final Report to United States Fish and Wildlife Service, and California Department of Fish and Game. 17pp.

Zembal, R., S. Hoffman, and J. Konecny. 2007. Status and Distribution of the Light-footed Clapper Rail in California 2007. Final Report to United States Fish and Wildlife Service, and California Department of Fish and Game. 17pp.

Zembal, R., S. Hoffman, and J. Konecny. 2006. Status and Distribution of the Light-footed Clapper Rail in California 2006. Final Report to United States Fish and Wildlife Service, and California Department of Fish and Game. 17pp.

Zembal, R., J. Konecny, and S. Hoffman. 2006. A Survey of the Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*) in California 2006. Final Report to California Department of Fish and Game. 15pp.

Zembal, R., S. Hoffman, and J. Konecny. 2005. Status and Distribution of the Light-footed Clapper Rail in California 2005. Final Report to Naval Base Point Mugu, United States Fish and Wildlife Service, and California Department of Fish and Game. 14pp.

Zembal, R., S. Hoffman, and J. Konecny. 2004. Light-footed Clapper Rail in California, Management, Study, and Translocation, 2004. Final Report to Naval Base Point Mugu, United States Fish and Wildlife Service, and California Department of Fish and Game. 30pp.

Konecny, J. and D. Stadtlander. 1995. Use of an Abandoned Dredge Rig as an Artificial Nesting Platform by Double-Crested Cormorants in San Diego County. Poster presented at the 22nd annual Pacific Seabird Group meeting, San Diego, California.

Konecny, J. 1995. A Summary of Colonial Seabirds and the Western Snowy Plover Nesting at Western Salt, South San Diego Bay, California, During 1994. Unpublished report prepared for the Fish and Wildlife Service Coastal Ecosystem Program.

Stadtlander, D., and J. Konecny. 1994. Avifauna of South San Diego Bay. 1994. Unpublished report prepared for the Fish and Wildlife Service Coastal Ecosystem Program.

Pavelka, M., and J. Konecny. 1992. Northward Migration of a Northern Harrier. Raptor Research 26: 196.

Mock, P., J. Konecny, and B.Jones. 1990. California Gnatcatcher Survey Guidelines. Guidelines prepared and adopted by the Fish and Wildlife Service.

Mock, P., J.Konecny, B. Jones, M. Grisahver, and D. King. 1990. Home Range and Habitat Preferences of the California Gnatcatcher in San Diego County. Paper presentation at the AOU and COS joint meeting. Los Angeles, California.

ORGANIZATIONS

American Ornithologists Union
Association of Field Ornithologists
Colonial Waterbird Society
Cooper Ornithological Society
Desert Tortoise Council
Pacific Seabird Group
Western Field Ornithologists

REFERENCES

References and verification of any factual statement presented herein available upon request.

Updated: 2010

STEFANIE L. KRANTZ
Wildlife Biologist

EDUCATION

M.S.	Resource Ecology Management	University of Michigan, Ann Arbor	2005
B.S.	Biology	McMurry University, Abilene, TX	1997

PROFESSIONAL PROFILE

Ms. Krantz has over eleven years of experience as a wildlife biologist. She is an ecologist trained in the study and identification of birds, mammals, reptiles, amphibians, and insects. Since joining Garcia and Associates, she has monitored for endangered species and conducted desert tortoise surveys, desert botany surveys, and desert bird surveys. She is trained in the identification of wildlife and habitats in the Mojave and Sonoran deserts. She has experience conducting willow flycatcher, least Bell's vireo, burrowing owl, yellow-billed cuckoo, Swainson's hawk, peregrine falcon, giant garter snake, California red-legged frog, orange-throated whiptail, and Quino checkerspot butterfly surveys. Ms. Krantz is proficient with numerous field research techniques including conducting avian point counts, mist-netting and banding passerines, color band re-sighting, and territory mapping. She is an NABC-certified bird bander with excellent avian identification skills. She has conducted avian surveys in the desert and can identify species in the Mojave and Sonoran deserts by sight and sound. She also has experience conducting standardized protocol level desert tortoise surveys, small mammal trapping, invertebrate sampling, snake and amphibian surveys, GPS/GIS, and orienteering. She has excellent data management, quality control and analysis skills, and has prepared survey and biological reports, biological assessments, and published original ecological research.

PROFESSIONAL TRAINING

- Death Valley's Endemic Flora, Jepson Herbarium Workshop, Death Valley, CA (2012)
- Desert Tortoise Council Desert Tortoise Handling Workshop, Ridgecrest, CA (2009); Test Score: 91.47%.
- Southwest Willow Flycatcher Survey Training, Southern Sierra Research Institute (2009)
- American Red Cross Adult CPR and First Aid (2011)
- Introduction to Plant Morphology, Jepson Herbarium, Berkeley, CA (2011)
- Rare Pond Species Survey Techniques Workshop (California Red-Legged Frog, California Tiger Salamander, and Western Pond Turtle), Rohnert Park, CA (2010)
- Wetland Delineation and Management Training Course, Sacramento, CA (2008)
- NABC (North American Banding Council) Bird Bander Certification (2007)
- American Red Cross Wilderness First Aid, First Aid, and Adult CPR Training (2006)
- Department of Interior Motorboat Operator Certification Course (2006)
- Tracking & Nature Awareness Workshop, Consumnes River Preserve, Galt, CA (2005)

PROFESSIONAL EXPERIENCE

Garcia and Associates **Wildlife Biologist**
April 2008 – Present
Representative Projects:

- **Burrowing Owl Surveys (2012).** Conducted burrowing owl surveys for solar power project near Blythe, California. Recorded incidental species including desert tortoise, nesting raptors, birds, kit fox, badger, and Mojave fringed toed lizard.
- **Swainson's Hawk Surveys (2011, 2012**). Conducted protocol level surveys for Swainson's Hawk for linear transportation and transmission projects.
- **Western Area Power Administration Transmission Line Upgrade (2010-2011).** Conducted preconstruction surveys for burrowing owl, Swainson's hawk, and giant garter snake. Conducted monitoring for giant garter snake, and nesting bird surveys. Contributed text to Compliance Monitoring and Compliance Plan, Coordination and Communication Protocol, and wrote survey reports. Mapped features with Trimble GEO XT handheld unit. Saw 4 recently active burrowing owl burrows with scat, pellets, and feathers, and 18 active Swainson's hawk nests.
- **Desert Tortoise Monitoring, Tehachapi, CA (2010).** Conducted 28 hours (3 days) of pre-construction desert tortoise surveys and desert tortoise monitoring activities for a wind power project in the Mojave Desert at Alta Pass.
- **Desert Tortoise Surveys, Mojave Desert, Banning, CA (2010).** Conducted protocol level desert tortoise surveys in creosote scrub habitat in Mojave Desert for transmission line permitting (70 hours survey time with qualified biologist).
- **Desert Tortoise Surveys, Mojave Desert, Twenty-Nine Palms, CA (2009).** Conducted protocol level desert tortoise surveys in creosote scrub habitat in Mojave Desert for solar power plant installation (68 hours survey time with qualified biologist).
- **Desert Tortoise Surveys, Mojave Desert, Barstow, CA (2009).** Conducted protocol level desert tortoise pre-construction clearance surveys in creosote scrub habitat in the Mojave Desert for a solar power plant construction project (30 survey hours survey time with a qualified biologist).
- **Phase I & II Burrowing Owl Surveys, Central Valley, CA (2008).** Carried out phase II protocol level burrow surveys for the western burrowing owl within impacts areas within the 20 mile corridor for PG&E's Vaca Dixon-Peabody-Lambie-Birds Landing 230kV Reconductoring Project in Solano County. Also, carried out a phase I and II protocol level surveys for the western burrowing owl along a five mile long linear study area on private land for PG&E's Yolo to Roseville Pipeline Routing Study in the Dunnigan Hills area of Yolo County. Recorded burrow and BUOW locations when individuals and/or sign of habitation were present. Wrote and edited technical reports. Saw 2 adult burrowing owls, and 2 active burrows.
- **SDG&E Wood to Steel Pole replacement project, San Diego National Wildlife Refuge (2008).** Ensured compliance of construction activities and safety of endangered and threatened species including the least Bell's vireo, California gnatcatcher, orange-throated whiptail, San Diego rufous-crowned sparrow, and Quino checkerspot butterfly during a power pole replacement project. Observed two least Bell's vireo, 9 California gnatcatchers, 3 orange-throated whiptails, 1 San Diego rufous-crowned sparrow, and the host plants for Quino checkerspot butterflies on the project site.

PRBO Conservation Science **Field Research Assistant**
March – July 2007, November - January 2008

- **Cosco Busan Oil Spill in Marin County, CA.** Conducted beach surveys for oiled and non-oiled wildlife following oil spill. Captured and transported live oiled birds and collected carcasses. Volunteered to help clean seabirds at the International Bird Rescue and Recovery Center. Entered and proofed data.
- **Palomarin Long-Term Landbird Monitoring Program, Marin County, CA.** Extracted, banded, and processed over 600 birds. Banded nestlings, hummingbirds and small raptors and color-banded study species. Conducted avian and vegetation surveys. Mended nets and maintained banding kits, trails, and net lanes. Trained and supervised volunteers, and educated public and school groups about avian conservation.

USGS Colorado Plateau Research Station **Biological Science Technician**
May – November 2006

- **Yellow-Billed Cuckoo Monitoring Project, Southwestern AZ.** Conducted presence/absence surveys for yellow-billed cuckoos, and rigorous vegetation surveys in desert riparian and upland habitats from Bill Williams National Wildlife Refuge to the U.S./Mexico border on the Colorado River. Created data summary tables for report and wrote supporting text.

University of Nevada – Reno **Survey Crew Leader**
May – September 2005

- **Willow Flycatcher Project, Northern Sierra Nevada Mountains, CA.** Planned and supervised presence/absence surveys for willow flycatchers. Found and monitored nests of willow flycatchers, dusky flycatchers, and yellow warblers. Re-sighted color-bands and mapped territory boundaries. Trained and supervised field assistants. Trapped & identified insects. Collected data on vegetation structure.

Institute for Bird Populations **Field Research Assistant**
May – June 2004

- **Manter/McNally Fire Project, Sequoia National Forest, CA.** Conducted vegetation surveys and avian point counts in remote backcountry sites. Used dichotomous keys to identify plants in study area. Recorded observations of bird behavior and plant phenology. Utilized GPS, pacing, and orienteering to navigate to field sites and transects.

Florida State Dept. of Agriculture **Plant Pest Survey Coordinator**
October 2002 – April 2004

- **Cooperative Agricultural Pest Survey (CAPS), Div. of Plant Industry, Gainesville, FL.** Collaborated with a team to develop a new survey program that was deemed the best CAPS program in the United States, which became a model for other states. Managed surveys for exotic pests in agricultural, urban, and natural ecosystems. Collected plant and insect samples. Networked with researchers, extension agents, and farmers at university, state and federal agencies to implement cooperative surveys. Researched scientific literature for data on exotic arthropods and plant diseases. Assembled a database and field guide of exotic arthropods. Summarized data and wrote survey reports.

USGS Patuxent Wildlife Research Center **Volunteer Amphibian Surveyor**
March 2003 – April 2004

- **North American Amphibian Monitoring Program, Cedar Key and Otter Creek, FL.**

Participated in volunteer point count survey for frogs in Florida to determine distribution and diversity of frogs in Florida. Conducted unlimited radius point counts for frogs based on vocalizations.

Univ. of Florida, Department of Zoology **Field Research Assistant**
October 2002 – February 2003

- **Dispersal of Invasive Chinese Tallow Project, Paynes Prairie State Preserve, FL**.

Conducted avian foraging observations and recorded seed dispersal events.

The Nature Conservancy **Wetland Research Assistant**
June 2002 – August 2002

- **Wetland Restoration Project, Disney Wilderness Preserve, Kissimmee, FL.** Completed photopoint monitoring survey of over 50 wetlands ahead of schedule. Worked with survey grade GPS equipment, palm top computers, cameras, data recorders and All Terrain Vehicles in wetlands. Followed strict contamination control procedures to avoid spreading invasive plants. Managed MS Access database and updated maps in ArcView. Assisted with canopy, shrub and herbaceous layer vegetation sampling. Assisted with Eastern Big-Eared Bat and Florida Scrub Jay monitoring**.**

Texas Tech University, Biology Dept. **Howard Hughes Tropical Ecology Fellow**
June 1996 – August 1996

- **Long-Term Ecological Research Program, Luquillo Experimental Forest, Puerto Rico.**

Assisted with mark and recapture study of terrestrial mollusks. Navigated to survey points in the rainforest at night via map and compass. Collected samples for macro-invertebrate community ecology project. Sampled vegetation structure, canopy density and leaf litter characteristics.

PROFESSIONAL AFFILIATIONS

- The Wildlife Society
- Ecological Society of America
- Society for Conservation Biology
- Cornell Lab of Ornithology
- American Birding Association
- American Bird Conservancy
- American Ornithological Union
- Point Reyes Bird Observatory Conservation Science

PUBLICATIONS

- Krantz, S. L., Benoit, T. G. and Beasley, C. W. (1999) "Phytopathogenic Bacteria Associated with Tardigrada." *Zoologischer Anzeiger,* 238: 259-260. Presented at Seventh International Symposium on Tardigrada in Dusseldorf, Germany, September 4 -7, 1997.
- Vandermeer, J. H., B. Hoffman, S. L. Krantz-Ryan, U. Wijayratne, J. Buff and V. Franciscus. (2001) "Effect of Habitat Fragmentation on Gypsy Moth (*Lymantria dispar* L.) Dispersal: The Quality of the Matrix." American Midland Naturalist 145: 188-192.

TECHNICAL REPORTS

- Dixon, W., Krantz, S, Baruch, D., Ogle, Y. Westwood, C. "Lobate Lac Scale Survey, *Paratachardina lobata lobate*, in South Florida." Florida Cooperative Agricultural Pest Survey Report No. 2003-04-LLS-01. Florida Department of Agriculture and Consumer Services, Division of Plant Industry, PO Box 147100, Gainesville, FL 32614, April 2003.
- Krantz, S. "Monitoring Report for Peregrine Falcons at Devil's Promontory, San Mateo County, CA, Devil's Slide Improvement Project, EA 1123U3." State of California, Department of Transportation. June 25, 2008.
- Krantz, S. "Monitoring Report for Peregrine Falcons at Devil's Promontory, San Mateo County, CA, Devil's Slide Improvement Project, EA 1123U3." State of California, Department of Transportation. August 2009.
- Krantz, S. Identification of Resources, Potential Impacts, and Wetlands Sections of Environmental Protection Plans for Makua Military Training Area, Humuula Sheep Station, and Kulani Boys Home, Hawaii, USA. November 28, 2008.

PRESENTATIONS

- Krantz, S. Butterfly Diversity in Coffee Agroecosystems. Poster presented at Ecological Society of America Meeting, Pittsburg, PA, August, 2010.

URS

Catherine MacGregor

Staff Biologist and Botanist

Overview

In Ms. MacGregor's more than nine years of biological work in Southern California, she has gained valuable experience in conducting wildlife, habitat, and botanical surveys, as well as monitoring and report writing. Her avian survey experience includes coastal California gnatcatcher, least Bell's vireo, and burrowing owl protocol surveys; Gila woodpecker, nesting bird, and point count surveys; and general avian/wildlife surveys.

Areas of Expertise

Wildlife Surveys
Spring and Rare Plant Surveys
Habitat Mapping
Restoration Monitoring
Biological Technical Report Writing
Wetland Delineation
Native Plant Landscape Design

Years of Experience

With URS: 1 Year
With Other Firms: 10 Years

Education

BA, Biological Sciences with High Honors and Phi Beta Kappa, Smith College, 2006

Avian and Wildlife Experience

Confidential Client Gila Woodpecker Survey, Riverside County, CA. Participated in spring 2012 Gila woodpecker surveys for a large-scale project in the eastern Riverside County; also documented all other incidentally observed bird species and sensitive wildlife.

Confidential Client Migratory Bird Point Count, Riverside County, CA. Assisted with the spring 2012 migratory bird point count surveys for a large-scale project in the eastern Riverside County desert by documenting all observed bird species.

Confidential Client Burrowing Owl Survey, Riverside County, CA. Participated in the 2012 burrowing owl burrow survey for a large-scale project in the eastern Riverside County desert according to the March 2012 survey guidelines.

Otay Mesa Burrowing Owl Survey, San Diego County, CA. Conducted protocol burrowing owl surveys at an occupied site along the U.S.-Mexico border on Otay Mesa in southwestern San Diego County.

Campus Park Residential Development and Biological Open Space, San Diego County, CA. Participated in a protocol least Bell's vireo presence/absence survey, habitat mapping, wildlife surveys, and spring and rare plant surveys for this 502-acre site in the Pala-Fallbrook area.

SDG&E Wood to Steel nesting bird surveys and nest monitoring, San Diego County, CA. As part of construction monitoring for the San Diego Gas and Electric Wood to Steel project, performed nesting bird surveys in the 2011 spring season, and monitored active nests in or near work areas.

Highlands Ranch Residential Development and Biological Open Space, San Diego County, CA. As lead biologist for this 177-acre site, participated in California gnatcatcher surveys, performed avian/wildlife surveys, performed spring and rare plant surveys, and prepared several iterations of a biological technical report for the proposed residential development and biological open space.

Singing Hills Residential Development and Biological Open Space, San Diego County, CA. As lead biologist for this 952-acre site, participated in California gnatcatcher surveys, performed avian/wildlife surveys, performed spring and rare plant surveys, and prepared the biological technical report.

Viejas Hills Estates Residential Development and Biological Open Space, San Diego County, CA. Mapped habitats, performed avian/wildlife surveys, performed spring and rare plant surveys, and conducted spring and rare plant surveys at this 182-acre site, and prepared several iterations of the biological technical report and open space management plan.

Lively Project, City of Poway, CA. Mapped habitats, performed avian/wildlife surveys, performed spring and rare plants surveys, and prepared the biological technical report and upland habitat revegetation plan for this 145-acre proposed residential development.

Montecito Ranch Residential Development and Biological Open Space, San Diego County, CA. Performed avian/wildlife surveys, and spring and rare plant surveys for this 935-acre project in the town of Ramona.

Pala Mesa Resort Major Use Permit and Biological Open Space, San Diego County, CA. As lead biologist, conducted habitat mapping, performed avian/wildlife surveys, performed spring and rare plant surveys, and prepared several iterations of the biological technical report.

Sevilla Residential Development, City of San Diego, CA. Performed habitat mapping, avian/wildlife surveys, spring and rare plant surveys, and a vernal pool survey and assessment for this site on the western edge of Otay Mesa.

Meyers Project, City of Escondido, San Diego County, CA. Peformed habitat mapping, avian/wildlife surveys, plant surveys, and delineation of a seasonal wetland for the proposed development.

Habitat Restoration and Management

Market Creek Plaza riparian habitat restoration, City of San Diego, CA. Managed this project on Chollas Creek in with qualitative and quantitative monitoring, including bird and wildlife monitoring and preparation of annual monitoring reports.

Hidden Meadows riparian habitat restoration project, San Diego County, CA. Performed qualitative and quantitative monitoring of this riparian habitat restoration project near the City of San Marcos.

Private residence riparian habitat restoration project, City of Poway, CA. Performed qualitative and quantitative monitoring of this riparian

habitat restoration project on a residential site and directed remedial measures as needed.

Old Coach Road riparian habitat restoration, City of Poway, CA. Performed qualitative and quantitative monitoring of this riparian restoration project adjacent to Old Coach Road in the City of Poway and directed remedial measures as needed.

Specialized Training

2011, 2012 Unexploded Ordnance Training
2007 San Diego Stream Team Bioassessment Professional Training
2006 San Diego Vernal Pool Flora and Habitat Restoration Workshop
2004 Fire Ecology of Chaparral and Coastal Sage Scrub Workshop
2002 San Diego's Sensitive Butterflies Workshop
2001 SERCAL Restoration and Revegetation Workshop
2001 Southwestern Willow Flycatcher Workshop
1999 U.S. Army Corps Wetland Delineation Training

Publications

"Land Cover Effects on Inorganic Nutrients in Groundwater and the Role of Salt Marshes in Interception of Land-Derived Nutrients Entering Estuaries of Waquoit Bay, Massachusetts." Biological Bulletin, 189: 248-249, 1995.

The Sea-Strand Vegetation of Lower Cape Cod, Massachusetts. Smith College (Honors Thesis): Northampton, MA, 1996

Chronology

02/12-present: URS, San Diego, CA
04/11-02/12: Aerotek, San Diego, CA
04/09-09/09: Consulting Botanist and Biologist, San Diego, CA
08/08-04/10: Volunteer Botanist, La Jolla Band of Luiseno Indians, Pauma Valley, CA
04/07-07/07: Aspen Environmental Group, Carlsbad, CA
03/01-11/06: REC Consultants, San Diego, CA
12/00-03/01: HDR Inc., San Diego, CA
03/99-10/00: EMD Inc., Orlando, FL

Contact Information

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Direct: 858.812.8288
Fax: 858.812.9293
Catherine.MacGregor@urs.com

RELEVANT QUALIFICATIONS

Years of Experience
5

Education
MS, California State University Fullerton Environmental Science – 2011
BA, University of La Verne, Biology - 2008

Expertise
Peninsular bighorn sheep, Focused Avian Surveys, Point Count, Avian Habitat Assessments, Avian Monitoring, Qualified California Rapid Assessment Method (CRAM) Practitioner

KEY QUALIFICATIONS

Mikaila Rimbenieks-Negrete has a Master's Degree from California State University Fullerton and almost half a decade of professional experience. Mikaila can identify the majority of North American species of birds by both sight and sound. She has extensive Peninsular bighorn sheep and avian field survey/monitoring knowledge as both a government researcher, and private consultant. Mikaila is experienced in the utilization of a variety of scientific survey methods, including helicopter surveys, transect, point counts, and area searches.

Biologist

United States Forest Service - Big Bear Lake Raptor Monitoring Study

For the US Department of Agriculture, Mikaila monitored bald eagle nests and conducted winter population surveys in Big Bear Lake, CA. Mikaila also monitored California spotted owl nesting territories.

Biologist

San Diego Gas & Electric Sunrise Powerlink Project

Mikaila was approved by the US Fish and Wildlife Service and other resource agencies to monitor Peninsular bighorn sheep - protecting the sheep from harm / harassment from low elevation helicopter flights while preventing unnecessary delays in construction related activities. Mikaila conducted daily pre-survey, extended daily surveys, and late afternoon surveys of proposed work areas for common and special status avian species as well. Data collected on sheep included documenting movements, locations, numbers, sex, and age of all bighorn sheep.

Biologist

United States Forest Service - San Bernardino and Cleveland National Forest

Mikaila was responsible for monitoring avifauna for the Lahontan Regional Water Quality Control Board Timber waivers at landings, skid trails, roads, riparian areas, and stream crossings. Additional duties included performing avian species diversity and abundance surveys along four congressionally designated Wild and Scenic Rivers'. Mikaila performed Qualified California Rapid Assessment Method (CRAM) assessments and provided guidance to accurately use CRAM for ambient monitoring and assessment for riverine wetlands.

Biologist

United States Forest Service - Big Bear Lake Field Station

In support of research for the US Fish and Wildlife service, Mikaila performed protocol field surveys for southwestern willow flycatcher, arroyo toad, mountain yellow-legged frog, desert tortoise, burrowing owl, and the California spotted owl.

Biologist

United States Forest Service - Mountaintop Ranger District Fuels Reduction Project

In support of research for the US Department of Agriculture, Mikaila conducted bird surveys for fuels reduction projects, windmill test sites, and other potential renewable sites.

URS

Alicia Omlid

Biologist

Areas of Expertise

Biological Surveys
Environmental Planning & Restoration

Years of Experience

With URS: 1 Year
With Other Firms: 4 Years

Education

MA, Geography: Resource Management & Environmental Planning with an emphasis in Biogeography, San Francisco State University, 2010

BA, Landscape Architecture, University of Oregon, 2005

Overview

Ms. Omlid is a Biologist in the URS San Diego office. She has supported document preparation, including editing for clarity and accuracy and writing portions of documents. Ms Omlid's position at URS also involves protocol surveys for special status wildlife species, botanical surveys, and vegetation monitoring on restoration projects. Her experience includes planning at the local level with the Port of San Francisco and she has performed environmental volunteer field work (i.e. habitat restoration, biological surveys (wildlife & vegetation), water quality monitoring) from San Diego, California to Portland, OR prior to joining URS. Ms. Omlid's educational background was ecologically and biogeographically focused as exemplified by courses in Applied Ecology, Biogeography, Watershed Assessment & Restoration, GIS for Environmental Analysis, Environmental Management, Natural Resource Management, and Tree & Plant Identification. Graduate-level research project topics include: identifying which low-impact design stormwater BMPs could be optimally located in a study area of San Francisco using GIS, taking tree cores to determine growth rate differences in trees infected/not infected with pitch canker, identifying street tree species and associated perceived street tree health, and the effects of climate change on vegetation in Costa Rica. Her education also provided familiarity with environmental laws and policies, as well as experience with geographic and biological field methods.

Project Specific Experience

High-Speed Train Palmdale to Bakersfield, CA. 2012.
Staff biologist performing desert tortoise surveys and habitat mapping for the proposed project area between Palmdale, CA and Bakersfield, CA.

Sonoran West Solar Electric Generating facility, Blythe, CA. 2011-Present:
Staff biologist leading and assisting in leading desert tortoise surveys, performing burrowing owl and elf owl surveys, shadowing botany surveys and managing botanical survey data for this approximately 8,000 acre site. Future work will include helping lead Mojave fringe-toed lizard surveys, and Couch's spadefoot toad surveys. (2011-present)

Rio Mesa Solar Electric Generating facility, Blythe, CA. 2011-Present:
Staff biologist performing desert tortoise, burrowing owl, Mojave fringed-toed lizard, avian point count, gila woodpecker, elf owl, and Couch's spadefoot toad surveys. Assisting in the writing and editing of associated technical documents, and entering data into spreadsheets for this approximately 11,000-acre project site near Blythe, CA.

Santa Margarita River Vegetation Study, Camp Pendleton, CA. 2011:
Staff biologist performing vegetation mapping (ranking vegetation density on transects) along the Santa Margarita River.

Mira Sorrento Place, San Diego, CA. 2011: Staff biologist performing vegetation surveys to determine vegetative cover for a coastal sage scrub/upland scrub/riparian scrub restoration site. Duties also include analyzing associated data and helping to assemble the annual report.

Dana Point Headlands Habitat Restoration, Dana Point, CA. 2011:
Staff biologist performing surveys to determine vegetative cover and container plant success for a coastal sage scrub restoration site.

San Diego River Park Foundation, San Diego, CA. 2010-2011:
Volunteer. Taking inventory and mapping locations of invasive species with GPS.

California Native Plant Society, San Diego, CA. 2011:
Volunteer. Rare plant surveys and vegetation sampling.

Johnson Creek Watershed Council & Xerces Society, Portland, OR. 2010:
Volunteer. Riparian restoration (invasive species removal and planting natives) along the Willamette River.

Middle Fork Willamette Watershed Council - Eugene, OR. 2010:
Volunteer water quality monitor. Taking stream samples and using field equipment (i.e. turbidity meter, conductivity meter, titrator) to determine pH, temperature, DO, conductivity & turbidity.

Oregon State University, Corvallis, OR. 2010:
Volunteer field assistant to a PhD Student in the Water Resource Engineering department. Installing wetland wells and collecting groundwater level data outside Eugene, OR.

Port of San Francisco, San Francisco, CA. 2007-2009:
Student intern providing support to Senior Port Planning and Engineering staff on planning projects. Writing fact sheets, producing presentation graphics, creating PowerPoint presentations, conducting site research (i.e. gathering maps and site plans), reviewing environmental documents, facilitating community meetings, and researching case studies for planning projects. Other duties included editing the *San Francisco Stormwater Design Guidelines*, monitoring plant cover and density of *Suaeda californica* to determine whether restoration efforts were successful.

Professional Societies/Affiliates

Association of Environmental Professionals, Member
California Native Plant Society, Member

Specialized Training

2011/Desert Tortoise Council's Surveying, Monitoring, and Handling Techniques Workshop
First Aid and CPR Training

Contact Information

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Patrick Lee Hord

Wildlife Biologist
9712 Snow View Drive, El Cajon, CA 92021
(858) 220-4732
chatamour7@yahoo.com

Patrick Hord's nine years of experience as a wildlife biologist includes nesting and migratory bird surveys; focused sensitive species surveys and monitoring including the Least Bells vireo, California gnatcatcher, Burrowing owl, flat tailed horned lizard, and Arroyo toad. His expertise also includes point count and raptor surveys, native plant surveys, construction monitoring, fuel management monitoring, mitigation monitoring, and GPS mapping.

He has worked with and handled California native wildlife as the Executive Director of a licensed California wildlife rehabilitation center. He is also co-owner of a wildlife exclusion and humane pest control service.

Mr. Hord is a San Diego native and has extensive experience as a licensed California General Building and Millwork Contractor; he has advanced skills and a comprehensive knowledge of all phases of the construction industry for both residential and commercial projects including planning, design, compliance, supervision, and maintenance.

Work Experience

Wildlife Biologist, Chambers Group Inc. ● October 2011 Present

San Diego Gas & Electric - Sunrise Power Link Project. Avian team member. Presence and absence, nesting bird surveys. Construction monitoring for large scale electric transmission project including daily reporting. Monitor environmental compliance in habitats ranging from desert scrub in Imperial County to coastal sage scrub in San Diego.

Birds Observed:

Golden eagle, Bald eagle, Cooper's hawk, Peregrine falcon, White-tailed kite, Merlin, Northern Harrier, Osprey, Harris's hawk, Turkey vulture, Red-shouldered hawk, Red-tailed Hawk, American kestrel, Blue-gray Gnatcatcher, California gnatcatcher, Mallard, Cinnamon Teal, Bushtit, Mourning dove, Western scrub Jay, Common raven, White-crowned sparrow, California towhee, Cliff swallow, Spotted towhee, Lesser goldfinch, American goldfinch, House finch, Northern mockingbird, California thrasher, Oak titmouse, Yellow-rumped Warbler, Wrentit, Anna's hummingbird, Costa's hummingbird, Black-chinned hummingbird, Ash-throated flycatcher, Black phoebe, Say's phoebe, Bewick's wren, Yellow-rumped warbler, Western kingbird, Cassin's kingbird, Common poorwill, Golden-crowned sparrow, Northern mockingbird, Rock wren, Western bluebird, California quail, Lark sparrow, Acorn woodpecker, Nuttall's woodpecker, Northern flicker, Rufous-crowned sparrow, Killdeer, American Coot, Phainopepla, Greater roadrunner, Wilson's warbler, Black -headed gross beak, Loggerhead shrike, Yellow warbler.

Wildlife Biologist, Geomorphis Information Sys, LLC ● June – July 2011

Southern California Edison - Tehachapi Renewable Transmission Project. Pre-construction surveys, bird surveys and nest monitoring, and construction monitoring on Segments 4, 5 and 11 - Mojave desert.

Wildlife Biologist, Owens Wildlife Biology, LLC ● 2006 – 2012

Nesting bird, raptor surveys, point count surveys and other sensitive species surveys. GPS mapping and perimeter flagging, general and sensitive species surveys for mitigation and Habitat Conservation Plan sites, construction monitoring, fuel management monitoring.

Also experienced in sensitive plant species mapping in desert scrub, Coastal sage scrub, mixed chaparral, oak woodland, riparian woodland, native & non-native grassland, fresh water marsh, among others.

Assisted with nest monitoring for California gnatcatcher and Least Bell's vireo, conducted daytime and night time Arroyo toad surveys.

Relevant Experience for Owens Wildlife Biology:

Our Lady of Mount Carmel Catholic Church Development Project, San Diego, CA, 2011 ● *General surveys for sensitive species (birds, mammals, herps, butterflies); nesting bird surveys, assistance with California gnatcatcher (CAGN) protocol surveys, CAGN nest monitoring, construction monitoring.*

The Escondido Creek Conservancy San Elijo and Greenlands Perpetual Land Management Plan San Marcos; Escondido CA 2009 – 2011 ● *Annual general surveys for sensitive species (birds, mammals, herpetiles, butterflies); nesting bird surveys, assistance with California gnatcatcher protocol surveys, point count surveys, habitat mapping, GPS.*

Horsethief Fuel Management Project, Alpine, CA, 2011 ● *Construction monitoring. Presence and absence bird surveys, nesting bird surveys, nest monitoring. GPS perimeter flagging, GPS sensitive plant mapping. Included surveys for Arroyo toad which were found on site, establish and monitor MTBA listed nesting bird buffer zones for construction.*

Habitat:

400 acres Mixed chaparral, Oak woodland, Engelmann Oak woodland, Riparian woodland, Riparian willow scrub, native & non-native grassland and fresh water marsh habitats.

Bird species observed:

Blue-gray gnatcatcher, Red-tailed Hawk, Bushtit, Common poorwill, Turkey vulture, Mourning dove, Western scrub Jay, Common raven, White-crowned sparrow, California towhee, Golden crowned sparrow, Spotted towhee, Lesser goldfinch, American goldfinch, House finch, Cliff swallow, Northern mockingbird, California thrasher, Oak titmouse, Yellow-rumped warbler, Wrentit, Anna's hummingbird, Costa's hummingbird, Ash-throated flycatcher, Black phoebe, Rock wren, Bewick's wren, Western bluebird.

Nesting birds observed:

Red tailed Hawk, Western bluebird, House wren, Cooper's hawk, Anna's hummingbird.

Threatened and Endangered:
Arroyo toad.

Ocotillo Express Wind Farm, Ocotillo, CA, 2010 ● *Assisted with point count surveys, migratory bird and raptor surveys, Burrowing owl surveys, flat tailed horned lizard surveys for preparation of EIR and EIS on Bureau of Land Management land in various desert habitats.*

Victoria Vegetation Fuel Management Project, Alpine, CA, 2010 ● *Construction monitoring, nesting bird and other sensitive species surveys, GPS perimeter flagging, GPS sensitive plant mapping, establish and monitor MTBA listed nesting bird buffer zones for construction.*

Habitat:
100 acres Mixed Chaparral, Oak woodland, Riparian woodland, Riparian willow scrub.

Bird species observed:
Say's phoebe, Cooper's hawk, Blue-gray Gnatcatcher, Red-tailed Hawk, Bushtit, Turkey vulture, Mourning dove, Western scrub Jay, Common raven, White-crowned sparrow, California towhee, California towhee, Spotted towhee, Lesser goldfinch, American goldfinch, House finch, Northern mockingbird, California thrasher, Oak titmouse, Yellow-rumped Warbler, Wrentit, Anna's hummingbird, Costa's hummingbird, Ash-Throated flycatcher, Black phoebe, Bewick's wren, Yellow-rumped warbler, Western kingbird,

Nesting birds observed:
Yellow-rumped warbler, Anna's hummingbird, Spotted towhee, Red-tailed hawk, American goldfinch, Bushtit.

California Fire Safe Council Fuel Management Projects, Alpine, CA 2009 – 2010 ● *Construction monitoring, nesting bird and other sensitive species surveys, GPS perimeter flagging, GPS sensitive plant mapping, establish and monitor MTBA listed nesting bird buffer zones for construction.*

Sky Ranch Development, Santee, CA, 2007 – 2008 ● *Assisted with California gnatcatcher protocol surveys, CAGN nest monitoring for 340+ acre development.*

Habitat:
Mixed chaparral and Coastal Sage scrub.

Bird species observed:
American Kestrel, California Gnatcatcher, Red-tailed Hawk, Bushtit, Common poorwill, Turkey vulture, Mourning dove, Western scrub Jay, Common raven, White-crowned Sparrow, California towhee, Golden-crowned sparrow, Spotted towhee, Lesser goldfinch, American goldfinch, House finch, Northern rough-wing swallow, Northern mockingbird, California thrasher, Yellow-rumped Warbler, Wrentit, Anna's hummingbird, Costa's hummingbird, Ash-throated Flycatcher, Black phoebe, Bewick's wren, Greater roadrunner.

Nesting birds observed:

5 California Gnatcatcher nests/territories.

Threatened and Endangered:
California gnatcatcher.

Installation Restoration Program at Marine Corp Air Station, El Toro, CA 2006 - 2007 ● *Assisted with California gnatcatcher protocol surveys and nest monitoring, nesting bird surveys, establish and monitor MTBA listed nesting bird buffer zones for construction for 400+ acre development.*

Habitat:
Coastal Sage scrub

Bird species observed:
Burrowing owl, Lesser Nighthawk, Red-tailed Hawk, Bushtit, Turkey vulture, Western scrub Jay, Common raven, California towhee, Golden crowned sparrow, Spotted towhee, House finch, Northern mockingbird, California thrasher, Oak titmouse, Wrentit, Anna's hummingbird, Costa's hummingbird, Black phoebe, Rock wren, Bewick's wren,

Nesting birds observed:
California Gnatcatcher.

Nesting birds observed:
Burrowing owl, CAGN.

Sensitive, Threatened and Endangered species observed:
Nine California Gnatcatcher nests monitored.

Quarry Creek Project, Oceanside, CA, 2007 ● *Assisted in protocol Least Bells Vireo (LBV) surveys for proposed development and expansion of quarry, general sensitive species surveys, LBV detected on site.*

Habitat:
Riparian willow scrub. Transitional Coastal Sage scrub.

Bird species observed:
Red-tailed Hawk, Bushtit, Turkey vulture, Mourning dove, Western scrub Jay, Common raven, California towhee, Spotted towhee, Lesser goldfinch, American goldfinch, House finch, Cliff swallow, Northern mockingbird, Oak titmouse, Yellow-rumped Warbler, Wrentit, Anna's hummingbird, Ash-throated Flycatcher, Black phoebe, Bewick's wren, Yellow-breasted chat, Wilson's warbler, Common yellowthroat.

Threatened and Endangered:
Least Bells Vireo, California Gantcatcher.

Guejito Ranch, Escondido/Valley Center, CA, 2006 ● *General bird and Arroyo toad protocol day and nighttime surveys, Arroyo toads detected on site.*

Habitat:

Riparian willow scrub.

Bird species observed:

Red-tailed hawk, Red-shouldered hawk, Cooper's hawk, White-tailed kite, Bushtit, Great egret, Lazuli bunting, Turkey vulture, Killdeer, Mourning dove, Scrub jay, Common raven, American crow, California towhee, White-crowned sparrow, Rufous crowned sparrow, Song sparrow, American kestrel, House finch, Lesser goldfinch, Bullock's oriole, Cliff swallow, Northern rough-wing swallow, Western meadowlark, Northern mockingbird, Wrentit, Western bluebird, Yellow-rumped Warbler, California quail, Wild turkey, Acorn woodpecker, Nutall's woodpecker, Great horned owl, Anna's hummingbird, House wren, Cassin's kingbird, Pacific-slope (Western) flycatcher, Western kingbird, Ash-throated flycatcher, Black phoebe, Barn owl, Wild turkey.

Threatened and Endangered:

Arroyo toads.

Native Wildlife Solutions ● July 2008 – Present

Co-owner of humane wildlife exclusion service Native Wildlife Solutions covering all of San Diego County; includes removal and exclusion of various vertebrate species, from structures, developed properties; and educational presentations for HOAs and related groups.

Executive Director, The Wildlife Center of Silicon Valley ● February – July 2008

Responsible for staff, 100 volunteers and the overall operation a Wildlife Rehabilitation hospital non-profit organization with budget of over $400 k. Fundraiser; developed policies, procedures and master plan. Handled various native wildlife in rehabilitation and field settings.

Executive Director and Co-founder, La Jolla Friends of the Seals ● May 1999 – May 2002

Established California non-profit educational. Trained and managed over 300 volunteer docents to promote positive public education and understanding of local wildlife and habitats.

General Building and Millwork Contractor, La Jolla Woodworks ● 1982 – 1997

Owner and supervisor of licensed construction company, experienced in all phases and modes of building construction and remodel for residential and commercial projects.

Education

Imperial Valley College. Course in Environmental Science, Brawley, CA
B.A. History, San Diego State University, San Diego, CA
San Diego Mesa College, San Diego, CA

Awards and Certifications

National Oceanic and Atmospheric Administration's Environmental Hero Award, 2000
California General Building & Millwork Contractor License B1 & C6 CSLB # 536150 ● 1990 - 1996

Professional and Community Affiliations

Association for Environmental Professionals, member
Wildlife Society, member
Citizens Advisory Committee member (former), Los Peñasquitos Canyon Preserve ● 2009 - 2010
Emergency Wildlife Rehab Volunteer, Lakeside, CA. 2003

Safety Training

Helicopter safety, 2011
CPR

References

Available upon request

RENÉE OWENS

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office / fax (619) 447-4979
renee@wildlifezone.net

- CEQA, NEPA Biological / Environmental Assessments
- California gnatcatcher, Least Bell's vireo USFWS nest monitoring permits
- Protocol surveys for Arroyo toad, Burrowing owl, Cactus wren, Flat-tailed horned lizard, Desert tortoise, SW pond turtle
- Integrated Natural Resources Management Plans
- International research in wetland /endangered species conservation funded by National Geographic Grants
- Biological Evaluation, Assessment and Mitigation Monitoring
- Species Recovery Plan Research & Monitoring
- CEQA/ NEPA workshop instruction
- Mitigation and Construction Monitoring and Analysis
- Habitat Restoration Planning
- Rare plant, raptor migration, and MBTA nesting bird surveys
- Development & Instruction of Wildlife Conservation Certification Training course
- Point counts, Mist-netting, banding, radio telemetry, quadrat sampling, mark & recapture, pit-fall trapping,

Ms. Owens has 24 years experience as a wildlife ecologist, college instructor, and conservation biologist. She is founder and senior biologist of Owens Wildlife Biology, an ecological consultancy specializing in terrestrial and marine wildlife biology, established in 1993. Her extensive experience includes projects in California and Latin America with focus on terrestrial ecology, natural history, conservation management, restoration and mitigation monitoring and implementation.

Her consultancy provides services for a broad spectrum of projects which typically include one or more of the following: ecological and conservation research, biological / environmental assessments and reports, restoration implementation, surveys, mapping, and monitoring of threatened, sensitive, and endangered species. Projects address compliance with regulations from the local to federal level (e.g. the ESA, CEQA, NEPA, NCCP, Clean Water Act, MBTA, among others), and often support regional habitat conservation plans. Over the years her clients have included private and public entities as well as government agencies from the City to Federal level, and she is on the City of San Diego approved list of biologists.

Her project experience comprises a broad range of species and taxa (e.g. passerines, raptors, shorebirds, herptiles, cetaceans, pinnipeds, and carnivores); habitat experience includes riparian, oak and conifer woodland, desert scrub, sage scrub, chaparral, and various tropical communities. She also organizes an annual workshop teaching CEQA and NEPA review as it relates to wildlife.

Ms. Owens has been a college instructor in Biology, Ecology, Botany, and Environmental Science in California and Ecuador, and her conservation research has been featured by National Geographic TV and magazine, Discovery, BBC, Dateline NBC, Sierra magazine, among others.

Resume Renée Y. Owens 619-201-1965 renee@wildlifezone.net

EDUCATION

Community College Instructor Certification, University of California San Diego Extension

Advanced Statistical Coursework and Ecology Seminar, University of Tennessee, Knoxville

MS in Ecology and Evolutionary Biology, San Diego State University

BS in Biology, Minor in Environmental Studies, SUNY Geneseo

REGISTRATION / CERTIFICATIONS

- Desert Tortoise Council, Survey Techniques Workshop, Certificate of Completion November 2010
- Flat-tailed Horned Lizard BLM Survey Techniques Workshop, Certificate of Completion, 2010
- Desert Tortoise Council, Survey Techniques Workshop Certificate of Completion, 2006
- USFWS Arroyo Toad Workshop, Camp Pendleton Marine Base, 1999
- Willow Flycatcher Workshop, SD Natural History Museum, Certificate of Completion, 1995
- U.S. Fish and Wildlife 10(a) Permit to survey and monitor the Coastal California gnatcatcher and Least Bell's Vireo. Permit # TE799569.
- California state (CDFG) Scientific Collecting Permit / MOU for coastal California gnatcatcher, Least Bell's Vireo surveys

AFFILIATIONS

- Association of Field Ornithologists
- Marine Mammal Society
- National Association of Biology Teachers
- Society for Conservation Biology
- Society for the Study of Amphibians and Reptiles
- Wildlife Society

AWARDS / HONORS

- Best Natural History Research Film Award, Animal Behavior Society 2003
- Science Alliance Research of Excellence Award 1998
- CONICIT (Venezuela) Award for the Novel Researcher 1998
- CITES and Profauna (Venezuela) joint Research Grant 1996
- National Geographic Film and Research Grant 1996
- National Geographic Research and Exploration Awards 1996

- Wildlife Conservation Society Research Grant 1996
- Sierra Club Emily Durbin Leadership in Conservation Award 1995
- SDSU Harry Hamber Academic Graduate Scholarship 1993

SELECT RELEVANT EXPERIENCE

MHCP Restoration and Mitigation Monitoring, City of San Diego, CA (2011 –present). Ms. Owens is the lead biologist for sensitive species surveys and mitigation monitoring of parts of the Black Mountain Open Space Park, on behalf of Our Lady of Mount Carmel Catholic Church (San Diego) development expansion. Along with conducting protocol California gnatcatcher and Burrowing owl surveys, Ms. Owens is supervising all biological components of construction and mitigation monitoring, and is additionally coordinating with the City of San Diego to administer all mitigation and restoration efforts within the MHCP parcel on site.

Fuel Management Projects, Alpine Fire Safe Council and USDA Forest Service, San Diego County, CA. (2009-2011). As principal investigator she was responsible for the management of several projects regarding hazardous fuel reduction for the Alpine Fire Safe Council in areas contiguous to and within U.S. Forest Service (USFS) land. Responsibilities included habitat mapping, sensitive plant and bird surveys , GPS mapping of treatment sites, monitoring and management of fuel reduction teams (consisting of two to thirty individuals), and preparation of the Biological Evaluations as required by the Bureau of Land Management. Project management included consultation and coordination with private landowners, project scientists, Home Owners Associations, USFS, and BLM staff.

Wind Farm Development Project on BLM land, Imperial County, CA (2010-2011). Ms. Owens was one of the lead biologists conducting surveys for an Environmental Assessment (EA) incorporating extensive wildlife surveys throughout 15,000 acres of Bureau of Land Management (BLM) land in Imperial County. Surveys since 2009 include (1) migratory bird surveys throughout migration seasons, with focus on sensitive raptor observations, (2) Burrowing owl surveys, (3) Avian point count surveys, and (4) Flat-Tailed Horned Lizard surveys; her reports will be incorporated into the final EA. She has also submitted a scientific publication on unique observations regarding horned lizard neonates.

Fuel Management Projects, California Fire Safe Council and USDA Forest Service, San Diego County, CA (2009). Ms. Owens was the principal investigator responsible for the implementation of hazardous fuel reduction projects in San Diego County for the California Fire Safe Council. The project included protocol surveys for the California gnatcatcher, least Bell's vireo, Arroyo toad, and sensitive plant species; GPS mapping of treatment sites and TES (Threatened and Endangered Species), and creation of the Biological Evaluations/Biological Assessments and mitigation protocol as in compliance with the Bureau of Land Management and USFWS standards.

Perpetual Land Management Plan, San Diego County, CA (The Escondido Creek Conservancy, (TECC) 2005 – present). Owens Environmental is the principle biologist responsible for reporting on the status of two habitat preserve Habitat Conservation Plans. The areas combined incorporate 103 acres of riparian wetland, oak woodland, coastal sage scrub, and chaparral habitats known as the

San Elijo Ridge and the Greenland Habitat Preserve; created in compliance with CEQA and MHCP planning. The third party beneficiaries of these preserves are the USFWS and California Department of Fish and Game (CDFG). Project duties include surveying and reporting for TES plant and animal species as well as habitat suitability analysis and monitoring for the California gnatcatcher.

Endangered Species Conservation and Natural History Research (Profauna, Wildlife Conservation Society, 1996-2002). Funded by the National Geographic Research Foundation, Wildlife Conservation Society, and The Venezuelan National Council for Scientific and Technological Research (CONICIT), Renée was one of two lead biologists who carried out a unique 8 year research project on the natural history of the green anaconda. Research incorporated radio telemetry, mark and recapture, genetic analysis, and neonate study; findings were used to implement a sustainable conservation management program throughout 175,000 acres of flooded savanna and forest in Venezuela. Reports to the Venezuelan federal wildlife agency (Profauana) included habitat suitability analysis, population census and nest monitoring, and reintroduction of endangered species (Orinoco crocodile, Arau side-necked turtle, and the Red-footed tortoise); as well as genetic analysis and monitoring of the highly endangered giant otter. Ms. Owens additionally generated a resident bird list comprised of over 400 species, including one previously undocumented species for the country.

Threatened Species Monitoring and Critical Habitat Assessment, (USFWS) Camp Pendleton Marine Base, 1994-1995. Ms. Owens participated in a long term monitoring effort of the California gnatcatcher for the entire Camp Pendleton Marine Base in Oceanside, CA. The study was unique in that in incorporated surveys and monitoring of the species during both breeding and non-breeding seasons; Ms. Owens monitored over 30 active breeding pairs spanning an area of several thousand acres. Extensive data were collected on habitat suitability as related to nesting success, contributing to critical habitat assessments and recovery planning.

Endangered Species Recovery Plan (USFWS) 1991-1995. Ms. Owens conducted 5 years of breeding season nest monitoring surveys and brown-headed cowbird management as partial fulfillment of the USFWS Endangered Species Recovery Plan for the Least Bell's Vireo, under P.I. Barbara Kus. She was responsible for monitoring and reporting on 25 to 70 nesting pairs throughout San Diego County, including many on Marine Base Camp Pendleton, while providing habitat assessments and reports for Critical Habitat evaluation and population recovery analysis.

College Instruction / Adult Education

● Wildlife Conservationist Certification Training, San Diego, CA, 2011 - present. Ms. Owens developed an annual pilot program with a curriculum created to educate volunteer activists in wildlife management. Students are certified upon completion of classes, field trips, and a 30 hour volunteer investment in a local citizen scientist project related to wildlife conservation; training is sponsored by the CA Audubon Society and is pending further endorsement by the USFWS and California DFG.

● Full Time Temporary Instructor, Botany and Environmental Science, Department of Math, Science, and Engineering, Imperial Valley College, CA. 2008.

● Full Time Instructor, Tropical Ecology, Boston University Tropical Ecology Program, Quito, Ecuador. Responsibilities included lecture and intensive field study of tropical habitats including cloud and mangrove forest, Pacific intertidal zones, rainforest, Galapagos Islands, and paramo. 1999 –2000.

● Biology Instructor Adjunct, Biology, Palomar Community College, San Marcos, CA. 1994 - 1996.

● Biology Lab Instructor and Teaching Assistant, San Diego State University, San Diego, 1990-1993

URS

Kathryn Riley

Wildlife Biologist

Overview

Ms. Riley has over 7 years of wildlife experience, focusing primarily on avian ecology and management. She is currently involved in a variety of biological survey and monitoring efforts on several upcoming solar electric generating facility projects in the Sonoran and Mojave deserts of California. Previously, she was part of the ongoing federally listed southwestern willow flycatcher management effort along the lower Colorado River. She has extensive experience in bird banding and color band resighting of passerines and shorebirds, as well as experience in large regional efforts of sampling bird demographics along the southern range of the Rocky Mountains.

Areas of Expertise

Ornithology
Endangered species, ESA
Burrowing owl biology
SW willow flycatcher biology
Western snowy plover biology
Invasive species management
Ecology, field studies

Years of Experience

With URS: 1 Year
With Other Firms: 6 Years

Education

BS, Wildlife Management, California State University, Humboldt, 2006

Project Specific Experience

Siberia Proposed Solar Electric Generating Facility (SEGF) Wildlife Biologist, March 2012 – Ongoing. 6,400 acre, 400 megawatt solar complex located near Ludlow, CA. Participated in migratory bird observation points, line-transects and focal surveys for CA State listed desert tortoise and burrowing owls. Served as a field liaison between remote field location and contracting office to ensure survey design and implementation met project specifications.

Rio Mesa Solar Electric Generating Facility (SEGF) Wildlife Biologist, March 2012 – Ongoing. 5,750 acre, 750 megawatt solar complex located near Blythe, CA. Participated in migratory bird observation points, line-transects and focal surveys for migratory birds and CA state listed Gila woodpecker.

S.W.C.A Environmental Consultants, Flagstaff, AZ, 2009 & 2007 May-August. Southwestern willow flycatcher recovery project along the Colorado River and tributaries in Nevada, Arizona and California. This project entailed re-sighting color banded birds, area censusing of local birds, GPS navigation, microclimate and vegetation monitoring, all-terrain vehicle and outboard motorboat operation, and data management.

Rocky Mountain Bird Observatory, Fort Collins, CO, 2008 May-July. Regional study along Rocky Mountain migratory corridor, conducting point counts of birds by habitat in northern Arizona. We used GPS to navigate a 15 point 3.25 km transect through dense habitat, and responsibilities included identifying all birds by sight and song, determining radial distance to individuals using a rangefinder, establishing new transects, recording local vegetation composition and structure, and data management.

Redwood Sciences Laboratories, Arcata, CA, 2006 April-October. Constant effort mist-netting of passerines as part of the Trinity River Restoration Project in northern California in cooperation with Klamath Bird Observatory and Humboldt Bay Bird Observatory. We operated 12 banding stations under a MAPS protocol in an effort to monitor passerine

demographics, specifically neo-tropical migrants. This project entailed operating mist-nets, banding passerine birds, area censusing local birds, facilitating public awareness of avian management, and data management.

Humboldt State University, 2006 February-April. Small mammal trapping and handling. As a member of the Wildlife department, assisted in collecting small rodents from Sherman traps for a student thesis project focusing on rodent demographics of local graze lands.

Mad River Biologist, Arcata, CA, 2005 May- September. Federally listed western snowy plover recovery and protection project in Humboldt County. Local beaches and rivers were surveyed via line-transects for color banded snowy plovers and nests. We constructed exclosures around nest sites for predator control, and monitored family units during brooding and fledgling periods.

Languages

English, Spanish

Specialized Training

2006, Certification
North American Banding Council certified Bander, Humboldt Bay Bird Observatory.

Contact Information

Kathryn Leigh Riley, Wildlife Biologist
URS Corporation
4225 Executive Square, Suite 1600
La Jolla, CA 92037
Tel: 858.812.8701
kathryn.riley@urs.com

Steve Ritt

4940 Cape May Ave.
San Diego, CA 92107
703.678.9893
stevenmritt@gmail.com

Qualifications

- Ability to rapidly identify all North American birds by behavior, sight, song, and call notes
- Experience conducting avian point-count and nest-searching surveys, and searching for rare species
- Experience conducting presence/absence surveys and behavioral observation of endangered species
- Permitted to conduct Southwestern Willow Flycatcher Presence/Absence Surveys
- Experience working in construction zones and with construction crews
- Extensive knowledge of flora of Eastern NA, and familiarity with flora of the Southwest and West
- Experience conducting aquatic, botanical, and general vegetative surveys
- Experience mist-netting and banding songbirds and raptors (~75 extracted/~30 measured and banded)
- Experience conducting radio telemetry
- Experience with GIS, GPS, and mapping
- Experience with technical writing, data entry, and general computing skills
- Extensive experience with managerial, administrative, and maintenance work
- Professional experience with public education among diverse demographics
- Strong knowledge of ecology and related fields
- Responsible, enthusiastic work-ethic and passion for learning

Professional Experience

Roadrunner Birding — November 2011 - present
Self-employed naturalist and guide for hire
- Personal guide for visiting and local birders
- Leader for bird festival trips and workshops

Ventures Birding and Nature Tours — May 2009, August 2011 - present
PO Box 1095
Skyland, NC 28776
Owner: Simon Thompson
Tour Leader
- Leader and planner for extended tours within the US
- Leader for day-trips, workshops, and personal guide for hire

University of California – Santa Barbara — January – March 2012
Carlsbad Field Office
2270 Camino Vida Roble
Suite D
Carlsbad, CA 92011
Supervisor: Andres Deza
Avian Biologist and Wetland Monitor
- Conduct point count surveys of wetland birds
- Assist other assistant biologists with bird ID
- Assist with tidal monitoring surveys of lagoons

Sunrise Powerlink — March-August 2011
Chambers Group Inc.
9909 Huennekens Street, Suite 206
San Diego, CA 92121
Supervisor: Kris Alberts

Avian Biologist and Construction Monitor
- Conducted pre-construction nest-searching surveys
- Conducted Burrowing Owl surveys
- Verified potential nesting reports
- Requested Nest Buffers and Nest Buffer Reductions
- Edited data and wrote Species Accounts for Annual Report
- Worked with construction crews to ensure environmental compliance without hindering construction
- Performed Biological Construction Monitoring

Southwestern Willow Flycatcher Study May-August 2010
SWCA Environmental Consultants
114 N. San Francisco St., Suite 100
Flagstaff, AZ 86001
Supervisors: Mary Anne McLeod, Anne Pelligrini
Survey Technician
- Surveyed for SWFL using broadcast and habitat assessment
- Resighted color-banded birds and collected behavioral data
- Collected data on other California Species of Special Concern
- Collected habitat and botanical ("vegetative") data

Bake Oven Knob Hawkwatch August-November 2009
Lehigh Gap Nature Center
PO Box 198
Slatington, PA 18080
Supervisor: Dan Kunkle
Official Counter for Fall Hawkwatch
- Identified, compiled, and posted hawk count data for LGNC and HMANA
- Educated general public and local school classes on hawks, hawk ID, and natural history

Ohio Breeding Bird Atlas II May-July 2009
210 Kottman Hall, 2021 Coffey Rd.
Columbus, OH 43210
Supervisor: Aaron Boone
Field Survey Technician
- Conducted point-count surveys for abundance and habitat data
- Conducted "blockbusting" surveys for breeding status data
- Was directed to confirm rare bird reports

University of North Carolina, Asheville 2008-2009
NCCCR, Reuter Center, CPO #5000, UNC Asheville, One University Heights
Asheville, NC 28804-8516
Supervisor: Mike McCreary
Taught classes and workshops through the Blue Ridge Naturalist Program
- Birding by Ear, Spring and Fall Songbird Migration, Hawk Watch, Bird Behavior, and other birding classes and workshops
- Plant identification, cultivation, and wildcrafting classes and workshops
- Numerous other nature-based workshops

Weeds, Wings, and Things 2006-2009
Self-employed naturalist and guide for hire
- Led interpretive walks and tours for private groups and individuals
- Presented lectures, workshops, and field trips for schools and home-school groups
- Conducted avian and botanical surveys for environmental consulting firms

Mountain Air Country Club May-October 2006
P.O. Box 1037, Burnsville, North Carolina 28714

Supervisor: Kat Dunham
Seasonal Naturalist
- Led interpretive nature walks and tours for residents
- Expanded inventories of flora and fauna
- Supervised and taught children in Junior Naturalist Camp
- Developed plan for Audubon Golf Course Certification

Other Employment

Laurel Springs Nursery — Spring 2009, Winter/Spring 2010
34 Country Rd, Hendersonville, NC 28792
Supervisor: Wes Burlingame
Assistant Nurseryman
- Worked with all aspects of plant husbandry from cultivation to monitoring and installation
- Assisted with retail sales and customer service (of predominantly native stock)
- Monitored, maintained, and repaired greenhouses, irrigation, and other infrastructure

French Broad Food Co-op — 2002-2006
90 Biltmore Ave., Asheville, North Carolina 28801
Supervisor: Mike McCreary
Store and Operations Manager
- Made major business decisions as part of Senior Management Team
- Supervised staff of 30 employees
- Managed three departments (Maintenance, Front-end, and IT)

Volunteer Experience

San Diego Audubon Society — Winter 2011 - present
- Leader/Docent for numerous field trips and workshops

San Dieguito Lagoon Monthly Bird Counts — Winter 2010 - present
- Assisted with monthly bird surveys and education

Warren Wilson College — Winter/Spring 2010, September 2011
701 Warren Wilson Rd, Swannanoa, NC 28778
- Teaching assistant for Field Ornithology and Field Ecology classes
- Guest Lecturer for Field Ornithology, Field Ecology, and Environmental Studies classes
- Field Trip Leader for Bird Crew

San Diego Bird Festival 2011 — March 2011
- Leader and Co-leader for Estuary Walks

Marine Science Institute, UC Santa Barbara — February 2011
Santa Barbara, CA 93106-6150
- Assisted with fish sampling of San Dieguito Lagoon Restoration Project

San Diego Natural History Museum — Fall 2010 - present
P. O. Box 121390, San Diego, CA 92112-1390
- Co-leader for Western Field Ornithologists 2010 Annual Conference field trip *Exploring the Santa Rosa Mountains Grinnell Transect*
- Field assistant for Grinnell and Swarth Centennial Resurvey of the Santa Rosa Mountains
- Prepared avian skeleton specimens, and assisted with other lab and office duties

Elisha Mitchell Audubon Society — 2009 - 2010
PO Box 18711, Asheville, North Carolina 28814
- Webmaster (Winter/Spring 2010)

- Co-leader for monthly bird walks
- Assisted with maintenance of Beaver Lake Bird Sanctuary through exotic-invasive plant identification, removal, and public education

Ned Smith Center/ Scott Weidensaul — Fall 2009
176 Water Company Road, Millersburg, PA 17061
- Assisted with mist-netting, banding, and radio tracking Saw-whet Owls

Brad Silfies – Independent songbird and raptor bander — Fall 2009
1525 Blue Mtn Dr., PO Box 242, Danielsvile, PA 18038
- Assisted with mist-netting and banding of songbirds and raptors

Mt. Pisgah Hawk Watch — 2008
Mills River Overlook, Blue Ridge Parkway milepost 404.5, North Carolina
Supervisor: Bill Sanderson
- Collected count data for fall migration

Western North Carolina Nature Center — 2004
75 Gashes Creek Road, Asheville, North Carolina 28805
Supervisor: Keith Mastin
- Assisted with maintenance of birds, mammals, and herps
- Provided interpretive education for visitors and off-site school trips

Education

B.S. Biology - Warren Wilson College, Asheville, North Carolina — 2003

URS

Ryan Randall

Wildlife Biologist

Overview

Mr. Randall has three years of ecology experience, focusing primarily on California wildlife including many species of raptors in San Diego County and shorebirds in central California. He led a habitat restoration effort for coastal cactus wren for the San Dieguito River Park and has worked with several sensitive shorebird species in central California National Wildlife Refuges. Ryan Randall has worked with such federal agencies as U.S. Fish and Wildlife Service, U.S. Forest Service, and U.S. Geological Survey. Mr. Randall has many hours of raptor nest monitoring with the U.S. Forest Service. Most recently, he has performed a variety of biological surveys in the Sonoran Desert including bird point counts and focused surveys for several sensitive species including: desert tortoise, burrowing owl, Mojave fringed-toed lizard, gila woodpecker, and elf owl.

Areas of Expertise

Wildlife Surveys
Biological Monitoring
Raptor Biology

Years of Experience

With URS: 1 Year

Education

BS, Biology with concentration in Ecology, California State University, San Marcos, 2011

Project Specific Experience

Rio Mesa Solar Electric Generating Facility, 2011-Present, CA:
Organized and led elf owl surveys. Performed fall and spring bird point count surveys, desert tortoise, burrowing owl, Mojave fringed-toed lizard, Couch's Spadefoot toad, and gila woodpecker surveys. Installed Anabat bat detection systems and performed data entry and statistical analysis for this approximately 11,000-acre project near Blythe, CA.

Sonoran West Solar Electric Generating System, 2011-Present, CA:
Organized and led elf owl surveys, performed spring bird point count surveys and desert tortoise surveys. Also participated in fall rare plant surveys for this approximately 5,500-acre project near Blythe, CA.

Camp Pendleton Utility Upgrades Pre-Construction Surveys 2011, CA:
Performed pre-construction surveys for this utility upgrades project documenting existing conditions and determining jurisdictional Waters of the U.S.

State Route 76 Biological Monitoring, 2011, CA:
Performed biological monitoring in relation to impacts to federally listed species (coastal California gnatcatcher, least bell's vireo, southwestern willow flycatcher, arroyo toad) and designated critical habitat for this highway improvement project located along the San Luis Rey River Valley in unincorporated San Diego County.

Dana Point Headlands Revegetation Monitoring and Coastal California Gnatcatcher Surveys, 2011, CA:
Performed biological monitoring as part of a yearly assessment of a 25 acre revegetation project. Plant line intercept transects were used to estimate percent cover in creation and enhancement areas. Participated in coastal California gnatcatcher surveys alongside a permitted biologist (over 10 positive contact hours).

Undergraduate Research Assistant, 2011, CA:
California State University San Marcos - Dr. Tracey Brown. Lizard husbandry and digestive ecology studies including feeding trials and analyses.

U.S. Forest Service - Cleveland National Forest, 2010, CA:
Biological Technician. Raptor surveys and nest monitoring for Golden Eagles, Peregrine Falcons, and Prairie Falcons. Banding and radio tracking Golden Eagles.

Wildlife Research Institute, Intern, 2010, CA:
Hawk Watch: aiding public in raptor identification and proper use of spotting scopes. Cleveland National Forest: habitat restoration for endangered coastal California Gnatcatcher and burrowing Owl artificial burrow monitoring.

U.S. Fish and Wildlife Service, Biology Intern, 2009, CA:
Conducted Western Snowy Plover surveys (over 100 positive contact hours), shorebird banding of Caspian Tern, invasive plant control at Farallon National Wildlife Refuge, Pacific Tree Frog surveys at Ellicott Slough National Wildlife Refuge, and endangered butterfly surveys (Lange's Metalmark butterfly) and endangered plant seed collection at Antioch Dunes National Wildlife Refuge.

U.S. Geological Survey, 2009, CA:
Biology Intern. Shorebird banding and nest monitoring of Forster's Terns as part of a study on the effects of Mercury contamination in the San Francisco Bay.

San Dieguito River Park, 2009, CA:
Intern. Organized and performed habitat restoration for the coastal cactus wren in North County San Diego. Trail and irrigation systems building and maintenance. Creation and assessment of firebreaks and park patrol. Aided in invasive plant removal.

Specialized Training

Introduction to Desert Tortoise Surveying, Monitoring, and Handling Techniques Workshop, 2011
Flat Tailed Horned Lizard Biomonitoring Training, 2012

Awards

Dean's List
Golden Key International Honor Society

Contact Information

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Ryan.randall@urs.com

BIOLOGICAL SURVEYS, MONITORING AND ENVIRONMENTAL INSPECTION

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Phone: (805) 715-3913 ● Fax: (805) 715-3492 ● email: info@dnlenvironmental.com

Sean Rowe, Senior Biologist

SUMMARY

Mr. Rowe nearly 20 years experience as a professional biologist conducting independent research in avian ecology and conservation as well as project related surveys and monitoring. He has worked with a wide variety of bird species and habitats, primarily in Southern California and Florida. This work included working with federal T&E and state listed species (Florida Scrub-Jay, Southwestern Willow Flycatcher and Western Yellow-billed Cuckoo), including conducting surveys, locating and monitoring territories and nesting attempts, trapping, netting and banding adults and nestlings, drawing blood and feather samples.

Mr. Rowe has conducted hundreds of surveys (transect, point count, spot-mapping, call broadcast) for target species and general bird communities in all seasons and has handled (mist-netted and banded) in excess of 1000 individual birds of numerous species including federal T&E and other special status species. This work includes running/assisting with Monitoring Avian Productivity and Survivorship (MAPS) stations and three seasons of intensive winter bird banding as well as targeted mist-netting and trapping on several different projects.

In addition to my professional experience, Mr. Rowe has extensive general birding experience as a life long birder (25+ years).

EDUCATION

B.S. Zoology, University of South Florida, Tampa, FL May- 1993

PERMITS

U.S. Fish and Wildlife Service, endangered species recovery permit, Southwestern Willow Flycatcher & Least Bell's Vireo

TRAINING

Willow Flycatcher Workshop and Training Session, Southern Sierra Research Station, Weldon, CA May 2010 & 2011.
Desert Tortoise Surveying, Monitoring, and Handling Techniques Workshop, Desert Tortoise Council, Nov 2010.

DESERT FIELD ORNITHOLOGY EXPERIENCE

- Mr. Rowe has birded throughout the desert Southwest including numerous trips throughout the Mojave Desert (1992-present).
- Conducted surveys for Inyo California Towhee in the Argus and Panamint Mountains, Inyo, Co., CA. Identified and recorded all other bird species observed (Spring 2011).
- Documented bird sightings in the Alvord Mountains area, San Bernardino Co., CA while working on vegetation transects for Desert Tortoise studies (Fall 2010).
- Conducted migrant bird surveys in the northern Mojave (Indian Wells Valley & Southern Owens Valley – Fall 2009).
- Conducted surveys for Burrowing Owls throughout the Imperial Valley, CA, and birded and documented sightings throughout the region (Spring 2007).
- Mr. Rowe co-founded a long-term Turkey Vulture and raptor migration study in southern Sierra Nevada/Northern Mojave (Kern Co., CA) and spent several hundred hours documenting migrating raptors and traveling throughout the region to locate additional migratory concentration corridors (Fall 1994-1998).
- Conducted general bird surveys and targeted surveys for Yellow-billed Cuckoos along the Bill Williams River, AZ (July 1994).

ADDITIONAL FIELD ORNITHOLOGY AND BIOLOGY EXPERIENCE

2009 – present
Independent Biological Consultant

May-Aug 2011 – Quad Knopf Inc.,
- Conducted surveys for Southwestern Willow Flycatchers on Cottonwood Creek & St. Johns River, Tulare Co., CA

Spring 2011 - Eremico Biological Services
- Assisted with plant data collection in the Desert Tortoise Natural Area and Mojave Ground Squirrel trapping, Kern Co., CA
- Conducted surveys for Inyo California Towhees in the Argus and Panamint Mountains, Inyo Co., CA

Fall 2010 - Eremico Biological Services
- Assisted with plant data collection in Desert Tortoise habitat in the Alvord Mountains, San Bernardino Co., CA

Fall 2009 - Eremico Biological Services
- Conducted migratory bird surveys for proposed wind energy development in southern Owens Valley and northern Indian Wells Valley, Inyo Co., CA

Nov 2008 – present
Land Steward, Audubon California, Kern River Preserve, Weldon, CA
- Responsible for duties relating to stewardship of the Kern River Preserve, including planning and implementing riparian and upland restoration projects, developing proposals to secure funding for Audubon programs, invasive weed control, supervising contractors and volunteers, general preserve and equipment maintenance.
- Conduct point count surveys for breeding birds, survey for Southwestern Willow Flycatchers, and assist with mist netting programs on the Kern River Preserve and Canebrake Ecological Reserve along the South Fork Kern River.

Nov 2007 – Nov 2008
Environmental Engineer, Comprehensive Health Services, Inc., Kennedy Space Center, FL

- Served as the principle Environmental Point of Contact for NASA Project Managers in support of Constellation and Construction of Facilities projects.
- Provided environmental consulting expertise to NASA Project Managers and coordination between Project Managers and NASA Environmental Program Branch from project conception through construction.
- Participated in design review and pre-work meetings and reviewed designs to ensure that environmental compliance issues were identified and addressed.
- Provided construction management support by reviewing construction bid packages, participating in project status meetings, tracking project environmental requirements, conducting field inspections, and providing logistical support and guidance to construction contractors.
- Performed industrial hygiene surveys and evaluations in support of launch and payload activities including, indoor air quality, ventilation, breathing air and confined spaces.

May – Aug 2007
Research Assistant, Southern Sierra Research Station, Weldon, CA

- Participated in studies of the reproductive ecology and conservation of the Southwestern Willow Flycatcher.
- Conducted surveys, determined breeding status, located and monitored nests, conducted behavioral observations, mist-netted and banded adult & young Southwestern Willow Flycatchers.
- Conducted point counts for breeding bird species, mist-netting and banding birds and vegetation sampling.

Mar – Apr 2007
Burrowing Owl Biologist, Wildlife Research Institute, Imperial Co. CA

- Conducted surveys for Burrowing Owls along Imperial Irrigation District right-of-ways throughout the Imperial Valley, California.

Nov 1998 – Sep 2005
Environmental Scientist II, St. Johns River Water Management District, Melbourne, FL

- Responsible for overseeing large-scale (1000 – 10,000 ac.) wetland restoration projects in the Upper St. Johns River Basin in east-central Florida including development and implementation of restoration projects.
- Conducted fieldwork for a variety of research projects involving wildlife and vegetation in wetland and upland habitats.
- Conducted bird surveys to assess project impacts on bird populations.
- Maintained wildlife occurrence & ArcView GIS wildfire databases for 150,000 acres of District owned properties.
- Provided logistical support for District staff including airboats, outboard boats, GPS, ATV and 4wd vehicles.

Jan 1998 – Nov 1998
Research Assistant III, Archbold Biological Station, Lake Placid, FL

- Monitored a population of federally threatened Florida Scrub-Jays on the Avon Park Air Force Range.
- Conducted surveys and behavioral observations, mapped breeding territories & located nesting attempts, mist-netted, trapped and banded adult and nestling scrub-jays. Assisted with field studies of Red-cockaded Woodpeckers & Florida Grasshopper Sparrows.
- Mapped spatial data using ArcView and Arc/Info GIS and provided GIS support and other assistance as needed for other projects.

May 1994 – December 1997
Research Associate, Kern River Research Center, Weldon, CA

- Conducted research on the effects of riparian restoration efforts on winter bird communities.
- Developed a long-term Turkey Vulture and raptor migration monitoring program in the southern Sierra Nevada. This included extensive field experience with identification of migrating raptors in the Southern Sierra Nevada.
- Conducted field word on the reproductive ecology and conservation of Southwestern Willow Flycatchers and Yellow-billed Cuckoos and the effects of riparian restoration on breeding bird communities.
- Prepared project reports, proposals, and manuscripts for publication.
- Conducted bird surveys and behavioral observations, located breeding pairs and nesting attempts, mist-netted, trapped and banded birds and conducted vegetation sampling.

January 1993 - April 1994
Wildlife Ecologist, Bionetics Corp., Kennedy Space Center, FL

- Designed and conducted studies on patterns in avian activity as related to the bird-aircraft strike hazard and bird control operations at Kennedy Space Center's Shuttle Landing Facility.
- Monitored and provided recommendations to NASA managers on the effects of landing facility operations on a population of threatened Florida Scrub-Jays and the effects of bird control efforts and proposed projects on wildlife habitat and sensitive species.
- Conducted bird surveys, behavioral observations, mist-netting, trapping and banding Florida Scrub Jays and other bird species and vegetation sampling.

June 1992 – August 1992
Research Assistant, Kern River Research Center, Weldon, CA

- Conducted fieldwork for studies of riparian breeding bird communities including long-term studies of the Southwestern Willow Flycatcher and Yellow-billed Cuckoo.
- Surveyed for, determined breeding status, located and monitored nests, netted and banded adult and young willow flycatchers and cuckoos and other bird species.

1987 - 1991
Field Volunteer, Florida Breeding Bird Atlas, Central Florida

- Surveyed breeding bird populations in a variety of habitats throughout west-central Florida

May - Jun 1990
Research Intern, Archbold Biological Station, Lake Placid, FL

- Participated in a long-term study on the behavioral ecology the federally threatened Florida Scrub-Jay.
- Conducted bird surveys and behavioral observations, located breeding pairs and nesting attempts, mapped breeding territories, mist-netted, trapped and banded adult and young scrub-jays and conducted vegetation sampling.

PUBLICATIONS

Ponzio, K.J., S.J. Miller, E. Underwood, **S. P. Rowe**, D.J. Voltolina, and T.D. Miller. 2006. Responses of a willow (*Salix caroliniana Michx*) community to roller-chopping. Natural Areas J. 26:53-60.

Rowe, S.P. 2003. Barn Swallow (*Hirundo rustica*), Gray Kingbird (*Tyrannus dominicensis*), Northern Rough-winged Swallow (*Stelgidopteryx serripennis*), Prairie Warbler (*Dendroica discolor*), and Prothonotary Warbler (*Protonotaria citrea*), in Florida Fish and Wildlife Conservation Commission. 2003, Jan 6. Florida's Breeding Bird Atlas: A collaborative study of Florida's birdlife. http://www.myfwc.com/bba/

Whitfield, M. J., K. Enos and **S. P. Rowe**. 1999. Is Brown-headed Cowbird trapping effective for managing populations of the endangered Southwestern Willow Flycatcher? Studies in Avian Biology No. 18:260-266.

Rowe, S.P. and D.S. Cooper. 1997. Confirmed nesting of an Indigo with a Lazuli Bunting in Kern County, California. Western Birds 28:225-227.

Larson, V.L., **S.P. Rowe**, and D.R. Breininger. 1997. Temporal, spatial, and diurnal patterns in avian activity at the Shuttle Landing Facility, John F. Kennedy Space Center, Florida, U.S.A. NASA Tech. Memo. 97-206644, 43 pp.

Rowe, S.P. and T. Gallion. 1996. Fall migration of Turkey Vultures and raptors through the southern Sierra Nevada, California. Western Birds 27:48-53.

Larson, V.L., **S.P. Rowe**, and D.R. Breininger. 1995. Astronauts and avifauna sharing space. Suppl. to the Bulletin of the Ecological Society of America 76(2):151 (80th Ann. ESA Mtg, Snowbird, Utah, 30 Jul-03 Aug).

Larson, V.L., **S.P. Rowe**, D.R. Breininger and R. Yosef. 1994. A review of falconry as a bird control technique with recommendations for use at the Shuttle Landing Facility, John F. Kennedy Space Center, Florida, USA. NASA Tech. Memo. 110142, 43 pp.

PROFESSIONAL SERVICE

Member, Board of Directors, Southern Sierra Research Station, 2009 to present
Treasurer, Florida Ornithological Society 1998 – 2001

References Available Upon Request

URS

Julie Stout

Biologist

Overview

Ms. Stout has over 6 years of experience conducting biological resource surveys and preparing reports. Ms. Stout conducts desert tortoise surveys, wetland delineations, wildlife surveys, and rare plant surveys. Her avian experience includes raptor nest monitoring and conducting surveys for breeding and migrating birds including western snowy plover, California least terns, western burrowing owls, and greater sage-grouse. Her mammalian experience includes acoustic and mist netting surveys for bats and radio tracking pygmy rabbits. Ms. Stout has conducted critical issues analyses for renewable energy projects throughout southern California and prepared environmental permitting documents including Biological Assessments, Environmental Assessments, Environmental Impact Reports, and Environmental Impact Statements.

Areas of Expertise

Wildlife Biology
Renewable Energy Projects

Years of Experience

With URS: 1 Year
With Other Firms: 6 Years

Education

BS, Biological, Science, California Polytechnic State University, 2005

Registration/Certification

N/A

Project Specific Experience

Federal

San Clemente Island Fuel Storage and Transfer Pipeline, CA. Conducted surveys for rare plants and migrating birds along a fuel pipeline route. Prepared a Biological Assessment and the biological resources section of an Environmental Assessment for the project.

Naval Hospital Camp Pendleton, CA. Prepared a worker education brochure to comply with a biological opinion for impacts to the coastal California gnatcatcher. Conducted construction monitoring to ensure compliance with the gnatcatcher biological opinion and ensure a water of the U.S. and vernal pool on site were not being impacted. Conducted breeding bird surveys prior to clearing and grading in vegetated areas to prevent violations of the Migratory Bird Treaty Act.

Naval Base Coronado and Point Loma BRAC EA, CA. Prepared the biological resources sections for Base Realignment and Closure Environmental Assessments. Resources of concern included California least terns, western snowy plovers, and Essential Fish Habitat.

Chocolate Mountain Aerial Gunnery Range. Prepared a Biological Opinion for impacts to desert tortoises due to military training activities at a training area in the northern portion of CMAGR. Participated in a cultural resource survey for this project.

BLM West Chocolate Mountain Geothermal Lease. Prepared the special status plants existing conditions section of the Programmatic Environmental Impact Statement.

Environmental Protection Agency Circuit Rider Program. Involved in learning program to improve water treatment systems at Indian Reservations in southern California.

Energy Projects

Meteorological Tower near Beatty, Nevada, CA. Installed acoustic bat monitoring and conducted ongoing maintenance and data gathering.

Meteorological Tower near Barstow, CA. Conducted surveys for rare plants and desert tortoises at two meteorological tower sites. Conducted construction monitoring for desert tortoise for the installation of two meteorological towers. Prepared the biological resources section of an Environmental Assessment.

Ruby Pipeline in Oregon, Nevada, and Utah. Conducted stream and wetland delineations, habitat and biotic soil crust mapping, breeding bird surveys, noxious weed survey and mapping, electrofishing and salvage for Lahontan cutthroat, raptor nest monitoring, and pygmy rabbit radio tracking.

Wind Project near Big Timber, Montana. Conducted a habitat assessment, acoustic bat monitoring, and completed acoustic bat data analysis and report.

Aliso Canyon Gas Storage Project, CA. Assisted in preparation of the biological resources section of the Environmental Impact Report.

Solar Energy Projects in Kern, Monterey, and San Luis Obispo counties, CA. Conducted a habitat assessment survey and prepared a survey report and critical issues analysis.

California Public Utilities Commission Ivyglen Transmission Line, CA. Biotechnical report third party review and assisted in preparation of the biological resources existing conditions EIS/EIR section.

Solar Sites in Los Angeles County near Lancaster, CA. Conducted habitat assessment and prepared biological critical issues analysis report.

Salmon River Wind Project. Conducted greater sage-grouse lek count surveys.

Recurrent Solar Projects, Kern County, CA. Conducted habitat assessment, wetland delineation, rare plant surveys, and burrowing owl surveys.

Mineral Mountains, Utah. Conducted noxious weed surveys.

Iberdrola Meteorological towers near Las Vegas, Nevada. Conducted desert tortoise presence/absence surveys.

Ohio Wind Farm. Preconstruction bat mist netting for Indiana bats.

Energia Sempra Juarez Transmission Line. Conducted habitat assessment survey and prepared survey report.

Solar Project near Tucson, AZ. Conducted native plant inventory survey.

Pattern Energy Ocotillo Express Wind Project. Conducted burrowing owl surveys for meteorological tower installation

Ormat, Orni 21 Geothermal Project, Imperial County, CA. Conducted burrowing owl surveys for geothermal well pads.

Kern River Gas Pipeline, CA. Conducted revegetation monitoring using linear sampling.

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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 *RIO MESA SOLAR ELECTRIC GENERATING FACILITY*

DOCKET NO. 11-AFC-04
PROOF OF SERVICE
(Revised 8/14/12)

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DECLARATION OF SERVICE

I, Nick Jacobs, declare that on August 27, 2012, I served and filed a copy of the attached document Applicant's Supplemental Response #9 to CEC Staff Data Request Set 1A (DR 45) dated August, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: **http://www.energy.ca.gov/sitingcases/riomesa/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 marked ***"hard copy required"** or where no e-mail address is provided.

AND

For filing with the Docket Unit at the Energy Commission:

_X_ by sending electronic copies to the e-mail 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-04
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.ca.gov

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
michael.levy@energy.ca.gov

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.

Original Signed By
Nick Jacobs

*indicates change