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AECOM

DOCKET
08-AFC-9
DATE AUG 27 2009
RECD AUG 27 2009

August 27, 2009

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-9
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

Re: City of Palmdale Hybrid Power Project – Docket No. 08-AFC-9

Dear Sir/Madam:

Pursuant to the California Code of Regulations, title 20, sections 1209, 1209.5, and 1210, enclosed herewith for filing please find **Palmdale Hybrid Power Project: Final Swainson's Hawk Nesting Survey Report**.

As shown in the attached letter, this Final Report was sent to the California Department of Fish and Game on August 11, 2009. A previous version on the Swainson's Hawk Nesting Survey Report was filed with the CEC on May 1, 2009 as a Supplemental Response to Data Request Set One. However, that Preliminary Report did not include the results of the final survey period in June-July. The enclosed report contains the final survey period; although another survey was completed, no changes were made to the findings of the earlier April 2009 Report.

Please note that the attached submittal was filed today via electronic service to all parties on the attached proof of service list. Thirteen copies will be sent via first class mail service to the dockets units, as well as one copy via regular mail to all parties on the attached proof of service list, except those indicating electronic service only.

Very Truly Yours.

Sara J. Head
Applicant's Consultant, Project Manager

Enclosure

AMEC Earth & Environmental, Inc.
3120 Chicago Avenue, Suite 110
Riverside, CA 92507
www.amec.com

August 11, 2009

Ms. Erinn Wilson
Staff Environmental Scientist
South Coast Region
18627 Brookhurst Street # 559
Fountain Valley, CA 92708
(714) 968-0953

RE: Palmdale Hybrid Power Project (PHPP) Swainson's Hawk Nesting Survey Report

Dear Ms. Wilson:

AMEC Earth & Environmental, Inc. conducted Swainson's hawk nesting surveys in March and April 2009. A Swainson's Hawk Nesting Survey Report documenting the absence of Swainson's hawks in the vicinity of PHPP was prepared in April 2009 and provided to you in May 2009. Additional surveys were conducted in June and July 2009 to ensure Swainson's hawks were not in the area. Please find the updated Swainson's Hawk Nesting Survey Report attached.

Please call me at (949) 233-2134 if you have any questions or need additional information.

Sincerely,

Matt Amalong
Wildlife Biologist
AMEC Earth & Environmental, Inc.

PALMDALE HYBRID POWER PROJECT

FINAL

SWAINSON'S HAWK NESTING SURVEY
LOS ANGELES COUNTY, CALIFORNIA

Prepared for:
City of Palmdale, California and Inland Energy
Under subcontract to
AECOM Environment
1220 Avenida Acaso
Camarillo, California 93012-8738
Office: (805) 388-3775
Fax: (805) 388-3577

Contact: Ms. Sara Head
sara.head@aecom.com

Prepared by:
AMEC Earth & Environmental, Inc.
3120 Chicago Avenue, Suite 110
Riverside, California 92507
Office: (951) 369-8060
Fax: (951) 369-8035

Principal Investigator:
Matt Amalong, Wildlife Biologist
matt.amalong@amec.com

August 2009
AMEC Project No. 6554000247

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1.0 INTRODUCTION

1.1 Purpose and Need

AMEC Earth & Environmental, Inc. (AMEC) was contracted by AECOM Environment (AECOM) to prepare a Biological Resources Technical Report (BRTR) for the development of the proposed Palmdale Hybrid Power Project (PHPP or Project), a nominal 570-megawatt (MW) hybrid combined-cycle/solar thermal electrical generation facility. Swainson's hawk (*Buteo swainsoni*), a species listed as threatened under the California Endangered Species Act (CESA), was identified in the BRTR as a species known from the Project region. In response to the California Energy Commission's Palmdale Hybrid Power Project (08-AFC-9) Data Request #17, dated December 10, 2008, AMEC conducted nesting surveys in 2009 for Swainson's hawks.

1.2 Project and Property Description

The Project is located in the City of Palmdale (City) and unincorporated areas of Los Angeles County, California (the power plant site and most linear facilities are within the City of Palmdale; portions of the transmission line route are within unincorporated areas), and includes a 333-acre power plant site, 50-acre construction laydown area, 35.6-mile transmission line, 7.4-mile reclaimed water pipeline, 8.7-mile natural gas supply pipeline, 1-mile sanitary wastewater pipeline, and 0.5-mile potable water pipeline (Figure 1). Throughout this report, the term "Project Site" refers to all Project elements in the aggregate (power plant site and all linear facilities); "linear facilities" refers to the various Project pipelines and the transmission line in the aggregate; all other references are to the specific Project component being addressed ("power plant site" or "plant site," "transmission line," "reclaimed water pipeline," "natural gas supply pipeline," "sanitary wastewater pipeline," and "potable water pipeline").

1.3 Swainson's Hawk Background

Swainson's hawks are an uncommon breeding resident and migrant in the Antelope Valley (Bloom 1980). They breed from late March to August, typically utilizing a solitary tree, bush, small grove, or line of trees along a riparian corridor. Typical nest trees include willows (*Salix* spp.), black locusts (*Robinia pseudoacacia*), box elders (*Acer negundo*), junipers (*Juniperus* spp.), oaks (*Quercus* spp.), aspens (*Populus* spp.), and cottonwoods (*Populus* spp.) (England *et al.* 1997). A small number of nests have been reported on human-built structures such as power poles or transmission towers (Olendorff *et al.* 1981). Swainson's hawks forage in grasslands, agricultural fields, or livestock pastures up to 18 miles from their nest (Estop 1989, Babcock 1993).

In southern California, the Swainson's hawk population may have declined by more than 90 percent during the 1900s (Bloom 1980). They were historically abundant, with a wide breeding range. As a result of loss of nesting habitat because of human development, they are now mostly limited to spring and fall transients in southern California.

2.0 SURVEY METHODOLOGY

The Swainson's Hawk Technical Advisory Committee (SHTAC) developed a set of survey recommendations - *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (SHTAC 2000; Appendix 2) - to maximize the potential for locating nesting Swainson's hawks, thus reducing the potential for nest failures as a result of project activities/disturbances. This survey protocol meets the California Department of Fish and Game (CDFG) recommendations for mitigation and protection of Swainson's hawks. Survey methodology for PHPP adhered to these survey protocols.

Surveys were conducted for a 1-mile radius around the power plant site and a 0.5-mile radius around the linear facilities. AMEC biologists Stephen Myers, Chet McGaugh, John Green, and Mike Wilcox, all knowledgeable in Swainson's hawk habitat, ecology, and field identification (see Appendix 1 for surveyor qualifications), conducted surveys from March 16 through July 29, 2009.

2.1 Records Search

Prior to the field surveys, a records search was conducted to identify the historical occurrences of Swainson's hawks in the Project vicinity. The CDFG California Natural Diversity Data Base (CNDDB) for Los Angeles County was queried (CDFG 2009). During Survey Periods III and V (Sections 2.4 and 2.6), these historic sites were visited to determine their current status. Personal communications with Scott Harris (CDFG Biologist) and Pete Bloom (Swainson's hawk expert) were also made to confirm the historic nest locations and determine other potential nesting sites.

2.2 Survey Period I (Jan 1 – Mar 20)

Survey Period I included two surveys on March 16 and 17, 2009, to determine potential nest locations. Most nests are easily observed from relatively long distances, giving the surveyor the opportunity to identify potential nest sites and locate and map nest sites of competing species, such as great horned owls (*Bubo virginianus*), red-tailed hawks (*Buteo jamaicensis*), and common ravens (*Corvus corax*).

2.3 Survey Period II (Mar 21 – Apr 5)

Survey Period II included three surveys on March 27 and 31, 2009, and April 2, 2009. Most Central Valley Swainson's hawks return by April 1, and immediately begin occupying their traditional nest territories. (The Central Valley is sufficiently close and has similar weather cycles as the Project Site, so Central Valley Swainson's hawks can serve as a behavioral analogy for those in the PHPP area.) For those few that do not return by April 1, there are often hawks ("floaters") that act as place-holders in traditional nest sites; these are birds that do not have mates, but temporarily attach themselves to traditional territories and/or one of the site's "owners." Floaters are usually displaced by the territories' owner(s) if the owner returns.

Most trees are leafless and are relatively transparent in March, so it is easy to observe old nests, staging birds, and competing species. The hawks are usually in their territories during the survey hours, commonly soaring and foraging in the mid-day hours. Swainson's hawks may often be observed involved in territorial and courtship displays. Potential nest sites identified by the observation of staging Swainson's hawks will usually be active territories during that season, although the pair may not successfully nest/reproduce that year.

2.4 Survey Period III (Apr 6 – Apr 20)

Survey Period III included three surveys on April 13, 14, and 15, 2009. Although trees are much less transparent at this time, activity at the nest site increases significantly. Both males and females are actively nest-building, visiting their selected site frequently. Territorial and courtship displays are increased, as is copulation. The birds tend to vocalize often, and nest locations are most easily identified. Also, potential nest sites, as determined during previous surveys, and historical nesting sites (CNDDB records) were visited to determine their current status.

2.5 Survey Period IV (Apr 21 – Jun 10)

No Swainson's hawk individuals or nests were observed during Survey Periods I, II, and III, so no surveys will be conducted during Survey Period IV. If Swainson's hawk nests are observed in future breeding/nesting seasons during Project construction, the following Survey Period IV methodology will be implemented to monitor the nests and young.

During this phase of nesting, the female Swainson's hawk is in brood position, very low in the nest, laying eggs, incubating, or protecting the newly hatched and vulnerable chicks; her head may or may not be visible. Nests are often well-hidden, built into heavily vegetated sections of trees or in clumps of mistletoe, making them all but invisible. Trees are usually not viewable from all angles, which may make nest observation impossible.

Following the male to the nest may be the only method to locate it, and the male will spend hours away from the nest foraging, soaring, and will generally avoid drawing attention to the

nest site. Even if the observer is fortunate enough to see a male returning with food for the female, if the female determines it is not safe she will not call the male in, and he will not approach the nest; this may happen if the observer, or others, are too close to the nest or if other threats, such as rival hawks, are apparent to the female or male.

2.6 Survey Period V (Jun 11 – Jul 30)

Survey Period V included three surveys on June 17, July 23 and 29, 2009 to determine if any Swainson's hawks were in the area, as well as to re-visit historical nest sites. After hatching, young hawks are active, visible, and relatively safe without parental protection. Both adults make numerous trips to the nest and are often soaring above, or perched near or on the nest tree. The location and construction of the nest may still limit visibility of the nest, young, and adults.

3.0 RESULTS

3.1 Records Search

CNDDB records did not indicate the historical presence of Swainson's hawks within the Project Site or survey area (1-mile radius around power plant site, 0.5-mile radius around linear facilities), but they have been observed in the Project vicinity (Figure 2). Five occurrence records in Los Angeles County from 1979 to 2005 range from 3 to 16 miles from the Project Site (CDFG 2009; Appendix 3). These sites were visited during Survey Periods III and V to determine their current status.

SWHA 1. 1979: one adult at nest approximately 3 miles from transmission line segment

2009: no nest observed.

SWHA 2. 1996-1999: two adults and two young at nest (1996) approximately 3 miles from transmission line segment 1; one adult at same nest (1999).

2009: nest observed, but no Swainson's hawks observed.

SWHA 3. 1999: one adult approximately 3.5 miles from transmission line segment 1; no nest observed.

2009: one great-horned owl nest observed near the record's coordinates.

SWHA 4. 1999: two adults at nest approximately 16 miles from power plant site.

2009: not visited.

SWHA 5. 2005: two adults at nest approximately 6.5 miles from transmission line segment 1.

2009: nest trees no longer present.

3.2 Survey Periods I, II, III, and V

No Swainson's hawks were observed during Survey Periods I, II, III, and V. Twenty (20) nest sites of competing species (red-tailed hawk, great-horned owl, common raven) were located and mapped (Table 1; Figure 2).

Table 1. Raptor/Corvid Nest Locations

ID	UTM NAD 83		Species	Location
	Easting	Northing		
1	398063	3834106	Red-tailed hawk	Joshua tree
2	408933	3819219	Unknown (inactive)	Steel transmission line tower
3	409544	3836005	Red-tailed hawk	Cottonwood tree
4	408707	3835945	Great horned owl	Steel transmission line tower
5	405493	3835898	Common raven	Elm tree
6	403423	3835915	Great horned owl	Pine tree
7	402080	3835771	Common raven	Joshua tree
8	398029	3833414	Common raven	Joshua tree
9	397364	3830219	Unknown (inactive)	Joshua tree
10	402899	3829092	Red-tailed hawk	Cottonwood tree
11	417010	3823839	Common raven	Joshua tree
12	406368	3835603	Unknown (inactive)	Joshua tree
13	403311	3835931	Unknown (inactive)	Elm tree
14	401838	3829448	Common raven	Wood transmission line pole
15	412713	3829378	Common raven	Joshua tree
16	410925	3835849	Unknown (inactive)	Cottonwood tree
17	398171	3833747	Common raven	Joshua tree
18	397690	3833500	Unknown (inactive)	Joshua tree
19	399738	3829510	Common raven	Wood transmission line pole
20	401034	3829473	Unknown (inactive)	Wood transmission line pole

4.0 DISCUSSION

No Swainson's hawks were observed in the Project vicinity (1-mile radius of power plant site and 0.5-mile radius of linear facilities) during the 2009 breeding season. Preferred nesting habitat is not found on the Project Site. Therefore, the Project is not anticipated to have any direct adverse impacts on nesting individuals.

Swainson's hawks are known to forage up to 18 miles from nest sites (Estop 1983, Babcock 1993). Historic records of Swainson's hawk nests are located within foraging distance of the Project, but currently these historic records are not active Swainson's hawk nests. There is the possibility that Swainson's hawks are nesting within 18 miles of the Project. If they are, it

is possible that potentially suitable foraging habitat could be impacted by the Project (5.08 acres of agricultural land), thereby indirectly impacting nesting individuals and potentially contributing to cumulative impacts in the Antelope Valley (*i.e.,* continued development, conversion of agricultural crops to unsuitable foraging habitat).

Nest sites of competing species that were located in 2009 could be used by Swainson's hawks in the future, so if PHPP construction activities occur during the 2010 breeding season or longer, additional surveys may be needed.

5.0 REFERENCES

AMEC. 2008. Palmdale Hybrid Power Project: Biological Resources Technical Report. Unpublished report dated July 2008 and submitted to the California Energy Commission as part of an Application for Certification.

Babcock, K.W. 1993. Home range and habitat analysis of Swainson's hawks in West Sacramento. Michael Brandman Associates report prepared for the Southport Property Owner's Group, City of West Sacramento, CA. 21 pp.

Bloom, P.H. 1980. The status of the Swainson's Hawk in California, 1979. Nongame Wildlife Invest, Job II-8.0. Wildlife Mgmt. Branch, Calif. Dept. of Fish Game, Sacramento, CA.

California Department of Fish and Game (CDFG). 1994. State Fish and Game Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California.

California Department of Fish and Game (CDFG). 2009. California Natural Diversity Data Base, Rarefind 3, Version 3.1.0.

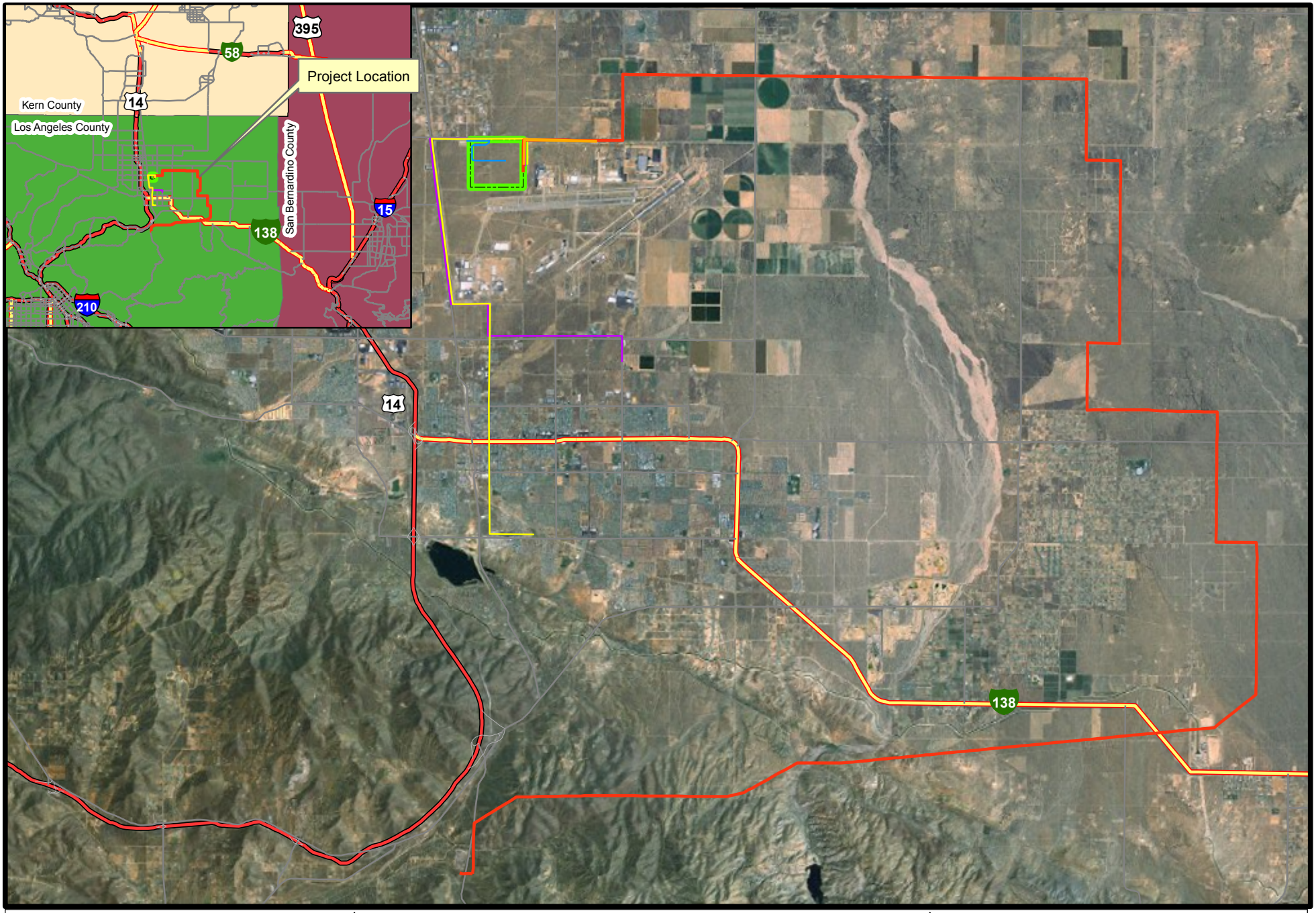
England, A. Sidney, Marc J. Bechard and C. Stuart Houston. 1997. Swainson's Hawk (*Buteo swainsoni*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/265

Estep, J.A. 1989. Biology, movements, and habitat relationships of the Swainson's Hawk in the Central Valley of California, 1986-87. Calif. Dept. of Fish and Game, Nongame Bird and Mammal Section Report, 53 pp.

Olendorff, R. R., A. D. Miller, and R. N. Lehman. 1981. Suggested practices for raptor protection on power lines: the state of the art in 1981. Raptor Res. Rep. no. 4.

Swainson's Hawk Technical Advisory Committee. 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley.

FIGURES



Legend

- Power Plant Site Survey Area
- Transmission Line
- Potable Water
- Sanitary Wastewater Pipeline
- Natural Gas Pipeline
- Reclaimed Water Pipeline

Palmdale Hybrid Power Project

Figure 1

Vicinity & Location

0 1 2 3 4 Miles

1:125,000

Map Notes:

Projection: NAD 83, Zone 11
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Date: 04/10/09

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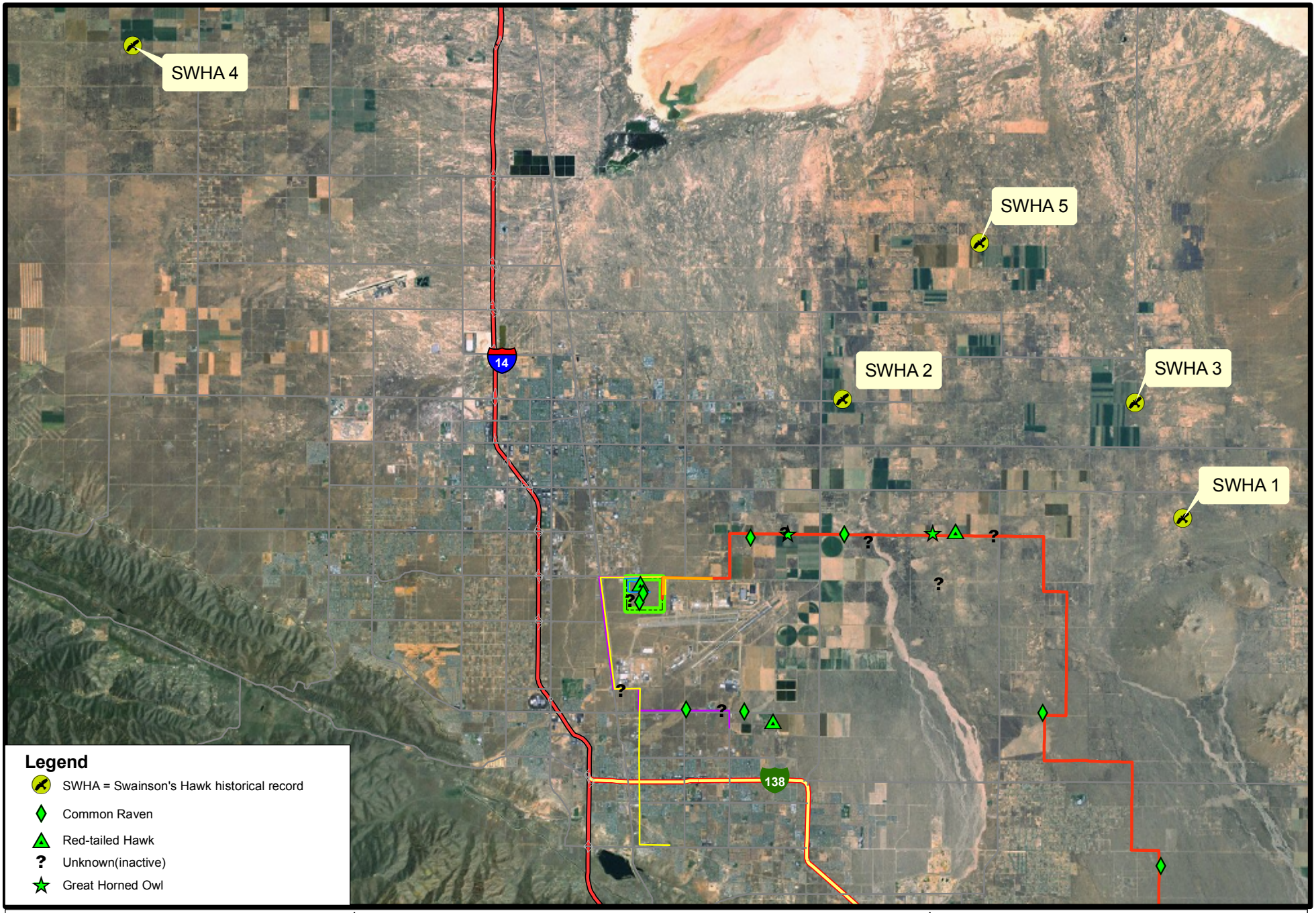

Power Plant Site Survey Area
Transmission Line
Potable Water
Sanitary Wastewater Pipeline
Natural Gas Pipeline
Reclaimed Water Pipeline

Palmdale Hybrid Power Project

Figure 2

Raptor Nests & Swainson's Hawk Historical Records

0 2 4 Miles

1:185,116

Map Notes:

Projection: NAD 83, Zone 11
Path:S:\active projects\Palmdale Power Plant Bio 6554000247\graphics\mxd\2009
Date: 04/16/09

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APPENDIX 1

Qualifications of Individuals Conducting Studies

John F. Green, B.Sc.

Wildlife Biologist

Professional summary

Mr. Green has a broad background in field biology, including experience with birds, mammals, reptiles, amphibians, insects, and plants. In Southern California he has extensive experience in Riverside, San Bernardino, Los Angeles and Imperial Counties. He has also worked on numerous projects in Kern, Mono, Orange, San Diego, and Santa Barbara Counties as well as in Northern California, Nevada, and beyond. Professional experience includes: general biological surveys for wildlife and plants; focused sensitive, threatened, and endangered wildlife and plant species surveys; project management; monitoring for sensitive, threatened, and endangered species; sensitive species exclusion and relocation; small mammal trapping studies, vegetation mapping; revegetation and revegetation monitoring; seed collecting; and the preparation of documents and reports related to those projects.

Professional qualifications

Permits

Independent Investigator for California Gnatcatcher on Federal Threatened/Endangered Species Permit, # TE-054011-2 (surveys and nest monitoring)

Independent Investigator for Least Bell's Vireo on Federal Threatened/Endangered Species Permit, #TE-054011-2 (nest monitoring)

Independent Investigator for Southwestern Willow Flycatcher on Federal Threatened/ Endangered Species Permit, # TE-054011-2 (surveys and nest monitoring)

Independent Investigator for the Quino Checkerspot Butterfly on Federal Threatened/ Endangered Species Permit #TE-054011-2

Independent Investigator for the Yuma Clapper Rail on Federal Threatened/ Endangered Species Permit #TE-054011-2

Supervised Investigator for California Red-legged Frog on Federal Threatened/ Endangered Species Permit # TE785148-10

Supervised Investigator for Stephens' Kangaroo Rat on Federal Threatened/Endangered Species Permits #TE804203-7 and TE785148-10

Supervised Investigator on Federal Threatened/Endangered Species Permit for San Bernardino Kangaroo Rat, #TE804203-7

Supervised Investigator for Pacific Pocket Mouse on Federal Threatened/Endangered Species Permit # TE785148-10

Subpermittee on Federal Bird Marking (Bird Banding) and Salvage Permit #23035-D

Field Investigator on Memorandum of Understanding (MOU) from the California Department of Fish and Game for California Black Rail, Yuma Clapper Rail, Western Yellow-billed Cuckoo, Elf Owl, Gila Woodpecker, Willow Flycatcher, Least Bell's Vireo, California Gnatcatcher, Palm Springs Pocket Mouse, Los Angeles Pocket Mouse, Stephen's Kangaroo Rat, and San Bernardino Kangaroo Rat

Field Assistant on Memorandum of Understanding (MOU) from the California Department of Fish and Game for Mohave Ground Squirrel and Mojave River Vole

Scientific Collecting Permit #SC-005605 California Department of Fish and Game

Rare, Threatened, and Endangered Plant Voucher Collecting Permit #08066 California Department of Fish and Game

Certifications

Wetland Training Institute Arid West Supplement 2007

San Diego Vernal Pool Flora and Habitat Restoration 2007

Wetland Delineator 2005

The Desert Tortoise Council Survey Workshop 2002

Education

BS, Entomology University of California, Riverside, CA, 1991

AA, Biology, Fullerton College, Fullerton, CA, 1989

Additional training

Yellow-billed Cuckoo Workshop and Training, 2007

CEQA Basics Workshop, 2006

Southwestern Willow Flycatcher Survey Training Workshop, 2002

Identification of California Branchiopod Crustaceans Workshop (Fairy Shrimp and Tadpole Shrimp) 2002

California Native Plants Seed Collecting and Storage, Rancho Santa Ana Botanic Garden, Claremont 2002

Plant Identification and Ecology, University of California Extension, Riverside, 2002

Rapid Assessment Method Vegetation Training Workshop, California Native Plant Society, San Diego 2002

South Coast Missing Linkages Workshop, University of Redlands, Redlands 2002

Survey of the Major Plant Families of Southern California, Rancho Santa Ana Botanic Garden, Claremont 2002

Introduction to Bird Banding, University of California Extension, Riverside, 2001

Field Study of Birds: Spring, University of California Extension, Riverside, 2001

Field Study of Birds: Winter, University of California Extension, Riverside, 2001

Field Study of Birds: Fall, University of California Extension, Riverside, 2000

Birding by Ear-An Intermediate/Advanced Birding Skills Workshop, Sea and Sage Audubon Society, 1997

Birding With Your Ears Workshop, Sea and Sage Audubon Society, 1996

Birding Workshop, Sea and Sage Audubon Society, 1992

Memberships

American Birding Association

California Native Plant Society

Desert Tortoise Council

Western Field Ornithologists

Xerces Society (invertebrate biodiversity)

Language

English

Summary of core skills

Mr. Green has had a lifelong interest in the natural history of Southern California. This has given him a broad background in field biology, including extensive experience with birds, mammals, reptiles, amphibians, insects, and plants as a matter of personal interest, as a volunteer, and professionally. He has conducted biological studies, surveys, monitoring, and other related activities on sites in Imperial, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Santa Barbara Counties in Southern California. These have included: general biological surveys for wildlife and plants; point counts, vegetation mapping; revegetation and revegetation monitoring; seed collecting; focused sensitive, threatened, and endangered wildlife and plant species surveys; monitoring for sensitive, threatened, and endangered species; sensitive species exclusion and relocation; small mammal trapping studies; and the preparation of documents and reports related to those projects.

Mr. Green is experienced in visually and aurally identifying birds. Over the past twenty years he has spent thousands of hours in the field, both personally and professionally, studying birds in California. He has hundreds more hours of bird observations over most of the United States and in Canada, Costa Rica, Great Britain, Kenya, Madagascar, and Mexico. He has observed, surveyed for, and monitored for many sensitive bird species including the Coastal California Gnatcatcher, Least Bell's Vireo, and Southwestern Willow Flycatcher, Yuma Clapper Rail. He is the Riverside County editor for the journal North American Birds, which reports quarterly on trends in bird populations and occurrences. He has participated in the National Audubon Society's Christmas Bird Count program for many years. For seven years he was the compiler of the Southeastern California Rare Bird Alert. Mr. Green also leads birding field trips for the Audubon Society. He has conducted personal and historical research to compile and maintain a checklist of the birds and other vertebrates of the Box Springs Mountains in western Riverside County.

Employment history

Biologist, AMEC Earth and Environmental 2001-present

President, John F. Green, Incorporated 1979-2001

Detection of Tephritid fruit flies, Supervisor, Department of Agriculture 1991-1996

Assistant (Entomology), University of California, 1991

Presentations / publications

North American Birds, Riverside County editor, Fall 2002-Present.

Birds of the Season, 1998-2005, published quarterly in the Western Meadowlark.

Birds and other Vertebrates of the Box Springs Mountains and Vicinity 1998, updated periodically for the Riverside County Parks Department's Box Springs Reserve.

Ornithological Considerations for Habitat Connectivity. Presentation at the South Coast Missing Linkages Workshop, University of Redlands, Redlands 2002.

Green, John F., David H. Headrick, and Richard D. Goeden 1993. Life History and Description of Immature Stages of Procecidochares stonei Blanc & Foote on Viguiera spp. in Southern California (Diptera: Tephritidae). Pan-Pacific Entomologist 69(1): 18-32.

Representative projects

Least Bell's Vireo Monitoring/Southwestern Willow Flycatcher Monitoring Studies, Santa Ana River, Riverside County. Mr. Green spent the 2002-2008 breeding seasons monitoring a population of the threatened Least Bell's Vireo. This was part of a 13 year monitoring effort for the Riverside County Transportation and Land Management Agency, associated with sand mining around the River Road bridge. This study also included presence/absence surveys for the Southwestern Willow Flycatcher. Data collected has added to evidence of the vireos' positive response to recovery efforts, and of the failure of the flycatcher to benefit from same. Starting in September 2008, a new bridge is being constructed at this site, and Green is project manager of the construction clearance and monitoring team for that project.

Biological Resources Assessments, Southern California Edison, Southern California. Biologist and project manager for numerous Edison projects, ranging from a 73 mile transmission line to a single pole. Project sites primarily in the western county, but have included sites as far east as Blythe. Duties have included project management, biological resources assessments, pre-construction surveys, construction monitoring, preparation of reports and documents, and focused presence-absence surveys for rare plants and various sensitive animal species, including Burrowing Owl, California Spotted Owl, Least Bell's Vireo, Southwestern Willow Flycatcher, and Coastal California Gnatcatcher.

On-Call Biological Services, Caltrans District 11, San Diego and Imperial Counties, CA. Served as one of the biologists on the AMEC team for this on-call, multiple-task biological resources services contract in support of proposed Caltrans projects, including new roadway/highway development, improvements to existing rights-of-way, and other related transportation actions.

Edwards Air Force Base Road Closure Project, San Bernardino, Los Angeles, and Kern Counties, CA. Helped identify unnecessary roads and roads being used for illegal access around the perimeter of the base. Closed roads through a combination of revegetation and vertical mulching (placement of plant and other natural materials).

Banning General Plan, City of Banning, CA. Conducted field visits and helped write the biological section of the new general plan for the City of Banning. This section will guide the city in decisions regarding biological issues associated with changes in land use. During field visits, confirmed records of several sensitive animal species and discovered several unrecorded ones.

Anza Narrows Point Counts, City of Riverside, CA. Points were established in 1996 along the Santa Ana River to monitor yearly progress of bird usage of restored habitat along the Santa Ana River for the Riverside County Regional Parks and Open Space District. Green has been part of the AMEC team conducting these point counts since 2002. Resulting data has documented increased riparian bird usage of the restored habitat over time, particularly by the Least Bell's Vireo.

CFD 88-8 Specific Plan and EIR, Mead Valley, CA. As project manager, conducted and directed a biological assessment and focused Western Burrowing Owl surveys. Wrote report and made recommendations on sensitive species issues on site, including active Burrowing Owl territories.

Bautista Canyon Road Project, Anza, CA. Part of AMEC team. Conducted focused surveys for the Southwestern Willow Flycatcher, Least Bell's Vireo, and Quino Checkerspot Butterfly. Detected willow flycatcher and quino during surveys.

Coachella Canal Lining Project, Coachella Valley Water District, Southern California. Part of AMEC team, that conducted various field studies in Riverside and Imperial Counties for this project. These included identifying all mature trees along the canal right-of-way; seed collection; pre-construction clearance surveys; document preparation, providing on-site biological monitoring to the construction team, and focused presence-absence surveys for sensitive species including the Desert Tortoise, Yuma Clapper Rail, California Black Rail, and Western Burrowing Owl.

Wildlife and Botanical Studies, Proposed San Elijo Lagoon Visitor Center, County of San Diego, Public Works Department, Encinitas, San Diego County, CA. Conducted ornithological assessment as part of AMEC team which produced a biological technical report and constraints analysis of a proposed visitor center adjacent to a coastal lagoon. Biological Resources addressed in the surveys and analysis included Coastal California Gnatcatcher, Least Bell's Vireo, light-footed clapper rail, Belding's Savannah Sparrow, and numerous other salt marsh, riparian, and coastal sage scrub related species.

Riverside County Breeding Bird Atlas. The Breeding Bird Atlas project was an attempt to create a baseline on the status of breeding birds in Riverside County. During this effort, Mr. Green surveyed an area in Riverside County that included much of the Box Springs Mountains and northern Moreno Valley.

Partners in Flight/Birds in the Balance Avian Monitoring. Partners in Flight is a cooperative effort between dozens of government, industry, and environmental entities united to promote bird conservation. One aspect of this effort is the establishment of several regularly scheduled point counts per year on a multi-year basis in numerous locations. The data collected is providing baseline data on bird populations over time. Mr. Green spent several years conducting point counts in Orange County, California for this effort.

Chet McGaugh

Wildlife Biologist/Ornithologist

Professional summary

Mr. McGaugh has studied wildlife in California for 24 years. He specializes in ornithological studies including focused surveys for endangered and sensitive species, population monitoring, breeding and wintering bird surveys, raptor censuses, and life history studies. He conducts inventories of flora and fauna, writes biological assessments, and performs wetlands delineations.

Mr. McGaugh has extensive experience in the visual and auditory identification of birds in North America, and has studied birds in Central and South America, the Caribbean region, Australia, and Europe. Mr. McGaugh is authorized by the United States Fish and Wildlife Service to perform focused surveys for the Federally-designated endangered Least Bell's Vireo and Southwestern Willow Flycatcher, and the threatened California Gnatcatcher. In conjunction with the United States Fish and Wildlife Service and the San Bernardino County Museum, he participated in a four-year life history study of the California Gnatcatcher in western Riverside County from 1992-1995. Since 1996, he has monitored a population of Least Bell's Vireos at the River Road Bridge site in western Riverside County.

Between 1988-1993, Mr. McGaugh collected data as part of an ongoing population monitoring program on the Cleveland, San Bernardino, Angeles, and Los Padres national forests. This effort required point counts at more than 200 locations in the national forests.

In 1997, Mr. McGaugh conducted a comprehensive survey for neotropical migrant birds in Pleasant Canyon in the Panamint Mountains of eastern California.

Mr. McGaugh conducts a yearly breeding bird survey in Joshua Tree National Park for the Department of the Interior, and is the compiler of the Salton Sea-North Christmas Bird Count for the National Audubon Society.

As a permitted bird-bander, Mr. McGaugh has participated in bird-banding projects (including color-banding) for the United States Fish and Wildlife Service, the University of California, Riverside, and the Department of Defense (United States Air Force).

Mr. McGaugh has conducted wetlands delineations for the Riverside County Flood Control and Water Conservation District, the Riverside County Transportation and Land Management Agency, International Technologies Corporation, and VHBC Incorporated.

Mr. McGaugh has served as principal investigator or field assistant for many small mammal trapping surveys.

Mr. McGaugh conducts focused surveys for sensitive reptiles and amphibians, including Desert Tortoise, Arroyo Toad, and Mountain Yellow-legged Frog. He has observed and photographed most of the herpetofauna of Southern California.

Mr. McGaugh surveys for sensitive butterflies, including the Quino Checkerspot, and participates in "Fourth of July Butterfly Counts," sponsored by the North American Butterfly Association. He is a co-compiler of a count in the San Bernardino Mountains.

Mr. McGaugh wrote species accounts for four bird species (American White Pelican, Mountain Plover, Long-billed Curlew, Bank Swallow) for the Bureau of Land Management's West Mojave Plan.

Mr. McGaugh teaches field ornithology classes for the University of California Extension program.

Professional qualifications

California Department of Fish and Game Scientific Collectors Permit #0028

Federal Bird Marking and Salvage Permit #21005-H

Federal Endangered Species Permit for California Gnatcatcher, #TE836517-2

Federal Endangered Species Permit for Southwestern Willow Flycatcher, #TE836517-2

Federal Endangered Species Permit for Least Bell's Vireo, #TE-836517-2

Federal Endangered Species Permit for Quino Checkerspot Butterfly, #TE836517-2

Certificate of Training: Wetland Delineation in Southern California

Education

University Of California, Riverside, B.A. 1973

California State University, San Bernardino, Standard Secondary Teaching Credential, 1975

Location

Riverside, California, USA

Seminars, Workshops, and Symposia

Desert Tortoise Council Symposium, 1990.

U. S. Forest Service Spotted Owl Symposium, Pomona, CA, 1990.

The Wildlife Society California Gnatcatcher Workshop, 1991.

Wetland Delineation Training Workshop, 1991.

California Department of Fish and Game Mojave Ground Squirrel Habitat Techniques Training, Barstow, CA, 1991.

Desert Tortoise Council Techniques Workshop, Ridgecrest, CA, 1993.

"*Empidonax traillii extimus* in California: The Willow Flycatcher Workshop," San Diego Museum of Natural History, 1995.

"The California Gnatcatcher Symposium," University of California at Riverside, 1995.

"Effects of Noise on Passerines," U.S. Navy & Marine Corps Symposium, Hubbs-Sea World Research Institute, 1997.

Warbler Workshop: J.L. Dunn and K.L. Garrett, Glendale, CA, 1997.

"Quino Checkerspot Workshop," Riverside, California, 1998.

"Symposium on Quino Checkerspot Butterfly," Chula Vista, California, 1999.

"Planning for Biodiversity: Bringing Research and Management Together," seminar sponsored by the U.S. Forest Service and the USGS Western Ecological Research Center, 2000.

"Arroyo Toad Symposium (*Bufo californicus*): Natural History and Management Practices," Marine Corps Air Station, Camp Pendleton, California, 2000.

"Ecology and Conservation of the Willow Flycatcher," Arizona State University, Tempe, AZ, 2000.

Memberships

American Ornithologists' Union

Association of Field Ornithologists

Cooper Ornithological Society

Association of Field Ornithologists

Western Field Ornithologists

American Birding Association

Wilson Ornithological Society

Employment history

Wildlife Biologist/Ornithologist, AMEC Earth and Environmental, Inc. November 2000-present. Conducts inventories of fauna and flora, performs literature reviews and research, prepares biological assessment reports and wetland delineations. Specializes in ornithological field studies including breeding bird studies, raptor and shorebird censuses, neotropical migrant surveys, and banding studies. Authorized by U.S. Fish and Wildlife Service to conduct focused surveys for the following Endangered or Threatened species: California Gnatcatcher, Southwestern Willow Flycatcher, Least Bell's Vireo, Quino Checkerspot Butterfly.

Field Experience with the California Gnatcatcher. Since 1988, Mr. McGaugh has performed focused surveys at many sites in western Riverside and San Bernardino counties. In 1990, he conducted focused surveys for California Gnatcatchers for Metropolitan Water District Eastside Reservoir Study. From 1992 to 1995 assisted in a U.S. Fish and Wildlife Service life history study of the California Gnatcatcher in western Riverside County. This study involved nest searches and monitoring, color-banding, and the collection of data for habitat characteristics analysis.

Field Experience with the Least Bell's Vireo and Southwestern Willow Flycatcher. Has performed numerous focused surveys for Least Bell's Vireos and/or Southwestern Willow Flycatchers in Riverside, San Bernardino, and Orange counties, including the monitoring of a population near the River Road Bridge project site along the Santa Ana River near Corona, 1996-2000. In 1996 assisted with a study of nesting Least Bell's Vireo behavior in response to model airplane noise at Hidden Valley Wildlife Area in Riverside.

Field Experience with the Quino Checkerspot Butterfly. In 1998 - 2000 performed focused surveys at several sites in Riverside and San Diego counties.

Wildlife Biologist/Ornithologist, Ogden Environmental and Energy Services, March 2000 - November 2000.

Chet McGaugh

Wildlife Biologist/Ornithologist, Tierra Madre Consultants, Inc., 1988 - March 2000.

Stephen J. Myers

Wildlife Biologist/Ornithologist

Professional summary

Mr. Myers has extensive experience in the visual and auditory field identification of birds. He has spent thousands of hours birding in California, Arizona, Texas, the Pacific Northwest, Costa Rica and Mexico since 1979. Since 1988 he has possessed a federal bird banding permit and has been involved in mist netting and other capture techniques. He is authorized by the USFWS to perform focused surveys for the federally threatened California Gnatcatcher, and recently conducted research on the life history of the California Gnatcatcher, color banding this species in western Riverside County. Mr. Myers is also permitted for the Southwestern Willow Flycatcher and Least Bell's Vireo. He has performed research for the University of California (Riverside), U.S. Forest Service, Los Angeles County Museum of Natural History, and the San Bernardino County Museum. He conducts an annual censusing route for the U.S. Fish and Wildlife Service Breeding Bird Survey and has participated in the Los Angeles, San Bernardino and Riverside County Breeding Bird Atlases since 1987. He has participated in the National Audubon Society Christmas Bird Count for 21 years, serving as compiler for two count locations. Mr. Myers is currently conducting an independent research project on Lark Sparrows (*Chondestes grammacus*) using color marking of birds, and is performing on-going avian monitoring of the Mojave River for a comprehensive paper on the status and distribution of its avifauna. Additional research projects have been published in *Western Birds, Southwest Naturalist* and *Herpetological Review*.

Mr. Myers possesses a Section 10(a) Permit and a Memorandum of Understanding with California Department of Fish and Game to perform focused surveys and trapping for the Stephens' Kangaroo Rat and San Bernardino Kangaroo Rat. He has performed nearly 10,000 trap-nights during small mammal trapping surveys in southern California. He also performs surveys for the Desert Tortoise, Arroyo Toad, Red-legged Frog, Mountain Yellow-legged Frog, Coachella Valley Fringe-toed Lizard, and other herpetofauna.

Mr. Myers also surveys for sensitive butterfly species, and participates in "Fourth of July Butterfly Counts," sponsored by the North American Butterfly Association. He is a co-compiler of a count in the San Bernardino Mountains.

Mr. Myers performs rare plant surveys, including San Bernardino Mountains. "limestone endemics," Santa Ana River Woolly-star, and Slender-horned Spineflower. He prepares restoration and revegetation plans, including a revegetation plan for the 70-mile long Morongo Basin Pipeline Project.

Mr. Myers is a part-time instructor at Victor Valley College in Victorville, California and at the University of California, Riverside Extension, where he teaches ornithology and bird banding classes, respectively.

Professional qualifications

California Department of Fish and Game Scientific Collectors Permit #801040-05

Federal Bird Marking and Salvage Permit #23035

Federal Endangered Species Permit ("10a") for California Gnatcatcher, #TE804203-4

Federal Endangered Species Permit for Southwestern Willow Flycatcher, #TE804203-4

Federal Endangered Species Permit for Least Bell's Vireo, #TE-804203-4

Federal Endangered Species Permit for Stephens' Kangaroo Rat, #TE804203-4

Federal Endangered Species Permit for San Bernardino Kangaroo Rat, #TE804203-4

Federal Endangered Species Permit for Quino Checkerspot Butterfly, #TE804203-4

California Department of Fish and Game MOU for Stephens' Kangaroo Rat, Mohave Ground Squirrel, Least Bell's Vireo, California Gnatcatcher, and Southwestern Willow Flycatcher

Education

Victor Valley College, Victorville, CA (1986-1987)

Mount San Jacinto College, San Jacinto, CA (1974)

California State University, Long Beach, CA (1973)

Location

Riverside, California, USA

Seminars, Workshops, and Symposia

"Seminars in Ornithology," Laboratory of Ornithology, Cornell University, 1983.

"California Gnatcatcher Workshop," The Wildlife Society, 1991.

"*Empidonax traillii extimus* in California: The Willow Flycatcher Workshop," San Diego Museum of Natural History, 1995.

"The California Gnatcatcher Symposium," University of California at Riverside, 1995.

"Effects of Noise on Passerines," U.S. Navy & Marine Corps Symposium, Hubbs-Sea World Research Institute, 1997.

"Quino Checkerspot Workshop," Riverside, California, 1998.

"Symposium on Quino Checkerspot Butterfly," Chula Vista, California, 1999.

"Planning for Biodiversity: Bringing Research and Management Together," seminar sponsored by the U.S. Forest Service and the USGS Western Ecological Research Center, 2000.

"Arroyo Toad Symposium (*Bufo californicus*): Natural History and Management Practices," Marine Corps Air Station, Camp Pendleton, California, 2000.

"Ecology and Conservation of the Willow Flycatcher," Arizona State University, Tempe, AZ, 2000.

Memberships

American Ornithologists' Union

Cooper Ornithological Society

Association of Field Ornithologists

Western Field Ornithologists

Western Bird Banding Association

American Birding Association

California Native Plant Society

Employment history

Wildlife Biologist/Ornithologist, AMEC Earth and Environmental, Inc. November 2000-present. Conducts field inventories of fauna and flora, performs literature reviews, prepares biological assessment reports emphasizing impact analysis, mitigation measures, and mitigation monitoring. Specializes in ornithological field studies including breeding bird and raptor surveys, and banding studies. Authorized by U.S. Fish and Wildlife Service to conduct focused surveys for the following Endangered or Threatened species: California Gnatcatcher, Southwestern Willow Flycatcher, Quino Checkerspot Butterfly, Stephens' Kangaroo Rat, and San Bernardino Kangaroo Rat.

Field Experience with the California Gnatcatcher. Since 1988, has performed focused surveys at many sites in western Riverside and San Bernardino counties. In 1990, conducted focused surveys for California Gnatcatchers for Metropolitan Water District Eastside Reservoir Study. From 1992 to 1995 assisted in a U.S. Fish and Wildlife Service life history study of the California Gnatcatcher in western Riverside County.

Field Experience with the Least Bell's Vireo and Southwestern Willow Flycatcher. Has performed numerous focused surveys for Least Bell's Vireos and/or Southwestern Willow Flycatchers in Riverside, San Bernardino, and Orange counties, including the River Road Bridge project along the Santa Ana River near Corona, 1996-2002. In 1996 assisted with a study of nesting Least Bell's Vireo behavior in response to model airplane noise at Hidden Valley Wildlife Area in Riverside. In 1999 conducted surveys for Southwestern Willow Flycatcher in several drainages of the Angeles National Forest.

Field Experience with the Quino Checkerspot Butterfly. In 1998 - 2001 performed focused surveys at several sites in Riverside and San Diego counties.

Field Experience with Stephens' and San Bernardino Kangaroo Rats. Has conducted trapping surveys for the Stephens' Kangaroo Rat in western Riverside County Since 1995, and for the San Bernardino Kangaroo Rat in western San Bernardino County since 1998.

Field Experience with the Desert Tortoise. Specialized desert tortoise experience under the authorization of Federal Section 7 Consultation and/or 10(a) permits, and state 2081 permits include: tortoise handling/relocation, burrow excavation and artificial burrow construction for Edwards AFB Leuhman Ridge Rocket Test Site (9/95), Morongo Basin Pipeline (6/93-1/94), and Sempra Line 6905, Kramer-Adelanto Natural Gas PipelIne (10/01-5/02). Additional USFWS and CDFG desert tortoise handling authorization for Caltrans Highway 395 Passing Lane Construction and widening project for Highway 395 (12/98). Performed focused desert tortoise presence/absence surveys for ten projects between 1988 and 1998.

Wildlife Biologist/Ornithologist, Ogden Environmental and Energy Services, March 2000-November 2000.

Wildlife Biologist/Ornithologist, Tierra Madre Consultants, Inc., 1987-March 2000.

Ornithological Field Researcher, University of California, Riverside, Cooperative Extension.

Biological Technician, San Bernardino National Forest, United States Forest Service, 1987-88.

Field Biologist, Los Angeles County Museum of Natural History, 1986-87.

Publications

Myers, S.J. 1993. Mountain Chickadees nest in desert riparian forest. *Western Birds* 24:103-104.

Myers, S.J. 1997. Checklist of the birds of Mojave Narrows Regional Park and the Victor Valley. Mojave Desert Bird Club, Apple Valley, CA.

Myers, S.J. In prep. California Horned Lark (*Eremphila alpestris actia*). Species account for the California Department of Fish and Game's "Bird Species of Special Concern in California."

Myers, S.J. In prep. Vermilion Flycatcher (*Pyrocephalus rubinus*). Species account for the California Department of Fish and Game's "Bird Species of Special Concern in California."

Myers, S.J. and B. Deppe. In prep. Avifauna of the Mojave River, California.

Myers, S.J. and J.D. Edwards. 1994. Checklist of the birds of Silverwood Lake. Mojave River Natural History Assoc., Hesperia, CA.

Patten, M.A. and S.J. Myers. 1992. Geographic distribution: *Bufo microscaphus californicus*. *Herpetol. Review* 23: 122.

Patten, M.A., S.J. Myers, C. McGaugh, and J.R. Easton. 1998. Recovery plan summary: Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*). Rodentia action plan, Int. Union Conserv. Nature and Nat. Resources.

White, S. D. and S.J. Myers. 1997. Evidence of *Astragalus lentiginosus* var. *borreganus* growing from a heteromyid seed cache. *Southwestern Naturalist* 42:329-330.

Wilcox, M.D., S.J. Myers, K.R. Beaman and R.L. McKernan. 1995. Geographic distribution: *Xantusia h. henshawi*. *Herpetol. Review* 23: 122.

Michael D. Wilcox

Wildlife Biologist / Ecologist

Professional Summary

Specializing in herpetological and entomological studies, Mr. Wilcox has studied California's wildlife in the field for over 15 years. Mr. Wilcox has conducted biological and environmental assessment work throughout Imperial, Inyo, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, and Ventura counties in California, as well as in the states of Arizona and Nevada. Personal field experience also includes studies of wildlife and ecology in Arizona, Florida, Louisiana, Kansas, Montana, New Mexico, Virginia, Wyoming, the Yucatan (Mexico), Baja California, Belize, Guatemala, Costa Rica, Peru and Bolivia. Professional experience includes serving as the lead biologist, supervising and managing biological compliance monitoring and sensitive species survey efforts for a variety of large-scale projects, as well as conducting focused surveys and monitoring of a variety of endangered, threatened, and/or otherwise sensitive species. In addition to fieldwork, Mr. Wilcox authors environmental and biological assessments, habitat conservation plans, habitat suitability evaluations for sensitive species, mitigation and revegetation plans, and comprehensive field inventories of flora and fauna.

Mr. Wilcox has been authorized by the U.S. Fish and Wildlife Service to perform focused surveys for the federally endangered Delhi Sands Flower-loving Fly, Quino Checkerspot Butterfly, and threatened California Gnatcatcher. Mr. Wilcox has also been authorized to assist other permitted biologists with focused surveys for the Stephens' Kangaroo Rat, San Bernardino Kangaroo Rat, and Mojave Ground Squirrel. He has also received both federal and state agency authorization for specific projects to capture, handle, process, and relocate the Desert Tortoise; and to capture, handle, and release the Mountain Yellow-legged Frog, Panamint Alligator Lizard, and sensitive salamander species. Mr. Wilcox has also received Bureau of Land Management certification for conducting focused surveys for the Flat-tailed Horned Lizard.

Other protected species Mr. Wilcox has worked with include the Arroyo Toad, California Red-legged Frog, Coachella Valley Fringe-toed Lizard, Gila Monster, San Diego Coast Horned Lizard, Belding's Orange-throated Whiptail, Southwestern Pond Turtle, Two-striped Garter Snake, Southern Rubber Boa, Least Bell's Vireo, hibernating bat species, and various sensitive plant species.

Mr. Wilcox also works part-time as an adjunct biology instructor at Victor Valley Community College, teaching Biology 128: "Identification and Study of the Amphibians and Reptiles of the Mojave Desert and Adjacent Mountains" and has served as an assistant instructor for "Jungles and Peaks: Ecology of Belize and Guatemala" and "Natural History of Peru" travel courses. He has also served as a field instructor and technical advisor for several symposia and workshops including the Desert Tortoise Council Survey Techniques Workshop and the Riverside Land Conservancy's Land Stewards School. Additionally, Mr. Wilcox has also participated in the annual U.S. Forest Service Lake Silverwood Winter Bald Eagle Census and several annual Fourth of July San Bernardino Mountains Butterfly Counts sponsored by the North American Butterfly Association.

Professional Qualifications

United States Fish and Wildlife Service Endangered Species Permit (PRT-836491-4) to take the Delhi Sands Flower-loving Fly and Quino Checkerspot Butterfly.

Bureau of Land Management certified Flat-tailed Horned Lizard surveyor # 6840 (CA-067.20).

California Department of Fish and Game Memorandum of Understanding (MOU) authorizing take of the Desert Tortoise (Permitted to capture, handle, and relocate Desert Tortoises for the Southern California Gas Company Kramer Line 6905 Project).

Lead Biologist for California Department of Fish and Game 2081 Incidental Take Permit No. 2081-2001-008-6 authorising incidental take of the Desert Tortoise, Mojave Ground Squirrel, and Burrowing Owl for the Southern California Gas Company Kramer Line 6905 Project.

California Department of Fish and Game Memorandum of Understanding (MOU) authorizing take of the Mountain Yellow-legged Frog (Permitted to capture, handle, and release tadpoles, juvenile, and adult frogs for identification purposes).

California Department of Fish and Game Scientific Collectors Permit # 801024-03, amended to allow the capture of the Panamint Alligator Lizard and salamander species in Pleasant Canyon, Panamint Mountains, CA.

Authorized Individual for various Desert Tortoise studies (Authorized to monitor, handle, process and relocate Desert Tortoises when necessary for specific project implementation).

Authorized Individual for United States Fish and Wildlife Service Endangered Species Permit (TE-804203-5) to conduct activities with the California Gnatcatcher, Southwestern Willow Flycatcher, Stephens' Kangaroo Rat, and San Bernardino Kangaroo Rat (Permitted to conduct focused gnatcatcher and flycatcher surveys, and assist with trapping, handling, and processing for the kangaroo rats under the direct, on-site supervision of Stephen J. Myers).

Authorized Individual for United States Fish and Wildlife Service Endangered Species Permit (PRT-836517-4) to assist with focused surveys of the California Gnatcatcher (Permitted to conduct focused gnatcatcher surveys under the direct, on-site supervision of Chet McGaugh).

Authorized Individual for California Department of Fish and Game Memorandum of Understanding dated April 30, 1997 regarding studies of the Mojave Ground Squirrel (Authorized to trap, handle, and process trapped squirrels).

Authorized Individual for California Department of Fish and Game Memorandum of Understanding dated July 29, 1998 regarding studies of Stephens' Kangaroo Rat and San Bernardino Kangaroo Rat (Authorized to assist permitted biologist, Stephen J. Myers, with trapping, handling, and processing of trapped specimens).

Education

Bachelor of Arts, University of Redlands, Redlands, 1991

University of California, Riverside, 1994-1995
Relevant extension course work included: Methods of Habitat Restoration and Ornithology: A Field Study of Birds.

Crafton Hills College, Yucaipa, 1996
Course work included: Psychology.

San Bernardino Valley College, San Bernardino, 1996
Course work included: Child Development

Victor Valley Community College, Victorville, 2000-Present
Course work included: 1) Jungles & Peaks; A Study of the Ecology of Costa Rica (2000), 2) Belize and Guatemala (2003)*, and 3) Natural History of Peru (2006)*. *Served as assistant instructor.

Additional training

Mojave Ground Squirrel Workshop. 4/16-17; Ridgecrest, CA.

Biology of the Rattlesnakes Symposium. 1/15-18/05; Loma Linda University, Loma Linda, CA

28th annual Southern California Botanists Symposium: Rare Plants of Southern California. 10/19/02 California State University, Fullerton, CA

27th Annual Western Field Ornithologists Conference. 10/12/02; Costa Mesa, CA

3rd North American Ornithological Conference. 9/24-28/02; Tulane University, New Orleans, LA

South Coast Missing Linkages Projects: Restoring Connectivity to California's South Coast Ecoregion. 8/07/02; University of Redlands, Redlands, CA

27th Annual Southern California Botanists Symposium: Shifting Sands - Conservation and Biology of California's Dune Habitats. 10/20/01; California State University, Fullerton, CA

Wetland Delineation & Management Training Seminar & Workshop. 2/5-10/01; San Diego, CA

Arroyo Toad Symposium (*Bufo californicus*): Natural History and Management Practices. 10/5/00; Marine Corps Air Station, Camp Pendleton, CA

Planning for Biodiversity: Bringing Research and Management Together. 2/29-3/2/00; Pomona, CA

Workshop on Year 2000 Draft Quino Checkerspot Butterfly Survey Protocol. 11/30/99; Carlsbad, CA

Current Research on Herpetofauna of the Sonoran Desert. 4/9-10/99; Phoenix Zoo, Phoenix, AZ

Status and Biology of the Quino Checkerspot Butterfly. 12/3/98; Carlsbad, CA

Herpetology of the Californias: First Annual Symposia in honor of Lawrence Klauber. 5/15/98; San Diego Natural History Museum, San Diego, CA

Desert Tortoise Council Symposium. 3/94-95,4/98; Las Vegas, Nevada and Tucson, AZ

Declining Amphibians and Reptiles in California II. 3/13/98; San Diego Natural History Museum, San Diego, CA

Quino Checkerpsot Butterfly Seminar. 1/6/98; Temecula, CA

The Quino Checkerspot/Butterfly Identification Workshop. 11/15/97; Riverside Land Conservancy, Riverside, CA

Declining Amphibians and Reptiles in California. 3/14/97; San Diego Natural History Museum, San Deigo, CA

Empidonax trailii extimus in California: The Willow Flycatcher Workshop. 11/95; San Diego, CA

Desert Lands Rehabilitation Workshop. 11/95; Barstow, CA

Desert Tortoise Council Techniques Workshop. 10/93-99; Ridgecrest, CA (Training included survey methods, handling procedures for tortoises and eggs, burrow excavation, and artificial burrow construction)

Biology and Management of Sensitive Amphibians and Reptiles of Central and Southern California. 6/11-12/94; Goleta, CA

Second Annual Horned Lizard Conference. 6/1/94; San Diego, CA

Second Annual Tropical Deciduous Forest Symposium. 5/22-23/94; Tucson, AZ

Memberships

The Wildlife Society– Member: 2005-present

Southwestern Herpetologists Society, Inland Empire Branch – Member: 2001-present, Secretary: 2001-2004

National Audubon Society, Inland Empire Branch – Member: 1999-present

Friends of the University of California, Riverside Entomological Research Museum – Member: 1998-present

California Botanical Society - Member: 1996-present

Riverside Land Conservancy - Land Stewards School Instructor/Technical Advisor: 1995-1997

Society for the Study of Amphibians and Reptiles - Member: 1994-present

Desert Tortoise Council - Member: 1993-present

American Federation of Herpetoculturists - Member: 1988-1995

Inland Empire Reptile and Amphibian Society – Member: 1985-2000, President: 1996-1998, Vice President: 1992-1996, Secretary: 1990-1992

Summary of Core Skills

Experience with Sensitive Amphibian and Reptile Species

Has managed, supervised, and conducted general herpetological inventories, as well as focused field surveys, habitat assessments and/or mitigation monitoring for the following Threatened, Endangered, and sensitive herpetofauna: California Red-legged Frog, Mountain Yellow-legged Frog, Arroyo Toad, Western Spadefoot, Slender Salamanders, Desert Tortoise, Southwestern Pond Turtle, Flat-tailed Horned Lizard, San Diego Coast Horned Lizard, Belding's Orange-throated Whiptail, Coachella Valley Fringe-toed Lizard, Panamint Alligator Lizard, Gila Monster, and Southern Rubber Boa.

Experience with Sensitive Invertebrates

Has managed, supervised, and conducted general entomological inventories, as well as focused field surveys and habitat assessments for the following Threatened, Endangered, and sensitive invertebrates: Delhi Sands Flower-loving Fly, Quino Checkerspot Butterfly, Coachella Valley Jerusalem Cricket, and Mojave Desert Spring Snails. Has also co-authored and participated in Habitat Conservation Plans for the Delhi Sands Flower-loving Fly as well as participated in a life history study of the species.

Experience with Sensitive Bird Species

Has assisted with focused field surveys and conducted habitat assessment and mitigation monitoring for the following Threatened, Endangered, and sensitive avifauna: Bald Eagle, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Le Contes' Thrasher, Burrowing Owl,

raptors, and various riparian-nesting bird species. Has assisted permitted biologists with mist netting and color-banding of California Horned Larks for Bird Air-Strike Hazard (BASH) studies and common raven capture, pit-tagging, and release at Edwards Air Force Base. Has also participated in passive relocation and artificial burrow construction for Burrowing Owls.

Field Experience with Sensitive Mammals

Has conducted focused field surveys, habitat assessments and/or mitigation monitoring for the following Threatened, Endangered, and sensitive mammals: Stephens' Kangaroo Rat, San Bernardino Kangaroo Rat, Los Angeles Pocket Mouse, Palm Springs Pocket Mouse, Pacific Pocket Mouse, Mojave Ground Squirrel, Palm Springs Round-tailed Ground Squirrel, and various large carnivores. Has also assisted with live trapping surveys for Stephens' Kangaroo Rat, San Bernardino Kangaroo Rat, Mojave Ground Squirrel, Palm Springs Pocket Mouse, and Los Angeles Pocket Mouse. Has also assisted with focused bat surveys.

Field Experience with Sensitive Plants

Has conducted general botanical inventories, habitat assessments and focused field surveys for the following Threatened, Endangered, and sensitive plant species: Coachella Valley Milk Vetch, Booth's Evening Primrose, and Mojave Monkeyflower. Has also assessed the health, selection of, and supervised the transplantation of Joshua trees, Mojave Yucca, and various species of cacti for various desert restoration projects. Has also participated in the restoration of riparian, wetlands, and coastal sage scrub vegetation communities.

Detailed Core Skills by Project

Renewable Energy Resources

Victorville 2 Hybrid Power Project, ENSR, Victorville, CA. Conducted and prepared comprehensive Biological Resources Assessment Report and Biological Assessment for a 400+ acre hybrid power plant site and associated transmission lines and pipeline easements. Other tasks included overseeing an/or participating in focused Desert Tortoise surveys, focused Burrowing Owl surveys, focused surveys for rare plants, focused trapping surveys for Mojave ground Squirrel, vegetation and sensitive species mapping, identification and delineation of jurisdictional water courses, and identifying potential mitigation strategies. Regulatory agencies involved included California Energy Commission, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and California Department of Fish and Game.

Whitewater Wind Energy Conversion Systems, Shell Oil Corporation, San Gorgonio Pass, Riverside Co., CA. Conducted general and focused (for Desert Tortoise, Burrowing Owl, and sensitive plant species) biological surveys; Desert Tortoise burrow excavation, artificial burrow construction, processing, and relocation; Burrowing Owl burrow excavation, artificial burrow construction, and passive relocation; mitigation monitoring; personnel awareness training for the development, installation, and implementation of a wind energy park located in the San Gorgonio Pass area, on the northwestern outskirts of the Coachella Valley.

Cabazon Wind Energy Conversion Systems, Cannon Power, Cabazon, CA. Conducted general and focused biological surveys (for Desert Tortoise, Burrowing Owl, and Coachella Valley Fringe-toed Lizard), mitigation monitoring, and biological resources awareness training for the development, installation, and implementation of a wind energy park located in the San Gorgonio Pass area for the life of the project.

Domestic Water Development and Supply

Coachella Canal Lining Project, Coachella Valley Water District, Niland, CA. Conducted and prepared detailed assessments of wildlife (specifically Desert Tortoise) accessibility for a 36-mile segment of the Coachella Canal in support of the preparation of FEIS/R, ESA Section 7 Informal

Consultation, NEPA Record of Decision, and CEQA Finding of Fact and Statement of Overriding Considerations and Mitigation Monitoring and Reporting Program processes and document preparation; Imperial and Riverside counties; Coachella Valley Water District, Bureau of Reclamation, and the San Diego Water Authority. Conducted preconstruction and clearance surveys for special-status species (i.e., Desert Tortoise, Burrowing Owl, Flat-tailed Horned Lizard) prior to site disturbance and served as lead biological monitor during the canal construction phase. Other duties included biological awareness training to on site personnel, performing ecological values assessments, preparing mitigation monitoring plan, environmental protection plan, and construction monitoring plan.

Lake Skinner Filtration Plant Expansion Project, Metropolitan Water District, Riverside Co., CA. Conducted general biological surveys, prepared Biological Assessment and authored the Biological Resources Section of an EIR in support of ESA Section 7 Formal Consultation, Section 404 and 1601 permits, NEPA Record of Decision, and CEQA Finding of Fact and Statement of Overriding Considerations and Mitigation Monitoring and Reporting Program processes and document preparation. Significant biological issues included nesting Bald Eagle, California Gnatcatcher, Stephens' Kangaroo Rat, Quino Checkerspot Butterfly, and jurisdictional wetlands and waters of the U.S.

Morongo Basin Pipeline Project, Joshua Basin Water District, Mojave Desert, CA. Conducted general biological surveys, focused surveys for sensitive species (i.e., Desert Tortoise, LeConte's Thrasher, Burrowing Owl), mitigation monitoring, revegetation, conducting biological resources awareness training for a 68-mile pipeline installation project in the Mojave Desert. Significant biological issues included Desert Tortoise, Burrowing Owl, LeConte's Thrasher, and native cacti and yucca.

Mojave River Pipeline, 1994. Conducted focused surveys for the Desert Tortoise from Adelanto to Helendale for the development of the Mojave River Pipeline Project, San Bernardino County, CA

Oil and Gas Development and Supply

Kramer Junction Line 6905 Expansion Project, Southern California Gas Company, Adelanto-Kramer Junction, San Bernardino County, CA. Served as lead biologist, supervising a team of 30+ biologists and biological monitors, for the installation and development of a 33-mile natural gas pipeline project in the Mojave Desert. Conducted general and focused biological surveys (for Desert Tortoise, Burrowing Owl, and sensitive plant species); Desert Tortoise burrow excavation, artificial burrow construction, processing, and relocation; Burrowing Owl burrow excavation, artificial burrow construction, and passive relocation; mitigation monitoring; personnel awareness training, yucca and cacti transplantation, and vertical mulching.

Kinder Morgan Energy Partners On-call Biological Services, Kinder Morgan Energy Partners, Victorville CA to Jean NV. Conducted, managed and supervised others conducting focused preconstruction/clearance surveys and mitigation monitoring for two different multiple product pipeline anomaly repair projects, CalNev 14" and 8", from the vicinity of Victorville, CA north to Jean, NV.

Habitat Conservation Plan for Delhi Sands Flower-loving Fly, SFPP, L.P., Operating Partnership for Kinder Morgan Energy Partners and CalNev Pipeline Company, L.L.C., Colton to Ontario, San Bernardino Co., CA. Developed and co-authored a draft HCP for the Delhi Sands Flower-loving Fly at the Colton Terminal and associated pipeline facilities totalling approximately 50 miles of linear pipeline easements in Colton, Rialto, and Ontario. Managed and conducted focused surveys for the Delhi Sands Flower-loving Fly, general biological assessments, mitigation monitoring, and habitat restoration activities for SFPP, L.P.'s facilities located at the Colton Terminal and within the Colton Dunes.

All American Pipeline Project, All American Pipeline Company, San Bernardino Co., CA. Coordinated and managed general and focused biological surveys and mitigation monitoring for the Desert Tortoise for exploratory geotechnical drilling activities in support of the All American Pipeline Project; San Bernardino County; All American Pipeline Company.

Electrical Power

SCE Habitat Conservation Plan, Southern California Edison Company, Inland Empire, San Bernardino and Riverside Counties, CA. Supervised and managed a team of up to 12 biologists for a two-year period conducting habitat assessments and focused surveys for the Delhi Sands Flower-loving Fly in support of the development of a multi-species HCP for Southern California Edison's transmission line easements and associated properties throughout the Colton Dunes in the Inland Empire.

Otay Mesa Generating Plant, San Diego Gas and Electric Company, Otay Mesa, San Diego County, CA. Conducted habitat assessments and focused surveys for the Quino Checkerspot Butterfly the proposed generation plant site and throughout the associated transmission line easements on Otay Mesa from the U.S./Mexican border north to Chula Vista.

Valley to Auld Electrical Substation and Transmission Line Upgrade Project, Southern California Edison Company, Riverside County, CA. Conducted mitigation monitoring for the Valley to Auld transmission line and electrical substation upgrade project. Significant biological issues included the California Gnatcatcher, Burrowing Owl, Stephens' Kangaroo Rat, Quino Checkerspot Butterfly, Belding's Orange-throated Whiptail, San Diego Coast Horned Lizard, and Southwestern Pond Turtle.

U.S. Forest Service

GST and Level 3 Fiber Optic Installation Project, U.S. Forest Service, San Bernardino Ranger District, San Bernardino Co., CA. Authored a comprehensive Environmental Assessment (EA) and a Biological Assessment/Biological Evaluation (BA/BE) for a joint GST/Level 3 fiber optic conduit installation project throughout a 13-mile segment of the San Bernardino National Forest. Also conducted habitat assessments for the San Bernardino Kangaroo Rat, Quino Checkerspot Butterfly, Least Bell's Vireo, Southwestern Willow Flycatcher and participated in focused surveys for the California gnatcatcher.

Angeles National Forest Arroyo Toad Surveys, U.S. Forest Service, Angeles National Forest Ranger District, Los Angeles County, CA. Conducted habitat assessments and focused surveys for the Arroyo Toad throughout 9 drainage systems containing potentially suitable and in historically occupied habitat within the Angeles National Forest. The focused survey efforts resulted in the detection of the species in one of the drainages surveyed and the discovery of a previously unknown population of the California Red-legged Frog.

San Bernardino National Forest Mountain Yellow-legged Frog Surveys, U.S. Forest Service, San Bernardino Ranger District, San Bernardino County, CA. Conducted habitat assessments and focused surveys for the Mountain Yellow-legged Frog throughout 14 drainage systems in historically occupied habitat within the San Bernardino National Forest resulting in the rediscovery of the species in the San Bernardino Mountains where they had been previously reported to be extirpated.

San Bernardino National Forest Arroyo Toad Surveys, **U.S. Forest Service, San Bernardino Ranger District, San Bernardino County, CA.** Conducted habitat suitability assessments and protocol focused surveys for the endangered arroyo toad in selected drainages, totaling approximately 6 miles, in the San Bernardino National Forest, San Bernardino County, California. Methodologies employed included diurnal and nocturnal eye-shine visual encounter surveys, diurnal larval and egg mass searches, and periodic silent listening for calling individuals. The survey efforts resulted in the detection of arroyo toads within several of the focused survey areas and the rediscovery of the species in the Mojave River.

Department of Defense

Vandenberg Air Force Base Missile Transport Bridge Project. Participated in focused surveys, capture, and relocation of California Red-Legged Frogs and Two-striped Garter Snakes, seine netting and relocation of the Unarmored Three-spine Stickleback, exclusion fence construction and

maintenance, construction monitoring, environmental compliance training for the construction of a Missile Transport Bridge over an environmentally sensitive creek, wetlands, and riparian habitat.

Edwards Air Force Base Inventory of Reptiles and Amphibians, Edwards Air Force Base, CA. Participated in a two-year base-wide inventory of the reptiles and amphibians of Edwards Air Force Base. Survey methodologies included diurnal visual encounter surveys, cover boards, night driving, and nocturnal eye-shine searches for amphibians, Edwards Air Force Base.

Camp Pendleton Marine Corps Air Station Road Improvement Project, Kinder Morgan Energy Partners, Camp Pendleton, CA. Provided biological monitoring for the improvement of base road infrastructure. Sensitive biological resources monitored included the Pacific Pocket Mouse and California Gnatcatcher.

March Air Force Base Wetland Mitigation Project, March Air Force Base, Moreno Valley, CA. Designed, implemented, and monitored the development of a wetland (pond 6B') as mitigation for impacts to other on-base wetlands.

Leuhman Ridge Rocket Test Site, Edwards Air Force Base, San Bernardino County, CA. Conducted focused surveys, handling, processing, artificial burrow construction, and relocation of Desert Tortoises at Edwards Air Force Base, San Bernardino County, CA.

Transportation and Infrastructure

CalTrans State Route 138, Segments 10 & 11, CalTrans District 7, Los Angeles County, CA. Coordinated and conducted biological monitoring of the widening of two different, approximate 3-mile sections of State Route 138 in the vicinity of Pearblossom, Los Angeles County, CA. Duties included scheduling monitoring activities, conducting focused preconstruction/clearance surveys for Desert Tortoise and Mojave Ground Squirrel, monitoring, supervision and inspection of exclusion fence installation. Other duties included meeting, communicating, and coordinating with CalTrans inspectors, Granite Construction Company personnel, and revegetation contractors.

Ontario Airport Master Plan, P&D, Ontario, CA. Conducted habitat assessments, mapping, and focused surveys for the Delhi Sands Flower-loving Fly on vacant lands owned and operated by Los Angeles World Airports in support of the Ontario Airport Master Plan, Ontario, San Bernardino County, CA.

CalTrans On-call Biological Services, CalTrans, District 8, Riverside and San Bernardino Counties, CA. Conducted habitat suitability assessments and protocol focused surveys for the Arroyo Toad, Mountain Yellow-legged Frog, California Red-legged Frog, Southern Rubber Boa, and Desert Tortoise for various CalTrans projects throughout portions of Riverside and San Bernardino counties, California. Projects included SR-138 realignment project between I-15 and Summit Valley (Arroyo Toad), I-15 bridge widening project at the Mojave River crossing near Victorville (Arroyo Toad, Red-legged Frog) , SR-18 seismic retrofit at the Mojave River crossing in Apple Valley (Arroyo Toad, Red-legged Frog) , Opah Ditch Mining Reclamation Project near Baker (Desert Tortoise), I-40 widen project between Barstow and Newberry Springs (Desert Tortoise), and Big Bear Dam/SR-18 realignment (Mountain Yellow-legged Frog, Southern Rubber Boa). Methodologies employed included diurnal and nocturnal eye-shine visual encounter surveys, diurnal larval and egg mass searches, periodic silent listening for calling individuals, and linear transects. Sensitive species detected during the course of the contract included the Arroyo Toad, Southwestern Pond Turtle, Desert Tortoise, Silvery Legless Lizard, San Diego Coast Horned Lizard, Belding's Orange-throated Whiptail, and Coastal Western Whiptail.

Bautista Canyon Road Widening Project, Riverside County Transportation Department, Hemet, CA. Supervised, managed, and conducted habitat suitability assessments for sensitive herpetofauna

and the Quino Checkerspot Butterfly, conducted a general herpetological inventory, and protocol focused surveys for the Arroyo Toad and Quino Checkerspot Butterfly throughout the suitable areas of the project site, a 13-mile segment of Bautista Canyon Road for a proposed road paving and improvement project. The surveys resulted in the positive detection of the Arroyo Toad and Quino Checkerspot Butterfly throughout various areas of the site.

Parks and Recreation

Arroyo Seco Master Plan General Herpetological Inventory and Focused Sensitive Species Surveys, City of Pasadena Parks & Recreation District, Pasadena, CA. Supervised, managed, and conducted habitat suitability assessments for sensitive herpetofauna, a general herpetogical inventory, and protocol focused surveys for the Arroyo Toad, Mountain Yellow-legged Frog, California Red-legged Frog, Southwestern Pond Turtle and San Diego Coast Horned Lizard within the Arroyo Seco, a tributary of the Los Angeles River, Los Angeles County, California. Methodologies employed included diurnal and nocturnal eye-shine visual encounter surveys, diurnal larval and egg mass searches, periodic silent listening for calling individuals, and night driving. Although the survey efforts for the target species ended with negative results, a total of 14 species including 3 sensitive species (i.e., Coast Range Newt, Coastal Western Whiptail, and Two-striped Garter Snake) have been detected on the project site.

San Bernardino National Forest/California State Park Parcel Exchange Project, The Wildlands Conservancy, San Bernardino National Forest, San Bernardino Co., CA. Conducted comprehensive wildlife surveys and habitat evaluations of several parcels considered for exchange from/to the U.S. Forest Service and California State Parks system.

Private Sector

Rio Vista Specific Plan, Albert A. Webb Associates, Rubidoux, Riverside Co., CA. Conducted, supervised and managed a comprehensive general biological resources assessment, habitat suitability assessments, and follow-up focused surveys for the Delhi Sands Flower-loving Fly, Burrowing Owl, and delineation of jurisdictional areas for the above referenced 909.4-acre project site proposed for residential and commercial development. Documents were submitted in coordination and compliance with U.S. Fish and Wildlife, California Department of Fish and Game, Western Riverside County Multiple Species Habitat Conservation Plan, and the U.S. Army Corps of Engineers.

Desert Dunes Development Project, Terra Nova Planning and Research, Inc., Desert Hot Springs, Riverside Co., CA. Coordinated, managed, and conducted a general biological resources assessment and follow-up focused surveys for Desert Tortoise, Flat-tailed Horned Lizard, Burrowing Owl, Le Conte's Thrasher, Crissal Thrasher, and Coachella Valley Milk Vetch for the proposed residential development of a 450-acre project site located in the Colorado Desert. A delineation and mapping of jurisdictional areas throughout the site was also conducted.

Santa Fe Ranch Biological Resources Inventory and Assessment, Santa Fe Ranch Conservancy, Riverside Co., CA. Conducted, supervised and managed a comprehensive general biological resources assessment, habitat suitability assessments, and follow-up focused trapping surveys for rodents, focused bat surveys, a general wildlife inventory and vegetation mapping for a 2,845.36-acre site.

Religious Center for the Carmelite Sisters of the Most Sacred Heart, Lake Los Angeles, CA. Conducted a general biological assessment, habitat suitability assessments, and follow-up focused surveys for the Desert Tortoise and trapping for the Mojave Ground Squirrel for the proposed development of the above referenced project near Lake Los Angeles, Los Angeles County, CA

World Beater Mine Herptological Inventory, and Focused Sensitive Herptological Species Surveys, World Beater Mine, Panamint Mountains, Inyo Co., CA. Conducted a general herpetological inventory and focused surveys for the Panamint alligator lizard and salamander species

throughout Pleasant Canyon in the Panamint Mountains, Inyo County, California. Methods used for the survey included diurnal visual encounter surveys, the use of cover boards, and cover plastic stations. Sensitive species detected during the course of the contract included the Panamint Alligator Lizard and Chuckwalla.

Employment History

Wildlife Biologist / Ecologist– **AMEC Earth & Environmental, Inc.**: December 2000 – present
Prepares habitat conservation plans (HCP), environmental assessments (EA), biological assessments (BA), and focused sensitive species' surveys and habitat assessments for both the public and private sectors. Conducts focused presence/absence surveys for rare and endangered flora and fauna including the Desert Tortoise, Southwestern Pond Turtle, Arroyo Toad, California Red-legged Frog, Mountain Yellow-legged Frog, Western Spadefoot, Coast Horned Lizard, Delhi Sands Flower-loving Fly, Quino Checkerspot Butterfly, California Gnatcatcher, and Southwestern Willow Flycatcher. Participates in habitat restoration projects and mitigation monitoring programs for the California Gnatcatcher, Least Bells' Vireo, Stephens' Kangaroo Rat, Desert Tortoise, Flat-tailed Horned Lizard, and California Red-legged Frog.

Adjunct Faculty– **Victor Valley Community College**: March 2002 – present
Serves as part time, adjunct instructor for Biology 128: Identification and Study of the Amphibians and Reptiles of the Mojave Desert and Adjacent Mountains.

Wildlife Biologist / Ecologist– **Ogden Environmental & Energy Services**: March – December 2000
Prepared HCPs, EAs, BAs, and focused sensitive species' survey reports for a variety of projects for both the public and private sectors. Conducted focused presence/absence surveys for rare and endangered flora and fauna including the Desert Tortoise, Arroyo Toad, Delhi Sands Flower-loving Fly, and Quino Checkerspot Butterfly. Participated in mitigation monitoring programs for the California Gnatcatcher, Least Bells' Vireo, Stephens' Kangaroo Tat, Desert Tortoise, and Flat-tailed Horned Lizard. Assisted permitted biologists with focused surveys for the California gnatcatcher.

Wildlife Biologist - **Tierra Madre Consultants, Inc.**: 1993 – March 2000
Prepared biological and environmental assessments, evaluations, and other documents for both the public and private sectors. Performed focused presence/absence surveys for rare and endangered fauna and flora; including the Desert Tortoise, Southwestern Pond Turtle, Southern Rubber Boa, Flat-tailed Horned Lizard, San Diego Coast Horned Lizard, Orange-throated Whiptail, Coachella Valley Fringe-toed Lizard, Panamint Alligator Lizard, California Red-legged Frog, Mountain Yellow-legged Frog, Arroyo Toad, Western Spadefoot, Mojave Ground Squirrel, Stephens' Kangaroo Rat, San Bernardino Kangaroo Rat, Los Angeles Pocket Mouse, hibernating bats, Burrowing Owl, Delhi Sands Flower-loving Fly, and Quino Checkerspot Butterfly. Assists in the preparation of Habitat Conservation Plans; field studies of the California Gnatcatcher; habitat restoration projects, rare plant surveys; small mammal trapping; and wetland delineations.

Wildlife Biologist - **Thomas Olsen Associates, Inc.**: 1995
Performed focused Delhi Sands Flower-loving Fly presence/absence surveys daily at 15 different locations within the City of Fontana. Also performed mitigation monitoring and behavioral studies of the Delhi Sands Flower-loving Fly for San Bernardino County Medical Center throughout the duration of the species' activity period.

Science Teacher **- Shandin Hills Middle School**: 1993
Long-term substitute science teacher, replacing former instructor mid-term, teaching natural sciences (biology, astronomy, geology, etc.) to approximately 250 eighth grade students. Responsible for creating

class/home assignments and projects, examinations, parent conferences, disciplinary actions, grading and a variety of other educational activities.

Presentations/publications

Wilcox, M.D. 2006. *Snakes of Hesperia and Adjacent Areas*. OSHA training provided to the City of Hesperia on 9 August 2006, Hesperia, CA.

Wilcox, M.D. 2006. *Snakes of Cismontane Southern California*. OSHA training provided to the Cities of Norco, Corona, and Riverside on 8 August 2006, Norco, CA.

Van Dam, M., A. Van Dam, and M.D. Wilcox. 2006. **Description of the 3rd Instar Larva and Adult Male of *Megasoma sleeperi*** Hardy (Scarabaeidae: Dynastinae). Coleopterists Bulletin 60(1), p.59-67.

Goodward David M., B. Cummings and M. D. Wilcox. 2005. **Geographic Distribution: *Hemidactylus turcicus* (Mediterranean House Gecko).** Herpetological Reveiw. 36 (2):199.

Wilcox, M.D. 2004. *Reptiles and Amphibians of Kansas*. Lecture presented to the California Turtle and Tortoise Club, San Bernardino Chapter on 15 October 2004.

Wilcox, M.D. 2004. *Herpetofauna of the Mojave Desert and Adjacent Mountains*. Lecture presented to the Mojave Desert Bird Club on 10 June 2004.

Wilcox, M.D. 2003. *Reptiles and Amphibians of Kansas*. Lecture presented to the Southwestern Herpetologists Society, Inland Empire Branch on 1 October 2004.

Wilcox, M.D., D.A. Wilcox, K.R. Beaman, and C. Painter. 1999. **Geographic Distribution: *Tantilla yaquia***. Herpetological Review 31(3), p.187.

White, S.D., A.C. Sanders, and M.D. Wilcox. 1996. **Noteworthy Collections: California**. Madrono 43(2), p. 334-338.

Wilcox, M.D., S.J. Myers, K.R. Beaman, and R. McKernan. 1995. **Geographic Distribution: *Xantusia henshawii*.** Herpetological Review 26(2), p.109.

Wilcox, M.D. (Ill.) 1991. **The ABC's of Geography**. Slofoot Publishing, San Bernardino, California.

APPENDIX 2

Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley

RECOMMENDED TIMING AND METHODOLOGY FOR SWAINSON'S HAWK NESTING SURVEYS IN CALIFORNIA'S CENTRAL VALLEY

Swainson's Hawk Technical Advisory Committee

May 31, 2000

This set of survey recommendations was developed by the Swainson's Hawk Technical Advisory Committee (TAC) to maximize the potential for locating nesting Swainson's hawks, and thus reducing the potential for nest failures as a result of project activities/disturbances. The combination of appropriate surveys, risk analysis, and monitoring has been determined to be very effective in reducing the potential for project-induced nest failures. As with most species, when the surveyor is in the right place at the right time, Swainson's hawks may be easy to observe; but some nest sites may be very difficult to locate, and even the most experienced surveyors have missed nests, nesting pairs, mis-identified a hawk in a nest, or believed incorrectly that a nest had failed. There is no substitute for specific Swainson's hawk survey experience and acquiring the correct search image.

METHODOLOGY

Surveys should be conducted in a manner that maximizes the potential to observe the adult Swainson's hawks, as well as the nest/chicks second. To meet the California Department of Fish and Game's (CDFG) recommendations for mitigation and protection of Swainson's hawks, surveys should be conducted for a ½ mile radius around all project activities, and if active nesting is identified within the ½ mile radius, consultation is required. In general, the TAC recommends this approach as well.

Minimum Equipment

Minimum survey equipment includes a high-quality pair of binoculars and a high quality spotting scope. Surveying even the smallest project area will take hours, and poor optics often result in eye-strain and difficulty distinguishing details in vegetation and subject birds. Other equipment includes good maps, GPS units, flagging, and notebooks.

Walking vs Driving

Driving (car or boat) or "windshield surveys" are usually preferred to walking if an adequate roadway is available through or around the project site. While driving, the observer can typically approach much closer to a hawk without causing it to fly. Although it might appear that a flying bird is more visible, they often fly away from the observer using trees as screens; and it is difficult to determine from where a flying bird came. Walking surveys are useful in locating a nest after a nest territory is identified, or when driving is not an option.

Angle and Distance to the Tree

Surveying subject trees from multiple angles will greatly increase the observer's chance of detecting a nest or hawk, especially after trees are fully leafed and when surveying multiple trees

in close proximity. When surveying from an access road, survey in both directions. Maintaining a distance of 50 meters to 200 meters from subject trees is optimal for observing perched and flying hawks without greatly reducing the chance of detecting a nest/young: Once a nesting territory is identified, a closer inspection may be required to locate the nest.

Speed
Travel at a speed that allows for a thorough inspection of a potential nest site. Survey speeds should not exceed 5 miles per hour to the greatest extent possible. If the surveyor must travel faster than 5 miles per hour, stop frequently to scan subject trees.

Visual and Aural Ques
Surveys will be focused on both observations and vocalizations. Observations of nests, perched adults, displaying adults, and chicks during the nesting season are all indicators of nesting Swainson's hawks. In addition, vocalizations are extremely helpful in locating nesting territories. Vocal communication between. hawks is frequent during territorial displays; during courtship and mating; through the nesting period as mates notify each other that food is available or that a threat exists; and as older chicks and fledglings beg for food.

Distractions
Minimize distractions while surveying. Although two pairs of eyes may be better than one pair at times, conversation may limit focus. Radios should be off, not only are they distracting, they may cover a hawk's call.

Notes and Species Observed
Take thorough field notes. Detailed notes and maps of the location of observed Swainson's hawk nests are essential for filling gaps in the Natural Diversity Data Base; please report all observed nest sites. Also document the occurrence of nesting great homed owls, red-tailed hawks, red-shouldered hawks and other potentially competitive species. These species will infrequently nest within 100 yards of each other, so the presence of one species will not necessarily exclude another.

TIMING

To meet **the minimum level** of protection for the species, surveys should be completed for **at least** the two survey periods immediately prior to a project's initiation. For example, if a project is scheduled to begin on June 20, you should complete 3 surveys in Period III and 3 surveys in Period V. However, it is always recommended that surveys be completed in Periods II, III and V. **Surveys should not be conducted in Period IV.**

The survey periods are defined by the timing of migration, courtship, and nesting in a "typical" year for the majority of Swainson's hawks from San Joaquin County to Northern Yolo County. Dates should be adjusted in consideration of early and late nesting seasons, and geographic differences (northern nesters tend to nest slightly later, etc). If you are not sure, contact a TAC member or CDFG biologist.

Survey dates **Justification and search image**	**Survey time**	**Number of Surveys**
I. *January-March 20 (recommended optional)*	*All day*	*1*

Prior to Swainson's hawks returning, it may be helpful to survey the project site to determine potential nest locations. Most nests are easily observed from relatively long distances, giving the surveyor the opportunity to identify potential nest sites, as well as becoming familiar with the project area. It also gives the surveyor the opportunity to locate and map competing species nest sites such as great homed owls from February on, and red-tailed hawks from March on. After March 1, surveyors are likely to observe Swainson's hawks staging in traditional nest territories.

II. *March 20 to April 5*	*Sunrise to 1000* *1600 to sunset*	*3*

Most Central Valley Swainson's hawks return by April 1, and immediately begin occupying their traditional nest territories. For those few that do not return by April 1, there are often hawks ("floaters") that act as place-holders in traditional nest sites; they are birds that do not have mates, but temporarily attach themselves to traditional territories and/or one of the site's "owners." Floaters are usually displaced by the territories' owner(s) if the owner returns.

Most trees are leafless and are relatively transparent; it is easy to observe old nests, staging birds, and competing species. The hawks are usually in their territories during the survey hours, but typically soaring and foraging in the mid-day hours. Swainson's hawks may often be observed involved in territorial and courtship displays, and circling the nest territory. Potential nest sites identified by the observation of staging Swainson's hawks will usually be active territories during that season, although the pair may not successfully nest/reproduce that year.

III. *April 5 to April 20*	*Sunrise to 1200* *1630 to Sunset*	***3***

Although trees are much less transparent at this time, 'activity at the nest site increases significantly. Both males and females are actively nest building, visiting their selected site frequently. Territorial and courtship displays are increased, as is copulation. The birds tend to vocalize often, and nest locations are most easily identified. This period may require a great deal of "sit and watch" surveying.

IV. *April 21 to June 10*	*Monitoring known nest sites only* ***Initiating Surveys is not recommended***	

Nests are extremely difficult to locate this time of year, and even the most experienced surveyor will miss them, especially if the previous surveys have not been done. During this phase of nesting, the female Swainson's hawk is in brood position, very low in the nest, laying eggs, incubating, or protecting the newly hatched and vulnerable chicks; her head may or may not be visible. Nests are often well-hidden, built into heavily vegetated sections of trees or in clumps of mistletoe, making them all but invisible. Trees are usually not viewable from all angles, which may make nest observation impossible.

Following the male to the nest may be the only method to locate it, and the male will spend hours away from the nest foraging, soaring, and will generally avoid drawing attention to the nest site. Even if the observer is fortunate enough to see a male returning with food for the female, if the female determines it is not safe she will not call the male in, and he will not approach the nest; this may happen if the observer, or others, are too close to the nest or if other threats, such as rival hawks, are apparent to the female or male.

V. ***June 10 to JuIy 30 (post-fledging)*** ***Sunrise to 1200*** ***3***
1600 to sunset

Young are active and visible, and relatively safe without parental protection. Both adults make numerous trips to the nest and are often soaring above, or perched near or on the nest tree. The location and construction of the nest may still limit visibility of the nest, young, ‘and adults.

DETERMINING A PROJECT'S POTENTIAL
FOR IMPACTING SWAINSON'S HAWKS

LEVEL OF RISK	REPRODUCTIVE SUCCESS (Individuals)	LONGTERM SURVIVABILITY (Population)	NORMAL SITE CHARACTERISTICS (Daily Average)	NEST MONI-TORING
HIGH	Direct physical contact with the nest tree while the birds are on eggs or protecting young. (Helicopters in close proximity)	Loss of available foraging area.	Little human-created noise, little human use: nest is well away from dwellings, equipment yards, human access areas, etc. *Do not include general cultivation practices in evaluation.*	**MORE**
		Loss of nest trees.		
	Loss of nest tree after nest building is begun prior to laying eggs.	Loss of potential nest trees.		
	Personnel within 50 yards of nest tree (out of vehicles) for extended periods while birds are on eggs or protecting young that are < 10 days old.	Cumulative: Multi-year, multi-site projects with substantial noise/personnel disturbance.		
	Initiating construction activities (machinery and personnel) within 200 yards of the nest after eggs are laid and before young are > 10 days old.	Cumulative: Single-season projects with substantial noise/personnel disturbance that is greater than or significantly different from the daily norm.		
	Heavy machinery only working within 50 yards of nest.		Substantial human-created noise and occurrence: nest is near roadways, well-used waterways, active airstrips, areas that have high human use. *Do not include general cultivation practices in evaluation.*	
	Initiating construction activities within 200 yards of nest before nest building begins or after young > 10 days old.	Cumulative: Single-season projects with activities that "blend" well with site's "normal' activities.		
LOW	All project activities (personnel and machinery) greater than 200 yards from nest.			**LESS**

APPENDIX 3

CNDDB Report for Swainson's Hawks in Los Angeles County

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status

Federal: None
State: Threatened

NDDB Element Ranks

Global: G5
State: S2

Other Lists

CDFG Status:

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 7 **Map Index:** 02503 **EO Index:** 27302

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen

Element: 1979-05-15
Site: 1979-05-15

Record Last Updated: 2003-08-06

Quad Summary: Alpine Butte (3411768/160B)

County Summary: Los Angeles

Lat/Long: 34.66692º / -117.89701º
UTM: Zone-11 N3836472 E417814
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile

Township: 07N
Range: 10W
Section: 25 **Qtr:** SW
Meridian: S
Elevation: 2,500 ft

Location: 0.5 MILE SOUTH OF THE JUNCTION OF AVENUE K & 130TH STREET EAST, EAST OF LANCASTER

Location Detail: NEST TREE LOCATED 75 YARDS EAST OFF OF A DIRT ROAD.

Ecological: NEST TREE IS A JOSHUA TREE.

Threat:

General: DFG SWHA #LA001. ONE ADULT OBSERVED AT THE NEST ON 15 MAY 1979; FORAGING OBSERVED IN SEC 25 AND 26.

Owner/Manager: PVT

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:**
State: Threatened	**State:** S2	

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 800 **Map Index:** 42305 **EO Index:** 42305

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1999-07-06
Site: 1999-07-06

Record Last Updated: 2000-05-10

Quad Summary: Lancaster East (3411861/161A)

County Summary: Los Angeles

Lat/Long: 34.70507º / -118.03269º
UTM: Zone-11 N3840822 E405426
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Area:

Township: 07N
Range: 11W
Section: 10 **Qtr:** XX
Meridian: S
Elevation: 2,400 ft

Location: ALONG AVENUE I, EAST OF 50TH STREET EAST, ANTELOPE VALLEY, 4 MILES EAST OF LANCASTER.

Location Detail: RANCH HOUSE LOCATED DIRECTLY ACROSS THE STREET.

Ecological: NEST TREE IS A LOCUST, SURROUNDED BY AGRICULTURAL FIELDS.

Threat:

General: NEST DISCOVERED ON 5 MAY 1996. 2 ADULTS AND 2 YOUNG OBSERVED AT THE NEST ON 4 JUL 1996. ADULT OBSERVED ON THE NEST ON 6 JUL 1999.

Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk **Element Code:** ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 801 **Map Index:** 42483 **EO Index:** 42483
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1999-06-09
Site: 1999-06-09
Record Last Updated: 2000-03-02

Quad Summary: Alpine Butte (3411768/160B)
County Summary: Los Angeles

Lat/Long: 34.70473º / -117.91643º
UTM: Zone-11 N3840681 E416073
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 3/5 mile

Township: 07N
Range: 10W
Section: 14 **Qtr:** XX
Meridian: S
Elevation: 2,440 ft

Location: AVENUE I EAST AT 120TH STREET EAST, ANTELOPE VALLEY, EAST OF PALMDALE
Location Detail:
Ecological: HABITAT CONSISTS OF AGRICULTURAL FIELDS.
Threat:
General: ADULT OBSERVED DISPLAYING AGITATED BEHAVIOR ON 18 MAY 1999, AND AN ADULT OBSERVED NEAR THE SAME AREA ON 9 JUN 1999; NESTING PRESUMED, BUT EXACT NEST TREE LOCATION NOT KNOWN.
Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk **Element Code:** ABNKC19070

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:**
State: Threatened	**State:** S2	

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 803 **Map Index:** 42486 **EO Index:** 42486

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1999-07-01
Site: 1999-07-01

Record Last Updated: 2000-03-02

Quad Summary: Little Buttes (3411873/187D)

County Summary: Kern, Los Angeles

Lat/Long: 34.81815º / -118.31677º
UTM: Zone-11 N3853667 E379573
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 2/5 mile

Township: 08N
Range: 14W
Section: 01 **Qtr:** XX
Meridian: S
Elevation: 2,400 ft

Location: SOUTH OF AVENUE A, APPROXIMATELY 1.5 MILES WEST OF 90TH STREET WEST, ANTELOPE VALLEY

Location Detail:

Ecological: HABITAT CONSISTS OF OLD, FALLOW AGRICULTURAL FIELDS, OVERGROWN WITH RUDERAL VEGETATION.

Threat:

General: ON 1 JUL 1999, A PAIR OF BIRDS EXHIBITED AGITATION NEAR A PRESUMED NEST TREE, AND ONE BIRD KEPT FLYING INTO A DENSE PORTION OF THE TREE, WHICH APPEARED TO CONTAIN A NEST.

Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk **Element Code:** ABNKC19070

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:**
State: Threatened	**State:** S2	

Habitat Associations

General: BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 1467 **Map Index:** 62421 **EO Index:** 62458

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2005-06-16
Site: 2005-06-16

Record Last Updated: 2005-08-29

Quad Summary: Redman (3411778/185C)

County Summary: Los Angeles

Lat/Long: 34.75685º / -117.97878º
UTM: Zone-11 N3846516 E410418
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Township: 08N
Range: 10W
Section: 30 **Qtr:** XX
Meridian: S
Elevation: 2,350 ft

Location: NORTH SIDE OF AVENUE E-8, 0.5 MILE WEST OF 90TH STREET EAST, SW OF REDMAN

Location Detail:

Ecological: NEST WAS LOCATED WITHIN A ROW OF NEARLY DEAD TREES ON THE NORTH SIDE OF AVENUE E-8.

Threat: THREATENED BY HUMAN ACTIVITY.

General: ON 16 JUN 2005, 1 ADULT WAS OBSERVED PERCHED ON NEST, WHILE SECOND ADULT PERCHED AND FLEW EXHIBITING DEFENSIVE BEHAVIOR.

Owner/Manager: UNKNOWN

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

In the Matter of: **APPLICATION FOR CERTIFICATION for the *PALMDALE HYBRID POWER PROJECT***	**Docket No. 08-AFC-9** **PROOF OF SERVICE** ***(Revised 7/30/2009)***

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DECLARATION OF SERVICE

I, Sara Head, declare that on, August 27, 2009, I served and filed copies of the attached **Palmdale Hybrid Power Project: Final Swainson's Hawk Nesting Survey Report**. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: **[http://www.energy.ca.gov/sitingcases/palmdale/index.html]**.

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(***Check all that Apply***)

For service to all other parties:

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

__X__ by depositing in the United States mail at Camarillo, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

_X__ sending an original and 12 paper copies and one electronic copy, mailed and emailed respectively, to the address below (preferred method);

OR

___ depositing in the mail an original and 12 paper copies as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-9
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.