

Appendix F
Biological Resources

Appendix F-1
CNDDDB Database

**APPENDIX F-1
CNDDDB DATABASE**

State of California
Department of Fish and Game
California Natural Diversity Database
January 2012 Version

Scientific Name	Common Name	Element Code	Federal Status	State Status	G Rank	S Rank	CNPS
Birds							
<i>Plegadis chihi</i>	white-faced ibis	ABNGE02020	None	None	G5	S1	
<i>Dendrocygna bicolor</i>	fulvous whistling-duck	ABNJB01010	None	None	G5	S1	
<i>Elanus leucurus</i>	white-tailed kite	ABNKC06010	None	None	G5	S3	
<i>Buteo swainsoni</i>	Swainson's hawk	ABNKC19070	None	Threatened	G5	S2	
<i>Falco mexicanus</i>	prairie falcon	ABNKD06090	None	None	G5	S3	
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	ABNNB03031	Threatened	None	G4T3	S2	
<i>Charadrius montanus</i>	mountain plover	ABNNB03100	Proposed Threatened	None	G2	S2?	
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	ABNRB02022	Candidate	Endangered	G5T3Q	S1	
<i>Athene cunicularia</i>	burrowing owl	ABNSB10010	None	None	G4	S2	
<i>Eremophila alpestris actia</i>	California horned lark	ABPAT02011	None	None	G5T3Q	S3	
<i>Toxostoma lecontei</i>	Le Conte's thrasher	ABPBK06100	None	None	G3	S3	
<i>Lanius ludovicianus</i>	loggerhead shrike	ABPBR01030	None	None	G4	S4	
<i>Agelaius tricolor</i>	tricolored blackbird	ABPBXB0020	None	None	G2G3	S2	
<i>Agelaius tricolor</i>	tricolored blackbird	ABPBXB0020	None	None	G2G3	S2	
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	ABPBXB3010	None	None	G5	S3S4	
Mammals							
<i>Sorex ornatus relictus</i>	Buena Vista Lake shrew	AMABA01102	Endangered	None	G5T1	S1	
<i>Eumops perotis californicus</i>	western mastiff bat	AMACD02011	None	None	G5T4	S3?	
<i>Ammospermophilus nelsoni</i>	Nelson's antelope squirrel	AMAFB04040	None	Threatened	G2	S2	
<i>Perognathus inornatus inornatus</i>	San Joaquin pocket mouse	AMAFD01061	None	None	G4T2T3	S2S3	
<i>Dipodomys ingens</i>	giant kangaroo rat	AMAFD03080	Endangered	Endangered	G2	S2	
<i>Dipodomys nitratooides nitratooides</i>	Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	G3T1	S1	
<i>Dipodomys nitratooides brevinasus</i>	short-nosed kangaroo rat	AMAFD03153	None	None	G3T1T2	S1S2	
<i>Onychomys torridus tularensis</i>	Tulare grasshopper mouse	AMAFF06021	None	None	G5T1T2	S1S2	
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2T3	S2S3	
<i>Taxidea taxus</i>	American badger	AMAJF04010	None	None	G5	S4	

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Reptiles							
<i>Emys marmorata</i>	western pond turtle	ARAAD02030	None	None	G3G4	S3	
<i>Gambelia sila</i>	blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	G1	S1	
<i>Phrynosoma blainvillii</i>	coast horned lizard	ARACF12100	None	None	G4G5	S3S4	
<i>Masticophis flagellum ruddocki</i>	San Joaquin whipsnake	ARADB21021	None	None	G5T2T3	S2?	
<i>Thamnophis gigas</i>	giant garter snake	ARADB36150	Threatened	Threatened	G2G3	S2S3	
Habitats							
<i>Valley Saltbush Scrub</i>	Valley Saltbush Scrub	CTT36220CA	None	None	G2	S2.1	
<i>Valley Sacaton Grassland</i>	Valley Sacaton Grassland	CTT42120CA	None	None	G1	S1.1	
<i>Alkali Seep</i>	Alkali Seep	CTT45320CA	None	None	G3	S2.1	
<i>Great Valley Cottonwood Riparian Forest</i>	Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	G2	S2.1	
<i>Great Valley Mesquite Scrub</i>	Great Valley Mesquite Scrub	CTT63420CA	None	None	G1	S1.1	
Singular Insect							
<i>Protodufourea zavortinki</i>	Zavortink's protodufourea bee	IIHYM77020	None	None	G1	S1	
Plants							
<i>Cirsium crassicaule</i>	slough thistle	PDAST2E0U0	None	None	G2	S2.2	1B.1
<i>Madia radiata</i>	showy golden madia	PDAST650E0	None	None	G2	S2.1	1B.1
<i>Stylocline citroleum</i>	oil neststraw	PDAST8Y070	None	None	G2	S2	1B.1
<i>Stylocline masonii</i>	Mason's neststraw	PDAST8Y080	None	None	G1	S1.1	1B.1
<i>Monolopia congdonii</i>	San Joaquin woollythreads	PDASTA8010	Endangered	None	G3	S3	1B.2
<i>Caulanthus californicus</i>	California jewel-flower	PDBRA31010	Endangered	Endangered	G1	S1	1B.1
<i>Atriplex cordulata</i>	heartscale	PDCH040B0	None	None	G2?	S2.2?	1B.2
<i>Atriplex coronata var. vallicola</i>	Lost Hills crownscale	PDCH04250	None	None	G4T2	S2	1B.2
<i>Atriplex minuscula</i>	lesser saltscale	PDCH042M0	None	None	G1	S1.1	1B.1
<i>Atriplex subtilis</i>	subtle orache	PDCH042T0	None	None	G2	S2.2	1B.2
<i>Astragalus hornii var. hornii</i>	Horn's milk-vetch	PDFAB0F421	None	None	G4G5T2T3	S1	1B.1
<i>Eremalche kernensis</i>	Kern mallow	PDMAL0C031	Endangered	None	G3?T1Q	S1	1B.1
<i>Eschscholzia lemmonii ssp. kernensis</i>	Tejon poppy	PDPAP0A071	None	None	G5T1	S1.1	1B.1
<i>Eriastrum hooveri</i>	Hoover's eriastrum	PDPLM03070	Delisted	None	G3	S3.2	4.2
<i>Delphinium recurvatum</i>	recurved larkspur	PDRAN0B1J0	None	None	G3	S3	1B.2
<i>Calochortus striatus</i>	alkali mariposa-lily	PMLIL0D190	None	None	G2	S2	1B.2

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1: Global Ranking

- G1= Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factor:
- G2= Imperiled—At high risk of extinction or elimination due to very restricted range, very few populations, steep declines, or other factor:
- G3= Vulnerable—At moderate risk of extinction or elimination due to a restricted range, relatively few populations, recent and widespread declines, or other factor:
- G4= Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors
- G5= Secure—Common; widespread and abundant.

T#= Intraspecific Taxon (trinomial)—The status of intraspecific taxa (subspecies or varieties) are indicated by :
 "T-rank" following the species' global rank. Rules for assigning T-ranks follow the same principle:
 outlined above. For example, the global rank of a critically imperiled subspecies of an otherwise
 widespread and common species would be G5T1. A T subrank cannot imply the subspecies or variety is
 more abundant than the species . For example, a G1T2 subrank should not occur. A vertebrate animal
 population, (e.g., listed under the U.S. Endangered Species Act or assigned candidate status) may be
 tracked as an intraspecific taxon and given a T-rank; in such cases a Q is used after the T-rank to denote the
 taxon's informal taxonomic status.

2: Subnational Ranking

- S1= Critically Imperiled— Critically imperiled in the jurisdiction because of extreme rarity or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the jurisdiction.
- S2= Imperiled— Imperiled in the jurisdiction because of rarity due to very restricted range, very few populations, steep declines, or other factors making it very vulnerable to extirpation from jurisdiction.
- S3= Vulnerable— Vulnerable in the jurisdiction due to a restricted range, relatively few populations, recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4= Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors
- S5= Secure— Common, widespread, and abundant in the jurisdiction.

- CNPS
- 1 Seriously endangered in California
 - 1B Plants that are rare or endangered in California and elsewhere
 - 2 Fairly endangered in California
 - 3 Not very endangered in California
 - 4 Plants that have limited distribution in California

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Appendix F-2

Waters of the U.S.

(Submitted Separately Under the Rules of Confidentiality)

Appendix F-3

Resumes

Name	Education	Experience	Expertise
Alyssa Berry	B.A. Earth and Environmental Studies, Wesleyan University	3 years	Plant and wildlife surveys
Andy Evans	B.S. Geological Sciences, UCSB	2 years	Blunt-nosed leopard-lizard surveys
Chris Julian	B.S. Biology, UCSB	10 years	Wetland regulatory sciences, clean water act regulation
Cletis England	B.S. Ecology and Systematic Biology, California Polytechnic, San Luis Obispo	11 years	Ecologist
David Compton	M.A. U.S. History, Marquette University	11 years	General biology, BNLL
David Kisner	M.S., Ecology, San Diego State University	19 years	Plant and wildlife surveys
Gilda Barboza	B.A. Geography and Environmental Studies/International Development Studies, UCLA	6 years	Section 7 consultation, rare plant and wildlife surveys
Jamie Deutsch	B.S. Forestry, California Polytechnic, San Luis Obispo	4 years	Plant and wildlife surveys
Jan Novak	B.S. Soils Science, California Polytechnic, San Luis Obispo	11 years	Clean Water Act regulations, wetland delineations
Jane Donaldson	B.S. Biological Sciences, California Polytechnic, San Luis Obispo	15 years	Sensitive species monitoring; botany
Jessica Birnbaum	M.S. Natural resources; Planning and Interpretation, Humboldt State University	7 years	Botany, BNLL surveys, habitat assessment.
Johanna Kisner	M.S. Environmental Science and Management, UCSB	11 years	Botany, wetland delineation.
Jolie Henricks	B.S. Wildlife and Fisheries, UC Davis	8 years	Wildlife biology, GIS analysis
Kate Eldredge	B.S. Biology, California State University, Bakersfield	21 years	Plant and wildlife surveys, BNLL
Kelly Kephart	B.S. Forestry, California Polytechnic, San Luis Obispo	6 years	Botany, wetland delineation, rare plant surveys
Mark Wilson	B.A., Environmental Studies, Saint Mary's College of	3 years	Biology/Conservation Biology, Biological

Name	Education	Experience	Expertise
	California		Monitoring, Habitat Assessments
Melissa Newman	M.S. Biology, UC San Diego	6 years	Wildlife biology surveys, habitat assessment, environmental impact analysis, ESA
Robin Murray	B.S. Botany, Humboldt State University	3 years	Botany, BNLL
Ronald Cummings	B.S. General Biology, Oregon State University	22 years	General biology, BNLL
Steve Zembsch	B.S., Soil Resource Management, UC Berkeley	31 years	Stream Restoration, Wetland Mitigation/Creation, Revegetation/Pest Species Eradication
Wayne Vogler	B.S., Biological Sciences, UC Irvine	12 years	Biological surveys, BNLL



Alyssa J. Berry

Staff Biologist

Areas of Expertise

Monitoring Threatened and Endangered
Amphibians of California
Wildlife Surveys
Habitat Restoration

Years of Experience

With URS: >1 Year
With Other Firms: 2 Years

Education

BA/Earth and Environmental Science/
2004/Wesleyan University, CT
Course Work in Animal Diversity,
Ornithology at Santa Barbara City
College/2006

Overview

Mrs. Berry is a field biologist with over three years of experience monitoring California Threatened and Endangered species and restoring native habitat. Alyssa's survey work has covered areas of the central coast, the high desert region of Northern California, and Mojave desert, focusing on California red-legged frogs and arroyo toads in the Los Padres National Forest, the Northern spotted owl in the Klamath National Forest and desert tortoise in Johnson Valley. Her conservation efforts have included ecological restoration, concentrating on the re-vegetation of disturbed habitat with genetically local, native plant species. Alyssa has propagated site-specific grassland, chaparral, riparian and coastal dune species for ecological restoration. She has aided in the design and installation of several restoration sites. More recently Alyssa has expanded her herpetological survey experience to include blunt-nosed leopard lizard and California tiger salamander.

Project Specific Experience

Wildlife Experience

California Tiger Salamander (*Ambystoma californiense*)

Santa Maria, CA – Under the supervision of Tom Olson and authorization of his recovery permit, visually evaluated burrows with a scope to determine presence of California tiger salamanders and hand excavated vacant burrows to prevent future use. Perform daily early morning clearance surveys to detect California tiger salamanders prior to construction activities, from March 2008 to present.

Blunt-Nosed Leopard Lizard (*Gambelia sila*)

Four positive identifications under supervision of a Level II surveyor

- California Valley, CA – Surveyed for blunt-nosed leopard lizards using the CA Department of Fish and Game Protocol.
- Belridge, CA – Surveyed for blunt-nosed leopard lizards using the CA Department of Fish and Game Protocol. Identified blunt-nosed leopard lizards at a reference site.
- Coalinga, CA – Surveyed for blunt-nosed leopard lizards using the CA Department of Fish and Game Protocol.

Desert Tortoise (*Gopherus agassizii*)

Over 16 hours of positive contact

- Attended the Desert Tortoise Council's Introduction to surveying, monitoring and handling techniques workshop.
- Conducted USFWS Protocol surveys for DT in Johnson Valley, CA.

California Red-legged Frog (*Rana aurora draytonii*)

Over 50 hours of positive contact

- Construction monitoring and relocation of California red-legged frogs for the Winchester Canyon Road Culvert Repair Project, Santa Barbara County, CA. Relocation authorization given by USFWS biologist, Chris Dellith.
- Biology and Management of California red-legged frog Workshop, Elkhorn Slough National Estuarine Research Reserve, Instructors, Galen Rathbun and Norman Scott.
- Santa Maria, CA – Morning eye-shine surveys to clear soil remediation site. Qualifications approved by USFWS biologist, Chris Dellith.
- Guadalupe, CA – Evening eye-shine surveys to monitor presence/absence of CRLF in newly created wetlands within the Guadalupe Soil Remediation site.
- Los Padres National Forest, Santa Barbara, CA – Surveyed for California red-legged frog egg masses, tadpoles, sub-adults and adults. Captured all life stages to measure morphological characteristics. Used Garmin GPS waypoints to map locations of individuals and areas of critical, potential and unsuitable habitat. Performed night surveys to monitor for breeding individuals, using eye-shine techniques.

Arroyo Toad (*Bufo californicus*)

Over 30 hours of positive contact

- Los Padres National Forest, Santa Barbara, CA – Surveyed for Arroyo toad egg strings, tadpoles, sub-adults and adults. Captured all life stages to measure morphological characteristics. Used Garmin GPS waypoints to map locations of individuals and areas of critical, potential and unsuitable habitat. Performed night surveys to monitor for breeding individuals, using eye-shine techniques.

Small Mammal Trapping

- California Valley, CA – Processed small mammal traps, capturing San Joaquin pocket mice (*Perognathus inornatus*), under the permit and training of Curtis Uptain.
- California Valley, CA – Under the permit and training of Paul Collins, curator of Santa Barbara Natural History Museum, baited Sherman's traps and processed small mammals, including San Joaquin pocket mouse, California pocket mouse (*Chaetodipus californicus*) and Heermann's kangaroo rat (*Dipodomys heermanni*).
- Guadalupe Dunes, CA – Processed small mammals under the supervision of Jane Donaldson, including California pocket mouse and Heermann's kangaroo rat.



Northern Goshawk (*Accipiter gentilis*)

5 hours of positive contact

- Klamath National Forest – Performed transect surveys while playing recorded vocalizations to solicit a response from Northern goshawks. Performed nest searches.

Swainson's Hawk (*Buteo swainsonii*)

20 hours of positive contact

- Macdoel, CA – Performed nest searches to locate Swainson's hawk fledglings and pairs. Banded individuals and recorded band numbers of previously banded individuals.

Habitat Restoration Experience

- Developed a restoration plan for six wetland pools designed for California red-legged frogs, California tiger salamanders and Western spadefoot toads, including specification for plant species to be planted, monitoring and maintenance procedures and irrigation at the Casmalia Landfill, CA.
- Conducted annual vegetation transect monitoring to measure plant cover and diversity of restoration sites.
- Composed annual restoration monitoring reports for the Santa Barbara Airport wetland restoration. Analysis included percent native and non-native cover, percent survival and percent cover by species.
- Assisted in the restoration of tidal wetlands at the Santa Barbara Airport by collecting local, California native plant seed and propagating native plants for re-vegetation.
- Assisted in restoration of disturbed coastal dunes by collecting genetically local, native plant seed.
- Assisted in the bluff's restoration at Nicholas Canyon State Park, Malibu by in-planting 2,000 native plants.
- Assisted in restoration of the Santa Barbara County landfill by installing irrigation systems, planning and planting 1,000 California native plants.
- Removed invasive weeds, including tamarisk, yellow/purple star-thistle and pampas grass from the Los Padres National Forest.

Vegetation Survey Experience

- Orcutt, CA – Created vegetation community maps using the Sawyer and Keeler-Wolfe, Rapid Assessment method for over 1400 acres of oil field property.
- Bakersfield, CA – Conducted a rare plant survey along a pipeline linear to document sensitive plant species prior to pipeline removal.
- Orcutt, CA – Conducted rare plant surveys throughout the Careaga oil field lease to document sensitive plant species within the property. Generated a report including maps of the observed species and recommendations for avoidance and conservation of identified species.



- San Bernardino NF, CA – Conducted vegetation surveys to map the presence/absence of the invasive weed, *Arrundo donax* along river channels.
- Los Padres NF, Santa Barbara District, CA – Conducted vegetation surveys to map the presence/absence of yellow star thistle.
- Los Padres NF, Santa Barbara District, CA – Conducted rare plant presence/absence surveys for the Santa Ynez false-lupine (*Thermopsis macrophylla* var. *angina*), Late-flowered mariposa lily (*Calochortus weedii* var. *vestus*) and the Refugio Manzanita (*Arctostaphylos refugioensis*).

Specialized Training

HAZWOPER Annual Refresher
June 2008

Loss Prevention System
August 2007

Smith Systems Driver Training
June 2007

First Aid/CPR/AED
December 2007

Contact Information

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Andrew Evans

Staff Scientist

Areas of Expertise

Structural Geology
Geomorphology
Petroleum Geology
Geologic Mapping & Field Methods
Geophysics
Sedimentary & Igneous Petrology

Years of Experience

With URS: 2 Years

Education

BS/Geological
Sciences/2007/University of
California, Santa Barbara

Registration/Certification

2008/California Geologist in Training
(GIT)

Overview

Mr. Andrew Evans is a staff geologist with experience in various aspects environmental consulting and remediation projects. His field experience includes soil classification, boring and trench logging, environmental sampling, and biological surveying. He has operational experience with basic air monitoring devices (PID, 5 gas monitors) and Tremble hand held GPS devices. He has assisted with the preparation of field assessment work plans and assessment reports related to a variety of oil field remediation projects. He has also assisted with various project management and project preparation activities such as historical research, permitting, Health and Safety plans, and project planning.

Awards

Edwin V. Van Amringe Scholarship (PCC), Miller Scholarship (PCC), Robert M. Norris Award in Field Geology (UCSB), Outstanding Graduating Senior Award (UCSB), Outstanding Academic Achievement Award (UCSB), Webb Award (UCSB)

Experience

Environmental Assessment

- ❖ Performed site assessment activities at a former oil-facility in East Cat Canyon, Santa Barbara County, California. Portions of the site were within a California Tiger Salamander Habitat. Directed excavation activities, site controls and collected soil samples. The assessment work was performed under permit with the County of Santa Barbara.
- ❖ Participated in environmental sampling for an ecological risk assessment at a former hazardous waste disposal facility.
- ❖ Assisted with the installation of wells and set up of soil vapor extraction system at a former oil-facility.

Blunt-nosed Leopard Lizard surveys

- ❖ California Valley Reference Site: Under the direction of a Level II surveyor, observed juvenile blunt-nosed leopard lizard in the wild.
- ❖ Elk Hills Project Site: Assisted with four surveys in 2009 – no blunt-nosed leopard lizards were detected.
- ❖ California Valley Project Site: Assisted with 28 surveys in 2009 – no blunt nosed leopard lizards were detected.



Christopher Julian

Project Biologist, Regulatory Specialist

Areas of Expertise

Multidisciplinary Project Management
CEQA/NEPA Environmental Analysis
Caltrans Natural Environment Studies
Section 404/1600 Permitting
Delineation of Streams and Wetlands
Wetlands Functional Assessment
404(b)(1) Alternatives Analysis
Section 7 Consultation
CESA Incidental Take Permitting
Stream Ecology and Bioassessment
Environmental Compliance Monitoring
Protocol Surveys for Plant and Wildlife
Species

Years of Experience

With URS: 8 Years
With Other Firms: 2 Years

Education

BS/Biology/2001/University of
California, Santa Barbara

Overview

Mr. Julian manages the Biological Services group at URS Santa Barbara, and has over ten years of postgraduate work experience as an environmental consultant, including six years as an interdisciplinary project manager. His technical emphases include environmental analyses under NEPA and CEQA, all aspects of state (California) and federal stream and wetlands permitting (including agency coordination and negotiations, jurisdictional determination, wetlands functional assessment, and 404(b)(1) analysis), and endangered species permitting. He has effectively assisted clients with designing projects to ensure compliance with agency regulations, and has managed and prepared highly complex CEQA, NEPA, and ESA documents. Mr. Julian also has an extensive stream ecology background, encompassing lake and stream bioassessments, surveys for common and special-status aquatic wildlife species, and mapping of aquatic habitats.

Project Specific Experience

Jurisdictional Delineation/Permitting Experience

Newhall Ranch Resource Management and Development Plan, Santa Clarita Valley, Ca: Managed delineation of all Corps-jurisdictional waters of the U.S., including wetlands, and CDFG-jurisdictional streambeds within the 12,000 acre Newhall Ranch site in the Santa Clarita Valley, California. All jurisdictional features were delineated in the field using a GPS unit capable of sub-meter accuracy, and nearly 100 wetland delineation data forms were completed. The results of the delineation were provided to the Corps and CDFG, and both agencies concurred with the delineated boundaries, which were utilized as the environmental baseline during environmental analysis of comprehensive permitting proposals on the site. Mr. Julian also prepared a Section 404(b)(1) alternatives analysis for this complex project.

California High Speed Train, Fresno-Bakersfield and Bakersfield-Palmdale Segments: Worked with and oversaw a crew of URS wetland scientists delineating all waters of the U.S., including wetlands, and CDFG-jurisdictional streambeds located along several alternative proposed high-speed rail alignments between Fresno and Bakersfield in California's Central Valley and between Bakersfield and Palmdale in the Tehachapi Mountains and Mojave Desert. All jurisdictional features were delineated in the field using a GPS unit capable of sub-meter accuracy, and the study conformed to the latest regulatory guidance, including the Arid West Regional Supplement to the Wetland Delineation Manual, and the Corps/USEPA's joint Rapanos Guidance Memorandum.



West Goleta Slough Enhancement and Restoration Project: Prepared permit application and supporting materials for the U.S. Army Corps of Engineers, the Central Coast Regional Water Quality Control Board, the California Department of Fish and Game, and the California Coastal Commission in support of a wetland restoration project in Santa Barbara County, California. The project aimed to restore tidal circulation to two vacant parcels within the Goleta Slough ecosystem that had been hydrologically isolated by construction of manmade berms. Key issues of concern included presence of listed species and adverse temporary impacts that would occur during project implementation.

Los Angeles Mission College Athletic Fields Project: Prepared and submitted permit application materials to the U.S. Army Corps of Engineers, the Los Angeles Regional Water Quality Control Board, and the California Department of Fish and Game in support of bank stabilization and storm drain outlets associated with expanding a collegiate athletics complex. Key issues on the project included presence of least Bell's vireo and in-stream sediment management, as well as the nature and extent of mitigation.

Marine Corps Base Camp Pendleton Infrastructure Improvement Projects: Was responsible for senior technical review of permit applications and supporting materials submitted to the U.S. Army Corps of Engineers and San Diego Regional Water Quality Control Board for two projects (P-1093 and P-1094) seeking to improve aging electrical, telecommunications, water, wastewater, and natural gas distribution infrastructure within Marine Corps Base Camp Pendleton in San Diego County, California. Key issues on the project included presence of listed species, including spreading navarretia, San Diego button celery, least Bell's vireo, southwestern willow flycatcher, tidewater goby, arroyo toad, California gnatcatcher, yellow-billed cuckoo, and two fairy shrimp taxa.

Ellwood Pump Station Removal Project: Prepared and submitted permit applications to the California Department of Fish and Game seeking authorization to remove an abandoned pump station structure from the bank of the Kern River in Kern County, California. Key issues on the project included avoidance of sensitive resources, including riparian vegetation, as well as safety concerns due to the site's location in an active oil field. Because the project was designed to avoid the need for grading and placement of fill material, a letter to the U.S. Army Corps of Engineers was composed, informing the Corps of the project and seeking concurrence with the opinion that Section 404 Permit was not required.

Other Representative Jurisdictional Delineations

- Johnson Valley Solar Project: Corps waters and CDFG Streambeds



- California Valley Solar Ranch Project: Corps waters, Corps wetlands, and CDFG streambeds
- Edwards Air Force Base solar project: CDFG Streambeds
- Gaviota Creek Culvert Replacement: Corps wetlands, coastal wetlands
- Piru Creek Bank Protection: Corps waters, CDFG streambeds
- Castaic Creek in Valencia Commerce Center: CDFG streambeds

Wetlands Functional Assessment Experience

Newhall Ranch Resource Management and Development Plan, Santa Clarita Valley, Ca:

Worked with URS staff and representatives from the U.S. Army Corps of Engineers to develop and implement a hybrid functional assessment method suitable for assessing impacts of a comprehensive permitting endeavor along the Santa Clara River, California. The end result was a method based on a combination of three established methods (CRAM, HGM, and SAMP LLFA), which was robust and rigorous enough to meet the Corps' assessment needs yet flexible and qualitative enough to meet the cost and schedule limitations of the proposed project. The hybrid method was utilized to measure existing functional capacity within the project site, and a set of predictive assumptions was established to allow comparison of various post-project scenarios with the existing condition. The method developed by URS was one of the most valuable impact assessment tools used in assessing impacts of the proposed permitting project. To validate the method, Mr. Julian used the method to assess a set of reference-quality sites in the Santa Clara River watershed outside the project area, as well as a number of existing compensatory mitigation sites.

California High Speed Train, Fresno-Bakersfield Segment: Assessed the condition of jurisdictional waters, including wetlands, along several alternative high-speed rail alignments between Fresno and Bakersfield in California's Central Valley using the California Rapid Assessment Method (CRAM). The aquatic features assessed included individual vernal pools, vernal pool complexes, and depression wetlands located on the floor of the Central Valley, as well as riverine wetlands along the Kings River and Poso Creek. A certified CRAM instructor participated in the assessment.



Cletis England

Biologist/Ecologist

Overview

Mr. England is an ecologist with experience working with a variety of native habitats along the Central California coast. Cletis' experience ranges from site assessments of industrial and commercial sites to restoring and enhancing native habitats and erosion control projects. He has over ten years of professional experience including botanical surveys and mapping, habitat assessment, habitat restoration design, implementation, and monitoring, wetland determinations, wildlife surveys, construction compliance and monitoring, and GIS mapping. Cletis' project experience has included working with federal, state, and local agencies to find solutions to project constraints that meet the goals of several parties with conflicting interests to facilitate the successful completion of projects. Cletis has developed and instituted monitoring protocols, developed restoration plans, and has monitored multiple development projects.

Areas of Expertise

- Birds of the Western United States
- Site Assessment and Monitoring of Endangered Birds of California
- Habitat Assessment
- Wildlife Survey
- Botanical Assessment
- Permit Compliance
- Construction Monitoring

Years of Experience

With URS: 0.75 Years

With Other Firms: 10 Years

Education

B.S./Ecology and Systematic Ecology/2000/Cal Poly, San Luis Obispo

A.S./Biology/1994/Cuesta Community College

Registration/Certification

2002/Adult CPR and First Aid/CA

2002/Wilderness First Aid/CA

2002/National Safety Council

Defensive Driver Training/CA

Project-Specific Experience

Land Rehabilitation Coordinator, Fort Hunter Liggett, CA July 2006 – March 2008

Colorado State University, Fort Collins, Colorado

- Identified, evaluated and coordinated rehabilitation sites and erosion control projects
- Coordinated and oversaw implementation of long term revegetation plans and seasonal crews
- Researched methods to improve efficacy of various restoration projects and resources
- Coordinated with Environmental Division and Range Control Trainers
- Coordinated purchases and outsourcing for materials and subcontractors
- Identified and monitored invasive species treatment areas and appropriate control methods
- Collected and utilized native materials to augment rehabilitation efforts

Field Biologist/Project Manager Nov. 2004 – June 2006

Sierra Delta Corporation

- Prepared Biological Assessments
- Prepared and coordinated environmental regulatory permits and consultations for projects
- Designed and prepared Habitat Mitigation / Restoration Plans
- Coordinated, managed, and monitored restoration projects
- Coordinated purchases and outsourcing for materials and subcontractors
- Conducted target surveys for rare and sensitive plants and animals



Field Biologist March 2003 – Nov. 2004

Althouse and Meade, Inc.

- Prepared Biological Assessments
- Served as environmental monitor for residential and commercial developments
- Conducted State and Federal protocol surveys / Special Status Species habitat assessments
- Developed G.I.S. habitat maps and site plans for environmental planning
- Conducted salmonid habitat assessment and coordinated restoration projects
- Generated preliminary wetland descriptions
- Prepared and tracked CDFG, USACE and RWQCB permits and agency consultations
- Implemented erosion control plans and operated a hydro-seeder

Fish Habitat Biologist August 2002 – Nov. 2002

Hoopa Valley Tribal Fisheries Department

- Evaluated and monitored Coho salmon and anadromous fish habitat
- Supervised, trained, and evaluated technicians for multiple projects
- Analyzed and interpreted field data and prepared final reports
- Handled and assessed wild and hatchery fish at traps and weirs
- Prepared proposals and grant applications for project funding
- Conducted site reviews and biological monitoring of timber harvest plan areas
- Monitored sediment load and channel morphology to assess habitat changes
- Provided technical support, G.I.S. map generation, and document layout
- Investigated and prioritized stream reaches and uplands for enhancement projects
- Participated in Interdisciplinary Team for E.I.A. of timber management areas

Fish and Wildlife Scientific Aid May 2000 – July 2002

California Department of Fish and Game

- Trained and supervised aids in project survey protocols for the High Mountain Lakes Project
- Trained seasonal aids in wilderness orienteering and plotting with GPS.
- Coordinated excursions into wilderness areas including equip. and supplies
- Researched and assisted in preparing land management plans for ecological reserves
- Assisted in budgeting expenses and equipment purchases
- Documented aquatic/terrestrial habitat and morphology of lakes and streams
- Tagged and herded fish, planted eggs and hatchery fish, and assisted in electrofishing streams



- Conducted land and vegetation surveys and created G.I.S. layers for habitat management
- Assisted in timberlands resource assessment
- Coordinated and implemented endangered species identification and monitoring
- Procured bids and contracts with private firms for state projects

Fish and Wildlife Technician April 1998 – Dec. 1999

Camp Roberts Hunting and Fishing Program

- Collected, analyzed, and documented data on wildlife species
- Summarized data and wrote annual reports
- Operated pest removal project and water quality monitoring project
- Surveyed and monitored endangered species by radio telemetry, trapping, spotlighting, and mist netting
- Coordinated with military police and Fish and Game wardens to enforce military regulations and applicable laws, and issued hunting permits

Other Technical Experience

California Red-legged Frog

- Attended N.R.C.S. red-legged frog workshop at Pierdras Blancas Lighthouse, San Simeon, CA instructed by Norman Scott (2003)
- Conducted protocol surveys for red-legged frogs at over 20 sites from Monterey, San Luis Obispo, and Santa Barbara Counties
- Positively identified and observed over 30 adult, over 50 sub-adult red-legged frogs, and over 20 larvae
- Conducted pre-activity surveys and pre-construction training sessions for projects in red-legged frog habitat

Other Rare and Sensitive Amphibians and Reptiles

- Supervised and trained 6 Scientific Aides in protocol surveys for Mountain yellow-legged frog and Yosemite toad while working on the High Mountain Lakes Project for the California Department of Fish and Game
- Conducted protocol surveys, identified and observed 9 adult and multiple sub-adult mountain yellow-legged frogs and larvae in the Emigrant Wilderness while working for the California Department of Fish and Game
- Conducted protocol surveys, identified, and observed 3 adult and multiple Yosemite toad larvae
- Identified and observed over 300 foothill yellow-legged frog adults, sub-adults, and larvae while working on the North Coast Watershed Assessment Program for the California Department of Fish and Game
- Identified and observed two adult arboreal salamanders during a Biological Assessment of Santa Margarita Ranch, San Luis Obispo County, California
- Identified and observed over 100 California newts on various Biological Assessments conducted in San Luis Obispo County



- Identified and observed over 100 larvae and 3 adult spadefoot toads by visual observation, and hundreds of adults by acoustic observation during field work and Biological Assessments in San Luis Obispo County
- Identified and observed 3 two-striped racers during field work in Monterey and San Luis Obispo Counties.

San Joaquin Kit Fox

- Identified and observed one-collared fox at Camp Roberts National Guard Facility and two foxes encountered during various field surveys and Biological Assessments Experience includes spotlight surveys, burrow evaluations, and radio telemetry (Camp Roberts National Guard Facility, 1997-1999)

Burrowing Owl

- Identified and observed over 25 adult owls during baseline surveys for the proposed Palo Prieto Conservation Bank and other field work in San Luis Obispo County

Other Ornithological and Acoustics

- Instructed in the identification of birds by acoustics by Dr. Eric Johnson, California Polytechnic Institute, San Luis Obispo, California (1998)
- Conducted over 50 acoustic and visual surveys for migratory nesting birds
- Volunteered for mist-netting and banding for MAPS stations at Chorro Creek, San Luis Obispo County and Oso Flaco Lake, Guadalupe Dunes, Santa Barbara County

Rare Plants

Pismo Clarkia

- Identified, delineated, and assisted in the planning and protection of one distinct population during the planning phase of a residential development in Arroyo Grande, San Luis Obispo County, California
- Well's Manzanita
- Chorizanthe rectispina
- Brewer's spine flower
- Monardella frutescens

Coho Salmon and Steelhead

- Identified, handled, and assessed hundreds of adult, smolt, and fry on the Trinity River Humboldt County while working as a Fisheries Biologist for the Hoopa Valley Indian Tribe
- Identified and observed over 300 juvenile steelhead in San Luis Creek, San Luis Obispo County, California
- Identified and observed 5 adult steelhead in Chorro Creek, San Luis Obispo County while working in coordination with Dave Highland, Native Fish Habitat Biologist with the California Department of Fish and Game



Other Fisheries

- Habitat Restoration Projects
- Steelhead
- Coho and Steelhead
- Riparian
- Wetland
- Central Coast Riparian Scrub

Specialized Training

- OSHA 40-Hour HAZWOPER
September, 2008
- Smith Systems Driver Training
August, 2008
- N.R.C.S. Red-legged frog workshop with Norm Scott
2003
- Loss Prevention System
August, 2008

Chronology

04/98-12/99: Camp Roberts Hunting and Fishing Program/Camp Roberts National Guard Facility, CA
05/00-07/02: California Department of Fish and Game/Fresno, CA
08/02-11/02: Hoopa Valley Tribal Fisheries Department/Hoopa, CA
03/03-11/04: Althouse and Meade, Inc./Paso Robles, CA
11/04-06/06: Sierra Delta Corporation/Paso Robles, CA
07/06-03/08: Colorado State University/Fort Collins, Colorado

Contact Information

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David A. Kisner

Project Biologist, Santa Maria Biology Group Leader

Overview

Mr. Kisner is a wildlife biologist with extensive experience working with threatened and endangered birds within southern California coastal and riparian areas. David completed his Master's in Ecology through San Diego State University looking at the impact of the non-native Giant Reed (*Arundo donax*) on the riparian bird community. While in San Diego, David worked with the U.S. Geologic Survey for four years conducting presence/absence and nest monitoring surveys for Least Bell's Vireos and Southwestern Willow Flycatchers. David has a broad background in biology and has also worked for Santa Barbara County Planning and Development as a Biologist and Planner. David is currently managing the biology portion of environmental documents associated with power development projects in Southern California and is involved with a large-scale soil remediation and restoration projects.

Areas of Expertise

- Birds of the Western United States
- Site Assessment and Monitoring of Endangered Birds of California
- Habitat Assessment
- Wildlife Survey
- Botanical Assessment
- Permit Compliance
- Construction Monitoring

Years of Experience

With URS: 4 Years

With Other Firms: 12 Years

Education

MS/Ecology/2004/San Diego State University

BA/Biology, Evolution, & Ecology/1994/University of California, Santa Barbara

Specialized Training

- OSHA 40-Hour HAZWOPER
- OSHA 8-Hour Supervisor HAZWOPER
- Loss Prevention System
- Smith System Driver

Project Specific Experience

Project Management

- Biology Task Lead for Hydrogen Energy California, Kern County – Managed and authored section for environmental document assessing biological impacts associated with 315-acre power plant and associated linears. March 2008 to present.
- Biology Task Lead for General Energy Solar Project, Kern County – Managed and authored section for environmental document assessing biological impacts associated with 280-acre solar power project and associated linears. March 2009 to present.
- Biology Task Lead for Sentinel Energy Project, Riverside County – Managed and co-authored section for environmental document assessing biological impacts associated with 37-acre power plant and associated linears. January 2007 to present.
- Biology Task Lead for San Gabriel Generating Station, San Bernardino County – Managed and co-authored section for environmental document assessing biological impacts associated with 17-acre power plant and associated linears. February 2005 to present.
- Wildlife Task Manager for the Guadalupe Dunes Restoration Project – Organized, coordinated, and oversaw wildlife monitoring and permit compliance of 2,700-acre soil remediation site. Communicated with On-site Environmental Coordinator regarding restoration, monitoring, coordinate operations with wildlife monitors, and reporting of sensitive species found on site. Oversaw monitoring efforts for Western Snowy Plovers, California Red-legged Frogs, small mammal trapping and numerous sensitive species. February 2006 to December 2008.



David A. Kisner

- Delhi Sands Restoration for SCE – Organized and oversaw restoration of a half-acre site for the endangered Delhi Sands Flower-loving Fly. April 2006 to present.
- Designated Biologist for SCE Mountainview Power Project – Organized and oversaw biological monitoring of 18 mile gas line and power plant construction site. Ensured construction was conducted according to permit conditions and worked with client and regulatory agencies to address biological concerns. April 2004 to April 2006.
- West Figueroa Bird Usage Study for the City of Santa Barbara – Conduct winter, spring, and breeding bird surveys to determine species usage and habitat values prior to proposed creek enhancement and native plant restoration efforts. January 2006 to July 2006.
- Project Manager and Lead Biologist for CalTrans SR 118/23 Widening Project – surveyed 5 miles of riparian habitat for Least Bell's Vireo and Willow Flycatchers. Managed project, contract biologist, and report production. 2004.

Sensitive Species Survey Experience

Least Bell's Vireo (*Vireo bellii pusillus*)

Over 350 positive contact hours

- Santa Clara and Ventura Rivers, Ventura County - Conducted presence/absence surveys for vireos and mapped territories. 2004 and 2005.
- San Timeteo River, Riverside County – Conducted presence/absence surveys for vireos and mapped territories. 2005.
- San Luis Rey River, San Diego County – Conducted area searches for Least Bell's Vireos. Monitored nest for fledging success, predation, and parasitism by Brown-headed Cowbirds. Banded nestlings with color bands. 2000 to 2003.
- Santa Barbara, Ventura, and Los Angeles Counties - Conducted focused surveys for Least Bell's Vireos. 1998 and 1999.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

Over 175 positive contact hours

- San Timeteo River – Riverside County - Conducted presence/absence surveys for vireos and mapped territories. 2005.
- Camp Pendleton, San Diego County – conducted area censuses for Willow Flycatchers and followed individuals and pairs through the breeding season. 2000 and 2001.
- Santa Barbara, Ventura, and Los Angeles Counties - conducted focused surveys for Willow Flycatchers. 1999.
- Vandenberg Air Force Base, Santa Barbara County – conducted surveys for Willow Flycatchers and monitored nest for success, predation, and parasitism by Brown-headed Cowbirds. 1998.

David A. Kisner

Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*)

Over 50 positive contact hours

- Tijuana River Estuary, San Diego – conducted passive surveys in the Tijuana River Valley in conjunction with sound study. 2002.
- Goleta Slough, Santa Barbara – conducted passive surveys in and around Goleta Slough to determine habitat usage. 1998 and 1999.
- Goleta Slough, Santa Barbara – assessed population dynamics and habitat selection of the Belding's Savannah Sparrows. 1993 and 1994.

Western Snowy Plover (*Charadrius alexandrinus nivosus*)

Over 130 positive contact hours

- Guadalupe Dunes, San Luis Obispo County – assisted with nest searching and monitoring. July 2006.
- Coal Oil Point, Santa Barbara County –monitored Snowy Plovers, educated the public, and enforced beach use regulations. Recorded human, dogs, and other wildlife's affects on the plovers. November 2005 to February 2006.
- Guadalupe UNOCAL Oil Field Response Monitoring, Santa Barbara and San Luis Obispo Counties – searched for and monitored Snowy Plover nests. 1994 and 1995.
- McGrath Beach Natural Resource Damage Assessment, Ventura County – searched for and monitored Snowy Plover nests. Recorded the number, behavior, and localities of wintering Snowy Plovers. 1994.

California Least Tern (*Sterna antillarum browni*)

Over 30 positive contact hours

- Mission Bay Bird Usage Study, San Diego County – passive observation of Least Terns foraging and breeding within the study area. 2000 to 2002.
- McGrath Beach Natural Resource Damage Assessment, Ventura County – searched for and monitored Least Tern nests. Surveyed the beach, river mouth, and coastal dune pond for birds and signs of habitat damage. 1994.

California Red-Legged Frog (*Rana aurora draytonii*)

Over 20 positive contact hours

- Guadalupe Restoration Project, San Luis Obispo County – assisted with quarterly eye-shine surveys, egg mass surveys, tadpole sampling, and day-time work zone clearances; adults, yearlings, tadpoles, and egg masses seen. March 2006 to present.
- *Rana* Capture and PIT Tag Training from Dr. Galen Rathbun - training involved approximately 30 minutes of lecture followed by over 3 hours of field work, where participants practiced finding and capturing bullfrogs by hand, taking basic metrics (sex, age-class, total length, weight), toe-clipping, and PIT tagging. October 2006.

David A. Kisner

- Ventura River, Ventura County – assisted with USFWS protocol CRLF Surveys along the Ventura River. Captured numerous Bullfrogs located with the main Ventura River channel. 2004.
- Gaviota State Beach, Santa Barbara County – day time habitat assessment; adults and egg mass seen. 2004.

Desert Tortoise (*Gopherus agassizii*)

2 positive contact hours

- Johnson Valley Energy Project – Conducted protocol surveys on portions of 8,000-acre project site looking for desert tortoise, sign, tracks, scat, and burrows. Collectively, crew found five individuals; each was passively measured and burrows were assessed.

General Bird Surveys, Wildlife Surveys, and Habitat Assessment

- Santa Barbara Airport Bird Usage Studies – Conducted regimented observations of bird usage of control and experimental tidal basins to determine potential strike hazards, assessed breeding bird habitat and directed vegetation removal to minimize nesting within certain areas, located and monitored nests within study areas in order to ensure there were no “take” under the Migratory Bird Treaty Act, and conducted Belding’s Savannah Sparrow and general bird observations in and around construction to ensure there were no impacts. 2004 to present.
- Lake Casitas Waterfowl and Bird Usage Study – conducted year round surveys of Lake Casitas for ducks, grebes, and other “aquatic” bird species. Surveys required determining the number, species, and location of all individuals. Fall 2004 to Winter 2005.
- Oxnard Plain Groundwater Recharge Project EIS/EIR – conducted surveys for Least Bell’s Vireo and general wildlife within the project site. Compiled historic data, recent survey results, and third party observations and assessed potential impacts to the biologic resources by proposed project activities. Made suggestions for avoidance and mitigation measure to negate and/or minimize impacts. 2005.
- National Forest Avian Point Count Assessment, Santa Barbara, Ventura, Los Angeles, and San Diego Counties – conducted point counts within four Southern California National Forests; coordinated field crew and access logistics. 2003.
- Camp Pendleton MAPS sites, San Diego County – captured, measured, and banded riparian birds to determine productivity and survivorship. Supervised field crew in 2003. 2000 to 2003.
- Point Loma Breeding Bird Assessment, San Diego County – conducted point counts to determine habitat usage and breeding bird composition. 2000 to 2003.



David A. Kisner

- Upper Tijuana Estuary Bird Usage Study, San Diego County – conducted seasonal surveys of U.S. Navy lands within the Tijuana River Valley to determine species composition and abundance. 2002.
- Mission Bay Bird Usage Study, San Diego County – conducted monthly surveys of the basins and wetlands to determine bird species composition and abundance. 2000 to 2002.
- Santa Barbara Municipal Airport Wetland Mitigation Feasibility Study, Santa Barbara – conducted surveys of bird usage of wetland basins within Goleta Slough to predict possible outcome of restoration efforts on bird-plane interactions. 1998 to 1999.
- Summerland Greenwell Park, Santa Barbara County – developed restoration plan using native plants to restore and enhance riparian and coastal scrub communities for new wildlife preserve. 1998.
- Golden Gate National Recreation Area Brown-headed Cowbird Census, Marin County – censused 5 locations using point count survey method for birds and searched riparian areas for nests. Monitored nests for parasitism (by Brown-head Cowbirds), predation, and fledging success. Trained volunteers in nest search methodology and directed their search efforts, and resolved logistical problems. 1996.
- San Miguel Island Small Mammal Trapping – used Sherman traps to capture deer mice. Mice were tagged, blood was drawn for Haunta virus testing, and morphometric data was collected before releasing the mice were released.

Botanical Experience

Field Experience:

- Johnson Valley Energy Project – conducted botanical surveys on portions of 8,000-acre project site looking for rare and sensitive plant species.
- Guadalupe Restoration Project – conduct active and passive restoration assessments and assist with population censuses for State Threatened surf thistle and beach spectaclepod, and Federally Endangered and State Threatened La Graciosa thistle. Oversee construction activity to ensure minimization of impact and avoidance of sensitive species. February 2006 to present.
- Santa Clara River Habitat Mapping - conducted several rapid assessments and mapped vegetation according to the Sawyer and Keeler-Wolf classification method along the Santa Clara River from the estuary to Newhall Ranch, including the Piru Creek tributary in Fall 2005.



David A. Kisner

- Mountainview Power Project – Conducted regular surveys within and near work zones to ensure no sensitive plants were present. Restored project area after disturbance; collected quantitative data on restoration success. April 2004 to April 2006.
- Santa Barbara Airport / Goleta Slough quantitative restoration monitoring –Assisted with quantitative data collection on restoration transects through out the salt marsh and transition habitats. Spring 2004 and 2005.
- L.A. Metropolitan Water District HCP site assessment. March 2004 and 2005. Surveyed large parcels within the northern Mojave Desert for rare and sensitive plant species.
- USGS – 2000 to 2004 – conducted habitat/vegetation assessments of sensitive species breeding areas/territory. Conducted “stacked cube” qualitative vegetation assessment of restoration site.
- Santa Barbara County Planning and Development – Conducted baseline surveys of proposed project sites to determine habitat function and value. November 1996 to August 1999.
- Northeastern Washington Timber Management Project – Conducted line transects through pine woodlands and mountain riparian zones in conjunction to avian survey routes. 1995.

Course Work:

- CNPS Vegetation Mapping and Classification Workshop, August 2005. Participated in the rapid habitat assessments and mapped vegetation according to the Sawyer and Keeler-Wolf classification method.
- Flora of California - UC Santa Barbara, 1993 Quarter long course with laboratory and field trips covering the plant families of California taught by Dr. Bob Haller. Focus of course involved keying plants to species using A Flora of California by Philip Munz (1974).
- Flora of California - Santa Barbara City College, 1998. Quarter long course with laboratory covering the plant families of California taught by Mr. Al Flinck. Focus of course was to key plants to species using The Jepson Manual, Higher Plants of California (1993).

Environmental Permitting and Regulations

- Contract Biologist/Planner, Santa Barbara County Planning and Development – processed development projects in Santa Barbara County under applicable local, state, and federal environmental and planning regulations and laws. Assessed impacts to Biologic Resources and reviewed environmental documents. March 1998 to August 1999.



David A. Kisner

- Permit Compliance, Santa Barbara County Planning and Development – ensured compliance with Conditions of Approval connected to discretionary projects. Assessed success of mitigation measures, environmental protection plans, and restoration efforts. Responded to public inquiries, complaints, and concerns. August 1997 to January 1998.
- Biologist/Planner, Santa Barbara County Planning and Development – processed development projects in Santa Barbara County under applicable local, state, and federal environmental and planning regulations and laws. Assessed impacts to Biologic Resources and reviewed environmental documents. November 1996 to August 1997.

Specialized Training

- OSHA 40-Hour HAZWOPER
December 2004
HAZWOPER annual refresher
February 2008
- OSHA 8-Hour Supervisor HAZWOPER Training
April 2005
- Shell “Yellowbook” Safety Training
August 2008
- Smith Systems Driver Training
September, 2006
- *Rana* Capture and PIT Tag Training with Dr. Rathbun
October 2006
- Loss Prevention System
March 2006
- Red Cross First Aide, CPR, & AED
July 2006
- CNPS Vegetation Mapping and Classification Workshop
August 2005

Contact Information

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A. Gilda Barboza

Biologist

Areas of Expertise

ESA Section 7 Consultation
Environmental Regulations
Regulatory Permitting
Plant, Wildlife, and Habitat Assessment
Wetland Delineations and Restoration
Biological Monitoring
Special Status Species Surveys

Years of Experience

With URS: 4 Years
With Other Firms: 3 Years

Education

BA/Geography and Environmental Studies/2004/University of California, Los Angeles
BA/International Development Studies/2004/University of California, Los Angeles
Minor/Latin American Studies/2004/University of California, Los Angeles

Permits/Training

Scientific Collecting Permit/# SC-10480/CDFG
Plant Voucher Collecting Permit/#2081 (a)-08-06-V/CDFC
Port of Oakland All Areas and Escort Access Badge
HAZWOPER/40 Hour + Refreshers/Cal OSHA
CPR/First Aid
Wilderness First Aid

Overview

Ms. Barboza has over six years of experience working in the environmental field on restoration, construction, and transportation projects. She has experience conducting Section 7 Consultation under the Federal Endangered Species Act (ESA), conducting biological studies and surveys for wildlife and plant species in California, preparing CEQA/NEPA compliance documents (BA, NLAA, ITP, EIR/EIS, agency permit applications, etc.), and attaining regulatory agency permits. Responsibilities include field surveys, data entry and statistical analysis, report and document preparation, agency permit applications, scientific writing, biological monitoring for construction projects, identification and quantification of vegetation communities, and extensive field surveys including rare and endangered plant and wildlife species (oak woodland, chaparral, desert scrub, salt marsh, seasonal wetlands, vernal pools, annual grasslands and alkali flats).

Project Specific Experience

Biologist, Oakland Airport Runway Safety Area Improvements, Oakland, CA, Port of Oakland, 2010 – Present: Conducted habitat assessment surveys and vegetation mapping. Searched for mitigation options for wetlands and species habitat. Prepared Biological Assessment (BA) and biological sections of the Environmental Assessment (EA).

Biologist, Town of Hillsborough Fire Hazard Mitigation and Fuel Reduction Program, Hillsborough, CA, FEMA- PDMC, 2009 – Present: Conducted rare plant surveys and habitat assessment in the open spaces of the Town of Hillsborough, in San Mateo County, CA. Served as primary author of the biological assessment for formal consultation with the USFWS. Consultation was completed for the following species: California red-legged frog (*Rana draytonii*), San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), bay checkerspot butterfly (*Euphydryas editha bayensis*), Mission blue butterfly (*Icaricia icarioides missionensis*), and five federally listed and serpentine endemic plants.

Biologist, West Fork Embankment Repairs, Calpella, CA, Calpella County Water District and FEMA, 2009: Conducted habitat assessments and prepared the biological assessment for formal consultation with the NMFS on a project located on the west fork of the Russian River, in Calpella, Mendocino County, CA. Consultation was completed for the following anadromous fish species: Central California Coast coho salmon (*Oncorhynchus kisutch*), Central California Coast steelhead (*Oncorhynchus mykiss*), and California Coastal Chinook salmon (*Oncorhynchus tshawytscha*).

Biologist, Section 7 ESA Consultations on Multiple Projects, Multiple Counties, CA, Federal Emergency Management Agency (FEMA), 2002 – Present, \$15M: Prepared Biological Assessments (BA) on endangered species for projects funded by various FEMA programs,



A. Gilda Barboza

including the Public Assistance (PA) Program, Pre-disaster Mitigation (PDM), and Hazard Mitigation Grant Program (HMGP) during presidentially declared disasters in California. The disasters include DR-1628, 1646, and 1585. She has consulted formally and informally with the USFWS and NMFS under Section 7 of the Federal ESA. Projects vary from flood control, vegetation management, fire prevention, highway improvement, and repairs to pre-disaster conditions. Responsible for conducting environmental site assessments, including characterization of habitat at project sites to determine suitability for federally listed species and preparing impact analysis and conducting biological assessments and surveys.

Biologist, Power Project, Hydrogen Energy California (HECA), Buttonwillow, CA, 2010: Field biologist conducting protocol level surveys for blunt-nosed leopard lizard (*Gambelia sila*) along sections of a proposed pipeline and hydrogen-powered electricity generating facility for the Kern County area, CA. It plans to use petroleum coke that is a by-product of oil refining, (or blends of petroleum coke with coal, as needed) as feedstock to create hydrogen that will be used for power generation.

Biologist, Burrowing Owl Surveys at the Oakland International Airport, Oakland, CA, Port of Oakland, 2010 – 2011, \$75K: Conducted routine burrowing owl surveys in the North Field during the breeding and non-breeding season. Addressed client environmental questions, as needed. Had authorization and clearance for full access badge to conduct field surveys at the airport's North Field.

Biologist, Uvas Creek Bridge Replacement Project, Gilroy, CA, Caltrans, 2008 – 2009: Conducted San Francisco Dusky-footed woodrat (*Neotoma fuscipes annectens*) field surveys and trapping and relocation efforts. Surveys included mapping of active nests, dismantling nests, and trapping woodrats at the site over a two week period.

Biologist, Alamo Creek Detention Basin Project/FEMA Federal Disaster Assistance for the Northern California 2005/2006 Winter Floods, Vacaville, Solano County, CA, Federal Emergency Management Agency (FEMA), 2008, \$700K: Biological field studies were needed for a 77-acre detention basin project proposed to be built north of Alamo Creek near Vacaville, CA, to reduce the potential for flooding in Vacaville during severe storm events. The project required protocol-level surveys for the California red-legged frog (*Rana draytonii*), the valley elderberry longhorn beetle, and rare-plant surveys. Participated in biological assessment for the city of Vacaville. Conducted both day and night amphibian surveys with specific emphasis on California red-legged frog (*Rana draytonii*). Surveyed streams for amphibian presence indicated by egg masses, tadpoles, and adult specimens.



Jamie Deutsch

Biologist

Overview

Mr. Deutsch has been involved with habitat restoration and construction projects in an array of environments all over the southern California. He is experienced in the identification of native and non-native plant species as well as local wildlife. This includes locally sensitive or listed species such as the Western Snowy Plover and the Nipomo Dune Lupine. Mr. Deutsch also has an extensive background in GPS navigation and GIS mapping.

Areas of Expertise

- Natural Resource Management
- Ecosystem Management
- Habitat Restoration
- Permitting and Environmental Analysis
- Permit Compliance
- Sustainable Forest Management
- Environmental Impact Analysis & Management
- Watershed Management and Restoration
- Forest Health
- Measurements/Sampling: Forest/Environments
- GPS & GIS Mapping
- Dendrology
- Forest Surveying
- Fire Ecology

Years of Experience

With URS: >1 Year

With Other Firms: 3 Years

Education

BS/Forestry and Natural Resources Management (Ecosystem Management), California Polytechnic State University, San Luis Obispo

Registration/Certification

OSHA 40-Hour Hazwoper Trained
CPR/First Aid Certified, 2010
NSC Defensive Driving Course
PADI Rescue Diver
Smith Driver Training

Project Specific Experience

Project Management

Lompoc, CA-

- **Assistant Project Manager**-Served as assistant project manager for Allan Hancock College Public Safety Training Facility and associated permit compliance. Conducted surveys for rare plants and general wildlife. Served as onsite lead biologist and corresponded with sub-contractors, AHC personnel, and construction manager on construction based CEQA compliance.

Construction Monitoring

Salton Sea, CA-

- Conducted sensitive species surveying and monitoring during the installation of a drill and excavation of gold and rock at a quarry east of the Salton Sea. Sensitive species located included nesting loggerhead shrikes which needed to be flagged off and restricted.

Desert Hot Springs, CA-

- Conducted pre-construction plant and wildlife surveys, wildlife monitoring during construction, and the relocation of several species of small mammals and reptiles prior to and during construction. Performed 15 nights of small mammal trapping to remove mammals from laydown area before clearing began. Each species was identified and logged prior to relocation.

Lancaster, CA-

- Conducted pre-construction wildlife surveys and wildlife monitoring and relocation during construction activities.

Lompoc, CA-

- Conducted pre-construction plant and wildlife surveys, wildlife monitoring during construction, relocated several species of small mammals and reptiles prior to and during construction

Vegetative Survey Experience

Desert Hot Springs, CA

- Conducted floristic surveys of the CPV Sentinel project site, laydown area, and associated linears for rare plants including the listed Coachella Valley and triple-ribbed milk-vetch. Surveys were conducted to comply with CDFG and USFWS protocols.



Bakersfield, CA

- Conducted floristic surveys of the HECA project area and associated linears for rare plants and wetland indicator species. Surveys were conducted to comply with CDFG and USFWS protocols.

Nipomo/Guadalupe Dunes, CA

- Conducted vegetation sampling in dune scrub habitats. Rare plant surveys were performed throughout dune environment for endangered Nipomo Dune Lupine. Once located, the site was marked, flagged, and GPS'd for population monitoring and mapping purposes.



Jan Novak, P.W.S.

Senior Wetland Scientist

Areas of Expertise

Jurisdictional Delineations
Environmental Impact Assessment
Permitting and Regulatory Compliance
Species and Plant Surveys
Soil Analysis

Years of Experience

With URS: 5 Years
With Other Firms: 5 Years

Education

BS/Soil Science/2000/California
Polytechnic State University, San Luis
Obispo, CA

Registration/Certification

Professional Wetland Scientist/
2010/#2022/Society of Wetland
Scientists Certification Program, Inc.
CDFG Scientific Collecting
Permit/Animals SC-0010473
CDFG Scientific Collecting Permit/
State-Listed Plants # 2081(a)-08-08-V
URS Project Management
Certification, 2009
2006/OSHA 40-Hour HAZWOPER

Overview

Mr. Novak is a Professional Wetland Scientist (PWS) with ten years of experience in performing wetland delineations that have been approved by the U.S. Army Corps of Engineers and the California Coastal Commission. He has also contributed to or prepared environmental documents under CEQA, NEPA, regulatory permitting applications (U.S. Army Corps of Engineers, multiple Regional Water Quality Control Boards, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service), and peer review. Additional skills include mitigation and monitoring plans, special status species surveys, rare plant surveys, and construction monitoring.

Project Specific Experience

Wetland Scientist

Soil Scientist, Adak Former Naval Complex Biological and Cultural Resource Surveys, Adak, AK, U.S. Navy, 2011, \$743K DO: Soil scientist for 600-acre wetland delineation. The project involves the ongoing removal of munitions and explosives of concern at Operable Unit (OU) B 2 at the former Adak Naval Complex. These studies were conducted to meet the substantial permit requirements under CERCLA (Comprehensive Environmental Response, Compensation and Liability Act of 1980). Field work focused on wetland delineations of areas with organic and volcanic soil. Pre-survey information included researching volcanic soils, contacting USACE and NRCS Alaska staff.

Wetland Task Order Manager/Technical Assistant, Bakersfield to Palmdale High-Speed Train Project, California High-Speed Rail Authority and Federal Railroad Administration, 2010 – Present, \$7M: Coordinated with USACE on delineation methodologies for difficult areas. Oversaw the first half of a delineation with a twelve-person team for the Bakersfield to Palmdale section of the High Speed Train Project. Nearly 100 miles of land was observed, recorded, and mapped using a variety of delineation techniques. Assisting with post-field data preparation and offering technical guidance.

Wetland Task Order Manager, Golden Gate National Recreation Area (GGNRA), San Francisco Presidio, CA, Golden Gate National Parks Conservancy (GGNPC), 2011, \$5K: Performed delineation of potential wetland area and assisted on completion of technical document. Delivered technical wetland memo to client, meeting their strict deadline and budget requirements.

Wetland Delineation Manager, High Speed Train Environmental Services, Fresno to Bakersfield, CA, California High Speed Train Authority, 2009 – Present, \$7M: Oversaw sixteen-person team for delineation of Fresno to Bakersfield section. Over 100 miles of land was observed, recorded, and mapped in accordance with the 2008 Ordinary High Water Mark Delineation and the 2008 Arid West Delineation



Jan Novak, P.W.S.

manuals. Managed and submitted preliminary jurisdictional determination report to USACE, as well as wetland components to another technical document and the EIR/EIS.

Internal Technical Review – Wetland Delineation, GE Tehachapi Photovoltaic Solar Project Conditional Use Permit Application, Tehachapi, CA, GE Energy, 2010, \$395K: Performed the Internal Technical Review for a jurisdictional determination of federal or state wetlands and/or waters. The determination was prepared to satisfy conditions/mitigation measures of a Conditional Use Permit and CEQA Mitigated Negative Declaration for construction and operation of a 330-acre, 30 to 40 megawatt solar energy project located in Kern County, California.

Senior Wetland Scientist/Task Order Manager, Olancha/Cartago 4-Lane Project, Wetland Delineation, Inyo County, CA, Caltrans, 2009, \$80K: Oversaw the jurisdictional delineation for wetlands and waters of the United States at the 994-acre Olancha/Cartago 4-Lane Project. Work included site research and preparation, two weeks of staffing and leading the field delineation (utilizing the 2008 Ordinary High Water Mark Delineation and the 2008 Arid West Delineation Manuals), conducting health and safety meetings, coordinating with and ensuring delivery of the delineation report to the U.S. Army Corps of Engineers. A total of 30.22 acres of Waters of the U.S (WUS) were delineated during the survey.

Senior Soil Scientist, SunGen Solar Project, McKittrick, CA, Complete Energy Holding, LLC's (CEH), 2009, \$25K: Oversaw and led delineation for waters of the U.S. and Waters of the State (WS) in the project area. Responsible for the submittal of a preliminary Jurisdictional Determination to client for submittal to USACE, CDFG and Central Valley RWQCB.

Senior Wetland Scientist/Task Order Manager, Los Vaqueros Ranch Mitigation Property, Monterey County, CA, Chevron Pipe Line Company, 2007 – 2008, \$350K: Oversaw the jurisdictional delineation for waters of the United States, and Waters of the State, at the 2,167-acre Los Vaqueros Ranch mitigation property. Work included a site reconnaissance, site research and preparation, three weeks of staffing and leading the field delineation, conducting health and safety meetings, coordinating with and ensuring delivery of the delineation report to the U.S. Army Corps of Engineers.

Senior Soil Scientist, Chart House Mitigation Area Wetland Analysis, Half Moon Bay, CA, Caltrans, 2008 – Present, \$600K (Overall Project), \$20K (Delineation): Delineated mitigation areas to verify if they meet the criteria for U.S. Army Corps of Engineers (USACE) and the California Coastal Commission (CCC) wetlands in 2008, 2010, and 2011. . Emphasis was placed on soils analysis as a key issue in explaining the poor response of mitigation plantings. Delivered status memos to client in 2008 and 2010, and currently preparing the 2011 final memo for delivery to the agencies.



Jan Novak, P.W.S.

Soil Scientist, Crescent City Airport Terminal Replacement Project, Crescent City, CA, Del Norte County, 2007, \$500K: Reviewed previous delineation of the 25 acre site, including herbaceous and forested environments. Delineation included analysis of forested soils to categorize them as histic/organic or mineral. Prepared both delineations for submittal to the USACE and CCC. Delineation verified by the USACE and CCC.

Senior Soil Scientist, Crescent City Runway Safety Analysis, Crescent City, CA, Del Norte County, 2007, \$350K: Reviewed previous delineation of 111 acre site. Delineated the study area, consisting of herbaceous and lacustrine environments. Reviewed both delineations for submittal to the U.S. Army Corps of Engineers and the California Coastal Commission.

Soil Scientist, Merced Dominion Annexation, Merced, CA, County of Merced/Robert Rucker, 2006, \$76K: Delineated wetlands and waters of the United States on 280 acres of complex habitat. Used multiple GPS devices for precise measurements. Wrote jurisdictional delineation report. Client coordination.

Soil Scientist, Balloon Property, Eureka, Humboldt County, CA, U.S. Army Corps of Engineers and the California Coastal Commission, 2005 – 2006, \$200K: Participated in a group delineation of a 50-acre property. Prepared separate jurisdictional delineation reports for the U.S. Army Corps of Engineers and the California Coastal Commission.

Soil Scientist, Sonoma 3, Sonoma County, CA, Federated Indians of Graton Rancheria, 2004 – 2005, \$400K: Individually delineated the initial 2,000 acre site in Sonoma County, followed by the 400 acre site in Rohnert Park. Wrote the jurisdictional delineation, which was verified by the U.S. Army Corps of Engineers.

Soil Scientist, Bethel Island, Contra Costa County, CA, Claremont Homes, Inc., 2004 – 2006, \$200K: Individually delineated 400 acres of complex delta histic (muck) soils. Soils analysis of histic soils. Performed two seasons of extensive hydrology testing to determine wet season water table. Wrote jurisdictional delineation.

Wetland Task Manager, SunGen Solar Project, McKittrick, CA, Complete Energy Holding, LLC's (CEH), 2011, \$25K: Managing delineation for waters of the U.S. (WUS) and Waters of the State (WS) in the project area for a proposed 120 MW solar PV farm. The presence/absence survey will be submitted to USACE, CDFG and the Central Valley RWQCB. Tasks include project management and correction of the document.



Jane Donaldson

Staff Biologist

Areas of Expertise

Monitoring Threatened and Endangered Birds, Mammals and Amphibians of California
Wildlife Surveys
Vegetation Surveys
Habitat Restoration

Years of Experience

With URS: 4 Years
With Other Firms: 11 Years

Education

BS/ Biological Sciences/1993/
California Polytechnic State University,
San Luis Obispo

Registration/Certification

OSHA 40-Hour HAZWOPER Trained,
OSHA Refresher July 2009
CPR/First Aid Certified, 2009
Smith Systems Driver Training,
June 2009
Loss Prevention System, March 2006,
refresher July 2010
Behavior Based Safety, 2006, with
annual refreshers

Scientific Collection Permit

Scientific Collecting Permit #SC2981

Overview

Mrs. Donaldson is a field biologist with over 15 years of professional experience working within a variety of native habitats within California. Her field work has included conducting wildlife surveys, overseeing construction compliance, and compliance monitoring for a large remediation project. She has conducted surveys for California red-legged frogs, California tiger salamander, San Joaquin kit fox, western snowy plover, burrowing owl, coast horned lizards, silvery legless lizards, two-striped garter snakes, and point-count bird surveys. Her habitat restoration and sensitive plant conservation efforts include general habitat surveys and coastal dune wetlands restoration using genetically local native plant species.

Wildlife Surveys and Monitoring

California Red-Legged Frog (*Rana aurora draytonii*)

Over nine years experience of surveying and handling California red-legged frogs (CRLF) in diverse habitats. Have observed and participated in surveys for CRLF presence during all life stages, i.e. eyeshine surveys, dip netting and minnow trapping. Survey work includes the following:

Guadalupe Restoration Project, Guadalupe, CA (June 2000 – April 2010): Authorized by USFWS, under project specific Biological Opinion, to survey for, handle, capture, and relocate CRLF. Conducted quarterly census counts, pre-construction surveys, minnow trap and dip net surveys for tadpoles, observation of all life phases of species, and relocation from work areas. Assisted in the development of monitoring measures for large scale excavation activities in proximity to known CRLF habitat.

San Joaquin Kit Fox (*Vulpes macrotis mutica*)

San Ardo Oil Field, San Ardo, CA: Conducted pre-disturbance surveys for presence of kit fox. Utilized motion cameras and track stations to determine presence/absence of kit fox under buildings slated for demolition.

Camp Roberts Army National Guard, Paso Robles, CA: Surveyed for San Joaquin kit fox using USFWS protocol for spotlighting under the supervision of Dr. Michael Hanson, Director of Cal Poly Endangered Species Program. Located and monitored kit fox dens. Set up track stations, and assisted in live-trapping and radio-collaring activities.

Desert Tortoise (*Gopherus agassizii*)

Calico Solar Project, Barstow, CA: Conducted desert tortoise surveys for Calico Solar Project at a proposed relocation site near Newberry Springs, CA.

Silvery-legless lizard (*Anniella pulchra pulchra*)



Guadalupe Restoration Project, Guadalupe, CA: Construction monitoring and relocation of individuals. Over 75 hours of positive contact.

Spade-foot toad (*Spea hammondi*)

Guadalupe Restoration Project, Guadalupe, CA: Construction monitoring, eyesine surveys and relocation efforts at Guadalupe Restoration Site, Guadalupe, CA. 10 hours of positive contact.

Blunt-nosed leopard lizard (*Gamelia sila*)

California Valley (Carrizo Plains), CA: Surveyed for blunt-nosed leopard lizards using the CA Department of Fish and Game Protocol. Identified blunt-nosed leopard lizards at a reference site. Two hours of positive contact.

Flat-tailed horned lizard (*Phrynosoma mcallii*)

El Centro, CA: Performed flat-tailed horned lizard surveys using tracking techniques in conjunction with California Dept. of Fish and Game and Bureau of Land Management. Three hours of positive contact.

California Tiger Salamander (*Ambystoma californiense*)

Conducted larval dip-net surveys with Tom Olson 27 May 2010 at Escolle Lease.

Coast horned lizard (*Phrynosoma coronatum*)

Guadalupe Restoration Project, Guadalupe, CA: Construction monitoring, general wildlife surveys and relocation efforts. Over 60 hours of positive contact.

Bird Surveys

Camp Roberts and Camp San Luis Obispo, CA: Conducted comprehensive bird surveys each spring from 1995 - 2000 on established plots using line transect method for the U.S. Army's Land Condition Trend Analysis program.

Botanical Experience

Guadalupe Restoration Project, Guadalupe, CA (June 2000 – April 2010): Was cross-trained and approved to monitor sensitive and endangered plant species including La Graciosa thistle, surf thistle, and beach spectacle pod during remediation and construction activities. Assisted in the vegetation restoration and monitoring of wetland habitats. Assisted with annual sensitive plant species census.

Camp Roberts Army National Guard, Paso Robles, CA (Mar 1995 – June 2000): Conducted chaparral/coastal scrub, grassland, oak woodland and riparian vegetation surveys using point transects and belts.



Johanna Kisner

Senior Biologist

Areas of Expertise

- Habitat Restoration Project Management-Planning, Implementation, and Monitoring (creeks, wetlands, bioswales, vernal pools, grasslands, riparian, coastal sage scrub, coastal dune scrub, chaparral, and oak woodland)
- Vegetation/Rare Plant surveys
- USFWS 10(a)(1)(A) recovery permit #TE-204436-0 for tidewater goby and California red-legged frog
- Survey Experience for Special-Status Species Including: steelhead trout, California tiger salamander, Coast horned lizard, desert tortoise, least Bell's vireo, white-tailed kite, Western snowy plover, burrowing owl, golden eagle, blunt-nosed leopard lizard and Stephen's kangaroo rat
- Small mammal trapping
- Bird and General Wildlife Surveys
- CEQA/NEPA Biological Assessments
- Stream monitoring
- Wetland Delineation
- Construction Compliance and Monitoring
- GPS and GIS mapping

Years of Experience

With URS: 6 Years

With Other Firms: 5 Years

Education

MS/Environmental Science and Management/2001/University of California, Santa Barbara

BS/Environmental Studies/1999/University of California, Santa Barbara

Overview

Ms. Kisner's combined education and professional background provide a wide range of experience in ecology, biological resource assessment, and habitat restoration. She has eleven years of professional experience including botanical surveys and mapping, habitat assessment, habitat restoration design, implementation, and monitoring, wetland delineation, wildlife surveys (particularly birds, and holds a U.S. Fish and Wildlife Service (USFWS) recovery permit (TE204436-0) for tidewater gobies and California red-legged frogs), construction compliance and monitoring, and GIS mapping. Ms. Kisner has been the project manager for several multi-million dollar habitat restoration projects in Santa Barbara and Ventura Counties. She has managed and coordinated complex biological resource sections for several CEQA/NEPA documents in southern and central California. She has assisted clients with obtaining and complying with regulatory permits for agencies such as USFWS, California Department of Fish and Game, California Coastal Commission, Army Corp of Engineers, and Regional Water Quality Control Board.

Project Specific Experience

Project Management Experience

Project manager for several habitat restoration projects including Arroyo Burro Estuary Restoration, Santa Barbara Airport (SBA) Safety Grading Mitigation Restoration Monitoring, SBA Airfield Safety Projects Creek Relocation, SBA Tidal Basin Experiment, SBA Area I Restoration, SBA Wetland Restoration Monitoring, Calleguas Creek Restoration, Bohnett Park Creek Restoration Monitoring, Lake Casitas Wetland and Grassland Restoration, and Ellwood Mesa Native Grassland Restoration. She also manages several biology related projects such as SB Flood Control District and Public Works Department Tidewater Goby Surveys, SBA Airfield Safety Projects Pre-Construction Environmental Compliance and SBA wetland delineation projects.

CEQA/NEPA Biological Assessments/Reports

- Application for Certification (AFC) Projects: Biology Task Leader for Bullard Energy Center, Panoche Energy Center, and Anaheim Municipal Power Station
- Natural Environmental Study- Biology Task Leader for Laetitia Winery and City of Goleta Ekwil-Fowler

Habitat Restoration Experience

- In addition to managing several restoration projects, Ms. Kisner has been involved in the design and implementation of the Casmalia B Drainage Wetlands Project (mitigation for CRLF and CTS), design for Cabrillo Bridge Restoration Project and Western Goleta Slough



Wetland Enhancement Project, and monitoring and implementation of several restoration projects in Santa Barbara and Ventura counties, such as Guadalupe Restoration Project (coastal dunes), several Santa Barbara Airport projects including Firestone Drainage, Las Vegas Creek, Tecolotito Creek Relocation and Berm Restoration, Area I wetland mitigation, Tidal Restoration Experiment, Verhelle Bridge (riparian), Airfield Storm Drains (slough), Turnpike Bioswale, Rhoads Bioswale, Lake Casitas (oak, wetland, grassland, and sage scrub), and Foster Park (riparian).

- Restoration Coordinator, University of California. Responsible for creating native grassland, vernal marsh, and vernal pool habitat related to environmental mitigation. Supervised the initial grading of the landscape for proper topography. Duties included collecting native seed, planting native species, and removing exotic species. Conducting various flora, fauna, and environmental monitoring for performance criteria. Developing research projects related to vernal pool habitat restoration.

Botanical Experience

Botanical experience includes work in Santa Barbara, Ventura, and San Luis Obispo Counties, Berkeley, Mojave Desert, and Southern California.

- Prepared several vegetation maps for projects such as Santa Clara River Vegetation Mapping, Lake Casitas Recreation Area RMP, Lake Cachuma RMP, Santa Barbara Fire Management EIR, Meiners Oaks Trunk Sewer Relocation, Goleta Slough Fish and Game Properties, Mountain View Power Project, Gaviota Creek, Foster Park (Ventura River), Piru Creek, and Lauro Reservoir.
- Conducted point-intercept and quadrat vegetation transect monitoring for several projects such as Lake Perris Recreation Area Grassland Experiment, UCSB Restoration Projects, Santa Barbara Airport Safety Area Grading Project and Wetland Restoration Monitoring Projects, Ellwood Grassland Restoration, and Guadalupe Restoration Project.
- Performed rare plant surveys for projects in Santa Barbara County including Santa Maria Pacific's Careaga oilfield, Lauro Reservoir EA, Lake Cachuma RMP, Lake Casitas RMP, and Guadalupe Restoration Project, San Bernardino County including a Solar Energy Project in Johnson Valley, MWD Colorado Aqueduct HCP (Mojave Desert), and Mountain View Power Project, Monterey County for the Los Vaqueros Ranch Mitigation Site, and Kern County McKittrick Oilfields.

Wetland Delineations and Functional Assessments

- Performed wetland delineations for Newhall Ranch, Santa Barbara Airport, Santa Barbara Ranch Project, Gaviota Bridge Project and Goleta Old Town Improvement Project.



Jolie Henricks

Wildlife Biologist and Assistant GIS Specialist

Areas of Expertise

Wildlife Biology – Amphibians, Birds (Songbirds and Raptors), Mammals (including bats), Reptiles
Biological Monitoring
GIS Analysis
Cartography

Years of Experience

With URS: 6 Years
With Other Firms: 2 Years

Education

BS/Wildlife & Fisheries
Biology/1995/University of California, Davis

Overview

Ms. Henricks has extensive field experience in numerous areas such as construction monitoring in sensitive landscapes, biological monitoring for birds, amphibians and mammals, and general wildlife identification as well as vegetation mapping,, tidal and storm water sampling, bird and bat banding, and fire fuels monitoring. She also has experience handling such wildlife as birds, including raptors, bats, reptiles and mammals, in both captive and wild environments. An avid birder who has also taught birding classes, her wildlife experience also includes field surveys for nesting birds, including both migratory songbirds and raptors. She also has diverse professional experience with a variety of environmental and geotechnical mapping programs such as ArcGIS and ArcView as well as cartographic design and production.

Project Specific Experience

Biologist, Devil's Slide Tunnel Project, Half Moon Bay, CA, Caltrans, 2011, \$600K: Conducted site-assessment for installation of water pipeline in conjunction with initial project that was currently under construction. Area surveyed was known habitat as well as critical habitat of California red-legged frog. Walked project area and documented conditions of sites surveyed. Created report on site status as well as conducted GIS analysis for impacts. Prepared report for CDFG.

Biologist, Tesla Portal, San Joaquin County, CA, San Francisco Public Utilities Commission (SFPUC), 2009, \$50K: Conducted protocol-level surveys for burrowing owl and nesting birds at planned development site. Prepared reports for client regarding sightings and nesting locations. Produced maps for all survey completed on the project site.

Biologist, Isabel Ave-580 Interchange, Alameda County, CA, California Department of Transportation (Caltrans), 2009, \$50K: Conducted pre-construction surveys for highway project for California red-legged frog and California tiger salamander. Prepared and conducted environmental awareness training program for all workers on site. Developed safety plan for those monitoring site. Acted as construction monitor for site, reported non-compliance issues and reacted to changing situations on site by providing guidance for crew.

Biologist, San Antonio Reservoir Pipeline Abandonment, Alameda County, CA, Chevron Pipe Line Company, 2009, \$200K: Monitored removal of abandoned pipeline at drainage crossing on private land. Site is known habitat of California tiger salamander and California red-legged frog. Performed daily pre and post-work site assessments for wildlife safety and other compliance measures including stream avoidance and dust abatement. Conducted on-site environmental compliance training for all personnel.



Jolie Henricks

Biologist, Urban Levee Geotechnical Investigations, Sacramento, CA, California Department of Water Resources (DWR), 2008, \$35M:

Conducted biological monitoring services for geotechnical investigations on urban levees in the Stockton/Lathrop area of the Central Valley. Ensured project compliance with environmental regulations, including state and federal Endangered Species Acts and wetlands regulations. USFWS-approved monitor for the federally endangered riparian brush rabbit and giant garter snake.

Biologist/Construction Monitor, San Antonio Reservoir Pipeline Relocation, Livermore, CA, Chevron Pipe Line, 2007, \$2M:

Participated as one of the lead monitors in a five month project conducting wildlife surveys including nesting raptor monitoring and as environmental monitor for pipeline relocation project that involved both drilling and trenching activities. Responded to inquiries and situations on site to manage and maintain environmental compliance. Received snake handling training and subsequent experience to deal with snake encounters on project site. Also reported raptor and wildlife observations and assisted with mapping new wildlife observations. Site was possible range for San Joaquin Kit Fox and repeated observations took place to monitor possible den sites becoming active by inspecting the dens for physical evidence of use.

GIS Specialist, High Speed Train Environmental Analysis, Bakersfield to Palmdale, CA, California High-Speed Rail Authority, 2010, \$62M:

Conducted digitization of existing cultural resource data for analysis of impacts and planning of field efforts by cultural team.

GIS Specialist, Gulf of Mexico Oil Spill Response GIS Mapping, Mobile, AL and Venice, LA, BP, 2010:

Stationed at the Incident Command Center in AL and outlying field station in LA as GIS support personnel for the Deepwater Horizon oil spill response effort in the Gulf of Mexico. Participated in numerous ongoing data and mapping products as well as production for a variety of one-time maps. Worked with a wide variety of internal clients to produce maps for general information and data analysis. Major projects included working with Civil Air Patrol uploading and processing aerial imagery to generate access shapefiles with photo linkages. Updated a variety of maps for scheduled daily updates for mass distribution within the facility. Coordinated with fellow GIS team members to streamline production and ensure quality products. Assisted with technical troubleshooting for site personnel as necessary.

GIS Specialist, High Speed Train Environmental Analysis, Fresno to Bakersfield, CA, California High-Speed Rail Authority, 2010,

\$62M: Assisted with GIS analysis and cartographic production of report maps for submission with EIR. Analyzed and edited field-collected data, attributed data and presented in final mapped form. Assisted with reviews and edits of various maps. Analyzed data for presentation with written text of the report. Georeferenced historic aerial imagery of the project footprint for cultural analysis. Assisted with planning and digitization of field collected data mapping land use between Fresno and Bakersfield. Also digitized cultural resources for impact analysis.



Katheryn Eldredge

Biological Resources

Areas of Expertise

- Wildlife Biology
- Botany

Years of Experience

With URS: 1 Year

With Other Firms: 20 Years

Education

BS/Biology/1993/California State University, Bakersfield

BA/Anthropology/1978/
California State University,
Bakersfield

Overview

Ms. Eldredge has over 31 years of experience, with more than 21 as a biologist. She has experience coordinating and conducting all on- and off-site biological related facets of projects, including pre- and post-plant and animal surveys, monitoring of site activities, providing project specific endangered species training, permit writing, pre-and post-activity project reporting, preparing trapping and monitoring plans for listed species, and biological input into multifaceted reports, such as EIRs and HCPs.

Ms. Eldredge has conducted listed species surveys to agency protocol levels, including the blunt-nosed leopard lizard (BNLL), provided consulting to clients (including oil & gas and other energy) and regulatory agencies, developed and implemented revegetation requirements, and managed cultural resources for a major oil and gas operator.

Project Specific Experience

Biologist, Trapping and Handling, Elk Hills, CA: Ms. Eldredge performed live trapping for several endangered and listed animal species, including the San Joaquin kit fox, San Joaquin antelope squirrel, giant kangaroo rat, San Joaquin pocket mouse and short-nosed kangaroo rat.

Biologist, Population Monitoring (BNLL), Various Locations, CA:

Ms. Eldredge performed driving and walking transects during the summer and fall months to monitor the blunt-nosed leopard lizard population. At least 100 positive identifications were made for this species. The surveys were performed at California Department of Fish & Game (CDFG) protocol level. Specific areas surveyed include Kern County, California Valley, Cuyama Valley and Coalinga area.

Biologist, Species Specific Surveys, Various Locations, CA:

Ms. Eldredge conducted species specific surveys for small mammals, botanicals, desert tortoise, and San Joaquin kit fox were performed at CDFG protocol levels. Kit fox monitoring experience includes monitoring dens, dusting dens and reading tracks, assessment of usage (active and natal) and spotlighting. She has also participated in botanical and desert tortoise surveys in the eastern Kern County area.

Biologist, Baseline Studies, Cuyama Valley, CA:

Ms. Eldredge performed line intersect and density plant studies for acquisition of initial baseline habitat information. She summarized results in report format for submittal to appropriate agencies.

Biologist, Permit and Document Writing, Various Locations, CA:

Ms. Eldredge wrote biological input for EIRs and HCPs. She completed state and federal Incidental Take Permits and Lake and Streambed Alteration Permits for CDFG. She wrote documentation needed to support CEQA regulations.



Biologist, Revegetation and Restoration, Various Locations, CA:

Ms Eldredge prepared and implemented revegetation and restoration plans. She also performed tasks such as monitoring, reporting, supervising initial restoration/planting activities and making field corrections to sites.

Biologist, Conservation Planning, Various Locations, CA:

Ms Eldredge located and acquired suitable mitigation lands that met local state and federal requirements. She assisted in land acquisition in cooperation with mitigation land banks.

Biologist, Seismic Studies, Various Locations, CA: Ms. Eldredge monitored seismic crews, surveyors, and shot-hole crews. She wrote the initial report and work plan prior to initiation of project. She acquired permits as needed for listed species, conducted pre-activity surveys, and wrote daily reports.

Anthropologist, Cultural Resources Management, Elk Hills, CA:

Ms Eldredge managed all aspects of cultural resources at the former Naval Petroleum No. 1 facility, including contribution to the Cultural Resources Management Plan, maintenance of known sites, and management of the local prehistoric and historic artifact collection.



Kelly J. Kephart

Biologist

Overview

Ms. Kephart is a biologist with more than six years experience with habitat restoration and California native and non-native species. She has participated in the restoration of hundreds of acres of habitat on the Central Coast, and southern California. Ms. Kephart is experienced at special status plant surveys, the identification of sensitive and Federally and State listed plant species, salvage of listed and sensitive plant species, vegetation sampling, pre-disturbance surveys, data analysis and reporting. Ms. Kephart is also experienced with many sensitive and listed wildlife species including: California red-legged frog, silvery-legless lizard, two-striped garter snake, coast-horned lizard, tidewater goby, and desert tortoise. Ms. Kephart is also experienced with sensitive shorebird species including western snowy plover and California least tern. Ms. Kephart has extensive technical experience that includes work with multiple GPS systems and ArcGIS map projects.

Areas of Expertise

Natural Resource Management

Habitat Restoration:

Riparian, chaparral, coastal sage scrub, coastal dune scrub, desert scrub, and native grassland

Vegetation surveys

Invasive/Non-native species

Construction Monitoring

Wildlife Monitoring

Monitoring of Threatened and

Endangered Shorebirds of California

GPS and GIS mapping

Years of Experience

With URS: 5 Years

With Other Firms: 1 Year

Education

BS/Forestry and Natural Resources

Management, Land Rehabilitation

Minor/2006/California Polytechnic

State University

Registration/Certification

OSHA 40-Hour Hazwoper Trained,

OSHA Refresher February 2012

CPR/First Aid Certified, 2009

Smith Systems Driver Training,

June 2009

Loss Prevention System, March 2006

LPS refresher, July 2010

Behavior Based Safety, 2006, with

annual refresher

Project Specific Experience

Vegetation Survey Experience

- **Sonoran West, Blythe, CA-** Conducted rare plant surveys, and mapped populations.
- **Allen Hancock, Lompoc, CA-** Conducted rare plant surveys for listed Seaside Bird's Beak (*Cordylanthus rigidus ssp. Littoralis*), mapped populations and conducted pre-disturbance surveys for additional sensitive plants.
- **Casmalia B Drainage Wetlands, Casmalia, CA-** Performed qualitative and quantitative monitoring of restoration wetland habitat.
- **Escolle Lease Remediation Assessment, Santa Maria, CA-** Conducted rare plant surveys prior to remediation activities, conducted habitat mapping, wetland delineation and conducted quantitative monitoring of native grassland habitat.
- **Caltrans, Towne Pass, Death Valley NP, CA-** Conducted pre-disturbance surveys for rare plant and sensitive plant species.
- **GE Energy Tehachapi Photovoltaic Solar Project, Tehachapi, CA-** Performed wetland delineations and botanical surveys.
- **Hydrogen Energy California, Bakersfield, CA-** Conducted rare plant surveys to document sensitive plant species, and conducted wetland delineations.
- **Guadalupe Restoration Project, Guadalupe, CA-** Conducted vegetation sampling in dune scrub, strand, and wetland habitats. Sampled and assessed the level of restoration for active restoration and passive restoration sites. Assessed erosion at restoration sites. Conducted pre-disturbance and post-disturbance

surveys for construction activities. Conducted site-wide weed mapping and weed transects. Conducted the yearly census of Beach Spectacle Pod (*Dithyrea maritime*, State Threatened), La Graciosa Thistle and Surf Thistle (*Cirsium rhotophilum*, State Threatened).

- **Solar One, Barstow, CA-** Conducted visual sampling of desert wash plant communities. Mapped boundaries between desert plant communities and conducted surveys for rare desert plants.
- **Oceano Dunes State Vehicular Recreation Area, Oceano, CA-** Conducted vegetation transects through dune scrub habitat.
- **Palos Verdes Land Conservancy, Palos Verdes, CA-** Conducted vegetation transects through coastal sage scrub, grassland, chaparral and riparian habitats.

Habitat Restoration Experience

- **Guadalupe Restoration Project, Guadalupe, Guadalupe, CA-**
 - Assisted in the restoration of over 30 acres of habitat in the Guadalupe Dunes. Duties included installation of straw plugs, sand fence, scheduling and management of seed collection, out-planting of over 60,000 4 inch and gallon plants, seeding and management of CCC crews.
 - Conducted maintenance at restoration sites by conducting erosion control and maintenance, conducting quarterly and yearly restoration monitoring, installing photopoints and taking yearly monitoring photos, managing weed control crews, identifying and removing non-native species.
 - Assisted in the salvage and relocation of multiple Beach Spectacle Pod (*Dithyrea maritime*, State Threatened), and thousands of La Graciosa Thistle (*Cirsium loncholepis*, Federal Endangered, State Threatened)
 - Assisted in the growing facility by conducting maintenance, collecting seed, and propagating plants.
 - Composed multiple reports including: the quarterly ecological monitoring report, which included the results of monitoring of restoration sites, analysis of percent cover of restoration sites, weed control statistics and detailed any ground disturbance that occurred each quarter. The yearly Biological Opinion Report, which detailed the results of total take of listed species for the year for agencies. The yearly and five year Weed Control Report, which detailed the results of weed control, and composed site specific restoration plans for disturbance areas.



Mark Wilson

Biologist

Areas of Expertise

Biology/Conservation Biology
Biological Monitoring
Habitat Assessments

Years of Experience

With URS: 2 Years
With Other Firms: < 1 Year

Education

BA/Environmental Studies/2008/
Saint Mary's College of California

Overview

Mr. Wilson is a staff biologist with academic training in geology, hydrology, biology, conservation biology, ecology, GIS mapping, environmental chemistry, and environmental geology. While in school, he conducted fieldwork in the Cascade Mountains where he tracked mountain goats by GPS collar and sampled natural salt licks used by the goats. He also participated in field studies in Alaska, which included a focus on glaciology, hydrology, disturbance ecology, and geomorphology. At URS he has assisted with a number of projects for federal, state, and private entities including field work and written reports.

Project Specific Experience

Biologist, Calaveras Dam Replacement Project, Sunol, CA, San Francisco Public Utilities Commission (SFPUC), 2008 – Ongoing, \$12M: Conducting construction monitoring for California red-legged frog, California tiger salamander, and San Joaquin kit fox and other species.

Biologist, Fish Surveys, Pit River, Shasta County, CA, Pacific Gas & Electric Company (PG&E), 2008, \$120K: Conducted fish monitoring surveys using techniques carried out from a boat, barge, and on foot using electrofishing backpacks.

Biologist, ESA Consultations on FEMA Disaster 1628 Projects, Marin, Mendocino, Del Norte, and Contra Costa Counties, CA, Federal Emergency Management Agency (FEMA), 2008 – Present, \$3.4M: Conducting site visits to examine projects and compliance with ESA for projects funded by the Federal Emergency Management Agency (FEMA). Consulting formally and informally with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Characterizing habitat at project sites to determine suitability for endangered species; preparing biological assessments for endangered species in California.

Biologist, Biological Monitoring, Livermore, Alameda County, CA, Chevron Pipeline Company, 2009, \$500K: Conducted construction monitoring for California red-legged frog, California tiger salamander, San Joaquin kit fox, and other species.

Biologist, Interstate-580 Truck Climbing Lane, Alameda County, CA, California Department of Transportation (Caltrans), 2009, \$130K: Wrote several documents after conducting field work and habitat assessments. Classified habitat types and identified potential breeding sites for listed amphibians and invertebrates. Prepared documents for Caltrans including a Natural Environment Study, Biological Assessment, Request for amendment to Biological Opinion, and assisted with a Jurisdictional Wetland Delineation study. Also conducted environmental permitting efforts for this project. These documents represented a summary of the



Mark Wilson

project area, biological resources, and impacts to listed species, water resources, and vegetation types.

Biologist, Wetland and Riparian Mitigation Monitoring, San Jose, CA, California Department of Transportation (Caltrans), 2008 \$45K:

Conducted annual monitoring for Wetland and Riparian Mitigation site adjacent to Route 87 and Guadalupe River. Reviewed data and rewrote mitigation and monitoring report with new data, conclusions and suggestions. Coordinated maintenance efforts and acted as temporary lead task manager in 2010 monitoring effort.

Biological Monitor, Bodfish Creek, Gilroy, CA, California

Department of Transportation (Caltrans), 2009, \$200K: Served as biological monitor for a linear transportation project adjacent to Bodfish Creek. Duties included: monitoring ESA fencing installation and excavation work according to the construction plans. Monitoring was completed for the following federally listed species: California tiger salamander (*Ambystoma californiense*) and California red-legged frog (*Rana draytonii*). Additional monitoring included avoiding removal of vegetation and uprooting of valuable trees, such as redwood (*Sequoia sempervirens*).

Biological Monitor, Lake Isabella Auxiliary Dam-Kern Canyon Fault Evaluation, Lake Isabella, CA, U.S. Army Corps of Engineers (USACE), 2008 – Present, \$2.5M:

Conducted construction monitoring in Kern County during exploratory trench excavation and geomorphic mapping. Aided geologists in setting hydraulic shores to prevent the trench from caving in. Conducted safety audits while fulfilling duties as a biological monitor.

Biological Monitor, Caldecott Tunnel, Alameda and Contra Costa Counties, CA, California Department of Transportation (Caltrans), 2010 \$60K:

Conducted construction monitoring in Alameda and Contra Costa Counties during preparation for the fourth bore of the Caldecott Tunnel. Discovered and monitored a nesting killdeer throughout multiple construction phases and described movements and nesting success.

Biologist, Old Lake Road to Dunne Lane Safety Improvement Project, Santa Clara County, CA, California Department of

Transportation (Caltrans), 2008 – 2009, \$40K: Assisted in writing documents and authored permits such as Incidental Take Permits for this project.

Biologist, Pullman Ditch Drainage Improvement Project, San Mateo County, CA, California Department of Transportation

(Caltrans), 2010, \$12K: Authored a Caltrans Compliance Manual for the Caltrans Resident Engineer containing a summation of permits and regulations required by agencies for this project.

Biologist, Old Niles Canyon Safety Widening Project, Alameda County, CA, California Department of Transportation (Caltrans),

2010, \$8K: Authored a Caltrans Compliance Manual for the Caltrans Resident Engineer containing a summation of permits and regulations required by agencies for this project.



Melissa Newman

Senior Biologist

Areas of Expertise

Environmental Impact Analysis
Endangered Species Act
Wildlife Biology Surveys
Habitat Assessment
Permitting

Years of Experience

With URS: 6 Years
With Other Firms: 0 Years

Education

M.S./Biology/2004/University of California, San Diego
B.S./General Biology/2002/University of California, San Diego

Registration/Certification

CDFG Scientific Collecting Permit
Standard First Aid
Adult CPR
HAZWOPER 29 CFR 1910.120 (c)
BNLL Workshop, The Wildlife Society, 25 day credit towards CDFG Level II BNLL surveyor (David Germano) (2009)

Overview

Ms. Newman has approximately nine years of experience in biological research studies; six of which have been in environmental consulting. She has managed the preparation of, and prepared, BAs for Section 7 consultation under the ESA with USFWS and NMFS, biological resources sections of CEQA/NEPA compliance documents, CDFG 1600 agreement notifications, and Section 404 and 401 permit applications, Caltrans Natural Environment Studies, Jurisdictional Delineation reports, and mitigation reports. Her field experience includes protocol surveys for blunt-nosed leopard lizard, California red-legged frog, vernal pool branchiopods, burrowing owl, California tiger salamander, valley elderberry longhorn beetle, raptors, and birds protected under the Migratory Bird Treaty Act. She also has experience coordinating and consulting with government resource agencies (e.g., USFWS, NMFS, and CDFG).

Selected Project Experience

Senior Biologist, Hydrogen Energy California Project, Buttonwillow, CA, Hydrogen Energy California, 2010-present, [Cost]: Conducted protocol-level surveys for BNLL for proposed hydrogen-powered electrical energy generating facility.

Senior Biologist, Lokern Habitat Conservation Plan EIR/EIS, Kern County, CA, Chevron Pipe Line Company, 2012-present, >\$1 M: Preparing the biological resources sections of the EIR/EIS for the implementation of the Lokern Habitat Conservation Plan.

Task Manager/Senior Biologist, High Speed Train (Fresno to Bakersfield), Fresno, Kings, Tulare, and Kern Counties, High Speed Rail Authority, 2009-present, \$1.02M: Wildlife species issues include CRLF, SJKF, BNLL, BUOW, vernal pool branchiopods, kangaroo rats, CTS, birds of prey, VELB, fisheries, and wildlife movement corridors. Managed field teams and led survey crews for portions of the wildlife field surveys. Managed preparation, revisions, and/or prepare sections of the Biological Resources Technical Report and EIR/EIS.. Consulted with USFWS, NMFS, and CDFG.

Wildlife Task Lead, High Speed Train (Bakersfield to Palmdale), Kern, and Los Angeles Counties, High Speed Rail Authority, 2010 - 2011, \$812K: Wildlife Task Lead for Bakersfield to Palmdale section of California High-Speed Train project. Section includes southern end of San Joaquin Valley, Tehachapi Mountains, and Mojave Desert. Wildlife species issues include desert tortoise, least Bell's vireo, Mojave ground squirrel, California condor, SJKF, BNLL, BUOW, birds of prey, and wildlife movement corridors. Organized and coordinated wildlife field surveys and managed integration of field data.

Task Manager/Senior Biologist, SAPCO PIM Repairs, Monterey County, CA, Chevron Pipe Line Company, 2011, [Cost]: Prepared



Melissa Newman

USFWS BA and oversaw preparation of the biological resource permit applications (i.e., USACE 404 NWP, RWQCB 401, CDFG 1600 Notification) for the proposed pipeline repair project.

Biological Resources Task Manager, Tracy Combined Cycle Conversion – Solar Integration Project, Tracy, CA, GWF, 2009, \$27K: Coordinated the biological surveys (habitat assessment, rare plants, burrowing wildlife) for proposed solar power project.. Led the wildlife surveys and oversaw preparation of the Biological Resource Assessment report.

Biologist, Willow Pass Generating Station, Pittsburg, CA, Mirant, 2009, [Cost]: Prepared Biological Evaluation report and CDFG 1600 Notification for proposed generating station.

Assistant Biological Resources Task Manager, Colusa Generating Station, Colusa County, CA, E&L Westcoast, LLC, 2006 –2008, \$1.5M: Prepared revised biological resources section of CEC AFC (EIR equivalent document) for proposed power plant site and associated bridge replacements. Prepared USFWS/NMFS BA, USACE 404 individual permit application, RWQCB 401 permit application, CDFG 1600 Notification, CEC Biological Resources Mitigation Implementation and Monitoring Plan. Consulted with agency personnel from the CEC, ACOE, USFWS, NMFS, CDFG, and EPA. Conducted surveys for BUOWs, amphibians, and rare plants. Mapped habitats and identified and delineated vernal pools, seasonal wetlands, and freshwater marsh wetlands. Conducted informal CTS habitat site assessment.

Biologist, San Ardo to Coalinga Crude Oil Pipeline Alignment, Monterey and Fresno Counties, CA, Chevron Pipe Line Company, 2006 – 2008, \$4.6M: Conducted protocol surveys for raptors and BUOWs for 57-mile pipeline project. Co-wrote draft Mitigation Concept Plan for proposed off-site mitigation for wetlands and habitats for federally listed species.

Chronology

01/10 – present: URS Corporation, Senior Biologist, Oakland, CA

05/06 – 12/09: URS Corporation, Biologist, Oakland, CA

09/01 – 06/03: Center for the Reproduction of Endangered Species, San Diego Zoo, Research Assistant, San Diego, CA

09/02 – 12/02: University of California, San Diego, Teaching Assistant for upper division course “Evolution”, La Jolla, CA

01/01 – 08/01: University of California, San Diego, Field Biologist, La Jolla, CA

Contact Information

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Robin Murray

Staff Biologist

Overview

Ms. Murray is a biologist with three years experience with rare plant surveys within California. Her work in Northern California involved conducting rare plant surveys, organizing field crews, and training crews in the identification and habitat requirements for target species. Ms. Murray has extensive experience hiking and navigating in rough terrain and in the operation off-highway vehicles. She also has experience in the creation and care of herbarium collections.

Areas of Expertise

Vegetation surveys
Plant identification
Habitat Assessment for sensitive plant species
Navigation in difficult terrain

Years of Experience

With URS: <1 Year
With Other Firms: 2 Years

Education

BS/Botany/Environmental
Biology/2006/Humboldt State
University

Specialized Training

OSHA 40-Hour HAZWOPER
Wetland Delineation

Project-Specific Experience

Restoration Experience

- Delhi Sands Restoration for SCE, San Bernardino, CA – Assisted with restoration efforts on a half-acre site for the endangered Delhi Sands Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*). March 2008 to present.

Vegetation Survey Experience

- Johnson Valley Energy Project – Conducted over 250 hours of botanical surveys on portions of 8,000-acre project site looking for rare and sensitive plant species. March to June 2008.
- Timber Harvest Plan Surveys, Korb and Scotia, CA– Coordinated three to four person crews for vegetation surveys including field training and plant identification training. Surveyed timber harvest plans for rare and sensitive plant species, monitored known populations of rare plants, assessed habitat suitability for rare plants, recorded and interpreted data, navigated and hiked in varying terrain and weather conditions, drove ATVs as well as 4x4 trucks. May to August 2006 and March to September 2007.

Sensitive Species Experience

Botanical Experience

- Conducted over 250 hours of surveying for rare and/or listed desert plant species in Johnson Valley, CA.
- Identified and documented a large population (over 1,500 individuals) of desert polygala (*Polygala acanthoclada*).
- Identified and documented first two known populations of giant fawn lily (*Erythronium oregonum*) within California.
- Surveyed over 50 miles of logging roads for Howell's montia (*Montia howellii*) and identified over 50 populations.
- Identified and documented over 100 populations of running pine (*Lycopodium clavatum*).
- Identified and documented over 25 populations of robust false lupine (*Thermopsis robusta*).



- Surveyed for and identified populations of Bald Mountain milk-vetch (*Astragalus umbricatus*), small groundcone (*Boschniakia hookeri*), flaccid sedge (*Carex leptalea*), Meadow sedge (*Carex praticola*), Oregon goldthread (*Coptis laciniata*), coastal fawn lily (*Erythronium revolutum*), Pacific gilia (*Gilia capitata* ssp. *pacifica*), indian pipe (*Monotropa uniflora*), Siskiyou checkerbloom (*Sidalcea malviflora* ssp. *patula*), and coast checkerbloom (*Sidalcea oregana* ssp. *eximia*).

Wildlife Experience

Blunt-nosed leopard lizard (*Gambelia sila*)

- Four positive identifications under supervision of a Level II surveyor. California Valley, CA – Surveyed for blunt-nosed leopard lizards using the CA Department of Fish and Game Protocol.

Desert tortoise (*Gopherus agassizii*)

- Four positive contact hours. Johnson Valley Energy Project – Conducted protocol surveys on portions of 8,000-acre project site looking for desert tortoise, sign, tracks, scat, and burrows. Collectively, crew found fifteen individuals; each was passively measured and burrows were assessed.

Specialized Training

- Wetland Delineation Training
August 2008
- OSHA 40-Hour HAZWOPER
June 2008
- Smith Systems Driver Training
August 2008
- Loss Prevention System
August 2008
- Certified ATV driver by the ATV Safety Institute,
license # 122849
- 2007/First Aid/CPR/AED

Chronology

3/08 - Present: URS Corporation, Staff Biologist, Santa Maria, CA

3/07 - 9/07: Green Diamond Resource Company, Botanical Crew Leader, Korbelt, CA.

5/06 - 8/06: Pacific Lumber Company, Botanical Technician, Scotia, CA

6/05 - 8/05: Biological Sciences Department, Humboldt State University, Research Intern, Arcata, CA

6/03 - 8/03: Entomology Laboratory, Humboldt State University, Laboratory Assistant (Volunteer) Arcata, CA

5/02 -8/02: Joint Genome Institute- Lawrence Berkeley Laboratories, Laboratory Assistant and Microscope Technician, Walnut Creek, CA



Contact Information

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Ronald R. Cummings

Senior Wildlife Biologist

Overview

Ronald Cummings' educational and professional background provide an experience base in special status species surveys, habitat analysis, environmental impact assessment, NEPA analysis, and the management and logistics of survey field crews. Mr. Cummings is currently employed as a Senior Wildlife Biologist in the Santa Barbara office within the Central Coast Operations of URS Corporation.

Areas of Expertise

Wildlife field survey
NEPA Analysis
ESA Section 7 Consultation
Biological Evaluations
Biological Assessments
Habitat management

Years of Experience

With URS: 2 Years
With Other Firms: 20 Years

Education

BS/General Biology/1985/Oregon
State University, Corvallis, OR

Registration/Certification

Loss Prevention System (LPS)
HAZWOPER 40-hour
Shell Yellow Book Safety
Smith Driver Safety
PASSPORT Contractor Safety
e-RAILSAFE System
BNSF Contractor Orientation
Level II Surveyor: Blunt-nosed
leopard lizard survey protocol.

Mr. Cummings has over twenty-one years of experience in wildlife and fisheries management, including 18 years as a wildlife biologist with USDA Forest Service and two years as a fresh water fishery volunteer with the Peace Corps in Ecuador, South America, and two years with URS Corporation. He has extensive experience in field surveys for various wildlife species; project and sub-watershed level NEPA analysis for determining effects and mitigations for species and habitats, including writing Biological Evaluations (BE), Biological Assessments (BA), and portions of Environmental Assessments (EA); and some experience writing portions of Environmental Impact Statements (EIS). Mr. Cummings has experience in writing habitat assessments; habitat improvement projects; wildlife surveys; program planning; employee supervision; ESA Section 7 Consultation with USDI FWS; cooperation with other agencies such as NPS, CDFG, BLM, Caltrans, PG&E, local Governments and private individuals. He has a general knowledge of West Coast habitats and species, with emphasis on the following Federally Listed species: Northern spotted owl, San Joaquin kit fox, giant kangaroo rat, blunt nosed leopard lizard, desert tortoise, and valley elderberry longhorn beetle. Mr. Cummings has experience with other wildlife species endemic to the Sierra Nevada range, the San Joaquin Valley, and Mojave Desert.

Project Specific Experience

Wildlife Surveys: December 15, 2008 to present.

- **California Valley Solar Ranch Project; SunPower Corporation, Systems; San Luis Obispo County, CA:** Participated in botanical surveys, wintering bird surveys, nesting bird surveys, burrow surveys, kit fox spotlighting, and blunt-nosed leopard lizard surveys on the 3,000 acre project site. Performed monitoring and detection of the San Joaquin kit fox via spotlight surveys (3 nights), burrow surveys (2 days), and automatic camera stations (5 weeks set up and take down). Assisted in the supervision of the survey crew of 12 to 24 biologists during 17 weeks of blunt-nosed leopard lizard surveys. Coordinated rental cars and hotel rooms, developed the survey schedule, performed safety briefings, and ensured data forms were filled out appropriately. Organized and summarized survey data on a weekly basis and at the end of the survey season. Responded and adapted to challenges such as



last-minute personnel changes and weather events to complete the surveys on time and within protocol. Qualified as a Level II surveyor for blunt-nosed leopard lizard. May – Sept, 2009.

- **Santa Ynez Habit Mapping; Rincon Corporation; Santa Ynez, CA.** Performed a habitat assessment on a 1.1 acre parcel for a proposed gas station. Identified vegetation communities, general botanical and wildlife species present, and wrote the resulting Habitat Assessment and Sensitive Species Review. June, 2009.
- **HECA 2; Hydrogen Energy, California; Buttonwillow, CA:** Performed general wildlife surveys for sign of special-status species on the approximately 1,000-acre project site (January, 2009). Participated in protocol blunt-nosed leopard lizard surveys on a portion of the site, May – June, 2009, and again during the juvenile blunt-nosed leopard lizard survey season August-September, 2010.

Special-Status Wildlife Species Experience:

Blunt-nosed leopard lizard (*Gambelia sila*): 530 survey hours:

- Attended survey protocol training in Bakersfield, May, 2009. Level II BNLL survey qualified.
- California Valley Solar Ranch project: 400 surveys hours. Supervised the crew of 12-24 biologists during BNLL survey efforts in California Valley.
- HECA 2 project: 130 survey hours.
- Observed adult and juvenile BNLL in the field an estimated 8 times during training and at a reference site in the Carrizo Plains National Monument.

Burrowing owl (*Athene cunicularia*): 136 survey hours:

- Antelope Valley, Larsen Ranch Site: 40 dedicated survey hours.
- Calico Solar project site: 96 survey hours.
- Larsen Ranch Site, Calico Solar, Pacific Valley Solar, High Speed Train: 128 survey hours; observed burrowing owls during general bird/wildlife surveys.
- California Valley site: 400 survey hours; observed burrowing owls almost daily during blunt-nosed leopard lizard surveys.

Swainson's hawk (*Buteo swainsoni*): 40 survey hours:

- Pacific Valley Solar (3 sites): 24 dedicated survey hours.
- High Speed Train: 16 hours.

San Joaquin kit fox (*Vulpes macrotis mutica*): 34 survey hours:

- California Valley Solar: 18 hours spotlight surveys, 16 hours burrow surveys, and 5 weeks of motion-sensitive automatic camera station monitoring. Observed kit foxes (adults and young) and sign frequently during 400 hours of blunt-nosed leopard lizard surveys.
- Able to identify kit fox burrows, natal dens, scat, tracks, and suitable habitat.



Steve Zembsch, CPESCS

Senior Hydrologist

Areas of Expertise

Stream Restoration
Wetland Mitigation/Creation
Erosion and Sediment Control
Road Removal/Downgrades to Trail
Revegetation/Pest Species Eradication

Years of Experience

With URS: <1 Year
With Other Firms: 30+ Years

Education

BS/Soil Resource
Management/1979/University of
California, Berkeley

Registration/Certification

1994/CPESCS/#678
1980/General Engineering
Contractor/CA/#390156

Overview

Prior to joining URS this year, Mr. Zembsch was the founder and principal hydrologist of Watershed Science, a specialized stream restoration and wetland mitigation firm. He designed and/or implemented more than 100 projects throughout California in a wide variety of geomorphic settings for a diversity of clients. He also undertook many projects involving erosion and sediment control, non-native species eradication, native plant re-vegetation, golf course development, and water feature design and construction.

Mr. Zembsch is a firm believer in tailoring each project to function harmoniously with the natural channel forming factors. His greatest post-project satisfaction is when the project site is indistinguishable from its natural surroundings. And the finest compliment you can give him is to disbelieve that a stream restoration actually occurred at one of his many project sites.

Project Specific Experience

Stream Restoration Projects

Designer/Installer, Wilder Creek Dam Removal and Channel Restoration, Santa Cruz, CA, CA Dept. of Parks and Recreation, 1999 – 2000, \$160K: Total project responsibility from concept through implementation, including major riparian reforestation and post-project monitoring. Project involved applying for SB 271 funds to remove a 100% barrier to salmon and steelhead migration and spawning. Project complications included designing and installing a new water source for park operations (infiltration gallery), and mitigating for loss of important Red-legged frog breeding and rearing habitat. Salmonid surveys conducted the first year after the project revealed the highest density of steelhead fry of all coastal San Mateo County streams and the presence of a few Coho fingerlings, the first salmon in this highly suitable habitat after nearly 50 years of absence. Some major project steps included:

- The dam and spillway were removed.
- Boulder cascades were placed 60 feet downstream of the former dam and continued upstream to create a grade similar to Wilder Creek's pre-dam channel.
- A 12-foot thick layer of sediment that had filled the reservoir created by the dam was removed and relocated to a stable site.

When Mr. Zembsch and his crew removed the impounded sediments half a century later they discovered that the pre-dam cobbles had been removed, crushed and were now incorporated into the asphalt! To complete the project properly, they had to extend the project upstream, all the way to the point of inflection (where the impacts of the dam was manifest as a flattened grade).



Steve Zembsch, CPESCS

Designer/Installer, Shekell Streambed and Streambank Rehabilitation, near Somis, Ventura County, CA, Ventura County Resource Conservation District (RCD), 1999 – 2003, \$750K: Mr.

Zembsch's first foray into southern California was an eye opening experience. Agriculture (citrus and avocados) is king, and creeks seem to be viewed as agricultural "drains". The fact that the RCD and the individual landowners associated with this experimental project were willing to try something other than concrete and riprap is a remarkable tribute to their faith and trust in scientific approaches.

This was a surprisingly difficult project, despite the 2% valley slope. The bed and banks were coarse sand and the channel had been highly altered over the last half a century. The previous (and ongoing) bank erosion methodology was to back dump trucks up to the top of the banks and simply dump all sorts of construction debris and rubble. No thought was given to the hydrological effect of this practice, nor to the impact of this practice on the property owner on the other side.

Mr. Zembsch carefully surveyed the existing channel and found several stable reaches nestled in among the collapsing, debris-embedded banks and torrents of sandy bedload. He carefully surveyed and analyzed these sites and discovered the stable plan form for the majority of the project was a short wavelength, mildly sinuous channel with a well-defined cross-section and depositional features. The few existing (pre-project) stable banks along the meander bend, particularly from the beginning and through the apex of the meander, were stable largely due to the dense riparian vegetation with embedded woody material, and/or large rocks. There was an ample supply of the latter two, and enough of a budget to purchase the young vegetation.

100,000 native grasses of various species were grown from seeds in a large agricultural nursery. Mr. Zembsch oversaw the planting in late April. The timing determined that the seedlings were very dependent on the adjacent property owners to take good care of them until their root systems were developed enough to survive without irrigation. Planting on this scale is better performed in October, but the landowners did a fair-good job of irrigating and there are areas of moderately dense plantings holding the banks.

Mr. Zembsch returned in December of 2003 to touch up a couple of spots where the entrance roads or citrus crops encroach on the channel and compromises had to be made in the design. The previous season's high water sounded a fair warning that such compromises would not be tolerated over the long haul, so he pulled the banks back as best we could and stabilized the incising, confined reach. It's up to the vegetation now.

Designer, Restoration of Easkoot Creek, Stinson Beach, CA, Golden Gate National Recreation Area, National Park Service, 2000, 45K: Located on a recently altered Holocene marine terrace, just a few hundred feet from the beach, the Easkoot Creek project presented several problems. Under pressure from the town, the park did not want to give up any visitor parking space to give the floodplain back to the creek or its adjacent wetlands. This seemed to be a strange concession at the time



Steve Zembsch, CPESCS

and an even stranger one today, 11 years later. The natural resources that the parking lots are displacing are not only disappearing fast from our national landscape, they are critical breeding and rearing habitat for several listed species.

Parking lots aside, there is another critical issue facing the natural resources that rely on the Stinson Beach parklands for critical habitat. Water extraction, both surface diversion and groundwater, result in a premature desiccation of Easkoot Creek and its wetlands. There are several simple solutions to this problem. A large storage reservoir, located upslope from the community, could be fed by excessive storm flow in the winter and combined with wise community use in the summer and fall, and would greatly reduce the need to extract surface and groundwater from the Easkoot Creek hydrologic basin.

Designer/Installer, Apple Homes Development, Scotts Valley, CA, Apple Homes LLC, 2007 – 2011, \$63K: Mr. Zembsch designed and constructed three wetland basins to mitigate for the loss of existing wetlands caused by the construction activities. He also designed and constructed an additional wetland as a provisional wetland. The wetlands were plugged with several types of native obligate species that were salvaged and stockpiled from the existing wetlands before they were disturbed by the impending construction. He primarily used *Juncus* and *Carex* species because of their rapid growth and the development of thick, strong root masses. They quickly formed dense, fibrous root masses that successfully bound the channel stones and boulders together to withstand the tremendous erosional forces of an unusually severe fall storm the first year.

Designer/Installer, Design and Implementation, Eradication of Eucalyptus Forests, Marin County, CA, Golden Gate National Recreation Area, 2004, \$305K: Two different post-removal treatments were provided- complete removal, roots and all (6 acres), and stump application of herbicide (using Garlon 4- 22 acres). The results were immediate and spectacular. The 6 acre complete removal was quickly planted with thousands of natives grown in the GGNRA nursery and the Eucalyptus seedlings were easily hand-pulled. The site transformed immediately from a monoculture dominated by the invasive, exotic pest tree into a beautiful glade dominated by a wide diversity of native flora. To the contrary, the 22 acre site is peppered with stumps and requires thousands of dollars a year in maintenance costs and hundreds of hours of volunteer labor to pull the sprouts.

Designer/Installer, Periwinkle Eradication, Design/Implementation, Bothe-Napa Valley State Park, St. Helena, CA, CA Dept. of Parks and Recreation, 1986, 26K: Mr. Zembsch took this project over from a State Park employee on leave. He quickly discovered that the application of herbicide in the spring was simply defoliating the rhizomonous Periwinkle, and there was enough energy in the stems and roots to re-leaf by mid-summer. The herbicide did kill adjacent vegetation, however, that was competing with the Periwinkle. So the target plant came back, more robust than ever. The solution was



Steve Zembsch, CPESCS

simple: let the plant re-leaf so it uses its stored energy and then hit it with herbicide again once the leaves are large enough to deliver the herbicide to the roots.

Designer/Installer, Lombardi Creek Tule Removal Project, Wilder Ranch State Park, Near Santa Cruz, CA, California Department of Parks and Recreation, 2002, \$40K: The back-dune estuary had become choked with sediment and thickly vegetated with tules, limiting its value as a diverse native ecosystem and nursery for the sensitive amphibians and fish known to inhabit these coastal lagoons. Mr. Zembsch and his crew cleared the tules, enlarging the estuary in size and depth, greatly increasing its volume. This increase was critical for providing a salinity gradient, increasing oxygenation and decreasing the temperature of the water.

Installer, Big Rock Ranch Revegetation Project, Near San Rafael, CA, LucasFilm LLC, 2001 – 2004, \$96K: The revegetation program has settled into a comfortable journey toward successful completion of the mitigation requirements. At issue was the hardening of the nursery stock prior to installation (the wetland plants went through Steve's boot camp, much to the client's and their landscape architect's dismay). Note that the Watershed Science plants quickly surpassed the adjacent contractor's beautiful nursery stock. An important horticultural consideration is to replicate the natural condition so we tap into the internal survival wiring. This means use native soil as a planting medium, without amendments (fertilizer, organic matter, etc.). It also means to irrigate in a way that mimics the natural condition, adjusting for the existing situation, such as the plant is in a container, not the wetland soil.

An ideal example would be to plant the plugs after the first good soaking rain of the fall and then leave them alone unless there is a protracted drought until the next fall/winter storm. Or, as in the case of LucasFilm, leave them in their containers in the summer, lightly water them to keep them alive while triggering root development and concomitant foliar suppression.

Installer, Riparian Reforestation, Clear Creek, Redding, CA, Western Sotoyome Resource Conservation District, 2002, \$76K: Planting 7,000 riparian tree poles (1" to 3" diameter branches cut into a 6' length) in fluvial gravels in Redding in late March doesn't sound like fun. Guess what? It wasn't. Mr. Zembsch and his crew had to drill a five-foot deep hole with a Bobcat and auger attachment and then immediately stick a pole in the hole before it caved in or the pole dried out. The job had a rigid sequence of species and a regimented appearance that is contrary to Mr. Zembsch's design philosophies. The project was, however, a necessary step in converting this braided, deforested portion of Clear Creek into a stable, meandering C4 channel.



J. Wayne Vogler

Senior Biologist

Areas of Expertise

Wetland Delineations
Construction Monitoring
Flora/Fauna Surveys
Mapping Services
HAZWOPER Trained

Years of Experience

With URS: 2 Year
With Other Firms: 11 Years

Education

BS/Biological Sciences/1994/
University of California, Irvine

Registration/Certification

1997/U.S. Army Corps of
Engineers Wetland Delineation
Certification Program
2008/Level II Blunt-nosed Leopard
Lizard Surveyor

Overview

Mr. Vogler is a biologist with a well-balanced understanding of biological resources and project planning. Mr. Vogler has proved to be an asset in the planning of complex field efforts; developing strategies for performing surveys and collection data while maintaining critical data acquisition targets. Mr. Vogler's project experience has included working with federal, state, and local agencies to find consensus among several parties, often with conflicting interests, toward the successful completion of the project. Mr. Vogler developed an instituted monitoring protocols, developed restoration plans, and monitored one of the largest hydrocarbon remediation projects along the U.S. Western Coast. Wayne has maintained compliance with Health and Safety training requirements, including some specialized training, since 1996; he is fully-versed in the health and safety culture.

Project-Specific Experience

Sensitive Species Experience

California Red-legged Frog (*Rana aurora draytonii*) identified presence through eyeshine survey techniques for hundreds of individuals, pit-tagged dozens of individuals, identified and differentiated individuals from other amphibian species.

- San Luis Obispo and Santa Barbara County – Conducted presence/absence surveys for California red-legged frogs and mapped habitats. 1999 through present.
- Chevron Guadalupe Restoration Project - Permitted to survey, capture, handle, and relocate California red-legged frogs. Includes pit-tagging and radio-tracking of individuals to monitor relocation efforts. Adult surveys include quarterly census surveys, presence/absence, and construction site clearance surveys. Survey efforts for tadpoles, including dip-netting and use of minnow traps. 1999 through present.
- Chevron Wylie Remediation Project, Santa Maria, CA – Habitat assessment, clearance surveys of work areas, and consultations with regulatory agencies. October 2007 to present.
- Capture, Handling, and Pit Tagging Workshop, Grover Beach, CA - small group led by Galen Rathbun on techniques to safely capture and handle California red-legged frogs, using bullfrogs (*Rana catesbiana*) as surrogates. Hands-on use of pit tag equipment on live bullfrogs. Workshop conducted in support of obtaining U.S. Fish and Wildlife approval to conduct such activities under the Guadalupe Restoration Project Biological Opinion. 2000.

Desert Tortoise (*Gopherus agassizii*)

- Solar Energy Project, Johnson Valley, San Bernardino County, CA – habitat assessment and survey of 14 square miles. Protocol surveys for desert tortoise. Acted as survey crew leader. Other species commonly

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observed include desert horned lizard (*Phrynosoma platyrhinos*) and long-nosed leopard lizard (*Gambelia wislizenii*). March to June 2008.

- Solar Energy Project, Johnson Valley and Hector Valley, San Bernardino County, CA – survey area of over 20,000-acres for protocol surveys for desert tortoise. Surveyed project site and proposed transmission line corridors. Also conducted general habitat mapping, Waters of the U.S. delineations, rare plant surveys, and habitat surveys for the Mojave ground squirrel (*Spermophilus mohavenissi*). March to July 2007.
- Mojave Desert – Completion of the Desert Tortoise Council Annual Surveying, Monitoring, and Handling Techniques Workshop. Training included survey techniques for individuals and their sign, assessment of habitat, handling techniques, and burrow construction. 2003.

Wetland Delineations

- Performed the initial survey and subsequent update surveys to identify and delineate wetlands according to federal definitions at the 2,800-acre Guadalupe Restoration Project. Employed both routine and comprehensive survey methods with findings reviewed by USACE and NRCS. 1997 and 2004.
- Performed the initial survey and subsequent update surveys to identify and delineate wetlands according to California state definitions at the 2,800-acre Guadalupe Restoration Project. Developed specific analysis methods to satisfy CCC concerns. Findings reviewed by CDFG and CCC 1998 and 2003.
- Guadalupe-Nipomo Dunes – Conduct an identification survey of wetland habitats throughout the entire dunes complex. Developed identification and screening criteria, classification and descriptive identifiers, and survey methodology. Employed aerial photography interpretation for initial target identification. Mapped wetland habitats with sub-meter GPS unit for data to be incorporated into an existing GIS project. 2004 to present.
- Administrative Hearing with the Army Corps of Engineers for the Santa Maria Airport District. Presented to Hearing Officer in support of District's opinion that wetlands unfairly identified by ACOE personnel. Hearing resulted in no action taken by ACOE against District.

General Vegetation Surveys, Wildlife Surveys, and Habitat Assessment

- Conducted regimented surveys and mapping efforts for La Graciosa thistle (*Cirsium loncholepsis*), surf thistle (*Cirsium rhotobopulum*), and beach spectacle-pod (*Dithyrea maritima*). Initial survey and mapping of presence. Annual censusing of populations. Monitoring of construction activities to ensure avoidance of disturbance to individuals and habitat. 1998 to present.
- Prepared biological sections for Application for Certification documents submitted to the California Energy Commission regarding power generating stations. September 2006 to present.



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- Presence survey. Population mapping, and habitat assessment for Gaviota tarplant (*Deinandra increscens* ssp. *villosa*) for a naturally vegetated 16-acres site at Vandenberg Air Force Base, California. June 2006.
- Habitat Inventory and Ecological Database (HIED) development for the 2,800-acre Guadalupe Restoration Project. Scope included the initial mapping of sensitive flora, sensitive fauna, weed infestation, habitat quality, and several other parameters. Data developed from aerial photograph interpretation, qualitative and quantitative surveys, and specific presence/absence surveys per species. Updated annually. 2002 to present.
- Pre-disturbance assessment and restoration monitoring surveys to determine habitat composition and quality. Developed protocols for photograph documentation efforts. Spring 1998 to present.
- Construction monitoring to ensure compliance with over 1,200 permit conditions. Work with contractors and construction personnel to minimize native habitat disturbance and avoid sensitive and listed flora and fauna. Spring 1998 to present.

Specialized Training

- Annually/8-Hour HAZWOPER Annual Refresher
- 2006/Loss Prevention System Training, a Behavior Based Safety Program
- 2006/Smith System Advanced Driving Traffic Safety
- 2003/PADI Certified Open Water Diver
- 2001/Stormwater Pollution Prevention on Construction Sites, California State Water Resources Control Board
- 1996/40-Hour Hazardous Waste Workers' and 24-Hour First Responder Health and Safety Training

Contact Information

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