

**CURRICULUM VITAE**  
**Peter H. Bloom**  
**President, Bloom Biological, Inc.**

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**Education**

Ph.D. *Candidate* 2001 College of Natural Resources, University of Idaho, Moscow  
*Dissertation*; Natal dispersal and philopatry in sympatric *Buteos* in southwestern California. Dr. J. Michael Scott (Chair)

M.S. 1989 (Biology) California State University, Long Beach.  
*Thesis* Red-shouldered Hawk habitat home range and habitat use in southern California.

Graduation with Honors: Outstanding Thesis Award, School of Natural Sciences.

B.S. 1979 (Zoology) California State University, Long Beach

**Employment**

1/77 - Present *President, Bloom Biological; Independent research biologist/consultant.* As president of my own biological consulting group, I annually direct and supervise the work of 7 expert associates, species specialists, and up to 50 subcontractors per year. Contracts I steward range from small to large, million dollar multifaceted and complex projects. Responsibilities include directing and performing surveys of nesting and wintering birds of prey for the California Department of Fish and Game, National Park Service, Bureau of Land Management, U.S. Forest Service, Department of Defense, and numerous private land owners as well as a raptor status and management plan for U.S. Naval Weapons Station; Seal Beach and Fallbrook Detachments. Corporate clients have included The Irvine Ranch, Tejon Ranch, Rancho Mission Viejo, Newhall Ranch, Ahmanson Ranch, MWD, and Los Angeles Department of Water and Power. During this work, my associates and I prepare and/or contribute to numerous biological assessments, environmental impact reports, and provide expert advice to corporations, non-profit conservation groups, and federal and local government(s) on the subject of threatened and endangered species, conservation, general biological surveys. I have worked on international avian and herpetological research projects in the western U.S., Alaska, Peru, Ecuador, and India. During this work, I have coordinated and logged over 500 flight hours of helicopter and fixed wing nest survey work and aerial radio tracking of eagles, California condors, red-shouldered hawks, red-tailed hawks and great blue herons in the western United States.

7/90 - Present *Research Biologist, Western Foundation of Vertebrate Zoology.* Duties range from serving on the Science Advisory Board of the South Orange County Natural Communities Conservation Program. Member of the Technical Advisory Committee for the 17,000 acre Nature Reserve of Orange County. Management of long-term (38 year) raptor ecology study in California. Supervisor on a two year Caltrans radio-telemetry study of nesting peregrine falcons in southwestern California and their relationship to California least terns. Principal biologist overseeing long-term monitoring of raptors of the Nature Reserve of Orange County. Established and directed an Institute for Bird Populations MAPS passerine monitoring station for 7 years.

1/93 - Present *Research Biologist/Expert Advisor in India (7 visits).* Served as international advisor for Indo-US wildlife conservation project sponsored by the U.S. Fish & Wildlife Service International Affairs Office, the Indian Government, and the Bombay Natural History Society. Responsibilities involve educating Indian biologists and government officials on multiple techniques needed to capture and mark birds, and conduct VHF and satellite telemetry tracking research projects.

- 5/82 - 6/90 *Research Biologist, National Audubon Society.* Directed the successful efforts to capture all wild free flying California condors for transmitter placement or captive breeding. Radio tracked California condors and conducted contaminant studies on condors and 180 golden eagles.
- 5/81 - 9/83 *Research Biologist, University of California, Santa Cruz.* Principal investigator on a three year study designed to determine the status of northern goshawk populations in California for the Department of Fish and Game.
- 1/80 - 8/81 *Research Biologist.* Trapped and placed transmitters on great gray owls for the U.S. Forest Service, prairie falcons for the Department of Fish and Game, and peregrine falcons in Peru, South America for the Bodega Bay Institute of Pollution Ecology.
- 4/79 - 10/79 *Wildlife Biologist.* U.S.D.I., Bureau of Land Management. Principal investigator of a study designed to determine the status of the Swainson's hawk in California. Surveyed all suitable habitat including semi-arid and desert regions in California, reviewed literature and museum records, ascertained reproductive success, banded adults and young, and prepared final report. My effort resulted in state (California) listing of the Swainson's hawk.
- 6/75 - 10/79 *Biological Technician and Biologist.* U.S.D.I., Bureau of Land Management. California and Nevada. Conducted reptile, amphibian, small mammal, and avian surveys of 3.25 million acres of public land as part of a grazing EIS. Diet study and banded 180 nestling golden eagles.

### **Primary research emphasis**

Long term analysis of population ecology and biology of sympatric raptors; specifically red-tailed hawk, red-shouldered hawk, barn owl and great horned owl.

Supplemental analysis of the western screech owl, long-eared owl, Cooper's hawk, white-tailed kite and golden eagle.

35,000 raptors banded as part of a dispersal, migration, survivorship, and mate/territory fidelity study.

Thirty year study on the status and ecology of Swainson's hawk in northeast California.

Aging techniques for golden eagles, *buteos* and large owls based upon molt characteristics as determined from recaptured known-aged banded nestlings.

### **Publications**

Bloom, P.H., W.S. Clark, and J.W. Kidd. 2007. Capture techniques. IN Bird and Bildstein (eds). Raptor research and management techniques. Hancock House, Blaine, WA.

Kidd, J.W., P.H. Bloom, C.W. Barrows and C.T. Collins. 2007. Status of Burrowing Owls in southwestern California. IN Proceedings of the California burrowing owl symposium, November 2003. Bird populations monographs No. 1. Institute for Bird Populations and Albion Environmental, Inc.

Lincer, J.L. and P.H. Bloom. 2007. The Status of the Burrowing Owl (*Athene cunicularia*) in San Diego County, California. IN Proceedings of the California burrowing owl symposium, November 2003. Bird populations monographs No. 1. Institute for Bird Populations and Albion Environmental, Inc.

Houston, C.S. and P.H. Bloom. 2005. Turkey Vulture marking history: The switch from leg bands to patagial tags. North Am. Bird Bander 30:59-64.

Clark, W.S. and P.H. Bloom. 2005. Basic II and basic III plumages of Rough-legged Hawks. J. Field Ornith. 76:83-89.

- P.H. Bloom and W.S. Clark. 2001. Molt and sequence of plumages of Golden Eagles, and a technique for in-hand ageing. *North Am. Bird Bander* 26:97-116.
- Collins, C.T. and P.H. Bloom. 2000. The status of Harlan's Hawk in southern California. *Western Birds* 31:200-202.
- Goldstein, M.I., P.H. Bloom, J.H. Sarasola, and T.E. Lacher. 1999. Post-migration weight gain of Swainson's Hawks in Argentina. *Wilson Bull.* 111:428-432.
- Tietje W.D., P.H. Bloom, and J.K. Vreeland. 1998. Characteristics of Red-tailed Hawk nest sites in oak woodlands of central California. IN *Proceedings; Symposium on Oak Woodlands: Ecology, Management, and Urban Interface Issues*.
- Hall, L.S., M.S. Morrison, and P.H. Bloom. 1997. Population status of the endangered Hawaiian Hawk. *J. Raptor Res.* 31:11-15.
- Bloom, P.H. and M.D. McCrary. 1996. The urban Buteo: Red-shouldered Hawks in southern California. In: D.M. Bird, D.E. Varland, and J.J. Negro (eds.). *Raptors in human landscapes, adaptations to built and cultivated environments*. Academic Press.
- Woodbridge, B., K.K. Finley and P.H. Bloom. 1995. Reproductive performance, age structure and natal dispersal of Swainson's Hawks in the Butte Valley, California. *J. Raptor Res.* 29:187-192.
- Bloom, P.H. 1994. The biology and current status of the Long-eared Owl in coastal southern California. *Bull. Southern California Acad. Sci.* 93:1-12.
- Garrison, B.A. and P.H. Bloom. 1993. Natal origins and winter site fidelity of Rough-legged Hawks wintering in California. *J. Raptor Research* 27:116-118.
- Bloom, P.H., M.D. McCrary, and M.J. Gibson. 1993. Red-shouldered hawk home range and habitat use in southern California. *J. of Wildl. Manage.* 57:258-265
- Bloom, P.H., J.L. Henckel, E.H. Henckel, J.K. Schmutz, B. Woodbridge, J.R. Bryan, R.L. Anderson, P.J. Detrich, T.L. Maechtle, J.O. McKinley, M.D. McCrary, K. Titus, and P.F. Schempf. 1992. The Dho-gaza with Great Horned Owl Lure: An analysis of its effectiveness in capturing raptors. *J. Raptor Res.* 26:167-178.
- McCrary, M.D., P.H. Bloom, and M.J. Gibson. 1992. Observations on the behavior of surplus adults in a Red\_shouldered Hawk population. *J. Raptor Res.* 26:10-12.
- Risebrough, R.W., A.M. Springer, S.A. Temple, C.M. White, J.L.B. Albuquerque, P.H. Bloom, R.W. Fyfe, M.N. Kirven, B.A. Luscombe, D.G. Roseneau, M. Sander, N.J. Schmitt, C.G. Thelander, W.G. Vasina, and W.W. Walker II. 1990. Observaciones del Halcon Peregrino, *Falco peregrinus* subspp, en America Del Sur. *Rev. Brasil. Biol.*, 50:563-574.
- Pattee, O.H., P.H. Bloom, J.M. Scott, and M.R. Smith. 1990. Lead hazards within the range of the California Condor. *Condor* 92:931-937.
- Risebrough, R.W., R.W. Schlorff, P.H. Bloom and E.E. Littrell. 1990. Investigations of the decline of Swainson's Hawk populations in California. *J. Raptor Res.* 23:63-71.
- Clark, W.S., P.H. Bloom, and L.W. Oliphant. 1989. Aplomado Falcon steals prey from Little Blue Heron. *J. Field Ornith.* 60:380-381.
- Harlow, D.L. and P.H. Bloom. 1989. Status of Buteos and the Golden Eagle in the western United States. IN *Proceedings on the status of western raptors*. National Wildlife Federation

- Bloom, P.H., J.M. Scott, O.H. Pattee, and M.R. Smith. 1989. Lead contamination of Golden Eagles within the range of the California Condor. IN Raptors in the modern world - Proceedings of the international conference on birds of prey, Eilat, Israel, 1987.
- Wiemeyer, S.N., J.M. Scott, M.P. Anderson, P.H. Bloom, and C.J. Stafford. 1988. Environmental contaminants in California Condors. *J. Wildl. Manage.* 52(2):238-247.
- Bloom, P.H. 1987. Capturing and handling raptors. IN Millsap, B.A., K.W. Cline, B. Giron Pendleton, and D.A. Bird (eds.). *Raptor Management Techniques Manual*. National Wildlife Federation Science Technical Series #10. National Wildlife Federation.
- Bloom, P.H. 1985. Raptor movements in California. Pgs. 313-323. IN Harwood, M. (ed). *Proceedings of hawk migration conference IV*. Rochester, New York.
- Schlорff, R.D. and P.H. Bloom. 1984. Importance of riparian systems to nesting Swainson's Hawks in the Central Valley of California. Pgs. 612-618. IN Warner, R.E. and K.M. Hendrix (eds.). *California riparian systems, ecology, conservation, and productive management*. Univ. of California Press.
- McCrary, M.D. and P.H. Bloom. 1984. Lethal effects of introduced grasses on Red-shouldered Hawks. *J. Wildl. Manage.* 48:1005-1008.
- McCrary, M.D. and P.H. Bloom. 1984. Observations on female promiscuity in the Red-shouldered Hawk. *Condor* 86:486.
- Bloom, P.H. and S.J. Hawks. 1983. Nest box use and reproductive biology of the American Kestrel in Lassen County, California. *J. Raptor Res.* 17:9-14.
- Bloom, P.H. 1983. Notes on the distribution and biology of the Flammulated Owl in California. *Western Birds* 14:49-52.
- Bloom, P.H. and S.J. Hawks. 1982. Food habits of nesting Golden Eagles in northeast California and northwest Nevada. *J. Raptor Res.* 16:110-115.
- Barrows, C.W., P.H. Bloom and C.T. Collins. 1982. Sexual differences in the tail barring of Spotted Owls. *N. American Bird Bander* 7:138-139.
- Bloom, P.H. 1979. Ecological studies of the Barn Owl in California. IN Shaeffer, P. and S.M. Ehlers (eds.). *Proceedings of the National Audubon Society's Symposium on Owls of the West: Their Ecology and Conservation*.
- Collins, C.T. and P.H. Bloom. 1975. An aid to eagle banders. *Western Bird Bander.* 50:70.
- Bloom, P.H. and M.D. McCrary. 1974. Disturbed foothill grassland breeding bird survey. *Am. Birds* 28:1000.
- Bloom, P.H. 1974. Some precautions to be used in banding studies of nestling raptors. *Western Bird Bander* 49:4-5.
- McCrary, M.D. and P.H. Bloom. 1974. Coastal grassland winter bird survey. *Am. Birds* 28:1043.
- Bloom, P.H. 1973. Seasonal variation in body weight of sparrow hawks in California. *Western Bird Bander* 48:17-19.

### **Technical Reports**

- Bloom, P.H. 2005. Raptor status and management recommendations for the Santa Monica Mountains and Simi Hills, Los Angeles and Ventura Counties, California. Santa Monica Mountains National Recreation Area.

- Bloom, P.H. 2002. Breeding raptor and loggerhead shrike status and management recommendations for site 300, Lawrence Livermore Laboratory, Livermore, CA.
- Hull, B. and P. Bloom. 2001. The North American bander's manual for raptor banding techniques. North Am. Banding Council.
- Bloom, P.H. 1996. Raptor status and management recommendations for Naval Ordnance Center, Pacific Division, Fallbrook Detachment, and Naval Weapons Station, Seal Beach, 1993/95.
- Morrison, M.L., L.S. Hall and P.H. Bloom. 1994. Hawaiian Hawk (*Buteo solitaries*) population survey. Prepared for U.S. Fish and Wildlife Service.
- Bloom, P.H. 1991. Status of the Golden Eagle on Marine Corps Base, Camp Pendleton. Prepared for Dept. of Defense.
- Bloom, P.H. 1988. China Lake Naval Weapons Center raptor inventory and assessment. Prepared for Dept. of Defense.
- Bloom, P.H., G.R. Stewart, and B.J. Walton. 1985. The status of the Northern Goshawk in California, 1981-1983. Wildlife Management Branch Administrative Report 85-1. Supported by Federal Aid in Wildlife Management, Non-game Wildlife Investigations, California Department of Fish and Game, W\_64\_R\_2.
- Bloom P.H. 1983. Raptor inventory and habitat assessment for the Santa Margarita River basin area, San Diego, California. U.S.D.I, Fish and Wildlife Service.
- Bloom, P.H. 1980. The status of Swainson's Hawk in California, 1979. Federal Aid in Wildlife Restoration, Project W\_54\_R\_12, Non-game Wildlife Investigations. Job Final Report 11\_8.0. 42p.
- Bloom, P.H. 1980. The raptorial birds of Camp Pendleton Marine Corps Base, San Diego County, California. Prepared for Dept of Defense. 33p.

### **Peer reviewer**

Journal of Wildlife Management  
Journal of Raptor Research  
Journal of Field Ornithology  
Auk  
Condor  
North American Bird Bander

### **Professional presentations**

To date, I have conducted several hundred presentations for public and professional organizations. Examples of the range of presentations include keynote speaking engagements for National Audubon Society chapters, professional meetings, and conferences on the subject of raptors, reptiles, amphibians, and natural history. I have also presented internationally including invited speaking engagements at Eilat, Israel on California Condors, and Milan, Italy regarding raptors in North America.

### **Professional affiliations**

Board Member Orange County Natural History Association, 1991-2002,  
Board Member Sea & Sage Audubon Society, 1985-95  
Board Member Western Bird Banding Association, 1982-84.

Member American Ornithologists Union

Member Society for the Study of Amphibians and Reptiles  
 Life Member The Wildlife Society, Western Section  
 Life Member Raptor Research Foundation  
 Life Member Cooper Ornithological Society  
 Life Member Association of Field Ornithologists  
 Life Member Western Bird Banding Association  
 Life Member Society for Conservation Biology  
 Life Member Hawk Migration Association

Representative North American Banding Council, Raptor Research Representative, 1999 – 2002.

### **Awards**

2005 The Wildlife Society Western Section, Professional of the Year.  
 1981 Association of Field Ornithologists, Bergstrom Award.  
 2004-06 The Nature Conservancy, Satellite Transmitters.

### **Examples of granting institutions**

Rancho Mission Viejo,	1987-1991	\$100,000
Communications Specialists	1987-2005	\$250,000
Donna and Richard O'Neill	1987-1990	\$ 10,000
Marine Corps Base, Camp Pendleton	1992-1998	\$ 10,000
Naval Weapons Station, Seal Beach	1997-2000	\$ 30,000
The Nature Reserve of Orange County	1998-2007	\$150,000

### **Permits**

Master Bird Bander Permit (#20431)

Federal Endangered Species Permit (#TE-787376-8) for Red-legged Frog (transmitters, transponders), Arroyo Southwestern Toad (transmitters, transponders), California Gnatcatcher (banding), Least Bell's Vireo (banding), Southwestern Willow Flycatcher (banding), California Least Tern, Snowy Plover, Peregrine Falcon, Bald Eagle, and Swainson's Hawk.

Federal Bird Marking and Salvage Permit.

State of California Scientific Collecting permit and Memorandum of Understanding for all raptors, herptiles, and small mammals.

Migratory Bird Predator Management authorization.

Migratory Bird avian relocation permit.

Cowbird trapping authorization in California.

Federal and state authorization for Desert Tortoise surveys.

To date, over 25 subpermittees, including researchers at the UFWS, University of California, Davis, and UC Santa Cruz work under the auspices of my permits.

### **References**

Dr. Charles T. Collins, Professor Emeritus, California State University, Long Beach	562-598-4385
Dr. J. Michael Scott, Professor, University of Idaho, Moscow	208-885-6336

# MICHAEL BUMGARDNER

Principal, Bumgardner Biological Consulting

Mr. Bumgardner has over 20 years of experience with the terrestrial vertebrates, invertebrates, and flora of North, Central, and South America; Asia; Africa; and western Europe. He also has over 18 years of experience in the management and preparation of environmental documents that comply with the National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), Tahoe Regional Planning Agency (TRPA) Rules of Procedure, Federal Endangered Species Act (FESA), and California Endangered Species Act (CESA). He has extensive experience in the coordination and preparation of biological resource assessments, impact assessments, management plans, mitigation programs, and habitat conservation planning and permitting associated with special-status species.

## TECHNICAL CAPABILITIES

- Experienced with the statutory requirements and guidelines for federal Endangered Species Act Section 7 Consultations, Section 10(a)(1)(B) incidental take permits, Section 10(a)(1)(A) safe harbor agreements, and California Fish and Game Code Section 2081 management agreements and Section 2080.1 consistency determinations.
- Experienced in the preparation of biological assessments and conservation strategies for state and federal threatened and endangered species and other special-status species.
- Managed and conducted surveys for species including, but not limited to: *valley elderberry longhorn beetle*, *California tiger salamander*, *arroyo toad*, *western spadefoot*, *mountain yellow-legged frog*, *California red-legged frog*, *desert tortoise*, *western pond turtle*, *blunt-nosed leopard lizard*, *giant garter snake*, *San Joaquin kit fox*, *California clapper rail*, *spotted owl*, *northern goshawk*, *burrowing owl*, *Swinson's hawk*, *least Bell's vireo*, *southwestern willow flycatcher*, *California gnatcatcher*.
- Experienced in the management and preparation of environmental documents that comply with CEQA, NEPA, and the TRPA Rules of Procedure.
- Experienced with impact analyses involving sensitive habitats and special-status species, designing feasible mitigation measures to reduce significant impacts on biological resources, and resolving project conflicts with biological resources.
- Serves on the Science Subteam of the US Fish and Wildlife Service's Recovery Team for the Santa Barbara County DPS of *California tiger salamander*.
- Served as guest lecturer for course on Ecological Methods (Sierra Community College) and Conservation Biology (California State University - Sacramento).

## EDUCATION AND AFFILIATIONS

B.S., Zoology, June 1980, University of California at Davis, California

### Registrations

Federal Scientific Take Permit No. TE-785564-6 for California Gnatcatcher (*Poliotila californica californica*), Southwestern Willow Flycatcher (*Empidonax trailii extimus*), California Clapper Rail (*Rallus longirostris obsoletus*), and California Tiger Salamander (*Ambystoma californiense*)

California Department of Fish and Game Scientific Collector's Permit #801214-01 and Letter of Authorization for Yellow-billed Cuckoo (*Coccyzus americanus*), Willow Flycatcher (*Empidonax trailii*), California Gnatcatcher (*Poliotila californica californica*), California Black Rail (*Laterallus jamaicensis coturniculus*), and California Clapper Rail (*Rallus longirostris obsoletus*)

## PROJECT EXPERIENCE

### State and Federal Endangered Species Act Compliance

- Sespe Oil Field Endangered Species Act/Permitting Assistance in Regards to *California Condor*, Seneca Resources
- California Red-legged Frog* Monitoring, Salvage, and Relocation for the Marsh Creek Bridge Repairs, Sycamore Environmental Consultants and Contra Costa County Planning Department
- San Joaquin Kit Fox* Potential Den Surveys and Clearance for the Vernalis-Thomling 3 & 4 Aggregate Mining Sites, Teichert Aggregates
- Least Bell's Vireo* and *Southwestern Willow Flycatcher* Surveys within Recreation Residence Tracts of the Angeles National Forest, Angeles National Forest
- San Joaquin Kit Fox* Potential Den Surveys on 2,700+ Acres within The Villages at Laguna San Luis SUDP, Berryman Ecological LLC
- Review of Coachella Valley Multi-Species Habitat Conservation Plan and EIR/EIS (particularly for *Peninsular Bighorn Sheep*), Pacific Municipal Consults and City of Palm Springs
- Review and Comment on Proposed Critical Habitat for *Southwestern Willow Flycatcher*, Southern California Edison
- Soledad Canyon Sand and Gravel Mine Expert Witness Services, Jeffer, Mangels, Butler, and Marmaro LLP
- Angeles National Forest Fire and Vegetation Management Program Endangered Species Surveys and FESA Compliance, North State Resources, Inc.
- Northwest Casmalia Enhanced Oil Recovery Project *California Tiger Salamander* and *California Red-legged Frog* Habitat Assessment and Endangered Species Act Compliance, Santa Maria Pacific, LLC
- Kettleman Hills Waste Management Facility Class 1 Landfill Expansion *Blunt-nosed Leopard Lizard* Surveys and Endangered Species Act Compliance, TRC Solutions
- Zeneca Richmond Facility Saltmarsh Remediation Project *California Clapper Rail* Focused Survey and Habitat Evaluation/Impact Assessment, LFR Levine Fricke
- Los Flores Ranch Remediation Project *California Tiger Salamander* Habitat Evaluation, Impact Assessment, and Alternative Land Use Development Strategy, Chevron Environmental Management Company
- White Paper on the Known Historic and Current Distribution of the *San Joaquin Kit Fox* in Eastern Merced and Stanislaus Counties and Western Madera County, Merced County
- UC Merced/University Community Federally Listed *Vernal Pool Crustacean*, *California Tiger Salamander*, *Special-Status Plant*, and *San Joaquin Kit Fox/Fresno Kangaroo Rat* Survey Programs and Biological Assessment, University of California and Merced County
- Turk Anticline 3-D Seismic Exploration Project Endangered Species Impact Avoidance Program, Enron Oil and Gas Company
- Stewart Tract Section 2081 Habitat Management Plan for *Swinson's Hawk*, Califia Development
- Milpitas Recycled Water Pipeline Project Passive Relocation Program for *Burrowing Owl*, Santa Clara Valley Water District

### **Natural Resource Management Projects**

*California Tiger Salamander* Distribution Study in Southern San Luis Obispo County, U.S. Fish and Wildlife Service  
Tulare Basin Wildlife Management Area Planning Assistance, U.S. Fish and Wildlife Service  
Hansen Creek (Nevada) Biological Monitoring Program, Getchell Gold Mine  
Lawrence Berkeley National Laboratory Biological Baseline Database, U.S. Department of Energy  
Environmental Baseline Study for a 10-year comprehensive plan that addresses 280+ petroleum-related projects in eastern Venezuela, Petroleos de Venezuela, S.A.

### **Utility and Infrastructure Projects**

Elk Grove Routine Stormwater Channel Maintenance Program Biological Assessment for *Giant Garter Snake* and *Valley Elderberry Longhorn Beetle*, City of Elk Grove  
Habitat Assessments for *Southwestern Willow Flycatcher* at Southern California Edison Facilities in the Santa Ana River Watershed, Southern California Edison  
Alba Phase 3 LNG Plant Preliminary Impact Analysis, Alternatives Analysis, and Environmental Impact Assessment (EIA) (Equatorial Guinea), Marathon Oil Company  
Mill Creek 2/3 Hydroelectric Project FERC Relicensing *Southwestern Willow Flycatcher* Expert Witness Services, Downy, Brand, Seymour, and Rohwer  
Level 3 Fiber Optic Cable Biological Assessments, ESA Compliance, and Permit Compliance Monitoring, Level 3 and Kiewit Environmental  
Paiute Natural Gas Pipeline Biological Evaluation, Lake Tahoe Basin Management Unit, USDA Forest Service  
Santa Rosa Subregional Long-Term Wastewater Project EIR and Biological Assessment, City of Santa Rosa  
Southern Nevada Water Authority Treatment and Transmission Facility EIS and Biological Assessment, Southern Nevada Water Authority (Nevada)  
Biological Evaluations for several wastewater infrastructure projects on National Forest lands in the Lake Tahoe Basin, South Tahoe Public Utility District  
Echo Lake Dam Stabilization Environmental Assessment, PG&E

### **Mining Projects**

*California Red-legged Frog* Survey and Endangered Species Act Compliance Strategy for the Gardner Ranch Mining and Processing Facility, Granite Construction Company  
*California Red-legged Frog* Survey for the Bee Rock Quarry and Adjacent Drainages, Granite Construction Company  
Day Creek-Inland Rock Mine Expansion *San Bernardino Kangaroo Rat* Trapping Study, West Coast Environmental & Engineering and Hanson Aggregates  
Los Alamos Sand Mine *California Tiger Salamander* and *California Red-legged Frog* Surveys, Biological Assessment, and Safe Harbor Agreement, Los Alamos Sand Company  
Williams Quarry Expansion Project Biological Resources Report, Resource Design Technology, Inc.  
Madera Ranch Quarry *California Tiger Salamander* Biological Assessment and Draft Biological Opinion, Pacific Municipal Consultants  
Ozena Valley Ranch Surface Mining Site Biological Resources Report, West Coast Environmental & Engineering  
Santa Maria River Surface Mining Site Biological Resources Report, West Coast Environmental & Engineering  
Diamond Rock Surface Mining Site Biological Resources Report and *Blunt-nosed Leopard Lizard* Impact Avoidance Program, West Coast Environmental & Engineering

### **Transportation Projects**

Analysis of Impacts to *Willow Flycatcher* Habitat from Emergency Washout Repairs on the Caliente Line along Meadow Valley Wash (Nevada), Union Pacific Railroad  
Analysis of Impacts to *Willow Flycatcher* Habitat from Emergency Washout Repairs on the Clifton Branch of the Lordsburg Line along the Gila River (Arizona), Union Pacific Railroad  
Biological Evaluations for 18 Union Pacific Railroad Bridge Replacement Projects in California, Olsson Consulting  
Grizzly Island Road Bridge Replacement Project *California Clapper Rail* Surveys, Sycamore Environmental Consultants  
Union Pacific Railroad Yolo Bypass North Track Project Biological Assessment, Parsons Corporation  
Kowloon-Canton Railway Corporation Lok Ma Chau Spurline (Hong Kong) Expert Witness Services, Denton Wilde Sapte (Legal Counsel, London)  
Kowloon-Canton Railway Corporation Lok Ma Chau Spurline Environmental Impact Assessment Defensibility Review and Response to Comments, California Environmental Consulting Associates  
US Highway 101 Auxiliary Lanes Project Wetlands Delineation, Natural Environment Study, and Biological Assessment, San Mateo County Department of Transportation

### **TRPA Projects**

Heavenly Ski Resort Master Plan EIR/EIS, Biological Resources Surveys, Biological Evaluation, and Annual Monitoring Programs, Heavenly Ski Resort and Tahoe Regional Planning Agency  
Golden Bear Park Master Plan EIR/EIS, Tahoe Regional Planning Agency and El Dorado County  
Harootunian Trust Land Transfer Biological Evaluation, Lake Tahoe Basin Management Unit, USDA Forest Service

### **Department of Defense Projects**

*California Gnatcatcher* Surveys for the Santa Margarita River Conjunctive Use Project within MCB Camp Pendleton, Fallbrook Naval Weapons Station, and City of Fallbrook, North State Resources, Inc.  
Brooks Air Force Base (Texas) Inventory of Avian Species, U.S. Air Force Center for Environmental Excellence (AFCEE)  
Hohenfels Combat Maneuver Training Center (Germany) Integrated Natural Resources Management Plan-Fish and Wildlife and Threatened and Endangered Species Management Programs, U.S. Army Europe (USAEUR)  
Andrews Air Force Base and Davidsonville and Brandywine Communication Sites (Maryland) Biological Inventory and Integrated Natural Resources Management Plan, AFCEE  
Fort Leonard Wood (Missouri) BRAC US Army Chemical School and Military Police School Relocation Mitigation Monitoring Framework and Adaptive Management Strategy, U.S. Army  
U.S. Fish and Wildlife Service World-listed, and Portuguese Government Listed Species Surveys and Integrated Natural Resources Management Plan (Azores), AFCEE and U.S. Air Force Air Combat Command (ACC)  
Dyess Air Force Base (Texas) Threatened and Endangered Species, Fish and Wildlife, and Outdoor Recreation Component Plans of the Integrated Natural Resources Management Plan, ACC  
Vandenberg Air Force Base (California) Fiber Optic Cable Route Biological Assessment, U.S. Air Force Space Missile Command  
Camp Pendleton Relocation of Baseline Road and Case Springs Access Road Habitat Suitability and Assessment for the *Stephen's Kangaroo Rat*, *California Gnatcatcher*, and *Least Bell's Vireo*, U.S. Marine Corps

## **LESLIE GOFF**

### **EDUCATION**

B.S., General Biology, University of California, Irvine (UCI), 2006

### **AREAS OF EXPERTISE**

Ms. Leslie Goff has experience in the following areas:

- Biological Resources Surveys
- Construction Monitoring

### **REPRESENTATIVE EXPERIENCE**

Ms. Goff presently serves as a Staff Biologist with TRC in Irvine, California. Her primary responsibilities include the assessment of biological resources and monitoring.

#### **Burlington Northern Santa Fe Railway, Bridge Renewal Project - San Bernardino County, (Environmental Monitor)**

Ms. Goff trained as an environmental monitor during construction activities preparing for a bridge renewal.

#### **J-Power, Orange Grove - Pala, CA (Biologist)**

Ms. Goff assisted in delineating jurisdictional wetlands and “waters of the US” and “waters of the State” and preparation of the delineation report to support required permit applications.

#### **The Irvine Ranch Conservancy- Irvine, CA (Volunteer)**

Ms Goff is a volunteer for the conservancy promoting educational awareness of Orange County’s biological diversity. She works as trail guide along many of the canyons and paths that run through the Irvine Ranch Land Reserve.

#### **University of California - Irvine, CA (Animal Behavior Volunteer)**

Ms. Goff worked in the aviary located at the UC Irvine arboretum as a research volunteer maintaining four active flights with 20 breeding pairs of Zebra Finches each. She conducted bird surveys to document behavioral changes and conditioning.

#### **University of California, Irvine- Field studies**

##### **Sacramento County**

Ms. Goff conducted a field study of riparian growth along the Sacramento River and a small creek to compare the effects of daily water height fluctuation versus annual flooding.

##### **Joshua Tree National Park**

Ms. Goff joined a field team to conduct an analysis on the Jojoba plant to determine the affects of slope angle, elevation, and soil moisture on

growth and distribution of dioecious plants, Jojoba being a representative species.

**San Joaquin Fresh Water Marsh**

Ms. Goff has conducted monitoring in the freshwater marsh for species composition and diversity. She has also monitored three man-made Vernal Pools within the marsh to determine their success as mitigation for construction impacts.

# **STEPHEN JON MONTGOMERY**

## **Wildlife Biologist**

### **SJM Biological Consultants, Inc.**

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**U.S. Fish and Wildlife Service Permit TE745541-10**

## **EXPERIENCE**

Owner, Principal Consultant  
SJM Biological Consultants  
1983 to Present

Manage and conduct field surveys, analyze data and prepare reports for diverse types of biological studies, including: rare/endangered/sensitive species studies; environmental impact reports; development suitability studies; project monitoring; biological inventories. Prepare proposals, determine equipment and budget requirements, manage projects and technical staff, meet with municipal, state and federal agencies, and present findings at meetings.

### **Recent, On-going and Former Projects**

Conducted Station-wide Habitat Mapping, and Developed a Long-term Monitoring Methodology for the Federally Endangered Stephens' Kangaroo Rat, at the Fallbrook Naval Weapons Station (FNWS), Fallbrook, California. Mapped occupied and suitable/unoccupied Stephens' kangaroo rat habitat, live-trapped SKR to confirm species identity of kangaroo rats in certain habitats/areas, developed specific methods for monitoring SKR habitat occupation through time, established SKR monitoring plots in the field, collected initial baseline monitoring data at established monitoring plots, recorded habitat conditions at monitoring stations, analyzed initial monitoring data, prepared report describing results of the above-described field studies, at FNWS. For Fallbrook Naval Weapons Station, Fallbrook, California. 2001-on-going.

Conducted Live-trapping Surveys in the Imperial Valley, Imperial County, California., for the California Sensitive Hispid and Arizona Cotton Rats, for the Imperial Irrigation District (IID)

Habitat Conservation Plan. For Ecorp, Redlands. 2007-2008.

Conducted USFWS Protocol Field Surveys for the Federally Endangered Yuma Clapper Rail at the Earp (CA)-Parker (AZ) Bridge. For Ecorp (Redlands), for Cal Trans (District 8).2008.

Mapped Distribution of the Federally Endangered Stephens' Kangaroo Rat Along the Proposed Route of the SDGE Sunrise Powerlink Project in eastern San Diego County. For Arcadis, Inc. San Diego, California. 2006-2007.

Conducted Habitat Assessment for the California Threatened Mohave Ground Squirrel along the proposed approximately 22-mile alignment for the AT&T Fiber Optic Cable Route in San Bernardino County, California. For Chambers Group. Irvine, California. 2007-2008.

Conducted Protocol Trapping Survey for the California Threatened Mohave Ground Squirrel at the 80-acre Capital Pacific Homes proposed development site in Rosamond, Kern County, California. For Chambers Group. Santa Ana, California. 2007.

Conducted Protocol Trapping Survey for the California Threatened Mohave Ground Squirrel at the 13-acre Lumber 84 proposed development site in Lancaster, Los Angeles County, California. For Eilar Associates. Encinitas, California. 2007.

Conducted protocol live-trapping surveys for the federally endangered Pacific Pocket Mouse at Camp Pendleton Marine Corps Base, San Diego County, for the Oscar One and Edson Range road improvement project. For The Environmental Company. Santa Barbara, California. 2007.

Conducted habitat assessments and field (trapping) surveys for the Federally Endangered San Bernardino Kangaroo Rat and California Sensitive Los Angeles pocket mouse, and analyzed potential wildlife corridor issues, for the proposed State Route 79 expansion project in the region of the City of Hemet, Riverside County, California. For CH2MHill, Santa Ana, California. 2005-2008.

Conducted Protocol Surveys for the Federally Threatened California Gnatcatcher at the Fallbrook Naval Weapons Station, Fallbrook, California. In Collaboration with the San Diego Zoological Society. 2006-2007.

Mapped the Distribution of the Federally Endangered Stephens' Kangaroo Rat at the U.S. Navy RTS (Remote Training Site) Warner Springs, San Diego County, California. For Tierra Data Systems (for U.S. Navy). 2006.

Served as Team Member in Developing Methodology, and Served as Principal Investigator for Live-trapping Studies, for Long-term Monitoring Studies of the Federally Endangered San Bernardino Kangaroo Rat, in the Santa Ana River Woolly Star Preserve, as Part of Multi-species Habitat Conservation Plan. For SAIC (San Diego, Calif.) and Everest International Consultants, Inc. (Long Beach, Calif.), for U.S. Army Corps of Engineers Mitigation Studies for 7 Oaks Dam Project.

2005-2008.

Conducted Protocol Trapping Studies for State (California) Threatened Mohave Ground Squirrel, for CalTrans Projects at Cushenberry and along SR138 and SR395, and in Adelanto, in San Bernardino County, as well as at Edwards Air Force Base, Los Angeles County, California. For Chambers Group, ECorp, Redlands, and AMEC, Riverside, Calif. 2004-2007.

Mapped Distribution of Stephens' Kangaroo Rat at the 20,000-acre Rancho Guejito, San Diego, California. Mapped distribution of SKR on large ranch in western San Diego County. For Helix Environmental Planning, La Mesa, Calif. 2004.

Conducted Trapping Survey for the Federally Endangered Pacific Pocket Mouse at the CalTrans Genesee Avenue - Interstate 5 Interchange Project Site, San Diego, California. For Helix Environmental, La Mesa, California. 2004.

Conducted Habitat Assessment and Trapping Study for the Stephens' Kangaroo Rat Along Ammunition Road, for the Proposed Ammunition Road Fencing Project at the Fallbrook Naval Weapons Station, Fallbrook, California. For The Environmental Company, Santa Barbara, Calif. 2004.

Assessed Habitat Conditions for Stephens' Kangaroo Rats at Potential on El Sobrante Landfill Lands South of Lake Mathews. For RECON, San Diego, California. Mapped occupied SKR habitat on one parcel, and determined potential areas for habitat enhancement, for proposed landfill expansion activities. 2002-2003.

Conducted Trapping Studies for Federally Endangered San Bernardino and Stephens' Kangaroo Rats For Various CalTrans Projects, in San Bernardino and Riverside Counties, Calif. For Chambers Group, Redlands, California. 2003-2004.

Conducted Trapping Study for Federally Endangered San Bernardino Kangaroo Rat, Stephens' Kangaroo Rat, Los Angeles Pocket Mouse and other California sensitive small mammals at Lake Elsinore, California. For Glenn Lukos & Associates. 2003.

Conducted Long-term Monitoring Studies of the Effect of Fire on Stephens' Kangaroo Rats in the Juliett Area SKR Mitigation Bank on Camp Pendleton Marine Corps Base. For Environmental Security Office, Wildlife Management Branch, Camp Pendleton Marine Corps Base. San Diego, California. Conducted annual vegetation measurements and SKR populations in burned grasslands, to determine effect of fire management strategies on this endangered species. 2000-2004.

Developed and Directed Study of Habitat Recolonization by Stephens' Kangaroo Rats at Former Napalm Storage Sites at the Fallbrook Naval Weapons Station (FNWS), Fallbrook, California. For CH2MHILL, Santa Ana, California. Developed study methods and habitat treatments, directed the implementation of substrate manipulation treatments at study plots which included excavation of

large numbers of artificial burrows, and periodically monitored and reported on the results of the 2-year investigation. 2003-on-going (through 2005).

Developed Post-construction Habitat Restoration Methods and Specifications for the Federally Endangered San Bernardino Kangaroo Rat for Contract 3-4 (Santa Ana River Area) of the Metropolitan Water District (MWD) Inland Feeder Waterline Project. For P&D Consultants. Orange, Calif. Worked with MWD staff and U.S. Fish and Wildlife Service biologists in developing specifications for sand grain sizes, as well as for methods and configurations of sand deposition in the construction area for Contract 3-4. These methods were designed to maximize future use of the construction area by the SBKR. 2001-2004.

Conducted USFWS Protocol Field Surveys for the Federally Endangered Yuma Clapper Rail at the Miles Avenue Bridge Project, Indian Wells, California. For Pacific Southwest Biological Services (San Diego, Calif.). 2002.

Served as Consultant on Stephens' Kangaroo Rat (SKR) Issues to Napalm Canister Decommissioning Team, at Fallbrook Naval Weapons Station, Fallbrook, California. Conducted field assessments of and marked locations for SKR presence/absence/distribution, at napalm storage sites, and at the Palm Plant site, at Fallbrook Naval Weapons Station, Fallbrook, California. Conducted field surveys to determine presence/absence/distribution of SKR at napalm storage sites, advised client regarding necessary restrictions to construction activities and field activities, and regarding required actions to minimize/eliminate incidental take of SKR. Prepared reports describing results of field work. For Battelle Memorial Institute, Columbus, Ohio. 1998-2001.

Conducted USFWS Protocol Field Surveys for the Federally Endangered Yuma Clapper Rail at the Union Pacific Railroad Crossing Site, in Thermal, California. For Chambers Group (Redlands, Calif). 2001.

Conducted Field Surveys for the CSC Palm Springs Round-tailed Ground Squirrel (PSRTGS) and CSC Palm Springs Little Pocket Mouse (PSLPM), for the CalTrans Interstate 10 - McNaughton Interchange Project Site, Coachella Valley, Riverside County, California. Trapped for PSLPM and conducted vocalization surveys for PSRTGS at a proposed freeway ramp. For BonTerra Consultants. Costa Mesa, Calif. 2001.

Conducted Field Vocalization Surveys for the CSC Palm Springs Round-tailed Ground Squirrel (PSRTGS) for the CalTrans Interstate 10 - Jefferson Street Ramp Project Site. For BonTerra Consultants. Costa Mesa, Calif. 2002, 2003.

Conducted Biennial Stephens' Kangaroo Rat Monitoring Study at Marine Corps Base Camp Pendleton. Established monitoring plots, trapped SKR and counted active burrows at plots, followed SKR abundance at plots over an 8 year period, analyzed data and prepared reports. For Marine Corps Base, Camp Pendleton, California, Wildlife Management Branch. 1996-2002.

Presented Stephens' Kangaroo Rat (SKR) Natural History/Ecology Information to Biologists Conducting Annual Firebreak Surveys for SKR at Fallbrook Naval Weapons Station. Presented natural history information to volunteer SKR field (firebreak) survey biologists, in the classroom and in the field. For Fallbrook Naval Weapons Station through San Diego State University Foundation. 1998-2002.

Conducted Long-term Monitoring Studies of the Effect of Fire on the Federally Endangered Pacific Pocket Mouse at the San Mateo North Population Site, Camp Pendleton Marine Corps Base. For Environmental Security Office, Wildlife Management Branch, Camp Pendleton Marine Corps Base. San Diego, California. Conducted vegetation measurements and PPM trapping studies at a proposed burn site designed to rejuvenate habitat for this species. Analyzed data to determine resultant effect of burn on PPM population distribution/size. 2000-2004.

Conducted Translocation Studies of Stephens' Kangaroo Rat at the Ramona Airport, San Diego County, California. For KEA Environmental and San Diego County Department of Public Works, San Diego, California. Conducted habitat assessments, trapping, and translocation and long-term monitoring studies, potentially using radio telemetry, to determine response of trapped SKR to introduction into new habitat areas. Conducted study of feasibility of using radio-collars on this species. 2000-2002, on-going.

Conducted Assessment of Presence/Absence of the Federally Endangered Stephens' Kangaroo Rat Along State Highways in San Diego County. For California Department of Transportation (CalTrans). San Diego, California. Conducted habitat evaluations and trapping studies for SKR along five highways. 2000.

Assisted In Development of Biological Assessment for the Federally Endangered San Bernardino Kangaroo Rat, for the 7 Oaks Dam Project, San Bernardino County, California. For MEC Analytical Systems. Carlsbad, California. Analyzed impacts of operation of 7 Oaks Dam on SBKR, assisted in analyzing alternative habitat management and enhancement schemes for this species. 1999-2000.

Conducted field surveys for the Federally Threatened California Gnatcatcher and Federally Endangered Stephens' Kangaroo Rat on the 1100-acre Norco Hills Ranch property in Norco, California. For VHBC, (Riverside) Crouse Beers Associates (Norco), and SunCal Companies (Irvine) California. Coordinated field team and assisted in field surveys for the CAGN, and conducted field studies for SKR. 1999-2000.

Conducted trapping and related studies for the Federally Endangered Pacific Pocket Mouse (PPM) at various localities along the coast of Southern California. With SC Dodd Consulting. For California Department of Fish and Game/U.S. Fish and Wildlife Service, through San Diego State University Foundation. San Diego, California. Conducted trapping studies to determine current population status of PPM at Dana Point Headlands, assisted in design of study of the effect of shrub removal on PPM presence/abundance/distribution at Headlands, co-conducted shrub removal PPM

habitat alteration study at Headlands, conducted studies of potential translocation receiver sites in coastal Southern California. 1999-2002.

Conducted trapping and habitat affinity studies for the Federally Endangered San Bernardino Kangaroo Rat (SBKR) at various localities in the Santa Ana River, San Bernardino County, California, for U.S. Army Corps of Engineers Seven Oaks Dam project. For MEC Analytical Systems, Carlsbad, California. Assisted in study design, trapped SBKR at 14 sites, and participated in SBKR habitat preferences study. 1999-2000.

Conducted translocation study of the Federally Endangered Stephens' Kangaroo Rat for the Phoenix Road improvement project at Fallbrook Naval Weapons Station. Fallbrook, California. For Southwest Division Naval Facilities Engineering Command, San Diego, California. Trapped SKR from within fenced improvement area, translocated animals to nearby artificially excavated burrows, monitored use of artificial burrows by SKR. 1998-1999.

Conducted USFWS Protocol Field Surveys for the Federally Endangered Yuma Clapper Rail at the Gateway to the Americas Project Site in Calexico, California. For Robertson Environmental Consultants, San Diego, California. 1998.

Conducted trapping and habitat assessment surveys for the Federally Endangered San Bernardino Kangaroo Rat (SBKR) at various localities in the Santa Ana River, Lytle Creek and Cajon Creek Washes, San Bernardino County, California. For Sunwest Materials (Ontario, Calif.), CalMat Corporation (Riverside, Calif.), and the Chambers Group (Irvine, Calif.). Trapped and mapped habitat for SBKR in alluvial fan scrub habitats in sandy wash habitats in the three river systems mentioned above. 1998-2000.

Relocated Stephens' Kangaroo Rats (SKR) Residing in the Construction Zone of the Contract 7/8 of the Metropolitan Water District Inland Feeder Pipeline. For P&D Consultants (Orange, Calif.) and Metropolitan Water District of Southern California (Los Angeles, Calif.). Trapped and relocated SKR to artificial burrow systems in nearby suitable habitat at the California Department of Fish and Game San Jacinto Wildlife Area Riverside County, California. Monitored relocated SKR in 1998 and 1999, and monitored SKR recolonization of rehabilitated construction zone in 2000 (on-going)

Directed and Conducted Intensive Trapping Survey for the Federally Endangered Pacific Pocket Mouse at Camp Pendleton Marine Corps Base. Intensive team trapping effort to determine presence/absence of PPM in several previously unsurveyed ranges of Camp Pendleton. 1998, on-going. (See entry below for details of similar survey for PPM on Camp Pendleton in 1996)

Mapped Occupied San Bernardino Merriam's Kangaroo Rat (SBKR) Habitat in Portions of the Metropolitan Water District Inland Feeder Pipeline Alignment, in alluvial fan scrub habitats in the Santa Ana River and City Creek. P&D Technologies. Orange, Calif. Conducted trapping studies

and completed maps of occupied habitat for SBKR along the Inland Feeder waterline right-of-way. 1994-2000.

Conducted Required Studies for the Metropolitan Water District Inland Feeder Waterline Right-of-Way. P&D Technologies, Orange, Calif. Conducted required field studies for sensitive small-mammal species, assisted in the development of a preliminary biological assessment of impacts to San Bernardino Kangaroo Rat, mitigation work for Stephens' kangaroo rats, and others. July 1994-1996.

Prepared a Biological Assessment for Stephens' Kangaroo Rats for an Erosion Control/Repair Project in the Juliett Firebreak Area of Camp Pendleton. For the Mission Resource Conservation District. Fallbrook, California. Conducted field surveys for SKR along an existing eroded firebreak, assisted in the development of an erosion control plan, and prepared a biological assessment of the potential impacts on SKR of the proposed plan. 1997.

Conducted Status Review Field Studies of the Federally Endangered Amargosa Vole (AV) in the Mojave Desert. For California Department of Fish and Game, through the San Diego State University Foundation. Conducted live-trapping surveys and habitat assessments to determine the current status and distribution of the AV. 1997-1998.

Conducted (as co-investigator) Trapping and General Monitoring Studies of the Dana Point Headlands PPM Population. For U.S. Fish and Wildlife Service, California Department of Fish and Game, and Orange County Nature Reserve. Conducted live-trapping studies of PPM, studied predator activity, developed long-term monitoring plan for this population, conducted study of the effect of vegetation thinning on PPM population at this site. 1997-2000, on-going.

Conducted Annual Surveys for Federally Endangered Yuma Clapper Rail (YCR) at the California Department of Fish and Game (CDFG) Wister Unit (Imperial Wildlife Area) Wildlife Refuge, Imperial County, California. Conducted field surveys and trained CDFG personnel to conduct surveys for YCR. Approx. 1990-2000.

Conducted Trapping Studies of the Federally Endangered Pacific Pocket Mouse (PPM) on Marine Corps Base, Camp Pendleton. For California Department of Fish and Game, through San Diego State University Foundation. Conducted grid live-trapping studies of PPM populations, primarily to determine proper trap spacing for long-term monitoring studies of this species, at two localities on Camp Pendleton. 1997-1998.

Co-managed Field Team and Participated in Intensive Trapping Survey for the Federally Endangered Pacific Pocket Mouse at Camp Pendleton Marine Corps Base. Also Coordinated Project with Base Environmental Office Personnel. With Ogden Environmental Services and LSA & Assoc., San Diego and Orange Counties. Intensive team trapping effort to determine presence/absence of PPM in several ranges of Camp Pendleton. Managed team of 10 biologists,

coordinated with Base environmental office and range control contacts, conducted trapping surveys, assisted in report preparation. 1996.

Determined Base-wide Distribution of Stephens' Kangaroo Rat (SKR) on Camp Pendleton Marine Corps Base, San Diego County, Developed Long-term SKR Management Plan for the Base , Prepared Biological Assessment of the Impact of SKR Management Plan on Other Sensitive Species and on the Base Operations. With Tetra Tech Corporation, San Bernardino, Calif. Mapped SKR distribution through trapping and visual surveys; developed Base SKR management plan involving population preservation, SKR movement corridor development and preservation, long-term monitoring methods, and potential for population translocations; evaluated impact of management plan on least Bell's vireos, California gnatcatchers, sensitive reptiles, and other sensitive biota; evaluated impacts of management plan on various required Base operations and activities and projects. October 1994-1998.

Conducted Field Studies Required for the Metropolitan Water District Inland Feeder Waterline Project, on the Federally Endangered Stephens' Kangaroo Rat and alluvial fan scrub inhabiting San Bernardino kangaroo rat, in the area of the Santa Ana River, San Jacinto Wildlife Area and San Timoteo Canyon. For P&D Environmental Services, Orange, Calif. Conducted trapping studies, mapped habitat, assessed impacts of proposed project, developed mitigation strategies, prepared portion of Biological Assessment for San Bernardino kangaroo rat. 1994-95.

Conducted Field Surveys for Occupied Stephens' Kangaroo Rat (SKR) Habitat on March Air Force Base (MAFB), as Part of SKR Habitat Analysis with The Nature Conservancy (Temecula, Calif. Office). With Tetra Tech Corporation, San Bernardino, Calif. Mapped SKR distribution/density and conducted burrow counts along formal transects at approximately 46 floral sampling plots within the SKR Preserve on the northern portion of MAFB, as part of an overall study of SKR-habitat relationships. 1995, 1996, 1997.

Conducted Habitat Analysis and Live-trapping Survey for Pacific Pocket Mice (PPM) at a 20-acre site in the Tijuana River Valley. For San Diego County Park and Recreation Department, San Diego, Calif. April-June 1995.

Conducted Preliminary Habitat Evaluation for Presence/Absence of the Federally Endangered Pacific Pocket Mouse (PPM) at Three Sites in the Tijuana Estuarine Sanctuary, in San Diego, Calif. For California State Coastal Conservancy, Oakland, Calif. Conducted field assessment of three sites for potential for PPM and prepared a general study design for trapping at these localities. March 1995.

Conducted Trapping Studies for the Federally Endangered Pacific Pocket (Little) Mouse (PPM) in San Mateo and San Onofre Creeks, Northwestern Camp Pendleton, San Diego County. Pacific Southwest Biological Services. National City, Calif., for Tri-City Water District. Conducted trapping surveys for PPM in numerous habitats in these drainages and adjacent lands located within approximately 2 miles of the coastline. July-August 1994.

Conducted Trapping Studies for the Federally Endangered Pacific (Little) Pocket Mouse (PPM) for the City of San Diego North Torrey Pines Bridge Replacement Project. Lettieri-McIntyre & Associates. San Diego, Calif. Trapped for PPM in sage scrub and disturbed field habitats adjacent to Pacific Coast Highway, at the northwestern section of Los Penasquitos Lagoon, Del Mar, California. August 1994.

Conducted Trapping Studies for the Federally Endangered Pacific (Little) Pocket Mouse (PPM) in the San Dieguito Lagoon and Adjacent Lands. BioSystems. Santa Cruz, Calif., for Southern California Edison. Conducted live-trapping surveys for PPM in numerous habitats in and surrounding the San Dieguito Lagoon, east and west of Interstate Highway 5, Del Mar, California. August 1994.

Conducted Trapping Studies for Stephens' Kangaroo Rats, San Bernardino Kangaroo Rat, and Los Angeles (Little) Pocket Mouse Along the Lamb Canyon Section of State Highway 79, Riverside County, California. Dames & Moore, Santa Barbara, Calif. Conducted trapping and habitat mapping surveys for these three species in various habitats in Lamb Canyon. July-August 1994.

Conducted Second Translocation Study of Federally Endangered Stephens' Kangaroo Rat, at the Fallbrook Naval Weapons Station in Fallbrook, California. Kvaas Construction Co. San Diego, Calif. As required by U.S. Fish and Wildlife Service and U.S. Navy: conducted pre-construction endangered species information presentation to construction personnel; conducted intensive small-mammal trapping study; designed, constructed and installed artificial burrow systems; relocated animals from occupied to artificially prepared habitat area; and monitored result of translocation experiment. Installed PIT (passive integrated transponder) into relocated animals to provide positive identification of released individuals. 1994-1996.

Conducted On-site Monitoring of IRP Hazardous Waste Remediation Project for Federally Endangered Stephen's Kangaroo Rat, at March Air Force Base, Riverside, California. Tetra Tech, Inc. San Bernardino, Calif. As required by U.S. Fish and Wildlife Service, conducted pre-project site survey for Stephens' kangaroo rat, delivered pre-project endangered species information presentation to field personnel, monitored and coordinated trenching project to minimize impacts to SKR habitat, coordinated with U.S. Air Force contact and construction personnel. 1993.

Conducted Survey for Rodent Scat to Detect Presence of Potential Poison Bait in Stephens' Kangaroo Rat Habitat, on March Air Force Base, Riverside, California. U.S. Air Force. Riverside, Calif. Conducted field survey for rodent small mammal scat at numerous locations on March AFB. 1993.

Conducted First Translocation Study of Federally Endangered Stephens' Kangaroo Rat, at the Fallbrook Naval Weapons Station in Fallbrook, California. Cox Construction Co. Vista, Calif. As required by U.S. Fish and Wildlife Service, conducted pre-construction endangered species information presentation to construction personnel, conducted extensive small-mammal trapping study, designed/constructed/installed artificial burrow systems, relocated animals from occupied to

artificially prepared habitat area, and monitored result of translocation experiment. Installed PIT (passive integrated transponder) into relocated animals to provide positive identification of released individuals. 1993-1995.

Conducted Quantitative (Emlen) Bird Transects, General Small Mammal Trapping and Trapping for Mojave Ground Squirrels on Edwards Air Force Base in San Bernardino, Los Angeles and Kern Counties, Calif. Tetra Tech, Inc. San Bernardino, Calif. Conducted the above-described general and focused studies of the fauna in various habitat types in the Mojave Desert on Edwards Air Force Base. Sixty bird transects were conducted and the resultant data analyzed. 1993.

Conducted Habitat Quality Analysis (HQA) Transects for Small Mammals, Large Mammals and Birds, at March Air Force Base in Riverside County, California. Tetra Tech, Inc. San Bernardino, California. Conducted small-mammal trapping and quantitative (Emlen) bird transects at selected sites on the western portion of March Air Force Base. 1992.

Conducted Stephens' Kangaroo Rat Habitat Mapping on March Air Force Base in Riverside County, California. Tetra Tech, Inc. San Bernardino, California. Trapped and assessed habitat for SKR on the approximately 3000-acre West March Air Force Base. 1992.

Conducted Stephens' Kangaroo Rat Habitat Mapping Studies on Riverside National Cemetery, in Riverside County, Calif. Royston, Hanamoto, Alley and Abey (Mill Valley, Calif.) and U.S. Veterans Administration (Washington, D.C.). Mapped SKR habitat on cemetery lands, and prepared mitigation plan for proposed loss of this species. 1992.

Conducted Biological Analysis (Natural Environmental Study) of a Proposed Widening of Cal-Trans Interstate Highway 215, between Moreno Valley and Interstate Highway 10, in Riverside County, California. Myra L. Frank & Associates. Los Angeles, California. Analyzed biological resources (plants, animals and habitats); delineated wetlands; assessed potential impacts to existing biota. 1992-1993.

Conducted Field Surveys for Stephens' Kangaroo Rats (SKR), Other Sensitive Rodents, Nocturnal and Diurnal Raptors, Least Bell's Vireo and Other Riparian Birds, and Analyzed and Designed Wildlife Corridors on the Lockheed Corporation 9000-acre Potrero Creek Property, located near Beaumont, Riverside County, California. Pacific Southwest Biological Services (National City) and Douglas Wood & Associates (Newport Beach). Conducted trapping and habitat mapping surveys for SKR, repeated field surveys for LBV and riparian birds, and designed corridors to allow passage of wildlife species through the property. 1992.

Conducted Cumulative Human Impact Evaluation (CHIE) for Mohave Ground Squirrels at the Apple Valley (California) Municipal Airport. San Bernardino County. P & D Technologies. Orange, California. Conducted CHIE on parcels proposed for inclusion in an expansion of the Apple Valley Airport, according to guidelines established by California Department of Fish and Game. 1992.

Conducted Biological Analysis of Proposed Routes for Cal-Trans Highway 126 Between I-5 and State Route 14, Los Angeles County, California. Livingstone-Parks and Parsons Brinckerhoff Corporation (San Bernardino). Tier 1 study of the botanical and zoological resources along three potential routes for Highway 126. Included: aerial habitat reconnaissance; search for sensitive plants, animals and habitats; analysis of the potential for wildlife corridors; comparative analysis of the impacts associated with highway construction on the biological resources along the routes. 1992.

Conducted Mule Deer Activity and Mitigation Analysis for Eastern Transportation Corridor (E.T.C.), in Orange County. P & D Technologies, Orange, California. Field assessment of mule deer use of foothill shrub habitats along a proposed state highway corridor. 1991.

Conducted Assessments of Wildlife Use of Meadow and Timber/Shrub Habitats on Southern California Edison (SCE) mitigation lands in the Southern Sierra Nevada, Shaver Lake Area, 1987-1992. Advance Sciences Inc. San Diego, California. Intensive studies of song birds, mule deer and small mammals in montane meadows and timber/shrub habitats in the SCE forest lands surrounding Shaver Lake, Sierra County, California. Involved small mammal live-trapping, deer pellet-group counts, and extensive bird censusing using transects and modified circular-plot methods. 1987-1992.

Conducted Habitat Quality Analysis (HQA) Transects for Small and Large Mammals Along Alternate Routes for the Metropolitan Water District (MWD) Inland Feeder Corridor, Riverside County, California. P&D Technologies, San Diego/Orange, California. Small-mammal trapping, large-mammal scent stations and large-mammal transects at selected sites within the study area. 1991-1993.

Conducted Assessments of Habitat for the Federally Endangered Stephens' Kangaroo Rat (SKR), Along Alternate Routes for the Metropolitan Water District (MWD) Inland Feeder Corridor, Riverside County, California. P&D Technologies, San Diego/Orange, California. Mapping of occupied habitat for SKR along alternate 1/4-mile wide potential pipeline corridors. Included: aerial habitat reconnaissance, development of a multi-tiered approach to the comparison of potential alignments, intensive field habitat checks, mapping of occupied SKR habitat. 1992.

Conducted Assessment of Habitat for Federally Endangered Stephens' kangaroo rats (SKR), along alternate routes for the Metropolitan Water District (MWD) Pipeline Number 6, Riverside and San Diego Counties, California. Pacific Southwest Biological Services, San Diego, California. Mapping of occupied habitat for SKR along 1/4-mile-wide potential pipeline corridors. Included: aerial habitat reconnaissance, development of a multi-tiered approach to the comparison of potential alignments, intensive field habitat checks, mapping of occupied SKR habitat. 1992.

Conducted Field Studies of Federally Endangered Stephens' Kangaroo Rats, in Riverside and San Diego Counties. Numerous private clients. Field trapping, identification and assessment of habitat and populations of SKR. 1977-present.

Conducted Monitoring of Construction Activity in Desert Tortoise (Federally Threatened) Habitat Along Highway 158. Barstow Area, California. Parsons, Brinckerhoff, Quade & Douglas, Inc. San Bernardino, California. Constant monitoring of impacts to desert tortoise habitat at drilling sites associated with the construction of Highway 158.

Assisted in a Search for Desert Tortoise (Federally Threatened) on a 160-acre Parcel in Palm Desert, California. Alice Karl, Biological Consultant, Sanger, California. Intensive walking surveys for tortoises in desert habitats.

Conducted a Study of the Impact of Simulated Geothermal Drilling Activity on Federally Endangered Yuma Clapper Rails at the Wister Unit, Imperial County, California. Freeport-McMoran/Geysers and Calpine Corporations, Santa Rosa, California. Radio-telemetry monitoring of habitat use and response to geothermal drilling by Yuma Clapper Rail. Telemetry, banding, habitat and food source (crayfish) sampling, assessment of migration departure and arrival dates, and general population assessments using YCR vocalization counts. 1989-1990.

Conducted Assessment of the Status of Stephens' Kangaroo Rats on Bureau of Land Management Lands in Western Riverside and Northern San Diego Counties. Bureau of Land Management, Indio Resource Area Office. Live-trapping studies and habitat mapping for SKR on 57 parcels covering approximately 12,000 acres of undeveloped land. 1989.

Mapped Stephens' Kangaroo Rat Habitat and Major Sensitive Species Localities in Western Riverside County. The Planning Center, Newport Beach, California. Large-scale mapping of approximately 200,000 acres in southwestern Riverside County. 1988.

Conducted Field Monitoring of Federally Endangered Least Bell's Vireo, Federally Threatened California Gnatcatcher, Coastal Cactus Wren, Raptors, Amphibians and Reptiles on the Otay Ranch in Southern San Diego County. Advance Sciences Inc., San Diego, California. Involved a variety of field methods, including herpetofaunal drift fence and pit-trap lines, seasonal bird counts utilizing vocalizations to identify different species, etc. 1986-1987.

Conducted Sensitive Endangered Least Tern Foraging and Waterbird Monitoring Studies at the Chula Vista Bayfront, San Diego County. Jones and Stokes Associates, Inc. Sacramento, California. Long-term assessment of use of San Diego Bay shoreline by numerous waterbirds. 1987.

Conducted Study of the Effect of the Del Mar Grand Prix on Waterbirds Inhabiting San Dieguito Lagoon, San Diego County. 1987-1989. Butler Roach Group and Pacific Southwest Biological Services, Inc., San Diego, California. For 22nd District Agricultural Association, as required by

California Coastal Commission. Intensive field monitoring of responses of coastal lagoon water-birds to grand prix automobile races in immediately adjacent lands. 1987-1989.

Conducted Preliminary Study of the Impact of a Geothermal Drilling Operation on the Yuma Clapper Rail (YCR), Imperial Valley, California. Kennecott Corporation, Salt Lake City, Utah. Intensive monitoring of Federally Endangered YCR in freshwater marsh habitats near a geothermal drilling operation, using vocalization count techniques. 1987.

Conducted Geothermal Development Impact Studies. Wister Wildlife Management Area, Niland, California. Kennecott Corporation, Salt Lake City, Utah. 1983-1987. Long-term studies of waterfowl and other waterbirds on a California State wildlife refuge; includes investigation of flight patterns, Federally Endangered Desert Pupfish and Yuma Clapper Rail, and miscellaneous amphibians, reptiles, birds and mammals. 1983-1987.

Conducted Study Design for Biological Monitoring and Assessment Program for the Sweetwater Marsh Upland/Wetland Complex. City of Chula Vista and California State Coastal Conservancy (San Diego, California). Includes a variety of State and Federal and otherwise sensitive species.

Prepared Biological Resources Management Plan for the Naval Aerial Gunnery Range, East and West Mesa, Imperial County, California. U.S. Navy Wildlife Resources Section, San Bruno, California. For Innis-Tennenbaum Co., San Diego, California. Included description of existing vegetation and wildlife of East and West Mesa study areas, discussion of impacts of transfer of ownership of current private land holdings to U.S. Navy, and preparation of management plan for transferred lands. Several sensitive species and habitat areas involved.

Conducted Golden Eagle Study. City of Riverside and GTE Sprint Corporation, California. Study of the seasonal activity of golden eagles and the impact of park development on the species, in the Sycamore Canyon area of the City of Riverside.

Conducted San Pasqual Valley Floodplain Biological Study. Applied Environmental Management. San Diego, California. Field surveys for the Federally Endangered Least Bell's Vireo and other riparian bird species.

Conducted Tijuana River Sewage Outfall Pipeline Biological Impact Study - Tijuana Ocean Engineering Study (T.O.E.S.). Butler/Roach Group. San Diego, California. Field studies of sensitive zoological resources along a coastal pipeline corridor; included investigation of such species as the Federally Endangered California Least Tern and Light-footed Clapper Rail, and California (state) Endangered Belding's Savannah Sparrow.

Senior Zoologist  
Pacific Southwest Biological Services, Inc.  
1977-1983

## Summary of Significant Projects

Raptor Nesting Survey. San Diego Gas and Electric Company.

San Dieguito Lagoon Enhancement Plan. City of Del Mar, California.

Original Mission Trails Regional Park Biological Study. San Diego, California.

Stephens' Kangaroo Rat Studies. San Diego and Riverside Counties, California.

Algodones Dunes Rare Plant Study. Bureau of Land Management.

## **ADDITIONAL EXPERIENCE/POSITIONS**

Conducted annual Yuma clapper rail census surveys at the California Department of Fish and Game, Wister Unit (Imperial Wildlife Area) in Imperial County, California (1983 to present)

Instructor, San Diego State University, Department of Biology, "Conservation of Wildlife," 1994

Research Associate, 1995-present, Department of Biology, San Diego State University. San Diego, Calif.

Peregrine Falcon Eyrie Observer, 1981-82 (Volunteer), U.S. Fish and Wildlife Service, Northern California.

Forest Wildlife Advisor, 1980-81, Forest Lands and Product Cooperative, Northern California.

Research Assistant/Diver, December 1977-January 1978, Dr. W.L. Montgomery. Punta Colorado, Baja California, Mexico

Biological Assistant, March to August 1976, U.S. Fish and Wildlife Service Coyote Predation Study. Utah and Montana.

Research Assistant, 1975, NSF Spruce-Fir Succession Study. Utah State University, Logan, Utah.

Research Assistant, 1972, IBP Desert Biome Study. Utah State University. Logan, Utah.

## **CERTIFICATIONS/PERMITS**

U.S. Fish and Wildlife Service Permit to trap, tag and handle the Federally Endangered Pacific Pocket Mouse (TE745541-9)

U.S. Fish and Wildlife Service Permit to trap, handle, and translocate the Federally Endangered Stephens' Kangaroo Rat (TE745541-9)

U.S. Fish and Wildlife Service Permit to trap and handle the Federally Endangered San Bernardino Kangaroo Rat(TE745541-9)

U.S. Fish and Wildlife Service Permit to conduct field studies of Federally Endangered Yuma Clapper Rail. Formerly held USFWS Permit to trap, handle and conduct radio telemetry studies on this species. (TE745541-9)

U.S. Fish and Wildlife Service Permit to conduct field surveys for the Federally Endangered Amargosa Vole (TE745541-9)

U.S. Fish and Wildlife Service Permit to conduct field surveys for the Federally Threatened California Gnatcatcher (as independent investigator on Shana Dodd's USFWS Permit)

California Department of Fish and Game Memorandum of Understanding to trap, handle and translocate the State Threatened (Federally Endangered) Stephens' Kangaroo Rat

California Department of Fish and Game Memorandum of Understanding to trap and handle the California State Sensitive (Federally Endangered) Pacific Pocket Mouse

California Department of Fish and Game Memorandum of Understanding to trap and handle the California State Sensitive (Federally Endangered) San Bernardino Kangaroo Rat

California Department of Fish and Game Memorandum of Understanding to trap and handle the California Endangered (Federally Endangered) Amargosa Vole.

California Department of Fish and Game Memorandum of Understanding to conduct trapping studies of the sensitive Mojave Ground Squirrel, Palm Springs Round-tailed Ground Squirrel, Palm Springs Little Pocket Mouse

California Department of Fish and Game Memorandum of Understanding to trap, hold and relocate the sensitive Palm Springs Round-tailed Ground Squirrel at the Jefferson Street Interchange Project site (Palm Springs)

California Department of Fish and Game Mojave Ground Squirrel Cumulative Human Impact Evaluation (CHIE) Training Sessions - 1991,1992

Formerly held California Department of Fish and Game MOU's to trap/handle (and for the YCR, conduct radio telemetry studies) on the Federally Endangered Yuma Clapper Rail and desert pupfish (lapsed in 1991-1992)

California Department of Fish and Game Collecting Permit, 1977-present.

Certified Scuba Diver-Issued 1970.

Private Pilot License.

24-hour Hazardous Waste Training Certification. September 1992.

**CLIENTS DIRECTLY OR INDIRECTLY INVOLVED  
IN PROJECTS PARTICIPATED IN BY MR. MONTGOMERY**

A.A. Webb & Associates  
Advance Sciences, Inc.  
Affinis  
AMEC (San Diego, Calif.)  
Aware Development Company  
Battelle Pacific Northwest National Laboratory  
BioSystems Inc. (Santa Cruz, Calif.)  
Brian F. Mooney Associates  
Buie Corporation  
Butler Roach Group  
California Department of Fish and Game  
California State Coastal Commission  
California State Coastal Conservancy  
California Transportation Department (CalTrans)  
CalMat Corporation  
Calpine Corporation (Santa Rosa, Calif.)  
Center for Natural Lands Management (Fallbrook, Calif.)  
Chambers Group (Irvine)  
CH2M Hill (Newport Beach, Calif.)  
City of Chula Vista  
City of Del Mar  
City of Hemet  
City of Riverside  
City of Temecula  
City of San Diego, Public Utilities Dept.  
Chambers Group  
Concordia Homes

Conservation Biology Institute (San Diego, Calif.)  
County of Riverside  
County of San Bernardino  
County of San Diego (Public Works Dept., Parks and Recreation Dept.)  
Cox Construction Company (Vista, Calif.)  
Dames & Moore (Santa Barbara, Calif.)  
Douglas Wood & Associates (Newport Beach, San Luis Obispo, Calif.)  
Earth Tech (Colton, Calif.)  
EDAW (San Diego, Calif.)  
Environmental Solutions, Inc. (Irvine, Calif.)  
Essex Environmental Consultants  
Everest International Consultants, Inc (Long Beach, Calif.).  
Fallbrook Public Utilities District (Fallbrook, Calif.)  
Fluor Corporation  
Freeport-McMoran/Geysers Geothermal  
Glenn Lukos & Associates  
GTE Sprint Corporation  
Harland Bartholomew & Associates (Sacramento, Calif.)  
Helix Environmental Planning (La Mesa, Calif.)  
Jones and Stokes Associates  
KEA Environmental  
Kennecott Corporation  
KTU&A Architects and Planners  
Kvaas Construction Co. (San Diego, Calif.)  
LG&E Power Engineers & Constructors  
Lettieri-McIntyre & Associates (San Diego, Calif.)  
Livingstone-Parks  
LSA Associates (Irvine, Calif.)  
MEC Analytical Systems (Carlsbad, Calif.)  
Merkel & Associates (San Diego, Calif.)  
Michael Brandman Associates  
Metropolitan Water District (MWD) of Southern California  
Mission Viejo Company  
Myra Frank Associates  
NBS/Lowry  
Ogden Environmental and Energy Services (San Diego, Calif.)  
P&D Technologies (San Diego and Orange, California)  
Pacific Gateway Homes  
Pacific Southwest Biological Services (National City, Calif.)  
Pardee Construction Company  
Parsons Brinckerhoff, Quade and Douglas  
Psomas & Associates (Costa Mesa, Calif.)  
Pulte Homes

Radian International  
RANPAC Engineering Corporation (Temecula, Calif.)  
RECON  
RBF/Sholders & Sanford  
Robert Bein, William Frost & Associates  
Royston, Hanamoto, Alley and Abey  
SAIC (San Diego, Calif.)  
San Diego Gas and Electric Co.  
San Diego State University Foundation  
S.C. Dodd Consulting  
Sempra Energy (San Diego, Calif.)  
Southern California Edison Co.  
Southland Engineering Co.  
Southwest Division, Naval Facilities Engineering Command  
SunCal Companies  
Sunwest Materials  
Sweetwater Environmental Biologists  
Tetra Tech, Inc. (San Bernardino, San Diego)  
The Environmental Company (Solana Beach, Calif.)  
The Environmental Trust (San Diego, Calif.)  
The Lusk Company  
The Nature Conservancy (Temecula, Calif.)  
The Planning Center (Newport Beach, Calif.)  
Tierra Environmental Services (San Diego, Calif.)  
Tierra Madre Consultants  
Tomac Engineering  
UltraSystems Engineers and Constructors  
U.S. Air Force (March Air Reserve Base)  
U.S. Bureau of Land Management  
U.S. Marine Corps (Camp Pendleton)  
U.S. Forest Service  
U.S. Navy (Southwest Division Naval Facilities Engineering Command)  
Vernadero Consulting (Scottsdale, Ariz.)  
Westec Services  
Western Municipal Water District  
Western Waste Management Corporation  
3M Corporation

**EXAMPLES OF SIGNIFICANT PUBLICATIONS,  
UNPUBLISHED REPORTS AND PRESENTATIONS**

Contributor at Wildlife Society Workshop Entitled: Biology and Management of Rodents in Southern California (26 June 1993).

Inventory for Stephens' kangaroo rats and habitat assessment on 57 BLM parcels located in western Riverside and northern San Diego Counties. Bureau of Land Management Report (November 1989)

A study of the impact of a geothermal drilling operation on the Yuma clapper rail (Rallus longirostris yumanensis), June to August 1987, Imperial Valley, California (1988)

A study of the effects of the Del Mar Grand Prix on water-associated birds inhabiting the San Dieguito Lagoon, Del Mar, California (1987,1988,1989)

### **EDUCATION**

Master of Science, Biology/Ecology, 1976, Utah State University.

Thesis: Rodent-Habitat Relationships in Great Basin Desert Shrub Communities.

Bachelor of Science, Wildlife Biology, 1970, Utah State University.

Organic Chemistry, Summer 1972, University of California, San Diego.

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Grass Valley, California 95945  
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www.ecooutreach.com

## CURRENT EMPLOYER:

Owner and sole proprietor of: *EOS-Ecological Outreach Services* ([www.ecooutreach.com](http://www.ecooutreach.com)) started May, 1999. Offering botanical and general ecological consulting, conservation planning, outreach and education programs, restoration ecology/native plant gardening, photography, and nature/technical writing services.

## WORK HISTORY

### Consulting (specific list of projects is available upon request)

My consulting experience includes performing the following tasks:

- rare plant surveys and floristic inventories
- designing mitigation for rare plant/floristic impacts
- vegetation mapping
- wetland delineations/mitigation
- restoration and revegetation projects
- conducting general biological surveys (including birds)
- preparing Habitat Management plans
- preparing Resource Management plans/recommendations
- conservation planning
- desert tortoise monitor
- assisting with red-legged frog surveys and other herpetological surveys
- conducting Quino checkerspot butterfly protocol surveys
- construction monitoring/writing monitoring plans
- utility forester
- checking and setting small mammal and herp traps
- conducting literature reviews
- preparing and conducting educational and training programs
- writing and reviewing biological sections of CEQA and NEPA documents
- permitting services including 404, 401 and 1600 programs

Companies include: **NorCal:** many private landowners, UC-Berkeley Museum (Paleobotanical Dept), Nevada Irrigation District, Lake of the Pines Subdivision, Jones and Stokes-Sacramento, Ecorps-Rocklin, Salvation Army (Sacramento), EcoBridges Consulting.

### **1986-1988 and 1998 to 2004**

**SoCal:** Center for Natural Lands Management, Camp Stevens of Julian, Sempra Energy/SDG&E, The Nature Conservancy, U.S. Forest Service, KEA Environmental, City of Escondido (Dixon Lake/Daley Ranch), Western Environmental Consulting, EcoVentures California, SJM Consulting, California Native Plant Society, J. Rumbaugh Smith Consulting, Sweetwater Consulting, Advanced Sciences.

### Governmental/Institutional Experience

**Botanist, Selawik National Wildlife Refuge** **June-October 1997**  
**U.S. Fish and Wildlife Service, Kotzebue, Alaska**

Position jointly funded by U.S. Air Force. Priority was to complete provisions of Conservation Agreement/Plan I initiated with U.S. Air Force in 1996 for rare plant mitigation. Wrote the scope of work and budget for this project. Mitigation included transplantation and seed collection. Multi-partnership project (5 entities).

**Endangered Species Specialist/Botanist** **August 1992-December 1996**  
**U.S. Fish and Wildlife Service, Regional Office and Ecological Services, Anchorage, Alaska**

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Coordinated first (and only) Ecological Services Rare Plant Program for Alaska. Implemented Sections 4, 6 and 7 of the Endangered Species Act; (listing, intergovernmental coordination, and consultation, respectively). Initiated and wrote first Conservation Agreement/Plan in Alaska between USFWS and U.S. Air Force for project above. Reviewed NEPA documents. Assessed impacts to fish and wildlife habitat for private, state and federal projects. Coordinated and/or conducted rare plant/floristic surveys. Wrote and supervised contracts, projects/field reports and summarized ecological data. Coordinated and assisted in revegetation projects. Initiated and coordinated the first inter-agency/NGO Anchorage "Celebrating Wildflowers" event which is still held annually. Created and implemented a pilot Anchorage Native Plant Salvaging Program for which I received an award.

**Endangered Species Specialist/Botanist** **June 1991-July 1992**  
**U.S. Fish and Wildlife Service, Ecological Services, Cheyenne, Wyoming**

Standard duties included those described above. Created Wyoming Rare Plant Working Group and initiated the Wyoming Rare Plant Field Guide.

**Natural Resource Specialist-Eastern Team** **June 1990-June 1991**  
**National Park Service, Denver Service Center, Lakewood, Colorado**

Completed environmental compliance for Park Service projects and participated as team planner. Wrote NEPA documents, completed Section 7's with USFWS, participated in wetlands delineation's in compliance with Clean Water Act 404 process, Executive Order on Wetlands/Floodplains. Conducted compliance for other regulations such as local coastal regulations.

**Biologist, Enhancement Project** **December 1989-May 1990**  
**Wyoming Game and Fish, Cheyenne, Wyoming**

Attempted to investigate if there was any possible correlation between pesticide application on wildlife habitat and wildlife damage claims from ranchers. (Soil Conservation Service cost-shared up to 80% of the pesticide application costs).

**Coordinator, Land Protection Planning and** **June-November 1989**  
**Stewardship, The Nature Conservancy, Frankfort, Kentucky**

Coordinated landowner registry program and cared for 23 preserves. Required ability to work with all types of people and be resourceful to meet stewardship needs as economically as possible. Also led hikes for the public and donors.

**Environmental Services Technician** **January 1988-May 1989**  
**California Dept Parks and Recreation, San Diego**

Conducted "CEQA" surveys (Calif. Environmental Quality Act) for rare plants, conducted trail-use evaluations, assisted in revegetation projects, wrote and supervised two contracts, digitized rare plant locations using GIS (arc-info). Assisted wildlife biologists in setting traps and analyzing research data.

**Research Technician** **May-September 1987**  
**Toolik Lake Arctic Research Station, Alaska Systems Ecology Research Group**  
**San Diego State University**

Assisted in research project to monitor long-term ecological effects of the Trans-Alaskan pipeline. Data collected included root growth, phenology, leaf area index and biomass of tundra vegetation. In San Diego assisted in project to monitor success of "created" vernal pools versus natural ones. Used two listed plant species as indicators: San Diego mesa mint (*Pogogyne abramsii*) and toothed lobelia (*Downingia cuspidata*).

**Ecologist (seasonal only)** **April-October 1986**  
**Ohio Dept of Natural Resources, Div of Natural Areas and Preserves, Columbus**

Used aerial photos and topographic maps to locate potential natural areas in Belmont and Guernsey Counties. (Both counties were over 50% strip-mined). Potential areas were field checked and ecological data was taken to quantify significant ecological attributes and justify candidacy.

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**Graduate Student**

**January 1984-June 1986**

**Dept of Botany, Ohio University, Athens, Ohio**

Conducted Master's research on former federal candidate Category 2 species, *Synandra hispidula* (Guyandotte Beauty) of the Mint Family. Research included demography, phenology, germination studies, and herbivory (by default). Thesis sent to USFWS Office of Endangered Species, Atlanta, Georgia.

**Undergraduate research experience**

**May 1983-January 1985**

**Dept of Botany, Ohio University, Athens, Ohio**

Research assistant for graduate advisor Dr. Philip Cantino, Systematist. Prepared pollen for electron microscopy. Conducted floristic survey of property under consideration for acquisition by the university. Worked in The Bartley Herbarium assisting with routine duties of the herbarium: processing loans, accessioning, annotating, identifying, mounting and repairing specimens.

**Current Certifications**

Nevada and San Diego County approved biologist, Women and Minority Business Enterprise as certified by the CPUC (California Public Utilities Commission) VON # 1KS00011, Federal, and State of California Permits to Collect Federal, and State Endangered, Threatened, and Rare Plants, Individual Permit for Quino Checkerspot TE-036890-0). Registered on Central Contract Registration with US Gov't and as Small Business. Certified Small Business, State of California (Ref # 0041912). Others in progress.

**Interpretive/Instructional Experience**

**Freelance naturalist/environmental educator/teacher**

**Some Present & Past EOS Clients:** Eco-Kids (Sierra Nevada Deep Ecology Institute, Grass Valley), Independence Trail Docent Program Nevada County, UC Berkeley Museum (Paleobotany Program), Bell Gardens, Valley Center, CA; KQ Resort, Julian, CA ; Rancho Corrido Campground, Pauma Valley, CA ; home school and children groups, on-call with many groups and programs. I play the guitar, sing, and compose songs.

**Freelance Multi-subject and Study**

**2006-Currently**

**Skills Improvement Tutor**

**Home Tutoring Plus**

**Meadow Vista, California**

**Adjunct Instructor**

**January-May 2007**

**Biology Department, Sierra College, Rocklin, California**

Taught course in Ecological Field Methods including lecture, labs and field trips.

**Teacher**

**September-November 2004**

**Alta Sierra Elementary, Grass Valley, California**

Create and teach after school nature education classes for elementary students.

**Instructor**

**June 2001-present (first two wkds of June)**

**Sierra Club Nature Knowledge Workshop, San Diego Chapter**

Create nature education and conservation programs for adults who want to learn more about local and regional ecology. My specific role is to emphasize plants and plant ecology.

**Adjunct Instructor**

**August-2001-September 2003**

**Biology Department, Palomar College, Escondido, California**

Instructed lab and lecture fast track course in introductory biology.

**Interpretive Specialist/Ranger**

**July 1998-July 1999**

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***Dixon Lake/Daley Ranch, City of Escondido, California***

First position of its kind in the City which I created. Part-time position that includes creating and coordinating a docent program, renovating and maintaining park interpretive signs, and leading natural history hikes/talks. Also prepared and obtained grant through the Natural Resources Conservation Service for removal of exotics at Lake Wohlford and Dixon Lake.

***Adjunct Instructor and Tutor***

***January-May /Sept-Nov 1997***

***Biology Department, University of Alaska, Anchorage***

Instructed labs and lecture courses in introductory biology/botany.

***Instructor (Intermittent)***

***June 1995-June 1997***

***Anchorage School District***

Conduct workshops on botany/ecology topics for teacher in-services as part of a National Science Foundation Earth Sciences grant.

***Summary of other interp/instruction/outreach experience***

- 1998 Presenter, Reptile Exhibit, San Diego Natural History Museum.
- 1988: Instructor, Denver C. Fox 6th grade Outdoor School, Santa Ysabel, Calif.
- 1986: Instructor for self-designed course on the local flora, Ohio Univ., Athens, Ohio
- 1983-84: Teaching Assistant, Department of Botany, Ohio Univ.
- 1980: Seasonal Naturalist, Grand Lake St. Mary's State Park, Ohio Dept of Parks and Recreation.
- 1979: Counselor, Camp Farnsworth, Thetford, Vermont.
- 1978: Youth Conservation Corps, Defiance, Ohio

**E D U C A T I O N**

M.S. in Botany (plant systematics and ecology), 1986  
Dept of Botany, Ohio University, Athens, Ohio  
B.S. in Field Biology, Ohio University, 1983.

Additional coursework at University of California, La Jolla,  
University of Wyoming, University of Alaska, Anchorage and Sierra Community College (Rocklin, Ca)

**C O M P U T E R E X P E R I E N C E**

Windows, Word-Perfect, Microsoft Works, Word 97/2000, GIS-arc-info (digitized data only), Microsoft Excel, Quattro-Pro, Harvard Graphics, ArcView GIS, STPLAN 4.1, Internet/email software.

**T R A I N I N G (always on-going)**

Grant Writing, Environmental Law, Conducting Section 7 Consultations (Endangered Species Act), Effective Presentations, Negotiation Skills, Bear and Firearms Safety (Alaska job requirement), Conflict Resolution & Consensus Building, Conservation Biology (Interagency Workshop, 1995), Inventorying and Monitoring Rare Plants (BLM Workshop 1995), CNPS Vegetation Sampling Workshop (refresher), San Diego's Sensitive Butterflies Workshop (2001) and Geology of San Diego County (SDNHM Class, 2002), Wetland Delineation (Wetlands Training Institute) (refresher) 2004, Soils Class (Fall 2005), ARC VIEW GIS (Fall 2005), Climate Change: Is This a New Age for Land Use Planning and CEQA? (May 2007), Willows of California, Chico Herbarium, Cal State Chico (June 2008).

**V O L U N T E E R**

I believe very strongly in contributing to my community. I am always involved in some type of volunteer activity.

February 2005: Completed Laubach Literacy Training for Literacy Program, Nevada Co Library System  
March 2004-present: Redbud Chapter, CNPS and other community/environmental groups in Grass Valley  
March 2003-November 2004: Member, Julian Planning Group, San Diego County  
2000-Volunteer, San Diego Bird Atlas Project. San Diego Natural History Museum.

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1998-present: Volunteer and/or Speaker: Volcan Mountain Preserve Foundation, California Native Plant Society, Iron Mountain Conservancy, Ramona, Adopt-a-Canyon Campaign hike leader, Sierra Club (Volunteer for many other groups as available).

1994-97: Vice President and Program Chair, Alaska Native Plant Society

1997: Education Chair, Anchorage Chapter of Audubon Society

1987-89: Chair of Programming, San Diego Chapter of the California Native Plant Society

1987: Orchid House volunteer, San Diego Zoo

1980-82: Careline Volunteer (24-hour crisis line)

### **A W A R D S / P U B L I C A T I O N S / O T H E R I N F O**

2005: Nevada's Buried Treasure: The Lund Petrified Forest. Abstract for Botanical Society of America, University of California Museum of Palentology. Erwin, D. et al. (Moran listed as co-author)

2004: Rare Plant and Vegetation Surveys, Santa Ysabel Preserve 2002 and 2003 ([http://www.co.san-diego.ca.us/parks/docs/syosp/Appendix\\_A.pdf](http://www.co.san-diego.ca.us/parks/docs/syosp/Appendix_A.pdf)) and Post-Cedar Fire Ecosystem and Rare Plant Impact Survey, Santa Ysabel Ranch Open Space Preserve, East Ranch ([http://www.sdcounty.ca.gov/parks/docs/syosp/Appendix\\_B.pdf](http://www.sdcounty.ca.gov/parks/docs/syosp/Appendix_B.pdf)) Reports produced for The Nature Conservancy and San Diego County. On county website at addresses above.

1997: Awarded the Outstanding Stewardship Award by the Anchorage Waterways Council for the pilot Native Plant Salvaging Program.

1997: Speaker for the Public Lecture Series, Anchorage Waterways Council/Aududon Society

1997: "Implementation of the Multi-partnership Conservation Agreement for *Oxytropis arctica barnebyana* (Barneby's milkvetch) Kotzebue LRRS 1996/1997." Final Report for the U.S. Air Force Work Order Number 86059. Elmendorf Air Force Base, Anchorage, Alaska. 49 pp. plus appendices.

1996. "Aleutian shield fern" and "How you can help protect endangered species" In: Alaska's Threatened and Endangered Species, edited by M.Sydeman, Alaska Department of Fish and Game. pp. 23 and 29.

1996, Coastal America Progress Report and Update, "Strengthening Regional Efforts--the Barneby's Milkvetch Conservation Agreement" pp.13. Coastal America, Washington, D.C.

1995, 1996 and 1997, received awards from U.S. Fish and Wildlife Service for performance, including

two Special Achievement awards, a time-off award for coordinating "Celebrating Wildflowers", and an "On-the-Spot" award for the report completed for the U.S. Air Force.

Moran, V.S. 1994. "A different perspective on sustainability". Ecological Applications 4(3) pp. 405-6.

Advisor for 1994 and 1998 DOI Multi-agency (USFWS, BLM, USFS and Heritage Programs) Wyoming & Alaska Rare Plant Field Guides.

Assisted in editing 2001 List of Flora of San Diego County through the San Diego Natural History Museum.

Freelance writer, Academic Press Dictionary of Science, Harcourt Brace Jovanovich, Inc., San Diego, California. Researched topics in mycology, taxonomy, systematics, ecology and botany for science dictionary.

1987. New county record for *Scribneria bolanderi* and *Agrostis avencea*. Madrono 34:4 pp.381.

1986: Presented results of graduate research at Ecological Society of America meeting, Syracuse, New York. Publication of abstract.

Wrote and was awarded a grant from the Ohio Dept of Natural Resources, Division of Natural

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reserves for graduate research project.

Variety of freelance articles published in the Chico News and Review, The Union newspaper (Grass Valley), YubaNet, Truth-Out, Anchorage Daily News, Casper Star, newsletter of the Alaska Native Plant Society (Borealis), Audubon Society (Okiotak), Alaska Wildlife Alliance, California Native Plant Society Newsletter, Vision Magazine, The Blend, and many others. Have also performed commentaries for various public radio stations.

### **ORGANIZATIONS/MEMBERSHIPS**

California Native Plant Society, California Botanical Society, Audubon Society, California Oak Foundation, California Native Grassland Association, and KVMR Community Radio, and others.

### **INTERESTS**

Philosophy, hiking/botanizing/bird watching, running, camping, backpacking, cycling, skiing of all kinds, writing, playing guitar/composing songs and my two dogs.

*References will be furnished upon request.*

## **PAULA POTENZA**

### **EDUCATION**

M.A., Biology, California State University, Fullerton, 1996  
B.A., Biology, University of California, San Diego, 1987

### **PROFESSIONAL REGISTRATIONS/CERTIFICATIONS**

U.S. Fish and Wildlife Service (USFWS) permit to survey for California gnatcatcher and Quino checkerspot butterfly, 2002-2007  
USFWS and California Department of Fish and Game (CDFG) permits to handle giant garter snakes, 1998-1999  
USFWS permit to survey for Quino checkerspot butterfly, 1998  
USFWS permit to survey for California gnatcatcher, 1997-1998

### **AREAS OF EXPERTISE**

Ms. Paula Potenza has technical experience in the following general areas:

- Biological Resource Surveys and Inspection
- Report Writing
- Revegetation
- Environmental Training

### **REPRESENTATIVE EXPERIENCE**

Ms. Potenza has nearly 17 years of experience in environmental inspection and biological resource surveying on small to large-scale projects with sensitive biological resource issues. Her biological expertise includes avian, herpetological, and mammalian species surveys; impact assessments; and mitigation measure development and monitoring. Ms. Potenza also combines a technical background in erosion control, stream and wetland crossing procedures, and revegetation with proven capabilities in field crew coordination, client and agency relations, technical writing, and environmental training. In addition, she holds a USFWS permit authorizing her to conduct surveys for coastal California gnatcatcher and Quino checkerspot butterfly.

#### **Otay River Constructors, State Route South Toll Road Project – Chula Vista, CA (Lead Biologist: 2004 – Present)**

Ms. Potenza supervises, coordinates, and conducts California gnatcatcher presence/absence breeding season and nesting surveys in accordance with agency protocols, and in conjunction with noise monitoring as required by the USFWS Biological Opinion. She prepares and submits the California gnatcatcher 45-day report and the annual report of her findings to the USFWS.

**Southern California Edison (SCE), As-Needed Environmental Services – Mono, Inyo, Tulare, Kern, Ventura, Los Angeles, Kern, San Bernardino, and Riverside Counties, CA (Biologist: 2006 – Present)**

Ms. Potenza conducts biological surveys and provides reports for SCE's operation, maintenance, and construction of electric distribution and transmission lines. She also drafts the scope and cost estimate for new projects.

**San Diego Gas & Electric (SDG&E), Otay Mesa Power Purchase Agreement Transmission Line Project – San Diego County, CA (Environmental Inspector: 2006 – Present)**

Ms. Potenza conducts preconstruction coastal California gnatcatcher surveys and construction monitoring activities for compliance with the mitigation monitoring plan for construction of a new 230 kilovolt (kV) transmission project in Southern San Diego County. She also conducts burrowing owl surveys according to the methodology provided by the California Burrowing Owl Symposium.

**San Diego Gas & Electric (SDG&E), On-Call Biological Services – CA (Lead Biologist: 2000 – Present)**

Ms. Potenza conducts biological surveys for areas with potential to support 110 sensitive wildlife and plant species, including presence/absence surveys for California gnatcatcher (protocol-level surveys in accordance with the agency protocols), least Bell's vireo, Belding's savannah sparrow, nesting raptors, and Quino checkerspot butterfly, and prepares technical reports for SDG&E's operation, maintenance, and new construction of electric distribution and transmission lines and natural gas pipelines in accordance with Sempra's 50-year Natural Community Conservation Plan permit. She also prepares application packages for CDFG 1600 permits and U.S. Army Corps of Engineers 404 permits for electric and gas transmission activities. Ms. Potenza provides environmental documentation to support National Environmental Policy Act (NEPA) compliance for U.S. Marine Corps (Camp Pendleton and Miramar) operation and maintenance, and she conducts fieldwork for permit and report submittals. Ms. Potenza reviews reports and pre-activity surveys for areas with potential to support 110 sensitive wildlife, and plant species, and wetlands and jurisdictional drainages. She coordinates with SDG&E on survey results and agency reports, and provides environmental documentation to support NEPA compliance for the Bureau of Indian Affairs resulting in the issuance of Categorical Exclusions.

**Arcadis, San Diego Gas & Electric Sunrise Powerlink Project – San Diego, CA (Lead Biologist: 2006)**

Ms. Potenza conducted reconnaissance-level wildlife surveys within the proposed Inland Valley Link right-of-way for a proposed 500 kV transmission line project. She identified, documented, and mapped special-status species and habitat to support special-status species along the route. Ms. Potenza monitored

surveyors to ensure that no sensitive species or habitats were impacted by their activities.

**San Diego Gas & Electric, Miguel to Mission 230 kV #2 Project – San Diego County, CA (Associate Biologist: 2005 – 2006)**

Ms. Potenza conducted preconstruction coastal California gnatcatcher surveys and construction monitoring activities for construction of a 230 kV transmission project in Southern San Diego County per the mitigation and monitoring plan in the project's Environmental Impact Report (EIR). Her duties included conducting preconstruction surveys for 110 sensitive species covered in SDG&E's NCCP, nesting birds, and Quino checkerspot butterfly.

**Pajaro Valley Water Management Agency, Revised Basin Management Plan – Santa Cruz and Monterey Counties, CA (Lead Biologist: 2005)**

Ms. Potenza coordinated and conducted a least Bell's vireo presence/absence survey in accordance with agency protocols. She prepared and submitted a survey letter report of her findings per the project Biological Opinion. Ms. Potenza also conducted surveys to verify nesting bird habitat along the project route.

**Southern California Gas Company, Playa del Rey Well 11 – Playa del Rey, CA (Lead Biologist: 2005)**

Ms. Potenza coordinated and conducted a Belding's savannah sparrow presence/absence survey and a general bird nest survey in accordance with standard survey protocols. She prepared and submitted a Belding's savannah sparrow methodology letter report and a Belding's savannah sparrow and general bird nest survey letter report of her findings per the recommendation of the CDFG and the California Coastal Commission. Ms. Potenza also conducted environmental crew training prior to the start of project activities and monitored nesting bird during project activities.

**Orange County Integrated Waste Management Department, Gothard Street Refuse Disposal Station – Huntington Beach, CA (Lead Biologist: 2005)**

Ms. Potenza coordinated and conducted California gnatcatcher presence/absence breeding season and nesting surveys in accordance with agency protocols. She completed and submitted the California gnatcatcher 45-day report of findings to the USFWS.

**Mojave Pipeline/Kern River Gas Transmission Company, Line No. 1905 Meter Station Modification Project – San Bernardino County, CA (Lead Biologist: 2004)**

Ms. Potenza was approved by the USFWS to conduct desert tortoise presence/absence surveys at four existing meter stations. She conducted the surveys and prepared and submitted the desert tortoise survey letter report of findings per the project Biological Opinion.

**Southern California Gas Company, Niland Pipe Relocation Project – Niland, CA (Biological Monitor: 2004)**

Ms. Potenza monitored a pipeline construction crew for desert tortoise mitigation compliance. She was approved by the USFWS to handle and relocate desert tortoise. Ms. Potenza also trained construction crews to avoid potential impacts to tortoise and other biological resources.

**Southern California Edison, Oak Valley Substation Project – Riverside County, CA (Lead Planner: 2004)**

Ms. Potenza supervised, coordinated, and conducted biological surveys for a new 115 kilovolt (kV) substation and a 220 kV substation proposed for either two separate substation sites of approximately three acres and 10 acres respectively, or on one site of approximately 15 acres that would accommodate both substations. She conducted sensitive resource surveys, which included general and sensitive wildlife surveys. She also supervised and contributed to the habitat assessment report in support of the proposed project.

**Southern California Edison, Summit Substation Project – San Bernardino County, CA (Lead Planner: 2003 – 2004)**

Ms. Potenza supervised, coordinated, and conducted biological surveys for a proposed 3.5-mile transmission line and substation upgrade. She conducted sensitive resource surveys, which included general and sensitive wildlife surveys, and protocol-level surveys for California gnatcatcher, in accordance with the agency protocols. Ms. Potenza supervised and contributed to the habitat assessment report in support of the project. She also coordinated and supervised project biological subconsultants.

**San Diego Gas & Electric, Miguel to Mission 230 kV #2 Project – San Diego County, CA (Lead Planner: 2002 – 2003)**

Ms. Potenza supervised, coordinated, and conducted biological surveys and prepared biological sections of a Proponent's Environmental Assessment (PEA) to the California Public Utilities Commission for a proposed 35-mile transmission line upgrade. She conducted sensitive resource surveys and surveys for sensitive wildlife in accordance with agency protocols. She was responsible for hiring, coordinating, and supervising project biological subconsultants, and she supervised and contributed to the biological and technical report preparation in support of the PEA.

**EnCana, Wild Goose Gas Storage Project – Butte and Colusa Counties, CA (Associate Biologist: 2001)**

Ms. Potenza performed surveys for sensitive wildlife species to facilitate the expansion of an underground natural gas storage facility and construction of approximately 30 miles of pipeline. Key resource issues included wetlands,

agricultural fields, special-status species, and a crossing of the Sacramento River. Ms. Potenza helped prepare various plans and reports, including the biological assessment, restoration plan, mitigation monitoring plan, and the biological resources section of the Proponent's Environmental Assessment.

**Williams Communications, Inc., Fiber Optic Project – CA (Spread Coordinator: 2000 – 2001)**

Ms. Potenza coordinated environmental inspection and training activities during installation of approximately 110 miles of underground fiber optic cable on the San Diego to Riverside route. She participated in protocol-level California gnatcatcher surveys and presence/absence surveys for least Bell's vireo. She oversaw documentation and reporting protocols, and preparation of variances. Ms. Potenza also implemented training programs and coordinated directly with agency representatives from the California Public Utilities Commission and the client.

**Pacific Gas and Electric Company, San Mateo-Martin Circuit No. 4 60 kV Conversion – San Mateo County, CA (Biological Monitor: 2000)**

Ms. Potenza monitored construction activities during the replacement of approximately 11.5 miles of existing overhead transmission lines. Construction occurred in extremely sensitive habitats for the federally listed San Francisco garter snake, California red-legged frog, and three sensitive butterfly species. Ms. Potenza coordinated with numerous contractors, the USFWS, and the CDFG.

**Alliance Pipeline L.P., Alliance Pipeline Project – IL, IA, MN, and IL (Lead Environmental Inspector/Biological Monitor: 1999 – 2000)**

Ms. Potenza supervised environmental inspection activities for an 891-mile, 36-inch-diameter natural gas pipeline from Canada to Illinois. She supervised one inspector, and she worked closely with construction contractors, agency representatives, and third-party monitors to ensure protection of wetlands and natural resources, and compliance with permit requirements. Ms. Potenza coordinated with the Federal Energy Regulatory Commission (FERC), the U.S. Army Corps of Engineers, and county agriculture inspectors. Prior to construction, Ms. Potenza provided inspection and biological monitoring during the clearing phase. She surveyed and inspected approximately 100 miles of right-of-way in Illinois and Iowa for Indiana bat and bat habitat, and she provided daily compliance reports with digital photographs.

**Alberta Energy Company, Wild Goose Gas Storage Project – Butte County, CA (Associate/Environmental Inspector: 1998 – 1999)**

Ms. Potenza performed environmental inspection and monitoring during construction of an underground natural gas storage facility and connecting pipelines within a wetland complex. She inspected for topsoil handling, wetland and water crossings, biological and cultural resource protection, and hazardous

materials. Ms. Potenza conducted environmental training for the construction workforce, and she worked closely with contractors, field crews, and agency representatives to ensure compliance with regulatory requirements. She also coordinated and monitored restoration and revegetation of disturbed areas in riparian and wetland communities. Ms. Potenza conducted winter bird, nesting bird, and vegetation surveys for postconstruction monitoring of wetland creation and enhancement sites. She also provided visual and auditory identification of birds, data collection from wetland control and creation sites, and writing and editing of annual reports.

**Questar Corporation, TransColorado Phase II – CO and NM (Environmental Inspector: 1998 – 1999)**

Ms. Potenza inspected construction of 70 miles of 24-inch-diameter pipeline. She focused on erosion control, topsoil handling, hazardous materials, biological and cultural resource protection, noxious weed control, and stream and wetland protection. Ms. Potenza coordinated daily with construction management and personnel from the FERC, Bureau of Land Management, and U.S. Forest Service. She also documented daily compliance activities via an electronic reporting system, and she provided on-site environmental training for construction crews.

**Chambers Group, Inc. – Orange County, CA (Wildlife Biologist: 1992 – 1998)**

Ms. Potenza participated in surveys for endangered, threatened, and sensitive species, including the California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, burrowing owl, southwestern arroyo toad, and desert tortoise. She provided construction, restoration, and annual inspections and written reports for the FERC Office of Pipeline Regulation on natural gas pipeline projects throughout the United States. She also conducted construction inspections to evaluate compliance with FERC mitigation plans, especially at environmentally sensitive areas such as wetlands and river crossings. Ms. Potenza monitored geotechnical survey crews, land surveying crews, and construction crews for compliance, including desert tortoise mitigation. She was approved by the USFWS to handle and relocate desert tortoise. She trained construction crews to avoid potential impacts to tortoise and other biological resources, and she managed a brown-headed cowbird-trapping program as part of mitigation for construction of a transportation corridor.

**The Nature Conservancy – McCloud, CA (Biologist: 1994)**

Ms. Potenza set up vegetation study plots in existing and revegetated areas of California coastal sage scrub. She identified dominant plant species and percent plant cover.

**Natural Resource Consultants, David A. Levine – Orange County, CA (Wildlife Biologist: 1994)**

Ms. Potenza participated in California gnatcatcher surveys, identified California gnatcatcher, cactus wrens, and other birds by sight and sound, and followed breeding gnatcatcher pairs to identify home range and nest site. She assisted mist netting of California gnatcatchers, and conducted vegetation mapping of local coastal sage scrub and chaparral communities by identifying major plant types and communities. Ms. Potenza also mapped community locations on aerial photographs.

**Sweetwater Environmental Biologists, Inc. – Mojave Desert, CA (Wildlife Technician: 1992 – 1993)**

Ms. Potenza participated in desert tortoise surveys on military installations. She also participated in California gnatcatcher surveys and a cowbird-trapping program in southern California.

**Biological Consultant, Victor M. Horchar – Twenty-Nine Palms, CA (Wildlife Biologist: 1992 – 1993)**

Ms. Potenza conducted mitigation compliance monitoring on a military installation for survey and drill crews working in desert tortoise habitat. She participated in desert tortoise surveys and collected, recorded, and reported biological data. Ms. Potenza identified, classified, and recorded all reptiles, birds, and mammals as part of general wildlife surveys.

**Wildlife Consultant, Dr. Bayard H. Brattstrom – Mojave Desert, CA (Wildlife Biologist: 1992)**

Ms. Potenza assisted in a breeding bird survey and she identified species of birds on the survey site by sight and sound. Ms. Potenza also assisted in analyzing collected data on bird densities for future publication.

**Institute of Wildlife and Environmental Toxicology, Clemson University – Chariton, IA (Research Technician: 1989 – 1990)**

Ms. Potenza located and monitored wild bird nests; monitored artificial nests; trapped and banded birds; tracked and located bobwhites and rabbits using upland wildlife telemetry; and conducted small mammal monitoring, carcass searching, and collecting for a study to determine the effects of pesticides on wildlife in rural agricultural Iowa.

**Sea World, Inc. – San Diego, CA (Aviculturist: 1987 – 1988)**

Ms. Potenza hand-raised quarantined penguins from eggs to adults. She prepared, collected, and maintained detailed records, and acted as co-supervisor on the graveyard shift during a second quarantine. She also trained and supervised new employees.

**TEACHING AND ADVISORY POSITIONS**

California State University, Fullerton, Biology Instructor/Teaching Assistant, Zoology and Biology undergraduate courses, Department of Biological Sciences, 1993 and 1994

### **SPECIALIZED TRAINING**

- San Diego County Sensitive Butterfly Workshop, Nature Festivals of San Diego County, 2002 and 2004
- Desert Tortoise Workshop, Desert Tortoise Council, 1995 and 2003
- San Diego's Sensitive Butterflies Seminar, San Diego Natural History Museum, 2001
- Quino Checkerspot Butterfly Workshop/Training Seminar, U.S. Fish and Wildlife Service, 1997
- Research and Management of the Brown-headed Cowbird in Western and Eastern Landscape Seminar, Research Working Group, Partners in Flight, California State University, Sacramento, 1997
- Declining Amphibians and Reptiles in California Workshop, San Diego Natural History Museum, 1997
- Southwestern Willow Flycatcher Workshop, Audubon California's Kern River Preserve, 1997
- Southwestern Willow Flycatcher Workshop, San Diego Natural History Museum, 1995

### **SELECTED PUBLICATIONS AND PRESENTATIONS**

Bolger, D.T., A.C. Alberts, R.M. Sauvajot, P. Potenza, C. McCalvin, D. Tran, S. Mazzoni, and M.E. Soule. "Response of rodents to habitat fragmentation in coastal southern California." *Ecological Applications*, vol. 7 no. 2, 1997.



Cadre Environmental is an environmental consulting firm specializing in conducting natural history research for threatened and endangered species throughout California. The managing Owner/Research Biologist/GIS Analyst of the firm, Mr. Ruben Ramirez, has over 15 years of experience in environmental consulting, conducting wildlife surveys, and developing Geographic Information Systems (GIS) databases, having worked as a Wildlife Biologist for the Angeles National Forest; as a Wildlife Biologist/GIS Analyst for Michael Brandman Associates; and as a Principal Wildlife Biologist/GIS Analyst for PCR Services.

Mr. Ramirez founded Cadre Environmental in June 2002. Since its inception the firm has worked on various public and private environmental projects both in northern and southern California.

PROFESSIONAL  
EXPERIENCE



2002 - Present **Cadre Environmental, Carlsbad California**  
**Owner/Research Biologist**

As Owner/Research Biologist for Cadre Environmental, I am responsible for all aspects of the business. These responsibilities include business development, client/agency interaction and coordination, project initiation and research, documentation, and mapping . I personally conduct all surveys for federal and state listed species for Cadre Environmental. Specifically, I have and continue to conduct focused survey programs for the arroyo toad, California red-legged frog, coastal California gnatcatcher, San Bernardino kangaroo rat and Pacific pocket mouse. I am currently conducting amphibian natural history research for both federal and private clients throughout Southern California. Clients include the Mojave Water Agency, Cleveland National Forest -FS, Rancho Mission Viejo Rancho Las Flores Limited Partnership, and the Pechanga Indian Reservation. In addition to conducting sensitive species research, I am also responsible for developing geographic information system (GIS) databases including creation, database development, and map production.

I also served as a member of Los Angeles County Significant Ecological Areas Technical Advisory Committee (SEATAC) from 2004-2006

1997 - 2002 **PCR Services Corporation, Irvine California**  
**Principal Wildlife Biologist/GIS Specialist**

As a Principal Wildlife Biologist for PCR Services Corporation, I conducted surveys for federal and state listed species with an emphasis on amphibians. I conducted amphibian natural history research for both federal and private clients on project sites totaling over 30,000 acres throughout Southern California. These clients included the United States Forest Service, United States Fish and Wildlife Service, Caltrans, Rancho Las Flores Limited Partnership, Summit Valley Ranch, and Rancho Mission Viejo. In addition to conducting research, I served as a liaison between private landowners and the federal and state agencies providing assistance and strategic guidance throughout the permitting process. Some of the clients included AeraEnergy, LLC a division of Shell, The City of San Diego, Palmdale Water District, Woodside Homes, Pacific Century Homes, Communities Southwest, West San Bernardino Water District, Coussoulis Development, and KHovnanian Companies of California. Responsibilities also included a continued commitment to the identification of mitigation lands and participation in all stages of conducting baseline studies, agency coordination and documentation (technical reports, mitigation bank agreements, management plans). Mitigation bank projects included Viejo Substation (Southern California Edison), Hidden Ranch (Ecological Capital Corporation), Four Seasons (KHovnanian), Summit Valley (Caltrans), and Sonny Meadows (Taylor Family).

## PROFESSIONAL EXPERIENCE

1995 - 1997

### **Michael Brandman Associates, Tustin California Wildlife Biologist/GIS Specialist**

As a Wildlife Biologist for an environmental consulting firm, I conducted biological constraints analyses for both private and public clients throughout Southern California. These reconnaissance level surveys led to recommendations on strategies for addressing federal, state, and local regulations specific to the projects. This involved the preparation of proposals which included the development of scope of works, budgets, and schedules. Due to my experience with federal and state listed species and GIS, I was directly involved in all aspects of the projects I managed relating to biological resources. These included conducting focused surveys, developing GIS databases, conducting alternative analyses, and preparing documentation specific to the permit process. Six months after joining the Michael Brandman Associates Biological Services Division, I was promoted to Wildlife Biologist/GIS Specialist and was made the GIS Manager for the 10,000 acre Foothill Transportation South, Transportation Corridor Agencies, Corridor Project and have remained involved to the present time.

1994 - 1996

### **United States Forest Service, Angeles National Forest Wildlife Biologist**

As a Wildlife Biologist, I conducted focused surveys for federal and state listed flora and fauna occurring throughout the Forest. I was responsible for the documentation of the surveys which included recommendations for improving management practices specific to preventing impacts to sensitive species. As a biologist for the Forest Service, I also developed GIS coverages for those sensitive resources I documented during focused surveys. Tasks included the development of coverages, databases, and map production using ArcInfo and ArcView.

## EDUCATION

- 2000 M.S., California State Polytechnic University, Pomona  
Biological Sciences  
Thesis: Arroyo Toad Upland Habitat Utilization and Movement Patterns
- 1993 B.A., California State University, Fullerton  
Biological Sciences

## PERMITS/CERTIFICATION

Federal Fish and Wildlife Permit (TE780566-10), Threatened and Endangered Species

*California Gnatcatcher (Polioptila californica californica)*

*Pacific Pocket Mouse (Perognathus longimembris pacificus)*

*San Bernardino Kangaroo Rat (Dipodomys merriami parvus)*

*Arroyo Toad (Bufo californicus), use of pitfall traps, radiotelemetry and passive integrated transponders*

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

California Department of Fish and Game Permits

General Scientific Collection Authorization

Authorization to Collect State Designated Endangered, Threatened and Rare Plants

Memorandum of Understanding (MOU) to conduct studies on the San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*)

Certified Qualified Biological Consultant - Riverside County Environmental Programs Dept.

## REFERENCES

Jill Sherman, Environmental Director, Viejas Indian Reservation (619) 659-2342

Dr. Eric Stein, Principal - S. Ca. Coastal Water Research Project (714) 372-9233

Steve Nelson, Director Biological Services, PCR Services Corporation (949) 753-7001

Nancy Ferguson, Acting San Bernardino Branch Chief, USFWS (760) 431-9440

Ray Bransfield, Section 7/CWA 404 Program Coordinator, USFWS (805) 644-1766

Kirsten Winter, Forest Biologist, Forest Service, Cleveland National Forest (858) 673-6180

Ann Johnston, Principal, Bonterra Consulting (714) 444-9199

Markus Spiegelberg, Regional Director, Center for Natural Lands Management (649) 295-4953

## PROJECT EXPERIENCE

### BIOLOGY - SOUTHERN CALIFORNIA

Mojave Water Agency - Threatened and Endangered Habitat Assessments/Focused Surveys, Water Quality Monitoring of Reservoir Releases/Development of Management Plans.

Pechanga Indian Reservation - Baseline Studies Including Focused Studies for Threatened and Endangered Species/Wildlife Movement Corridor Analysis, Development of Habitat Conservation Plan.

Summit Valley Ranch - Developed Hydrogeomorphic Habitat Baseline Analysis for the Arroyo Toad.

Angeles National Forest - Conducted Three-year Natural History Research Study on Upland Habitat Characterization and Activity Patterns for the Arroyo Toad, Little Rock Creek.

Rancho Las Flores - Conducting Three-year Natural History Research Study on Upland Habitat Characterization, Activity Patterns, Hydrogeomorphic Habitat Baseline Analysis, Stream Restoration Plan for the Arroyo Toad, Horsethief Canyon.

Cleveland National Forest - Conducting Home Range Telemetry Study Characterizing Upland Habitat Usage and Home Ranges for the Arroyo Toad, San Juan Creek.

Rancho Mission Viejo - Conducting Natural History Research Study on the Upland Habitat Characterization and Activity Patterns for the Arroyo Toad, San Juan Creek.

Talega Associates, LLC - Conducting Pitfall Trapping Study to Determine Upland Habitat Movements for the Arroyo Toad, San Clemente.

Southern California Edison - San Onofre Station Conducting Habitat Assessments/Focused and Monitoring for Federally Threatened and Endangered Species.

Southern California Edison - Hidden Ranch, Conduct Baseline Natural Resource Studies and Establishment of a Mitigation Bank.

Tentative Tract 46628/Rancho Palas Verdes - Conducted Focused Pacific Pocket Mouse Presence/Absence Surveys.

City of Carlsbad - Conducted Focused Pacific Pocket Mouse Presence/Absence Surveys.

County of Riverside - Conduct MSHCP Habitat Assessments, Focused Surveys and Permit Processing.

Foothill Transportation Corridor/South - Conducted Focused Pacific Pocket Mouse and Coastal California Gnatcatcher Presence/Absence Surveys.

San Mateo North - Seasonal Activity Monitoring of Pacific Pocket Mouse Population.

## **RYAN P. VILLANUEVA**

### **EDUCATION**

B.S., Biology, University of California Santa Cruz (UCSC) 2005.

B.A., Environmental Studies, University of California Santa Cruz (UCSC) 2005.

### **SPECIALIZED TRAINING AND CERTIFICATION**

- Desert Tortoise Surveying, Monitoring, and Handling Techniques Workshop. The Desert Tortoise Council. October 2005.
- Army Corps of Engineers Wetland Delineation & Management Training Program. Richard Chinn Environmental Training, Inc. October 2005.
- OSHA 40-Hour Hazardous Waste Operations (HAZWOPER) Training, 29 CFR 1910.120. JoshuaCasey Corporate Training and Education. August 2005.
- OSHA 8-Hour Hazardous Waste Operations (HAZWOPER) Refresher, 29 CFR 1910.120. JoshuaCasey Corporate Training and Education. September 2007.

### **REPRESENTATIVE EXPERIENCE**

Mr. Villanueva presently serves as a Staff Biologist. His primary responsibilities include the assessment of natural resources and the acquisition of federal, state, and local permits. His duties include conducting habitat assessments and biological surveys, the delineation of wetlands and other jurisdictional waters, biological monitoring, and production of documents in support of local, state, and federal regulations including the California Environmental Quality Act, National Environmental Policy Act, Clean Water Act, Endangered Species Act, and others. Mr. Villanueva has been conducting habitat assessments and presence/absence surveys for the desert tortoise (*Gopherus agassizii*) and monitoring construction operations in their habitat since August 2005. The following information highlights his experience with the species:

#### **Desert Tortoise Habitat Assessment and Presence/Absence Surveys**

##### **Kinder Morgan Energy Partners (KMEP), San Bernardino County, California and Clark County, Nevada.**

###### **August 2005**

Conducted presence/absence survey for desert tortoise and assessed biological resources at 37 locations along the 8-inch Calnev pipeline from Barstow, California to Bracken, Nevada. Followed U.S. Fish and Wildlife Service (USFWS) protocol to survey project area and potential zone of influence.

##### **KMEP, San Bernardino County, California.**

###### **September 2005**

Conducted presence/absence survey for desert tortoise and assessed biological resources at 12 locations along the 8-inch Calnev pipeline from Colton to Barstow, California. Followed USFWS protocol to survey project area and potential zone of influence.

**KMEP, San Bernardino County, California.****October 2005**

Conducted presence/absence survey for desert tortoise (*Gopherus agassizii*) and assessed biological resources at one location along the 14-inch Calnev pipeline from Barstow, California to Bracken, Nevada. Followed USFWS protocol to survey project area and potential zone of influence.

**KMEP, San Bernardino County, California.****November 2005**

Conducted pre-construction clearance surveys for desert tortoise (*Gopherus agassizii*) and monitored construction operations near Yermo, California along the Calnev 8-inch pipeline for 4 different locations along the 8-inch Calnev pipeline from Barstow, California to Bracken, Nevada. Administered initial biological resources and desert tortoise training to crew. Ensured minimization of impacts to the area by overseeing installation of Best Management Practices (BMPs) during construction and ensuring areas were returned to preconstruction conditions upon completion.

**KMEP, San Bernardino County, California.****November 2005**

Conducted presence/absence survey for desert tortoise (*Gopherus agassizii*) and assessed biological resources at one location (Mile Post 123.1) along the 14-inch Calnev pipeline from Barstow, California to Bracken, Nevada. Followed USFWS protocol to survey project area and potential zone of influence.

**KMEP, San Bernardino County, California.****December 2005**

Conducted pre-construction clearance surveys for (*Gopherus agassizii*) and monitored construction operations near Baker, California along the Calnev 8-inch pipeline for 3 different locations along the 8-inch Calnev pipeline from Barstow, California to Bracken, Nevada. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**KMEP, San Bernardino County, California.****December 2005-January 2006**

Conducted pre-construction clearance surveys for desert tortoise (*Gopherus agassizii*) and monitored construction operations near Baker, California along the Calnev 8-inch pipeline for 4 different locations along the 8-inch Calnev pipeline from Barstow, California to Bracken, Nevada. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**KMEP, San Bernardino County, California.****January 2006**

Conducted pre-construction clearance surveys for desert tortoise (*Gopherus agassizii*) and monitored construction operations near Yermo, California along the Calnev 8-inch

pipeline for 4 different locations along the 8-inch Calnev pipeline from Barstow, California to Bracken, Nevada. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**KMEP, San Bernardino County, California.**

**February 2006**

Conducted pre-construction clearance surveys for desert tortoise (*Gopherus agassizii*) and monitored construction operations near Yermo, California along the Calnev 14-inch pipeline for 6 different locations along the 14-inch Calnev pipeline from Barstow, California to Bracken, Nevada. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**KMEP, San Bernardino County, California.**

**February 2006**

Conducted pre-construction clearance survey for desert tortoise (*Gopherus agassizii*) and monitored construction operations near Baker, California along the Calnev pipeline for a new valve location near the Baker Station along the Calnev Pipeline from Barstow, California to Bracken, Nevada. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**KMEP, San Bernardino County, California.**

**March 2006**

Conducted desert tortoise (*Gopherus agassizii*) clearance surveys with biologist Ted Rado for 3 sites on the Calnev 8-inch pipeline and 3 sites on the Calnev 14-inch pipeline from Barstow, California to Bracken, Nevada.

**KMEP, San Bernardino County, California.**

**March 2006**

Conducted pre-construction clearance survey for desert tortoise (*Gopherus agassizii*) and monitored construction operations near Mountain Pass, California along the Calnev pipeline for 3 anomaly dig sites along the Calnev Pipeline from Barstow, California to Bracken, Nevada. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**KMEP, Riverside County, California.**

**April 2006**

Conducted desert tortoise (*Gopherus agassizii*), Coachella Valley fringe toed lizard (*Uma inornata*), and Coachella Valley Milk Vetch (*Astragalus lentiginosus* var. *coachellae*) clearance surveys with biologist Nick Ricono on Line Section 111 near Cabazon, California. The 20-inch pipeline transports petroleum from Colton, California to Phoenix, Arizona.

**KMEP, San Bernardino County, California.****May 2006**

Conducted pre-construction clearance survey for desert tortoise (*Gopherus agassizii*) west of Victorville, California for a 1,000 foot relocation along the Calnev Pipeline from Barstow, California to Bracken, Nevada.

**KMEP, San Bernardino County, California.****May 2007**

Conducted preconstruction clearance survey for desert tortoise (*Gopherus agassizii*) and monitored construction operations near Barstow, California along the Calnev pipeline for 2 anomaly dig sites along the Calnev Pipeline from Barstow, California to Bracken, Nevada. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**Southern California Gas Company (SoCal Gas), Riverside County, California****November 2007**

Conducted preconstruction clearance survey for desert tortoise (*Gopherus agassizii*) and monitored construction operations near Desert Hot Springs, California along a new 3,000 foot long, 6-inch pipeline. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**SoCal Gas, San Bernardino County, California****December 2007**

Monitored construction operations for desert tortoise (*Gopherus agassizii*) near Twentynine Palms, California along the existing Questar pipeline. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**SoCal Gas, San Bernardino County, California****April 2008**

Evaluation for desert tortoise (*Gopherus agassizii*) with biologist Ellen Schafhauser near the existing Questar line near Twentynine Palms, California. Conducted surveys – located sign (scat, track), tortoises (12), and burrows (25).

**BNSF, San Bernardino County, California****April 2008**

Conducted habitat assessment, presence/absence survey for sensitive species including the desert tortoise (*Gopherus agassizii*) at five proposed microwave tower sites near the BNSF railroad line from Barstow, California to Needles, California.

**OTHER REPRESENTATIVE EXPERIENCE**

**KMEP, San Bernardino County, California.****October 2005**

Monitored excavations and anomaly repairs near Devore, California along the Calnev 8-inch pipeline. Ensured minimization of impacts to Cajon Wash by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**KMEP, San Bernardino County, California.****September 2005**

Monitored construction operations near Cajon Junction, California along the Calnev 8-inch pipeline. Ensured minimization of impacts to Cajon Wash by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**KMEP, San Bernardino County, California.****April 2006**

Monitored excavations and anomaly repairs near Devore, California along the Calnev 8-inch pipeline. Monitored site for San Bernardino Kangaroo Rat (SBKR). Prepared and presented SBKR training to the construction crew. Ensured minimization of impacts to unnamed wash near Cajon Wash by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**SoCal Gas, Los Angeles County, California.****May 2006**

Conducted nesting bird survey with biologist Nick Ricono at a facility in Playa del Rey.

**Tel Tec Plus, San Diego County, California****May 2006**

Monitored excavations for a fiber optic line in Camp Pendleton Marine Corps Base, California. Monitored site for California gnatcatcher and coastal sage scrub habitat. Ensured minimization of impacts to coastal sage scrub.

**San Diego Gas and Electric (SDG&E), San Diego County, California****June-August 2006**

Surveyed SDG&E access roads for erosion issues as well as water permitting issues. Used handheld GPS unit to map locations of such areas.

**San Diego Gas and Electric (SDG&E), San Diego County, California****October 2006 – March 2007**

Conducted Stormwater Pollution Prevention Plan (SWPPP) inspections. Ensured BMPs were in place and functional.

**The City of Santa Clarita, Los Angeles County, California****October 2006**

Monitored bank stabilization project along the Santa Clara River. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**Wal-Mart, Solano County, California**

**December 2006**

Conducted a habitat assessment in the city of Fairfield, California.

**RMK Mining, Calaveras County, California**

**December 2006**

Delineated wetlands along a stream near Copperopolis, CA. The delineation was conducted using the 1987 United States Army Corps of Engineer (USACE) Wetland Delineation Manual. GPS was used to collect data on Waters of the United States (WUS) and Waters of the State of California (WSC).

**Wespac Pipelines, LLC, Los Angeles County, California.**

**May to September 2007**

Provided biological support for a biological assessment along a route from Long Beach to Los Angeles International Airport (LAX). Duties included database searches, driving surveys (biological and land use) and document creation.

**ARCADIS, San Diego County, California.**

**May 2007 - present**

Monitored a survey crew which installed aerial markers as well as located monuments throughout San Diego County. Prevented impacts/disturbance to sensitive areas/species.

**Southern California Edison (SCE), Kern, Los Angeles, Riverside and San Bernardino Counties, California.**

**May 2007 - present**

Conducted approximately 25 habitat assessments on several sites within various counties. Also, monitored maintenance activities near an osprey nest in Kern County near Weldon, CA.

**City of Murrieta, Riverside County, California.**

**May 2007**

Conducted a biological survey just south of Warm Springs Creek in Murrieta, California. The survey was used to complete an initial study for the site.

**Granite Construction Company, Yolo County, California.**

**May 2007**

Delineated wetlands along Cache Creek near Esparto, CA. The delineation was conducted using the 1987 United States Army Corps of Engineer (USACE) Wetland Delineation Manual. GPS was used to collect data on Waters of the United States (WUS) and Waters of the State of California (WSC).

**Power Engineers, Inc., Riverside County, California.****May to June 2007**

Conducted protocol level surveys with biologist Leslie Nelson for burrowing owl in Riverside, California.

**ARB, Inc., Kern County, California.****June 2007**

Conducted cultural surveys with Dionosis Glentis along a 2 mile stretch near Tupman, California.

**C.J. Segerstrom and Sons, Orange County, California.****July 2007**

Conducted nesting bird surveys near IKEA in the city of Costa Mesa, California.

**San Diego Gas and Electric (SDG&E), San Diego County, California****August 2007**

Monitored insulator washing for a transmission line in Camp Pendleton Marine Corps Base, California. Monitored site for disturbance to habitat. Ensured minimization of impacts to habitat.

**San Diego Gas and Electric (SDG&E), San Diego County, California****September 2007**

Conducted a habitat assessment in Pala, California for a proposed transmission line extension.

**The City of Santa Clarita, Los Angeles County, California****September 2007 - present**

Monitored restoration along a stretch of the Santa Clara River where bank stabilization activities took place. Ensured restoration site was being maintained by overseeing removal of non-native vegetation and growth of native vegetation.

**Castaic Lake Water District (CLWD), Los Angeles County, California****September 2007 - present**

Monitored weed removal and restoration of a mitigation area along a stretch of the Santa Clara River. Ensured the mitigation area was being maintained by overseeing removal of non-native vegetation and growth of native vegetation.

**KMEP, San Bernardino County, California.****October 2007**

Monitored excavations, repairs and installation of Submar mats near Lytle Creek, California along the Calnev 8-inch and 14-inch pipeline. Ensured minimization of impacts to an unnamed creek by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**SDG&E, San Diego County, California.****November 2007**

Monitored a directional drill (HDD) under the Sweetwater Marsh in Chula Vista, California. Ensured minimization of impacts to scrub and salt marsh habitat by overseeing installation of BMPs during construction and escorting crew into sensitive areas (salt marsh).

**KMEP, San Bernardino County, California.**

**November 2007**

Monitored excavations, repairs and installation of Submar mats and retention walls in Cajon Pass just west of Interstate 15 and north of Lytle Creek, California along the Calnev 14-inch pipeline. Ensured minimization of impacts to scrub habitat by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion.

**SCE, Los Angeles County, California.**

**December 2007**

Conducted pre-construction survey and environmental awareness training for burrowing owl (*Athene cunicularia*) and Mohave ground squirrel (*Spermophilus mohavensis*) west of Lancaster, California along a 66kV line upgrade.

**SoCal Gas, Los Angeles County, California**

**January – March 2008**

Monitored construction operations as an Environmental Inspector near Castaic, California along the existing Line 85 pipeline. Ensured minimization of impacts to the area by overseeing installation of BMPs during construction and ensuring areas were returned to preconstruction conditions upon completion. Ensured compliance with environmental requirements (fire plan, stormwater, etc.)

**BNSF, San Bernardino County, California**

**January 2008**

Conducted habitat assessment for five bridge locations along the BNSF railroad from Barstow, California to Needles, California.

**KMEP, San Diego County, California**

**April 2008**

Conducted protocol level surveys for California gnatcatcher with biologist Paula Potenza (TRC) in Pala, California.

**KMEP, San Diego County, California**

**April 2008**

Conducted protocol level surveys for Quino checkerspot butterfly with biologist Paula Potenza (TRC) in Pala, California.

**SCE, Riverside County, California**

**April 2008**

Conducted nesting bird survey along Temescal Canyon Road in Lake Elsinore, California.

**BNSF, Merced and Madera Counties, California**

**May 2008**

Conducted habitat assessment for eight bridge locations along the BNSF railroad from Madera, California to Planada, California.

**PROFESSIONAL AFFILIATIONS**

- The Desert Tortoise Council

# VALERIE WALSH

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## EDUCATION

B.S., Environmental Biology Management, University of California, Davis, 1999

## AREAS OF EXPERTISE

Ms. Valerie Walsh has technical experience in the following general areas:

- Biological and habitat surveys
- San Diego County habitats, flora and fauna
- Wetland delineations
- U.S. Army Corps of Engineers (Corps) Nationwide Permits
- Regional Water Quality Control Board (RWQCB) 401 Certifications
- California Department of Fish and Game (CDFG) Streambed Alteration Agreements
- California Coastal Commission (CCC) Coastal Development Permits
- Technical report writing

## REPRESENTATIVE EXPERIENCE

Ms. Walsh is a field biologist with six years of experience in environmental biology, plant taxonomy, land use policy and planning, and restoration ecology. She is knowledgeable of San Diego County habitats, fauna and flora, including sensitive resources, and she can read and identify habitats in the field using topographic and aerial maps and interpret these maps using ArcGIS. Ms. Walsh has experience with qualitative vegetation monitoring and collection of quantitative field data through transect and/or quadracept data collection. She is also skilled at conducting least Bell's vireo surveys through call recognition and visual identification.

### **San Diego Gas & Electric, On-Call Biological Services - San Diego County, CA (Associate Biologist: 2005-Present)**

Ms. Walsh writes pre-activity surveys, verification memos, and postconstruction reports for Sempra Energy/San Diego Gas & Electric's operation, maintenance, and construction of electric distribution and transmission lines under Sempra's 50-year Natural Community Conservation Plan permit. She also conducts biological field surveys on various electrical line projects and biological monitoring on construction projects.

### **San Diego Gas & Electric, Wetland Permitting Services - San Diego County, CA (Associate Biologist: 2006-Present)**

Ms. Walsh performs wetland permitting tasks involved with the Corps Nationwide Permit, RWQCB 401 Certification, CDFG Streambed Alteration Agreement, and CCC Coastal Development Permit applications. She has also performed Corps wetland delineations and created project location and vegetation maps using ArcGIS in association with the wetland permitting jobs.

**San Diego Gas & Electric, Miguel to Mission 230 kV #2 and Otay Mesa Power Purchase Agreement Transmission Line Projects - San Diego County, CA (Environmental Inspector: 2006)**

Ms. Walsh assisted environmental inspection and compliance monitoring tasks for both projects. She also calculated postconstruction biological impacts using ArcGIS, wrote the postconstruction compliance report, and drafted the revegetation monitoring report for the Miguel to Mission project.

**REC Consultants, Inc. - San Diego, CA (Associate Biologist: 2002-2005)**

Ms. Walsh managed and compiled various biological technical reports consistent with Multiple Species Conservation Plan, Multiple Habitat Conservation Plan, and Natural Community Conservation Plan standards throughout San Diego County. She processed wetland permits in coordination with CDFG, Corps, and RWQCB standards. She also designed restoration plans in coordination with landscape architects and property owners. Ms. Walsh performed wetland delineations consistent with Corps standards, and she researched historic field data and aerial photographs.

**Sequoia National Park - Three Rivers, CA (Biological Technician: 2002)**

Ms. Walsh performed work throughout Sequoia National Park that involved eradication of *Arundo donax*, *Rubus discolor*, *Genista monosperma*, *Spartium junceum*, and *Carduus pycnocephalus* through the use of various hand and herbicide control methods. She participated in the restoration of sensitive and common plant species local to the area, and she collected and recorded data using maps and global positioning system units.

**Zoological Society of San Diego, Center for Reproduction of Endangered Species - Maui, HI (Biologist: 2000-2001)**

Ms. Walsh participated in long-term projects on captive breeding of the critically endangered Hawaiian crow, Hawaiian goose, and a variety of Hawaiian forest birds. She hand-fed baby birds hourly by imitation of the parent, and monitored egg and newborn incubation and recorded data. Ms. Walsh monitored video recordings of bird pairs and potential breeding behavior, prepared daily food plates, and maintained aviaries.

**U.S. Geological Survey, Haleakala National Park - Maui, HI (Biological Technician: 2000)**

Ms. Walsh collected and provided field data for a research project that studied the relationship between the endemic silversword plant and exotic Argentine ant species. Her research tasks involved daily field monitoring that consisted of hiking under stressful conditions. She worked closely with a field team and collected quantitative baseline field data and mapped ant populations.

**Department of Pesticide Regulation - Sacramento, CA (Biological Technician:  
1999-2000)**

Ms. Walsh collected surface and groundwater samples for a variety of projects throughout California that monitored pesticide concentrations. She followed quality control measures outlined in the preparation, storage and collection of groundwater and surface water procedures. She then entered the field data in a Microsoft Access database.

**SPECIALIZED TRAINING**

- Wetland Delineation Training, Wetland Training Institute, 2004

## **H. CERI WILLIAMS-DODD, Ph.D. *CBiol MIBiol***

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### **EDUCATION**

Ph.D., Biosciences, Cardiff University of Wales, 2003

M.S., Monitoring, Modeling and Management of Environmental Change, University of London, King's College, 1999

B.S., Ecology and Environmental Management, Cardiff University of Wales, 1998

### **PROFESSIONAL REGISTRATIONS/CERTIFICATIONS**

Chartered Biologist, (#004004551), Institute of Biology, London, 2004

### **AREAS OF EXPERTISE**

Dr. H. Ceri Williams-Dodd has technical experience in the following general areas:

- Project Management
- Environmental Permitting and Compliance
- Biological Resources
- Habitat Restoration
- Multiple Species Habitat Conservation Plans
- California Environmental Quality Act

### **REPRESENTATIVE EXPERIENCE**

Dr. H. Ceri Williams-Dodd has a strong biological background with proven skills in management, strategic planning, report writing and communication. Her experience is broad ranging, including delineating jurisdictional waters, conducting habitat assessments and general plant and wildlife surveys, construction and biological monitoring, mitigation monitoring and reporting, designing and preparing mitigation plans with an emphasis in vegetation restoration, regulatory permitting and compliance (California Department of Fish and Game, U.S. Army Corps of Engineers, Regional Water Quality Control Board, and U.S. Fish and Wildlife Service), Biological Assessments and Section 7 consultations, compliance with Habitat Conservation Plans (particularly the Western Riverside County Multiple Species Habitat Conservation Plan), training and education programs, technical document review, California Environmental Quality Act overview, and preparing response to comments on environmental documents. Dr. Williams-Dodd has published scientific research papers in accredited journals with additional papers in progress.

### **Residential Developments**

***Project Manager/Senior Biologist for the following projects based in Southern California: Azusa Land Partners, Rosedale – Azusa (2004-2007); Capital Pacific Homes, Sierra Peaks – Corona (2003-2007); Centex Homes, Tomlinson Park – Brea (2003-2007); Concorde Development, Whispering Hills – San Juan Capistrano (2003-2007); D.R. Horton, Country Roads – French Valley (2003-2007);***

D.R. Horton, Sky View Ridge – Murrieta (2003-2007); D.R. Horton, Country Roads – French Valley (2004-2007); French Valley Airport, LLC, French Valley Airport – French Valley (2006-2007); Galstain Family Trust, Hillarides – Chino Hills (2004-2007); Harvest Development, Vellano – Chino Hills (2003-2007); Irvine Company/GeoSoils, Inc., Santiago Hills II – Irvine (2003-2007); Irvine Company, Lower Peters Canyon – Irvine (2003-2007); John Laing Homes, Newport Hills TT 28886 & 28886-1, Lake Elsinore (2003-2007); John Laing Homes, Summerly – Lake Elsinore (2004-2007); Lumos Communities, Back Basin – Lake Elsinore (2005-2007); Nexus Residential Communities, Oak Springs Ranch – Wildomar (2005-2007); Oak Hills Investment Co, LLC, TT 16902 – Phelan (2003-2007); RS Development, Temescal Wash – Lake Elsinore (2006-2007); SunCal, Northlake Development – Castaic (2003-2007); Talega Phase I & Phase II – San Clemente (2003-2007); Van Daele Development, Oakmont II – Wildomar (2003-2007); Taylor Woodrow Homes, Ivy House – Wildomar (2005-2007); Armada LLC, Chino Hills Dairy & 80-acre site – Chino Hills & Ontario (2006); Coast Royale, Ceanothus – Laguna Beach (2005-2006); D.R. Horton, Clinton Keith Road – Wildomar (2005-2006); Fieldstone Chow, Chino Hills Project – Chino Hills (2003-2006); Landmark, Desert Hot Springs – Coachella Valley (2006); Lennar/Newland Communities, Spencer’s Crossing – French Valley (2004-2006); Meritage homes, Pine Valley Estates, San Bernardino (2003-2006); Oak Tree Industries, Inc., TT 28859 – Sun City (2005); Pelican Properties – Perris (2005-2006); Shea Homes, Tonner Hills – Brea (2005-2006); D.R. Horton, Dry Creek Ranch – French Valley (2003-2005); Rancon, Meadowlark Lane TT 31998 & 31999 – Murrieta (2004-2005); Beazer Homes, TT 30656 – Wildomar (2003-2004); John Laing Homes, Burns Ranch – Menifee (2004)

***Regulatory permitting and compliance:*** Dr. Williams-Dodd was responsible for conducting jurisdictional waters delineations, regulatory permitting with California Department of Fish and Game, U.S. Army Corps of Engineers, and Regional Water Quality Control Board, and compliance with permit conditions, including submittal of information, compliance reports, notification of construction/mitigation activities, preparing and conducting Workers Education Programs, and Homeowners education brochures. She was also responsible for preparing 2081 applications for California Department of Fish and Game, preparing Biological Assessments and facilitating Section 7 consultations with the U.S. Fish and Wildlife Service, preparing compliance documents for the Western Riverside County Multiple Species Habitat Conservation Plan and coordinating approvals, and preparing response to comment letters. As part of the permitting process, Dr. Williams-Dodd was also responsible for reviewing technical biological documents and reports pursuant to the California Environmental Quality Act (CEQA), assisting with the CEQA process, and reviewing biological survey reports. She has also conducted due diligence level site assessments, and reviews of the Coachella Valley Multiple Species Habitat Conservation Plan.

***Mitigation Plans, Monitoring and Reporting:*** Dr. Williams-Dodd was responsible for

compiling plant palettes, designing and writing Habitat Mitigation and Monitoring Plans focusing on riparian and coastal sage scrub vegetation communities, and five year monitoring and reporting of mitigation sites, including obtaining approvals of completion from the agencies. Monitoring of the mitigation sites included planning and conducting qualitative and quantitative assessments of plant cover, growth and wildlife usage, supervising maintenance contractors, and recommending remedial measures to allow for the successful establishment of native habitat.

**Biological Surveys:** Dr. Williams-Dodd was involved in biological construction monitoring, Least Bell's vireo surveys and noise monitoring, burrowing owl surveys, plant habitat assessments, general wildlife habitat assessments, and assisting with California gnatcatcher surveys.

### **Commercial and Office Developments, Bridges and Repair Projects**

#### **City of Murrieta, Murrieta 18 Office Campus Project – Murrieta, CA (Project Manager: 2007)**

Dr. Williams-Dodd was responsible for managing preparation of an Initial Study and associated coordination, including consultation regarding the Western Riverside County Multiple Species Habitat Conservation Plan.

#### **City of Santa Clarita, Bank Stabilization Project – Santa Clarita, CA (Project Manager: 2007 – ongoing)**

Dr. Williams-Dodd is responsible for biological monitoring of a restoration site and associated surveys and reporting.

***Project Manager/Senior Biologist for the following projects based in Southern California:*** Golden Triangle/RS Development, Clinton Keith Road – Wildomar (2006-2007); Rancon, Clinton Keith Self Storage – Wildomar (2003-2007); Rancon, Village Walk Center – Murrieta (2003-2007); Regency Centers, French Valley Village Center – French Valley (2006-2007); D.R. Horton, Gabion Repair Project – Mission Viejo (2005-2006); Gate-King, Industrial Park – Santa Clarita (2006); Taylor Woodrow Homes, La Novia Bridge – San Juan Capistrano (2004-2006); City of Mission Viejo, Oso Creek Emergency Repairs – Mission Viejo (2004-2005); Neil Nadler, Inc., Industrial park – Castaic (2004-2005); Centra Realty Corporation, Ortega Ranch – San Juan Capistrano (2004); Irvine Company, Lambert Channel Repairs – Irvine (2003-2004)

Dr. Williams-Dodd was responsible for regulatory permitting and compliance; and mitigation plans, monitoring and reporting as described under **Residential Developments** above, in addition to planning and conducting Functional Assessments.

### Churches, Schools and Parks

***Project Manager/Senior Biologist for the following projects based in California:*** City of Murrieta, Sports Complex – Murrieta (2003-2007); Las Virgenes Unified School District, A.C. Stelle Middle School – Calabasas (2003-2007); Las Virgenes Unified School District, Yerba Buena Elementary School – LA County (2003-2007); Murrieta Valley Unified School District, Vista Murrieta High School – Murrieta (2003-2007); St. Kilian Church, Second Access Driveway – Mission Viejo (2003-2007); Calvary Chapel, Church and Recreation Facility – Murrieta (2005-2006); Murrieta Valley Unified School District, High School #3 – Murrieta (2006); Murrieta Valley Unified School District, High School #4 – Murrieta (2006); Robert Mitchell & Associates, Oak Demonstration Garden – Bakersfield (2003-2006); Friess Construction, Shea Riding Center, San Juan Capistrano (2005); City of Mission Viejo, Youth Athletic Park – Mission Viejo (2003-2004). Also: Plantlife International – Wiltshire, U.S. (Assistant Project Manager: 1998-1999)

Dr. Williams-Dodd was responsible for regulatory permitting and compliance; and mitigation plans, monitoring and reporting as described under **Residential Developments** above.

### Pipeline, Power, Mining and Infrastructure Projects

#### **Burlington Northern Santa Fe Railway, 5 Bridge Renewal Project – San Bernardino County, CA (Project Manager: 2007 - ongoing)**

Dr. Williams-Dodd is responsible for overseeing biological surveys and reporting, preparation and submittal of regulatory permits, and biological monitoring.

#### **Burlington Northern Santa Fe Railway, Microwave Cell Tower Project – San Bernardino County, CA (Senior Project Biologist: 2007 - ongoing)**

Dr. Williams-Dodd is responsible for coordinating with the County of San Bernardino and overseeing biological surveys and reporting, and preparation of environmental documents.

#### **Castaic Lake Water Agency, Sand Canyon Water Pipeline Project – Santa Clarita, CA (Project Manager: 2007 – ongoing)**

Dr. Williams-Dodd is responsible for biological monitoring of a restoration site and associated surveys and reporting.

#### **Granite Construction, Granite Esparto Mining – Yolo County, CA (Senior Project Biologist: 2007)**

Dr. Williams-Dodd was responsible for overseeing biological surveys, conducting a jurisdictional waters and wetland delineation, and preparing a biological assessment.

**J-Power USA, Orange Grove Power Plant Project – San Diego County, CA (Senior Project Biologist: 2007 – ongoing)**

Dr. Williams-Dodd is responsible for overseeing biological surveys and reporting, conducting jurisdictional waters and wetlands delineations, and responding to County and California Energy Commission Data Requests.

**Power Engineers, Riverside Transmission Reliability Project – City of Riverside, CA (Project Manager: 2007 – February 2008)**

Dr. Williams-Dodd was responsible for coordinating biological survey requirements, reports and MSHCP compliance

**WesPac, LAX Jet Fuel Pipeline – LA vicinity, CA (Senior Project Biologist: 2007-ongoing)**

Dr. Williams-Dodd is assisting with the CEQA process, including coordinating and compiling technical reports for biological, hazardous materials, land use and cultural resources.

**Native Habitat Maintenance and Plant Propagation**

***Biological Consultant for the following:* Horticultural Specialists, Inc. – San Juan Capistrano, CA (2005-2007); Native Grow Nursery – Brea, CA (2006-2007); SunCal, Marblehead Project – San Clemente, CA (2006-2007)**

Dr. Williams-Dodd trained and supervised a field crew to maintain a variety of riparian and coastal sage scrub mitigation habitats in Murrieta, Wildomar and Chino Hills pursuant to Habitat Mitigation and Monitoring Plans. She has also provided biological consulting on native plant propagation methods and species selection, plant inspections, pest control, and general nursery management issues. Dr. Williams-Dodd was also responsible for coordinating, advising, and supervising native plant propagation pursuant to a Habitat Mitigation Plan.

**TEACHING EXPERIENCE**

**Cardiff University School of Biosciences – Cardiff, UK (Assistant Teacher: 1999-2003)**

Dr. Williams-Dodd was an assistant teacher for undergraduate biology courses in advanced statistics, computing, ecology, genetics, laboratory protocol and safety training.

**SPECIALIZED TRAINING**

- Wetland Delineation Course, 2005
- Plant Identification for Coastal Southern California Course, 2005
- Identifying and Appreciating Native Grasses Workshop, 2005
- CEQA Basics Workshop, 2003
- CEQA Advanced Workshop, 2007

## PROFESSIONAL AFFILIATIONS

- Institute of Biology, London, U.K.

## SELECTED PUBLICATIONS AND PRESENTATIONS

Williams, H.C., Ormerod, S.J., & Bruford, M.W. (2006). Molecular systematics and phylogeography of the cryptic species complex *Baetis rhodani* (Baetidae, Ephemeroptera). *Molecular Phylogenetics and Evolution* 40: 370-382.

Williams, H.C., Wilcock, H.R., & Bruford, M.W. (2002). Microsatellite loci for the mayfly *Baetis rhodani* (Baetidae, Ephemeroptera). *Molecular Ecology Notes* 2: 411-412.

Manel, S., Williams, H.C., & Ormerod, S.J. (2001). Evaluating presence-absence models in ecology: the need to account for prevalence. *Journal of Applied Ecology*, 38, 921-931.

Williams, H.C., Ormerod, S.J., & Bruford, M.W. (in progress). Chapters 4 to 6 from PhD thesis: "The Genetic Structure and Dispersal of the Mayfly *Baetis rhodani* in relation to acidification and inter-catchment distance". *Molecular Phylogenetics and Evolution* and *Molecular Ecology*.

## **KAREN D. WILSON**

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### **EDUCATION**

M.A., Botany, Humboldt State University, California, 1991  
B.A., Biology, University of California, Los Angeles, 1982

### **PROFESSIONAL REGISTRATIONS/CERTIFICATIONS**

U.S. Fish and Wildlife Service permit to survey for Quino checkerspot butterfly (TE-037508-1), 2002 (re-permitted 2006)  
California Department of Fish and Game (CDFG) Scientific Collecting Permit (SC-006505), expires May 9, 2007

### **AREAS OF EXPERTISE**

Ms. Karen Wilson has technical experience in the following general areas:

- Botany
- Biological Resource Surveys and Monitoring
- Wetland Delineations

### **REPRESENTATIVE EXPERIENCE**

Ms. Wilson is a highly skilled botanist and biologist with more than 17 years of experience throughout California. Her proven capabilities extend from initial route surveys to final seeding and restoration activities on small- to large-scale projects. Ms. Wilson's background includes complex, multi-jurisdictional projects requiring coordination with a diverse range of agency, owner, and contractor personnel. She is well versed in identifying and delineating jurisdictional wetlands, as well as, in federal, state, and local regulatory requirements.

#### **San Diego Gas & Electric, Silvergate Substation Project – San Diego County, CA (Biologist/Lead Planner: 2006-Present)**

Ms. Wilson has performed initial/preconstruction plant surveys and is coordinating initial/preconstruction sensitive wildlife species surveys and associated report documentation for the construction of a 138 kilovolt (kV) transmission line—a portion of which will be placed beneath the Sweetwater Marsh National Wildlife Refuge via a horizontal directional drill—demolition of a decommissioned power plant, and construction of a new substation near downtown San Diego.

#### **San Diego Gas & Electric, Wetland Permitting Services – San Diego and Imperial Counties, CA (Biologist/Lead Planner: 2005-Present)**

Ms. Wilson performs wetland delineations and prepares application packages for CDFG 1600 permits, U.S. Army Corps of Engineers (Corps) Section 404 Nationwide Permits, Regional Water Quality Control Board (RWQCB) 401 Certificates, and California Coastal Commission (CCC) coastal development permits for access road crossings,

and pole and anchor repairs and replacements associated with electric distribution and transmission lines and natural gas pipelines.

**Otay River Constructors, State Route South Toll Road Project – Chula Vista, CA (Project Manager: 2003-Present)**

Ms. Wilson is supervising and coordinating biological monitoring and reporting of construction activities for a 12-mile, partially controlled access facility. She also coordinates yearly protocol-level surveys for nesting coastal California gnatcatcher and least Bell's vireo in appropriate habitat adjacent to the project. Ms. Wilson conducted preconstruction biological surveys for the nine-mile toll road portion of the project, and identified and recorded select plant species and environmentally sensitive areas, including vernal pools, for salvage. She coordinated preconstruction surveys for the Quino checkerspot butterfly and supervised salvaging activities of select plant species and vernal pool soil, San Diego fairy shrimp inoculum, and plants. Ms. Wilson also provided direction and confirmation of the quality and quantity of materials salvaged, and recorded daily sign-off sheets documenting materials salvaged. Additionally, she provides monthly, semi-annual, and annual reports documenting construction activities in and adjacent to environmentally sensitive areas of the project.

**San Diego County Water Authority, Olivenhain Pipelines-East and Dam and Reservoir Revegetation – Escondido, CA (Project Manager: 2002-Present)**

Ms. Wilson is overseeing monitoring, reporting, and providing remediation efforts to meet revegetation mitigation compliance for permit requirements associated with construction of the Olivenhain Dam and Reservoir and a three-mile-long pipeline from the dam to the Second San Diego Aqueduct.

**San Diego Gas & Electric, On-Call Biological Services – San Diego and Orange Counties, CA (Biologist/Lead Planner: 2001-Present)**

Ms. Wilson performs biological surveys and provides reports for the operation, maintenance, and construction of electric distribution and transmission lines and natural gas pipelines under Sempra's 50-year Natural Community Conservation Plan (NCCP) permit. She prepares application packages for CDFG 1600 permits, Corps 404 permits, RWQCB 401 Certificates, and CCC permits for electric and gas transmission activities. Ms. Wilson provides environmental documentation to support National Environmental Policy Act (NEPA) compliance for U.S. Marine Corps (Camp Pendleton and Miramar) operation and maintenance, and she provides environmental documentation to support NEPA compliance for the Bureau of Indian Affairs resulting in the issuance of Categorical Exclusions. She works in areas with wetlands, jurisdictional drainages, and the potential to support 110 sensitive wildlife and plant species, and coordinates with the client on survey results, responds to customer-related projects and issues, and assists with agency reports.

**Arcadis, San Diego Gas & Electric Sunrise Powerlink Project – San Diego, CA (Lead Botanist: 2006)**

Ms. Wilson conducted reconnaissance-level botanical surveys within the proposed Inland Valley Link right-of-way for a proposed 500 kV transmission line project. She identified, documented, and mapped special-status plants, habitat to support special-status species, and jurisdictional wetlands and waters along the route.

**Southern California Gas Company, Line 85 Permanent Repairs – Los Angeles County, CA (Lead Botanist: 2006)**

Ms. Wilson conducted botanical surveys for the development of a biological assessment in preparation for the permanent relocation of approximately 6,371 feet of 26-inch-diameter pipeline within the Angeles National Forest.

**Sierra Pacific Power Company, Tracy to Silver Lake 120 kV Transmission Line Project – Washoe County, NV (Botanist: 2005)**

Ms. Wilson conducted biological surveys along a 36-mile-long route for a proposed 120 kV transmission line between the Tracy Power Plant and the Silver Lake Substation. She conducted special-status plant surveys and identified plant communities, wetlands, and waters along the route.

**San Diego Gas & Electric, Otay Mesa Power Purchase Agreement Transmission Line Project – San Diego County, CA (Biologist/Lead Planner: 2004-2005)**

Ms. Wilson performed two seasons of focused plant surveys for the construction of 38 miles of overhead and 10 miles of underground 230 kV transmission line. The project included a horizontal directional drill beneath the Sweetwater Marsh National Wildlife Refuge.

**Southern California Edison, Oak Valley Substation Project – Riverside County, CA (Botanist: 2004)**

Ms. Wilson conducted biological surveys for a proposed 115 kV substation and a 220 kV substation on two separate substation sites of approximately three acres and 10 acres, respectively, or on one site of approximately 15 acres that would accommodate both substations. She also conducted sensitive resource surveys and surveys for special-status plants, and contributed to the habitat assessment report.

**Southern California Edison, Summit Substation Project – San Bernardino County, CA (Botanist: 2003-2004)**

Ms. Wilson conducted biological surveys for a proposed 3.5-mile transmission line and substation upgrade. She conducted sensitive resource surveys and surveys for special-status plants, and contributed to the habitat assessment report.

**Prunuske Chatham, Inc. – Occidental, CA (Botanist: 1991-2001)**

Ms. Wilson surveyed various types of chaparral habitat, and identified plant species and took cover values to determine the best method for ordnance removal in chaparral

vegetation at former Fort Ord military installation in Monterey County. She also provided photo documentation and collected, entered, and organized data. Ms. Wilson provided wetland delineations and assessed impacts on revegetation at Mayacama Golf Course in Santa Rosa. Additionally, she monitored erosion and sediment control measures to ensure compliance with the RWQCB Stormwater Pollution Prevention Plan. Ms. Wilson's other duties included scheduling maintenance, monitoring, installation, and inspection, and providing reports for the five years of restoration activities. She also monitored restored vernal pools impacted by construction during PGT-PG&E Pipeline Expansion Project in Northern California. Additionally, Ms. Wilson determined plant species' composition and cover, mapped the dimensions of each pool as defined by vegetation, and assessed the floristic and hydrologic condition of restored and constructed pools. She also monitored wetland mitigation restoration sites at jurisdictional wetlands, and recorded dominant native recruitment success. During the first phase of ecological restoration, Ms. Wilson provided topographic surveys, identification and collection of specific seed and soil inoculum, supervision of the inoculation, and documentation. During the second phase, she ensured quality control, provided biological and technical support for the installation and removal of geotextile fabric, and coordinated and supervised inoculation of vernal pools.

**Williams Communications, Inc., Fiber Optic Project – CA (Environmental Inspector: 2000)**

Ms. Wilson provided environmental inspection on a 90-mile spread during the installation of approximately 141 miles of underground fiber optic cable from Bakersfield to San Luis Obispo. She coordinated directly with cultural and paleontological specialists, as well as, with agency representatives from the California Public Utilities Commission. Ms. Wilson also conducted personnel training and provided daily compliance reports.

**Sempra Energy/San Diego Gas & Electric, Vegetation Management Program – San Diego, CA (Biologist: 2000)**

Ms. Wilson performed biological surveys for the vegetation management operation in accordance with Sempra's 50-year NCCP permit. She surveyed for 110 sensitive species prior to road maintenance and vegetation management activities. Ms. Wilson completed survey forms for areas with potentially sensitive natural resources, and coordinated with the client on survey results. She also assisted with agency reports.

**Previous Employment**

**URS – Oakland, CA (Botanist: 1994-1999)**

Ms. Wilson conducted rare plant surveys of vernal pools for a proposed University of California campus in Merced County. She assisted with delineation of the vernal pools, identification of special-status species, and mapped and recorded population information from surveys using global positioning system equipment. Ms. Wilson conducted several seasons of special-status plant surveys along a 165-mile-long route for a proposed Sierra Pacific Power Company 345 kV transmission line between Reno,

Nevada and Alturas, California. Additionally, she conducted a biological resource reconnaissance of 18 exploratory dig sites along a Kinder Morgan Energy Partners' petroleum pipeline on Morrow Island in Solano County. Ms. Wilson identified special-status plant and wildlife species, assessed impact potential to special-status species or their habitats, documented survey results, and recommended avoidance strategies. She conducted site surveys and determined biological resources for California Department of Transportation emergency repair projects in Northern California. Ms. Wilson also identified special-status plant and wildlife species and jurisdictional waters and wetlands, assessed impacts on natural resources, and provided impact avoidance strategies. She submitted Categorical Exemption/Exclusion documentation for each emergency repair site, in addition to site and biological assessments, and prepared CDFG Section 1601 Streambed Alteration Agreements, RWQCB Section 401 Water Quality Certification agreements, Coastal Development permits, and Corps preconstruction notification documentation.

**Doug Parkinson & Associates – Sonoma County, CA (Botanist: 1998)**

Ms. Wilson conducted rare plant surveys for special-status species as part of a plan to minimize or eliminate soil contamination. She documented survey results, including descriptions of the plant community types.

**Biosystems Analysis, Inc. – CA (Botanist: 1990-1991)**

Ms. Wilson conducted wetland surveys for the PGT-PG&E Pipeline Expansion Project in Central and Northern California. She identified wetland and upland plants, and surveyed, documented, and mapped special-status plants along pipeline right-of-way.

**Humboldt Foundation – Humboldt, CA (Research Assistant: 1988-1990)**

Ms. Wilson researched seed and seedling death of selected dune plants in native and nonnative habitats on the North Spit of Humboldt Bay. She established research plots, collected and analyzed data, and summarized results in quarterly reports.

**SPECIALIZED TRAINING**

- Basic Wetland Delineation Course, Wetland Training Institute, 2006
- 14th Annual Surveying, Monitoring, and Handling Techniques Workshop, Desert Tortoise Council, 2005
- San Diego County Sensitive Butterfly Workshop, Nature Festivals of San Diego County, 2002/2004

**PROFESSIONAL AFFILIATIONS**

- Association of State Wetland Managers
- California Native Plant Society