Ecological Studies Senior Wildlife and Aquatic Ecologist 38 Lower Cutter Drive, Watsonville, CA 95076 Phone: (831) 761-9496; Cell: (831) 588-7550

EDUCATION

M.S. Aquatic Ecology and Conservation Biology, 1999. San Jose State University, San Jose, CA.

B.A. Environmental Studies and Wildlife Biology, 1989. University of California, Santa Cruz, Santa Cruz, CA.

SPECIAL SKILLS

- Expert knowledge of California coastal terrestrial ecosystems, freshwater ecology (ponds and rivers), and estuarine ecology. Over 15 years of experience working as an aquatic ecologist in coastal estuaries, ponds and rivers.
- Over two decades of experience working on wildlife population studies. Sixteen years' experience working with endangered Species. Currently holds a USFWS recovery 10(a)1(A) permit for California Red-legged Frog. Has worked on numerous amphibian, reptile, avian and fisheries projects (see selected reports and representative project experience below).
- Has authored or coauthored management recommendations, with specific design criteria for wildlife enhancement and/or restoration, for the following protected species: California Red-legged Frog, Santa Cruz Long-toed Salamander, California Tiger Salamander, Bald Eagle, Peregrine Falcon, Western Pond Turtle, Tidewater Goby, Zanyante Banned-winged Grasshopper and Mount Hermon June Beetle.
- Has written wildlife management guidelines for herpifauna (amphibians and reptiles) and provided trainings on central coast herpifauna to other professional resource personnel.
- Statistical expertise with univariate and multivariate study design and sampling (SPSS statistical program).
- Spatial analysis and mapping skills with ArcView and GIS.
- Computer, writing and database skills (Excel, Word, ArcView, Power Point).
- Background in Environmental Education and Presentations.
- Over two decades of experience with numerous field sampling techniques, in both terrestrial and aquatic environments.

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• Knowledge of both State and Federal Laws that pertain to endangered species recovery and wetland restoration/enhancements in California.

EMPLOYMENT HISTORY

2002-Present	Owner & Senior Wildlife and Aquatic Ecologist, Dawn Reis Ecological
	Studies
1998-2002	Senior Wildlife and Aquatic Ecologist, EcoSystems West Consulting Group
1993-1997	Wildlife and Aquatic Ecologist, The Habitat Restoration Group
1993-1997	Graduate Teaching Assistant, San Jose State University
1993-1994	Field Supervisor Bald Eagle, Ventana Wilderness Sanctuary Project
1989-1993	Director (1990-1993), Assistant Director (1989-1990), Mendocino
	Woodlands Environmental Education Program
1990	Education Coordinator and Restoration Assistant, Redwood Community
	Action Agency Dept. of Natural Resources, Eureka, CA
1989	Field Staff, Predatory Bird Research Group, The Peregrine Foundation,
	University of California Santa Cruz, CA
1989	Internship (Marine Ecology Curriculum Development), Loma Prieta High
	School, Santa Cruz, CA
1987	Researcher (Orca, Orcinus orca, Use of Rubbing Beaches), Canadian
	Department of Ecological Reserves, British Columbia, Canada
1985-1987	Research Assistant, Ron Schustermen Project: Artificial Language Study
	with California Sea Lions, Long Marine, Santa Cruz, CA

SELECTED PUBLICATIONS AND REPORTS

Reis, Dawn K. 1999. Habitat Characteristics of California Red-Legged Frogs (*Rana aurora draytonii*): Ecological Differences Between Eggs, Tadpoles, and Adults In a Coastal Brackish and Freshwater System. Masters Thesis, San Jose State University, San Jose, CA.

About: To examine the effect of habitat characteristics on the presence or the absence of CRLF tadpoles in a field setting required multivariate habitat measurements in a large number of sample plots that varied in habitat characteristics. Her research project was conducted at Pescadero Marsh Preserve, a 320-acre, state-owned coastal wetland. The preserve includes a seasonal estuary at the confluence of Pescadero and Butano creeks, seasonal brackish and freshwater marshes, freshwater ponds, and riparian habitats along the creeks. Dawn Reis conducted sampling for CRLF adults, eggmasses and tadpoles under Dr. Smith's federal permit # PRT-793640 and California Department of Fish and Games permit # 803003-03 and # 893973-01. This federal

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permit included incidental take of tidewater goby during dip-netting and seining for CRLF tadpoles

- Smith, Jerry and Dawn Reis. 1996. Pescadero Marsh Natural Preserve Salinity, Tidewater Goby and Red-legged Frog Monitoring For 1995-1996. Report prepared for California Department of Parks and Recreation.
- <u>About</u>: This report provides management recommendations for a Pescadero Lagoon, California Red-legged Frog and Tidewater Gobies. .
- PWA/ESA, Baye, Peter and Reis, Dawn. 2011. Conceptual Ecosystems Restoration Plan and Feasibility Assessment for Laguna Salada, Pacifica CA. Prepared for the Wild Equity Institute.
- About: Dawn Reis collaborated with the other report authors to develop a conceptual restoration design that addressess natural function of the lagoon, flood control and recover of endangered of San Francisco Garter Snake and California Red-legged Frog populations. This peer reviewed document was developed as an educational piece for decision makers and land managers. Dawn wrote the report sections specific to San Francisco Garter Snake and California Red-legged Frog restoration and recovery at the Sharp Park and Laguna Salada.
- Reis, Dawn, K. 2002 to 2012. California Red-legged Frog tadpole surveys and translocations during the California-American Water Company 2002 water withdrawal in the Carmel River, Monterey County, California: United States Fish and Wildlife Service Biological Opinion (1-8-99-FW-7). Letter reports to California-American Water Company, dated January 28, 2003 to 2012.
- About: Dawn Reis has conducted CRLF tadpole surveys and rescues on along the Carmel River and provided management recommendations for eight years.
- Reis, Dawn and Jeffery B. Froke. 2002. Biological Assessment For California Red-Legged Frogs San Clemente Reservoir Drawdown 2003 And 2004 Operations. Prepared by Dawn Reis Ecological Studies and Jeffery Froke, Califauna. Prepared for the California-American Water Company, U.S. Army Corps of Engineers, and United States Fish and Wildlife Service, Ventura Field Office.
- Reis, Dawn. 2007. Biological Assessment for Special-Status Wildlife at ALBA's TRIPLE M RANCH. Prepared for: Mr. Brett Malone, ALBA Executive Director and Mrs. Rebecca Thistlewaite, Director of Programs at Triple M Ranch Agriculture & Landbased Training Association (ALBA) P.O. Box 6264, Salinas, CA 93912 & Mr. Bryan Largay, Largay Hydrologic Sciences, LLC, 160 Farmer Street Felton, CA 95018

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- <u>About</u>: During this project and the subsequent report, Dawn Reis provided habitat assessments specific to CRLF, CTS, and SCLTS.
- Reis, Dawn. Dec 3, 2007. Draft Wetland Restoration Design and Management Recommendations for Special-Status Wildlife at ALBA's TRIPLE M RANCH. Prepared for: Mr. Brett Malone, ALBA Executive Director and Mrs. Rebecca Thistlewaite, Director of Programs at Triple M Ranch Agriculture & Land-based Training Association (ALBA) P.O. Box 6264, Salinas, CA 93912 & Mr. Bryan Largay, Largay Hydrologic Sciences, LLC, 160 Farmer Street Felton, CA 95018
- <u>About</u>: In this document, Dawn Reis provided restoration designs and management recommendations specific to CRLF, CTS, and SCLTS.
- Ecosystems West and Reis, Dawn. 2001. Interim Draft: California Red-legged Frog (*Rana aurora draytonii*) Biological Assessment for the Carmel River and Dam Reservoir Project, Monterey County, California. 2001. Prepared by Dawn Reis while employed at EcoSystems West for Monterey Peninsula Water Management District and California-American Water Company.
- <u>About</u>: Dawn Reis conducted approximately five weeks of field surveys covering twenty-eight miles of the Carmel River. The purpose of the field surveys was to provide a habitat evaluation for the CRLF, not to conduct focused surveys. However, multiple visual observations of CRLF occurred and are documented in the report. Report and all mapping was developed by Ms. Reis.
- Reis, Dawn. 1999. Distribution and Habitat Study of California Red-Legged Frogs (*Rana aurora draytonii*) and Pacific Treefrogs (*Hyla regilla*) at Elkhorn Slough National Estuarine Research Reserve for 1997-1998. Submitted to California Department of Fish and Game Elkhorn Slough National Estuarine Research Reserve.
- About: Dawn Reis has been conducting a long-term monitoring and habitat usage study of CRLF by visual survey methods. This study includes surveys between 1997 and 1999 in the freshwater environments of the reserve: wildlife guzzlers and ponds.

 Management recommendations to maintain the health of the aquatic environments for CRLF have been made to the CDFG Reserve Manager and are ongoing. Trained docent volunteers until the CDFG Research Reserve hired and developed their own research team.

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REPRESENTATIVE EXPERIENCE

1987-2014 Dawn Reis Ecological Studies (Owner), Watsonville, CA

- Wrote the proposals, managed the budgets, conducted all project management, hiring, staff training and report writing activities
- Developed and implemented workshops and presentations
- Conducted the wildlife assessments and developed restoration goals and wildlife management recommendations
- Conducted pre-construction wildlife surveys for nesting birds, potential bat roost, amphibians and reptiles, including Western Pond Turtle, Legless lizards, California Red-legged Frogs (CRLF), California Tiger Salamanders;
- Conducted CRLF rescues and relocations of captured frogs (adults, sub-adults and tadpoles) from focused surveys, project related dewatering and managed and CRLF tadpole rearing program.

2011 Co-management of food safety risks and riparian/wetland habitats for Central Coast California Agriculture (Dr. Michele Jay-Russell, DMV and Project Director, Western Center for Food Safety, University of California-Davis).

- Dawn Reis worked as an adviser to Dr. Russell in field study design, field sampling techniques, and field protocols and sampling limitations due to endangered species. Duties included aiding Dr. Russell with outreach and enrollment of land owners in the Monterey and Santa Cruz Agricultural Community. Duties also included staff training of Dr. Russell's DMV and Field Biologist on coastal California amphibians and reptiles species identification and ecology and sampling protocols.
- <u>Background</u>: Dr. Russell is the PI conducting research that will provide a science-based approach that will reduce or eliminate bacterial contamination of fresh produce by amphibians and reptiles while minimizing negative impacts on native wildlife and their habitat. Specifically, Dr. Russell's project investigated the following:
- 1) Determine if wild amphibians (frogs, salamanders) and reptiles (lizards, snakes, turtles) are reservoirs of *E. coli* O157:H7 and *Salmonella* in Central Coast California agriculture regions
- 2) Identify natural and man-made risk factors associated with pathogen shedding and elevated commensal *E. coli* in ponds and riparian habitats that support common amphibians and reptile species in the central coast
- 3) Use a combination of environmental sampling, field biology, bacteriologic analyses, source tracking by DNA fingerprinting, and statistical analyses to examine the molecular relationships of *E. coli* O157 and *Salmonella* in these environments.

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- 4) Assist growers and ranchers in using information from this study to promote a science-based, co-management approach to food safety and environmental stewardship.
- 2006-2011 Population Study and Monitoring of Steelhead Trout In Santa Cruz County, Santa Cruz, CA (Don W. Alley and Associates, Brookdale CA and County of Santa Cruz).
 - Assist Don Alley with field sampling of Steelhead Trout.
- 2011 Conceptual Ecosystems Restoration Plan and Feasibility Assessment for Laguna Salada, Pacifica CA (Wild Equity Institute and PWA ESA).
 - Dawn Reis collaborated with the other report authors to develop a conceptual restoration design to restore that address natural function of the lagoon, flood control and recover of endangered of San Francisco Garter Snake and California Red-legged Frog populations;
 - Dawn wrote the report sections specific to San Francisco Garter Snake and California Red-legged Frog restoration and recovery at the Sharp Park and Laguna Salada.
- 2007 Biological Assessment for Special-Status Wildlife at ALBA's Triple M Ranch, Monterey, CA (Agriculture and Land-based Training Association) (ALBA)
 - During this project and in this document, Dawn Reis provided habitat assessments specific to CRLF, CTS, and SCLTS.
- Wetlands Restoration Design and Management Recommendations for Special-Status Wildlife at ALBA's Triple M Ranch, Monterey, CA (Agriculture and Land-based Training Association (ALBA)).
 - In this document, Dawn Reis provided restoration designs and management recommendations specific to CRLF, CTS, and SCLTS.
- Special Status Wildlife and How to Conduct and Biological Assessment for Them, Santa Cruz, CA (Natural Resource Conservation District and City Employees).
 - Conducted training for new resource personnel on special status wildlife and their basic ecology within the Watsonville Area;
 - This workshop also included and how to conduct basic data searches and mapping of known occurrences for protected wildlife species using the CNDD database searches.
- 2004 California State Parks Camel River Lagoon Enhancement Project Monterey, CA (Rana Creek Consulting, Carmel Valley, CA).

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- Conducted focused protocol level surveys for CRLF adults, sub-adults and tadpoles;
- Supervised the biological monitoring staff working with Western Pond Turtles and CRLF adults and tadpoles;
- Training for Rana Creek Consulting Staff Biologist on CRLF and other common amphibian identification, capture and translocation methods, and permit need.
- 2002 Carmel River Large Woody Debris Restoration Project At De Dampierre Park, Monterey, CA (Monterey Peninsula Water Management District, Monterey, CA).
 - Conducted focused protocol level surveys for CRLF adults, sub-adults and tadpoles. Translocated CRLF adults and subadult frogs under USFWS Permit No 1-8-02-F-47.
- Biological Assessment for the Whisler/Wilson Road Improvement Project, Monterey, CA (Rana Creek Habitat Restoration Group, Carmel Valley, CA).
 - Conducted the Biological Assessment portions of the project for Federally protected species including south-central steelhead (Oncorhynchus mykiss), California red-legged frog (Rana aurora draytonii), Smith's blue butterfly (Euphilotes enoptes smithi) and central coast California tiger salamander (Ambystoma californiense).
- 2004 Poster: Amphibians & Reptiles Of The Carmel River Watershed
 - In-house for project created for Educational Outreach: photographs and species facts for amphibians common and protected
- 2004 Poster: Reasons For Amphibian Declines: How To Be A Steward Of Your Watershed.
 - In-house project for Educational Outreach.
- 2002 Carmel River Large Woody Debris Restoration Project At De Dampierre Park, Monterey, CA (Monterey Peninsula Water Management District, Monterey, CA).
 - Conducted focused protocol level surveys for CRLF adults, sub-adults and tadpoles;
 - Translocated CRLF adults and subadult frogs under USFWS Permit No 1-8-02-F-47.