

Meeting Date: 12/3/2013

Report Type: Consent

Report ID: 2013-00862

Title: Roseville Road Bridge Replacement Project (T15068500) - Approve Cooperative Work Agreement and Supplemental Agreement

Location: Roseville Road over Arcade Creek, between Auburn Boulevard and Longview Drive adjacent to the Haggin Oaks Golf Course; District 2

Issue: City Council approval is necessary to amend the existing professional services agreement with David Evans and Associates, Inc. to provide ongoing design and environmental support through construction, and to remove approximately 41 trees and net the existing bridge to prevent the nesting of migratory birds and bats.

Recommendation: Pass a Resolution 1) authorizing the Director of Public Works to sign and submit, on behalf of the City of Sacramento, a request to Caltrans for a Cooperative Work Agreement (CWA) time extension to utilize federal transportation funds; 2) authorizing the City Manager to execute Supplemental Agreement No. 11 with David Evans & Associates, Inc. for an amount not to exceed \$156,803; 3) resetting the City Manager's Supplemental Agreement authority; and 4) resetting the administrative authority for the Roseville Road Bridge Replacement Project (T15068500).

Contact: Matthew Johns, Associate Engineer (916) 808-5760; Nicholas Theocharides, Engineering Services Manager (916) 808-5065, Department of Public Works

Presenter: None

Department: Public Works Department

Division: Civil & Electrical Design

Dept ID: 15001131

Attachments:

1-Description/Analysis

2-Background

3-Resolution

4-Exhibit A (Location Map)

5-Supplemental Agreement No. 11 - David Evans & Associates

City Attorney Review

Approved as to Form
Gerald Hicks
11/21/2013 4:05:51 PM

City Treasurer Review

Reviewed for Impact on Cash and Debt
John Colville
11/20/2013 1:00:09 PM

Approvals/Acknowledgements

Department Director or Designee: Jerry Way - 11/21/2013 11:15:25 AM

Description/Analysis

Issue: The Roseville Road Bridge Replacement Project (T15068500) will replace the existing Roseville Road Bridge over Arcade Creek.

On March 27, 2012, the City Council approved a design alternative for the Roseville Road Bridge Replacement Project (T15068500) that realigned a portion of Arcade Creek.

On December 11, 2012, after being informed by the California Department of Fish and Game and the U.S. Army Corps of Engineers they would no longer support a realignment of Arcade Creek, the City Council granted staff approval to pursue an "In-Kind" alternative that will reconstruct the existing Roseville Road Bridge without realigning Arcade Creek.

Staff is requesting the City Council to authorize the City Manager to execute Supplemental Agreement No. 11 with David Evans & Associates, Inc. in the amount of \$156,803 to provide ongoing design and environmental support through construction, and to remove approximately 41 trees and net the existing bridge to prevent the nesting of migratory birds and bats.

The additional environmental requirements have extended the timeline to complete the environmental and permitting processes; therefore, a Cooperative Work Agreement (CWA) will allow the City to continue to request reimbursement for currently obligated federal funds through June 30, 2015.

Policy Considerations: The action requested supports the City's General Plan goals of improving and expanding public safety and enhancing livability.

Economic Impact: Not Applicable

Environmental Considerations:

California Environmental Quality Act (CEQA): On March 27, 2012, the City Council adopted a Mitigated Negative Declaration (MND) and Mitigation Monitoring Program (MMP) pursuant to CEQA for the Roseville Road Bridge Replacement Project (T15068500) (Resolution No. 2012-084). The City Council also approved the preferred design alternative for the bridge replacement (Resolution No. 2012-083).

Following these actions, the California Department of Fish and Game, and the U.S. Army Corps of Engineers indicated that they will not

approve the preferred alternative, but instead required the In-Kind Bridge Replacement design (RIK). This RIK design was included and fully evaluated as Scenario B in the MND that City Council previously adopted. The mitigation measures adopted in the MMP, and identified in Resolution No. 2012-084, will apply to the RIK design now recommended by staff. No further action is required under the CEQA.

The resolutions that adopted the MND and MMP along with the MND for the Roseville Road Bridge Replacement Project (T15068500) are available at the Community Development Department's webpage located at the following

link: <http://www.cityofsacramento.org/dsd/planning/environmental-review/eirs/>

Sustainability Considerations: The project is consistent with the City's Sustainability Master Plan, and will include efforts to preserve and reestablish existing environmental resources in Arcade Creek.

Other: None.

Commission/Committee Action: None.

Rationale for Recommendation: Execution of Supplemental Agreement No. 11 is necessary to move forward with the completion of the design. The CWA will allow for the extension of time to get reimbursed for federal funds obligated for the environmental and preliminary engineering phases.

Financial Considerations: The estimated total cost for the preliminary engineering phase of the Roseville Road Bridge Replacement Project (T15068500) is \$1,899,387, consisting of federal and local transportation funds. To date \$1,576,282 has been expended and staff anticipates an additional \$323,105 will be needed to complete this phase of the project. As of October 28, 2013, the unobligated balance is \$330,304, which is sufficient to execute Supplemental Agreement No. 11 with David Evans & Associates, Inc. in an amount not to exceed \$156,803 and cover costs through final design. There are no General Funds planned or allocated to this project.

Emerging and Small Business Enterprise (E/SBE): The Emerging and Small Business Enterprise (E/SBE) requirements were held in abeyance. Participation in the Disadvantaged Business Enterprise (DBE) program was not a condition of the contract award in April 2008.

Attachment 1

Background Information:

The Roseville Road Bridge over Arcade Creek opened for service in 1938 and is in need of replacement.

A Caltrans inspection of the bridge in 2007 noted that many of the foundation footings are exposed from flood damage occurring during extraordinary high flows (a phenomenon known as "scour"). In addition to the damage caused by scour, the inspection noted moderate cracking in the deck and small areas of broken and missing concrete.

Utilizing federal funding from the Highway Bridge Program, the Public Works Department retained David Evans and Associates, Inc. (DEA) in 2008 to perform preliminary engineering, provide approved environmental documentation, and produce the final Plans, Specifications, and Estimate (PS&E) package for the bridge replacement for an amount not to exceed \$1,030,043.

The preferred design and construction alternative included removing the existing bridge, building a new bridge and re-aligning a portion of Arcade Creek. The creek currently passes beneath Roseville Road at a skewed angle making the existing structure very long. By moving the creek such that it crosses Roseville Road closer to 90 degrees the new structure could be much shorter and clear span the channel, significantly reducing any impacts from scour.

The City prepared a Mitigated Negative Declaration (MND) and circulated it for a 30-day public review period on January 5, 2012. The review period concluded on February 6, 2012, yielding six comment letters.

On March 27, 2012, the City Council adopted a MND and MMP pursuant to CEQA for the Roseville Road Bridge Replacement Project (T15068500) (Resolution No. 2012-084). The City Council also approved the preferred design alternative for the bridge replacement (Resolution No. 2012-083).

Following these actions, the California Department of Fish and Game, and the U.S. Army Corps of Engineers indicated they would not approve the preferred alternative, but instead required the "In-Kind" bridge replacement design that maintains the creek's current alignment.

This "In-Kind" bridge replacement design was included and fully evaluated as Scenario B in the MND that City Council previously adopted. The

mitigation measures adopted in the MMP, and identified in Resolution No. 2012-084, will apply to the "In-Kind" design now recommended by staff. No further action is required under the CEQA.

On December 11, 2012, the City Council approved the "In-Kind" design alternative (Resolution No. 2012-00954).

Supplemental Agreement No. 1 in the amount of \$117,120 compensated DEA for the preparation of a CEQA and NEPA document which were more complicated than originally scoped. Supplemental Agreement No. 1 was executed by City Council on January 1, 2009.

Supplemental Agreement No. 2 in the amount of \$0.00 revised the contract documents to reflect staff changes at IFC International (formerly Jones & Stokes) (IFC). Supplemental Agreement No. 2 was executed under the City Manager's Authority on June 5, 2009.

Supplemental Agreement No. 3 in the amount of \$0.00 revised the contract documents to include Dokken Engineering as a new sub-consultant, as well as reflect staff changes at DEA. Supplemental Agreement No. 3 was executed under the City Manager's authority on October 20, 2011.

Supplemental Agreement No. 4 in the amount of \$29,650 compensated the consultant for potholing of existing utilities. Supplemental Agreement No. 4 was executed under the City Manager's authority on June 7, 2012.

Supplemental Agreement No. 5 in the amount of \$0.00 revised the contract documents to reflect changes in staff at Dokken Engineering, Blackburn Consulting, and IFC. Supplemental Agreement No. 5 was executed under the City Manager's authority on July 11, 2012.

Supplemental Agreement No. 6 in the amount of \$0.00 revised the contract documents to reflect changes in staff at DEA and IFC. Supplemental Agreement No. 6 was executed under the City Manager's authority on October 4, 2012.

Supplement Agreement No. 7 in the amount of \$156,334 compensated the consultant for amending the existing design and environmental and permitting documents to reflect the "In-Kind" alternative. Supplemental Agreement No. 7 was executed by the City Council on December 11, 2012.

Supplemental Agreement No. 8 in the \$0.00 revised the contract documents to reflect changes in staff at DEA. Supplemental Agreement No. 8 was executed under the City Manager's authority on March 19, 2013.

Supplemental Agreement No. 9 in the amount of \$0.00 revised the contract documents to reflect changes in staff at DEA. Supplemental Agreement No. 9 was executed under the City Manager's authority on August 7, 2013.

Supplemental Agreement No. 10 in the amount of \$0.00 revised the contract documents to reflect changes in staff at DEA. Supplemental Agreement No. 10 was executed under the City Manager's authority on November 14, 2013.

The City began federally eligible environmental review and preliminary engineering in August 2007. Most of the federal funding allocated to this phase has been expended and reimbursed. Some of this funding is due to lapse in June 2014. Due to the extended time required to address environmental requirements, it is prudent to request a one-year time extension through the CWA to ensure all federal funding can be reimbursed.

RESOLUTION NO.

Adopted by the Sacramento City Council

AUTHORIZATION TO REQUEST A COOPERATIVE WORK AGREEMENT FOR A TIME EXTENSION TO UTILIZE FEDERAL TRANSPORTATION FUNDS AND EXECUTE SUPPLEMENTAL AGREEMENT FOR THE ROSEVILLE ROAD BRIDGE REPLACEMENT PROJECT (T15068500)

BACKGROUND

- A. The City has been conducting environmental review, preliminary engineering, and design for the Roseville Road Bridge Replacement Project (T15068500), primarily using federal transportation funds.
- B. The City has not yet fully expended all currently obligated federal funds for preliminary engineering but will be incurring additional federal expenses that will be eligible for reimbursement.
- C. The City retained David Evans and Associates, Inc. (DEA) in 2008 to perform preliminary engineering, provide approved environmental documentation, and produce the final Plans, Specifications, and Estimate (PS&E) package for the bridge replacement for an amount not exceed \$1,030,043.
- D. On March 27, 2012, the City Council adopted a Mitigated Negative Declaration (MND) and Mitigation Monitoring Program (MMP) pursuant to the California Environmental Quality Act (CEQA) for the Roseville Road Bridge Replacement Project (T15068500) (Resolution No. 2012-084). The City Council also approved the preferred design alternative for the bridge replacement (Resolution No. 2012-083).
- E. Following these actions, the California Department of Fish and Game, and the U.S. Army Corps of Engineers indicated they would not approve the preferred alternative, but instead required the "In-Kind" bridge replacement design that does not realign the creek.
- F. This "In-Kind" bridge replacement design was included and fully evaluated as Scenario B in the MND that City Council previously adopted. The mitigation measures adopted in the MMP, and identified in Resolution No. 2012-084, will apply to the "In-Kind" design now recommended by staff. On December 11, 2012, the City Council approved the "In-Kind" design alternative (Resolution No. 2012-00954)

- G. Additional consultant funding is necessary to provide ongoing design and environmental support through construction, as well as to remove approximately 41 trees and net the existing bridge to prevent the nesting of migratory birds and bats.
- H. Program Supplement No. 113 Rev 1 allows the City to request a time extension of one year through a Cooperative Work Agreement (CWA) for reimbursement of the funds.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

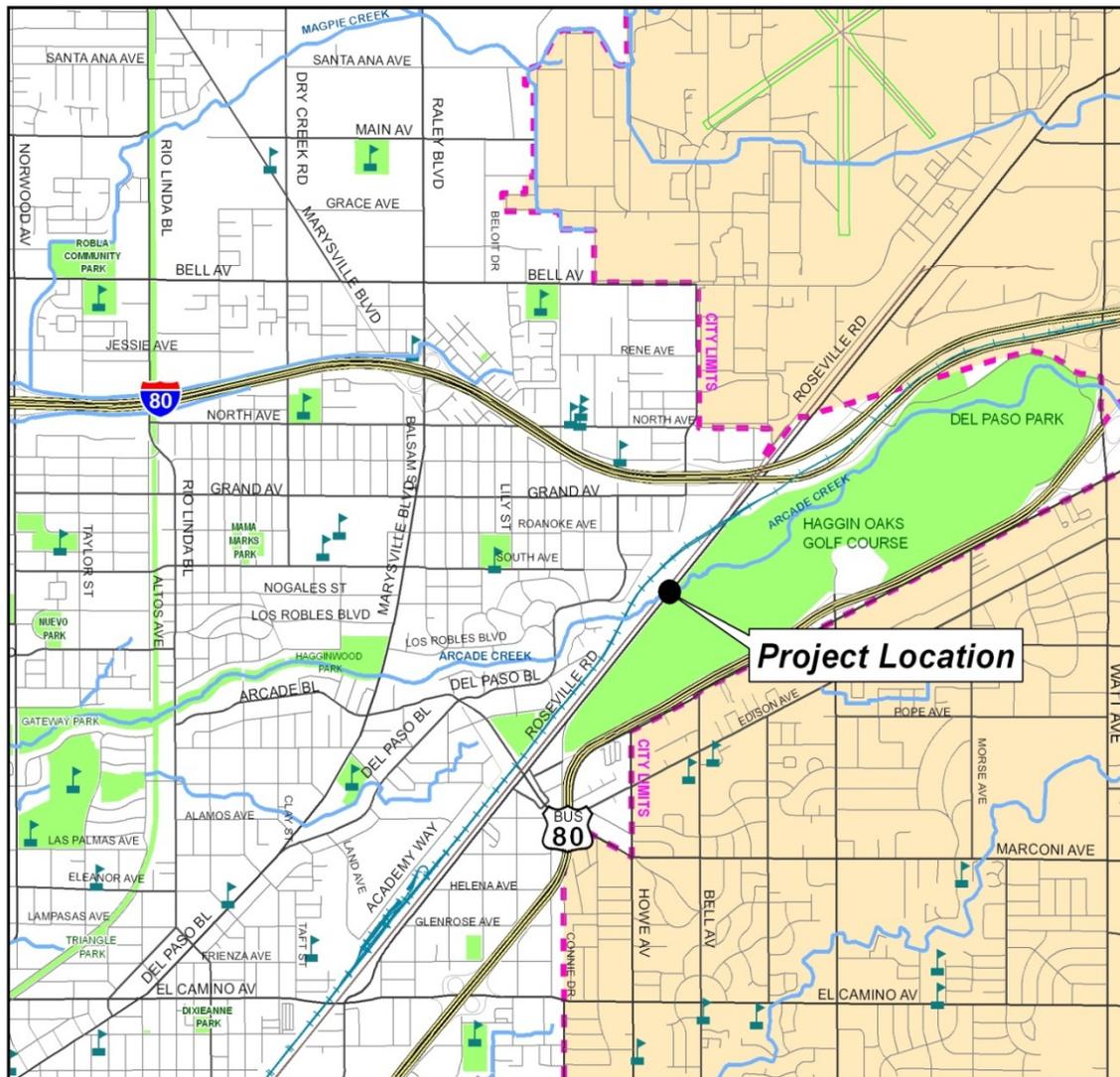
- Section 1. The City Council hereby authorizes the Director of Public Works to sign and submit to Caltrans a request for a Cooperative Work Agreement (CWA) time extension to utilize the funds authorized for the Roseville Road Bridge Replacement Project (T15068500).
- Section 2. The City Manager or his designee is authorized to execute Supplemental Agreement No. 11, not to exceed \$156,803, with David Evans & Associates, Inc.
- Section 3. The City Manager's supplemental agreement authority is reset.
- Section 4. The administrative authority for the Roseville Road Bridge Replacement Project (T15068500) is reset.
- Section 5. Exhibit A is incorporated as part of this Resolution.

Table of Contents:

Exhibit A – Project Location Map

EXHIBIT A

Location Map for
Roseville Road
Bridge Replacement Project
(Old PN: RR46)
(New PN: T15068600)



Project Location



City of Sacramento
SUPPLEMENTAL AGREEMENT

Contract #: 2008-0333-11

Purchase Order #:

Supplemental Agreement #: 11

Job#: T15068500

Project Title: Roseville Road Bridge Replacement Project

The City of Sacramento ("City") and David Evans & Associates, ("Contractor"), as parties to that certain Professional Services Agreement designated as Agreement Number 2008-0333 including any and all prior supplemental agreements modifying said agreement (said agreement and supplemental agreements are hereby collectively referred to as the "Agreement"), hereby supplement and modify the Agreement as follows:

- 1. The Scope of Services specified in Exhibit A of the Agreement is amended as follows:

See Exhibit A

- 2. In consideration of the additional and/or revised services described in section 1, above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement of Payment of Contractor's fees and expenses, is increased by \$156,802.25 and said maximum not-to-exceed amount is amended as follows:

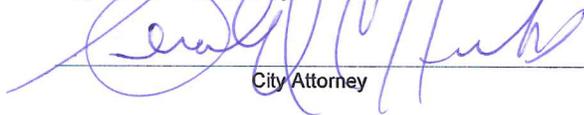
The original not-to-exceed amount:	\$1,030,043.00
The net change by previous Supplemental Agreements:	\$306,770.81
The not-to-exceed amount prior to this Supplemental Agreements:	\$1,336,813.81
The contract sum will be increased by this Supplemental Agreement:	\$156,802.25
The new not-to-exceed amount including all Supplemental Agreements:	\$1,493,616.06

- 3. Contractor agrees that the amount of increase or decrease in the not-to-exceed amount specified in section 2, above, shall constitute full compensation for additional and/or revised services specified in section 1, above, and shall fully compensate Contractor for any and all direct and indirect costs that may be incurred by Contractor in connection with such additional and/or revised services, including costs associated with any changes in work schedules or in the performance of other services or work by Contractor. The time for the performance of the agreement is increased by 0 Days by reason of the performance of the work required by this Supplemental Agreement.
- 4. Contractor warrants and represents that the person or persons executing this supplemental agreement on behalf of Contractor has or have been duly authorized by Contractor to sign this supplemental agreement and bind Contractor to the terms hereof.
- 5. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Contractor shall perform all the services, duties, obligations and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

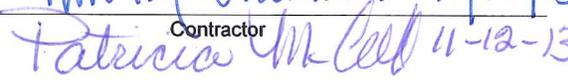
Approval Recommended By:


Project Manager 11-13-13

Approved as to Form By:


City Attorney

Approved By:

 11/12/13
Contractor
 11-12-13

Approved By:

City of Sacramento 11/26/13
Executed Date

Attested to By:

City Clerk



Exhibit A

Roseville Road Bridge Replacement Project

2008-0333

11/06/13

<i>Description</i>	<i>Amount</i>
Supplemental Agreement #11	
PCO # 13.0 Changed/Unforeseen Conditions	\$156,802.25
11/06/13 Additional scope was added to the contract to (1) remove trees, (2) net the existing bridge, and (3) provide environmental support through construction. New 10-H forms have been submitted to reflect staff changes at IFC International (formerly Jones and Stokes).	
1 Items	Total for Change Order # 11
	\$156,802.25
1 Items	Total for Contract # 2008-0333
	\$156,802.25
<i>Totals By Reason</i>	Changed/Unforeseen Conditions
	\$156,802.25
	Changes to Bid Documents
	\$0.00
	Client Initiated Changes
	\$0.00



ATTACHMENT 1
TO
EXHIBIT A

October 31, 2013

Michael Widmann
Project Manager
David Evans & Associates
401 B Street, Suite 410
San Diego, CA 92101-4223

Subject: Scope for Environmental Services for Roseville Road Bridge, City of Sacramento, California

Dear Michael:

As requested, ICF International (ICF) is submitting a scope of work and cost estimate to provide restoration planning and biological compliance services to support the City of Sacramento's (City) Roseville Road Bridge Replacement Project. Our proposed scope includes, conducting preconstruction biological surveys and resource staking, providing environmental management and training services during construction of the proposed project. To mitigate for loss of riparian woodland, oak woodland, street trees, and heritage trees designated by the City and the Department of Fish and Wildlife (DFW), a restoration construction document plan set and a monitoring plan need to be developed to fulfill project permit requirements. ICF offers the following scope of work to meet the City's environmental permit commitments for the replacement of the bridge.

Scope of Work

Task 1. Manage Environmental Compliance Services

ICF's project manager Steve Avery will be supported by senior permitting technical specialist Mike Vondergeest who will provide close support to Steve to implement the preconstruction, construction, and post-construction phases of the project. Steve will also be supported by Mike Vondergeest, who prepared most of the environmental permits for this project. As part of this task, we will:

- Prepare preconstruction survey and monitoring reports for submittal to the City and applicable regulatory agencies requiring this documentation.
- Manage environmental monitors and assist with the resolution of environmental issues as they arise in the field.
- Coordinate with David Evans & Associates (DEA), and the City, and regulatory agencies (when needed) during the duration of construction.

- Provide monthly and annual status reports (memorandum) on the status of environmental surveys and restoration monitoring, and any outstanding issues and resolutions.

Task 2 (BIO 2). Conduct Environmental Awareness Training for Construction Employees

ICF will prepare a presentation and supporting materials (including pictures and pocket-sized environmental handouts) for the environmental education program. The goal of the program will be to integrate environmentally responsible work practices into daily operations and standard construction procedures. ICF will:

- Provide an overview of the resource issues and regulatory setting.
- Establish a common understanding of the environmental compliance program, including communication and reporting responsibilities.
- Provide an overview of the environmental resource issues, mitigation measures, and permit conditions.
- Discuss special-status species in the project area including the life history of western pond turtle, roosting bats, and nesting birds.

The training will be provided to the construction contractor prior to the start of the project. As new construction personnel are added to the project the biologist assigned to the project will have the materials and information available to provide an environmental tailboard to the construction personnel. The tailboard meeting would be conducted at the project site and would include the same information provided at the start of the job.

Assumptions: One training session with up to 3 tailboard sessions to provide new personnel working on the project with training materials and instruction.

Task 3 (BIO 3). Provide a Certified Arborist to Trim Riparian Vegetation

ICF has identified a qualified arborist subcontractor, Mountain Enterprises, Inc., to conduct riparian tree and shrub trimming, removal, and root cutting in areas identified for construction activity. The trimming and/or removal will occur prior to construction activity between the months of February 1 and August 15. The subconsultant's scope for conducting this work is provided as an attachment (Attachment A).

Task 4 (Bio 1). Install Fencing to Protect Biologically Sensitive Areas Adjacent to the Project Area

ICF's biologist will flag environmentally sensitive areas (ESAs) for the protection of, valley elderberry longhorn beetle, riparian vegetation, native trees, and aquatic habitats. After these areas

and associated avoidance buffer zones are identified and flagged, ICF will work with the DEA's team to ensure that temporary construction barrier fencing is placed in the correct locations.

Temporary fence installation will occur in two mobilizations:

- (1) Pre-construction tree removal
- (2) Bridge removal/replacement

The temporary fence associated with the second mobilization will be the responsibility of the construction contractor to install, inspect, and maintain. As was the case for the temporary fencing installed to facilitate the pre-construction tree removal, ICF will work with the City's construction contractor to ensure that temporary construction barrier fencing is placed in the correct location.

DEA or its subcontractor(s) will provide all the protective fencing that will be required to protect sensitive resources during the pre-construction tree removal and will be responsible for installing and maintaining the barrier fencing. As part of this task, ICF will provide up to 100 laminated signs identifying these avoidance zones as sensitive habitat. We assume that the fencing will only need to be installed once and this effort will take up to two work days.

For each mobilization, ICF's biologist will inspect the fencing once a week to ensure that it is maintained to protect the sensitive resources.

Assumption: where possible the fencing inspections would be combined with other preconstruction surveys including checking the swallow exclusion netting, assessment of the health of the restoration plantings, and preconstruction surveys for nesting birds and bats.

Task 5 (BIO 7). Conduct Western Pond Turtle Preconstruction Clearance Surveys.

Within 24 hours of the start of construction in suitable habitat for northwestern pond turtle, a qualified ICF biologist will conduct a preconstruction clearance survey for this species. If construction does not start then the biologist will conduct an additional survey immediately prior to any in-water work. The biologist will remain onsite until the completion of the in-water work. Any turtle located within the in-water work area that appears to be trapped will be captured and relocated in a suitable site, outside of the construction area. The biologist will be on call during construction work outside of the water area in case a turtle is identified in the work area and requires capture and relocation. Observations of northwestern pond turtles will be recorded on standard field forms.

Assumption: the biologist will be available to conduct up to 8 preconstruction surveys when in water work occurs. As stated in the BIO 7 mitigation measure the biologist will remain onsite during in-water work. Based on the construction schedule we estimate that there will be approximately two months of in-water work that will occur in several phases of the bridge construction. We have budgeted 46 days of 8 hour/day monitoring.

Task 6 (BIO 8). Conduct Preconstruction Clearance Surveys for Nesting Birds and Bats

ICF will provide a qualified biologist to conduct nesting bird survey (during the nesting season which is February 1 – August 15) at the project site for nesting birds covered by the federal Migratory Bird Treaty Act. We will also conduct surveys up to a 0.25-mile radius surrounding the project area for nesting raptors (where access can be obtained). The purpose of the surveys will be to obtain complete coverage of the project area and buffer and document any nesting activity in the area. The survey will be conducted within 15 days before the start of construction and will be repeated 3 times within the 15 day survey period. A GPS unit will be used to record any nest locations and standardized field forms would be used to record the survey results.

If an occupied nest is located within the survey area, a GPS location will be recorded, and the information on the nest site will be documented on a standardized field form and provided to the City and DEA. In coordination with the City, ICF will coordinate with DFW to discuss appropriate no-disturbance buffers based on the bird or raptor species identified, nesting phase, type of construction activity occurring in proximity of the nest, and line of sight from the nest to the activity.

An acoustical survey of the project area will be conducted by a qualified biologist in the evening. Based on the results of the survey, the biologist will coordinate with DFW through telephone conversations to develop appropriate protective measures to limit the disturbance to tree roosting bats. The protective measures may include removing trees in the late afternoon or evening and monitoring tree removal activities.

Assumption: We have included time for a qualified biologist to conduct 3 separate survey visits, coordination time with DFW.

We have included time for one acoustical bat survey, 4 hrs to consult with DFW and prepare a bat protection plan, and 2 days of monitoring during tree removal activities.

Task 7 (BIO 9). Prevent Swallows from Nesting Adjacent to New Bridge Construction

ICF has retained a qualified subcontractor (Wildlife Control Technology, Inc.) with experience installing bird exclusion netting on bridges to net the Roseville Road Bridge. There scope to install the exclusion netting is attached (Attachment B). Netting would be installed prior to February 1. The netting contractor would be available in a timely manner to make up to 3 visits to make minor repairs and adjustments to the netting and removed trapped birds.

After the netting is installed on the bridge to exclude swallows from nesting, ICF will conduct weekly checks of the site (as described below) to ensure the netting remains a barrier to nesting activity and that birds do not become trapped in the netting. During the height of the nesting season (March-June) we will conduct netting inspections twice a week. In July and August we will conduct inspections once a week.

ICF will notify the netting contractor within the same day for any repairs, adjustments, or trapped bird removal that needs to occur at the site. The netting contractor's Sacramento area representative will respond to netting repair or adjustment requests within 24 hours.

Assumption: Where possible netting inspections will be combined with other environmental visit to the project site.

Subcontractor costs for bridge netting installation are based on having access to the underside of the bridge to install the netting. Therefore, installation during high water flows in the creek may change the level of effort and cost to install the netting.

Task 8 (BIO10). Conduct Training and Inspections of the Restoration Sites and Prepare the Annual Performance Monitoring Reports

ICF will provide a qualified restoration specialist (biologist, ecologist, or certified arborist) to provide a brief training session to City/Golf Course staff collecting annual performance data and providing the day to day care for all mitigation trees required by CDFW and the City. The restoration specialist will be available to discuss restoration activities and remedial action by phone with City/Golf Course staff. The restoration specialist will provide a data form for collection of annual performance monitoring data in accordance with the Tree Maintenance and Monitoring Guidelines (Guidelines). City/Golf Course staff will provide the annual performance monitoring data to ICF's restoration specialist in Excel format for incorporation into the first performance monitoring report to be submitted to the permitting agencies. ICF's restoration specialist will prepare the annual report in accordance with the Guidelines and provide a draft for review by the City. We will respond to one round of comments and we will prepare a final report that would be submitted to the City for distribution to the City Arborist and CDFW.

Assumptions:

- Annual monitoring will occur for all mitigation trees required for CDFW and City mitigation.
- Annual monitoring is required for 5 years but may end after 3 years should the mitigation trees meet success criteria established in the Guidelines and acceptance be given by the City Arborist and CDFW. ICF is providing one year of monitoring and reporting (the first year) of the total monitoring requirement. Subsequent monitoring reports will be prepared by a qualified specialist identified by the City.
- The restoration specialist will conduct up to 2 trips to the site to conduct training and inspection to document the health of the restoration plantings and prepare a draft and final annual report for the first year.
- City/Golf Course staff will provide the annual performance data in Excel format for all mitigation trees required by CDFW and the City.

Deliverables:

- Prepare Restoration Construction Documents
- Prepare Tree Maintenance and Monitoring Guidelines

Task 9. Prepare Restoration Construction Documents

ICF will prepare construction documents including plans, specifications, cost estimate, and bid form for the on-site mitigation area designated for the Roseville Road Bridge Replacement Project as presented in the Conceptual Mitigation and Restoration Plan submitted to the DFW and City of Sacramento in August of 2013. Additional tree mitigation of 272 inches requested by the City of Sacramento at that time will also be included in the plan. The city is allowing additional tree mitigation requested to be in the form of seedlings planted eight feet on center.

ICF will prepare a full stamped set of construction documents (restoration construction plan set) including a cover sheet, planting plans, irrigation plans, construction details for installation of irrigation and plants, technical specifications, and cost estimate/bid form. The final plan will be based off of comments from the draft.

Plans will be prepared using MicroStation software at a minimum of 3/32" scale on 24" x 36" sheets. Construction documents will be prepared using City standards. One PDF electronic copy plans will be provided to David Evans Associates (DEA) at each submittal. One hard copy of documents will be provided to DEA at the final submittal. Specifications will be prepared after the draft submittal. The final submittal plans and specifications will be stamped and signed.

Deliverables:

- Draft restoration construction plan set, cost estimate, and specifications in PDF format (specifications will also be provided in MS Word)
- Final restoration construction plan set stamped and signed by a California-licensed landscape architect, cost estimate, bid form, and specifications in PDF format and as a hard copy (specifications will also be provided in MS Word)

Assumptions:

- The construction documents are to be based off of the Conceptual Mitigation and Restoration Plan submitted to the DFW and City of Sacramento in August of 2013, and the plans provided by Haggin Oaks Golf Course
- DEA or the City will prepare and provide front-end specifications
- The irrigation system point of connection information and irrigation material preference will be provided through coordination with Haggin Oaks Golf Course
- ICF will submit construction document packages to City and DFW at each iteration
- The plans can be stand alone or wrapped into DEA's construction document set
- City Arborist will approve the Haggin Oaks Golf Course tree planting plan

Task 10. Prepare Tree Maintenance and Monitoring Guidelines

ICF will prepare tree maintenance and monitoring guidelines (Guidelines) for the on-site mitigation area designated for the Roseville Road Bridge Replacement Project. The Guidelines will include information relative to site maintenance, management, monitoring, and reporting recommendations and requirements. The Guidelines will include a list of the mitigation required and success criteria for the mitigation including performance criteria and final completion criteria. Maintenance requirements, monitoring protocols, data analysis requirements of information collected during monitoring, and a maintenance and monitoring schedule will be included in the Guidelines. A reporting schedule, requirements for final completion, and potential contingency measures will conclude the document.

The document will be prepared using MS Word software and ICF standard report templates. The administrative draft document will be submitted in PDF format to DEA for review. Based on comments a final draft will be submitted in PDF format to DEA for distribution to agencies. Based on comments from agencies, a final Guideline will be prepared and submitted to DEA in PDF format and three hard copies if desired.

Deliverables:

- Administrative draft Guidelines in PDF format
- Final draft Guidelines in PDF format
- Final Guidelines in PDF format and three hard copies

Assumptions:

- The Guidelines is to be based off of the Conceptual Mitigation and Restoration Plan submitted to the DFW and City of Sacramento in August of 2013
- DEA will submit the Guidelines to City and DFW at each iteration

Task 11. Work Period Extension Notification

ICF will prepare the necessary work period extension form and submit it to CDFW to request tree removal work in the stream zone during the wet season (November 1 to May 31). Our cost estimate includes the fee for this request (\$224).

Cost Proposal

Michael Widmann
October 31, 2013
Page 8 of 8

Our cost for providing the restoration planning services described above is provided in Table 1. We look forward to continuing to work together with you. If you have any questions please do not hesitate to contact us.

Sincerely,

A handwritten signature in cursive script that reads "Steve Avery". The signature is written in black ink and is positioned above the printed name and title.

Steve Avery
Principal Wildlife Biologist



Wildlife Control Technology, Inc.

Phone 559-490-2262 or 800-235-0262 Fax 559-490-2274 2501 N. Sunnyside, Fresno, CA 93727

Date: October 14, 2013
Attention: Steve Avery
Of: Jones and Stokes ICFI
Phone: (916) 737-3000
E-mail: savery@jsanet.com
From: Josh Brewer
Regarding: Roseville Road Bridge Replacement

Project Description

This proposal is for the swallow exclusion of the Roseville Road Bridge over Arcade Creek in Roseville, Ca.

Recommendation:

WCT will remove any existing previous seasons cliff swallow nests prior to 2-1-2014 and then install temporary netting to prevent Cliff Swallows from building mud nests on the underside of the bridge at the areas that are suitable for cliff swallows to build a viable nest. In this case, the areas consist of the 6 bents that are comprised of 3 pillars each and a rectangular ceiling jut that creates a 90 degree angle the entire width of the bridge on either side of each bent.

WCT Inc. will use 3/4-inch x 3/4-inch mesh polypropylene net attached with 1/16 "cable. The top of the net will be attached to the bridge ceiling with 1" penetrations that are 1/4" in diameter. The net will then be brought down around the pillars and the width of the complete area identified sealed with net exclusion from nesting attempts.

The netting can be removed by WCT at the CDFG regulatory allowed time for an additional cost and a quote can be provided.



Wildlife Control Technology, Inc.

Phone 559-490-2262 or 800-235-0262 Fax 559-490-2274 2501 N. Sunnyside, Fresno, CA 93727

This proposal also includes 3 trips to check and adjust the netting to remove trapped birds, make minor repairs, and repair or close areas where birds may be entering the exclusions on the bridge.

Costs

Including all labor, equipment, and materials to complete the project as described above.

***\$25,700.00**

***Assumptions and Disclaimers**

It is assumed that this project would be allowed to be accomplished with the water levels as witnessed on our visit to the bridge 10-4-2013. If access to the work area to perform this installation is restricted because of high water or other unforeseen issues additional charges may apply and would be discussed prior for fee estimate.

There is no guarantee against extreme weather conditions, acts of God or vandalism. All repairs will be bid on a case by case basis. This is a one season installation with a material capable of withstanding the elements of exposure for the one nesting season outside of the aforementioned uncovered incidents.

Sincerely,
Wildlife Control Technology, Inc.
Josh Brewer
VP of Operations

Table 1. Cost Estimate for the Final Restoration Mitigation Plan for the Roseville Road Bridge Replacement Project (September 30, 2013; P0891.13)

Task	Consulting Staff										Production Staff					Direct Expenses	Total Price	
	Avery Ste Principal	Avery Ste Project Manager	Vondergeest MIC Permitting Specialist	Oakes Har Restoration Specialist	Weller Pau Restoration Specialist	Laniz Kri GIS Specialist	Angler Ale GIS Specialist	Taylor Set Biologist	Asbell Aun Biologist	Harris Lei Wildlife Biologist	Subtotal	Lead Editor	Job J Publications Specialist	Admin Technician	Rumburg D			Subtotal
TASK 1. Manage Environmental Compliance Services.	8		22													\$0.00	\$5,712.36	\$5,712.36
TASK 2 (BIO 2). Conduct Environmental Awareness Training for Construction Employees	30															\$751.20	\$5,099.07	\$5,099.07
TASK 3 (BIO 3). Provide a Certified Arborist to Trim Riparian Vegetation	4															\$0.00	\$1,285.55	\$1,285.55
TASK 4 (Bio 1). Install Fencing to Protect Biologically Sensitive Areas Adjacent to the Project Area	4						20									\$0.00	\$1,072.18	\$1,072.18
TASK 5 (BIO 7). Conduct Western Pond Turtle Preconstruction Clearance Surveys.	8						185									\$0.00	\$28,194.33	\$28,194.33
TASK 6 (BIO 8). Conduct Preconstruction Clearance Surveys for Nesting Birds and Bats	4						30									\$0.00	\$5,905.11	\$5,905.11
TASK 7 (BIO 9). Prevent Swallows from Nesting Adjacent to New Bridge Construction.	8						80									\$0.00	\$6,757.29	\$6,757.29
TASK 8 (BIO10). Conduct Training and Inspections of the Restoration Sites and Prepare the Annual Performance Monitoring Reports	5						60					14				\$1,314.61	\$8,715.87	\$8,715.87
TASK 9. Prepare Restoration Construction Documents	1		6				8									\$0.00	\$0.00	\$0.00
Develop Base Plan, Cover Sheet, and Sheet Set-Up	1		6				8									\$0.00	\$0.00	\$0.00
Prepare Printing Plans for Draft and Final	1		12				28									\$0.00	\$2,575.30	\$2,575.30
Prepare Detail Sheets for Draft and Final	1		8				10									\$0.00	\$6,413.04	\$6,413.04
Prepare Cost Estimate, Technical Specifications, and Bid Form	1		2				8									\$187.80	\$2,854.17	\$2,854.17
Prepare Mitigation Plan for Draft and Final	1		16				32									\$0.00	\$6,240.00	\$6,240.00
TASK 10. Prepare Tree Maintenance and Monitoring Guidelines.	1		3				6									\$0.00	\$0.00	\$0.00
Prepare Admin Draft Guidelines	1		3				6									\$0.00	\$677.39	\$677.39
Prepare Final Draft Guidelines	1		1				2									\$0.00	\$9,203.79	\$9,203.79
Prepare Final Guidelines	1		1				2									\$1,500.19	\$1,799.12	\$1,799.12
TASK 11. Prepare Work Period Extension for CDFW	1		4				8									\$661.43	\$661.43	\$661.43
Total hours	8	72	49	17	62	172	40	315	185	36	4	27	2	2	4			
ICF Est 2013 Direct Rate	\$62.25	\$45.67	\$40.69	\$50.49	\$41.75	\$36.02	\$25.01	\$22.05	\$24.00	\$28.24		\$36.57	\$29.59	\$19.70				
Overhead 188.49%	\$117.34	\$86.08	\$78.70	\$65.17	\$78.69	\$67.89	\$47.14	\$41.56	\$45.24	\$53.23		\$72.70	\$55.77	\$37.13				
Fee 10%	\$17.99	\$13.18	\$11.74	\$14.57	\$12.04	\$10.39	\$7.22	\$6.35	\$6.92	\$8.15		\$11.13	\$8.54	\$5.68				
ICF Est 2013 Billing Rates	\$197.54	\$144.93	\$129.13	\$160.22	\$132.49	\$114.31	\$79.37	\$69.97	\$76.16	\$89.62		\$122.40	\$93.90	\$62.52				
Subtotals	\$1,580.35	\$10,434.87	\$6,327.14	\$2,723.82	\$8,214.32	\$19,650.55	\$3,174.66	\$22,041.57	\$14,099.85	\$3,226.20		\$489.59	\$2,535.32	\$125.03		\$3,146.84	\$94,623.25	\$94,623.25
Direct Expenses																		
500.00 Subcontractor Wildlife Control Technology, Inc (Bird Exclusion Netting)																		\$25,700
501.00 Subcontractor Mountain Enterprise (tree removal)																		\$24,436
500.00 Subcontractor Wildlife Control Technology, Inc (Bird Exclusion Netting) Contingency for Major Nesting Repair																		\$5,000
501.00 Subcontractor Mountain Enterprise (tree removal) Contingency for Additional Tree Removal																		\$2,000
522.00 Vehicle rental and gas (Tasks 4-9) 50 days @ \$70/day																		\$3,500
523.05 Travel, Auto, incl. Mileage at current IRS rate (.665/mile). Mileage will be used for Tasks 1-3,7-8. Estimated 40 total trips at 40 miles round trip for a total of 1600 project travel miles																		\$904.00
523.02 Reproductions																		\$75.00
523.03 Signs for Fencing																		\$300.00
523.04 Postage and Delivery																		\$40.00
529.00 Other Reimbursable Expenses (Permit Fees)																		\$224.00
Direct expense subtotal																		\$62,179.00
Total price																		\$156,802.25

Project: Roseville Road Bridge Replacement (T15068500)
 Contract No.: 2008-0333
 Consultant: David Evans & Associates
 Date: November 6, 2013

Classification	Name	Approved Hourly Rate
Principal	Joseph Hart	\$74.00
Project Manager	Mike Widmann	\$66.00
Project Engineer	Joseph Arellano	\$40.40
Engineer 5	Don Bloodworth	\$57.00
Engineer 5	Kelly Burnell	\$54.00
Engineer 5	Daniel Sun	\$70.80
Engineer 5	Stacy Tschuor	\$63.00
Engineer 5	Kevin Picanco	\$46.00
Engineer 3	Linda Mitchell	\$36.50
Engineer 3	Jerremy Clark	\$37.50
Engineer 3	Esmeralda Aranda	\$38.52
Engineer 2	Martin Plass	\$27.40
Engineer 2	Tan Cao	\$27.40
Designer	Melissa Cooper	\$34.50
Designer	Chad Karns	\$34.50
Designer	Lucas Chase	\$29.00
Survey Crew		\$80.00
Professional LS	David Crosswhite	\$51.00
Survey Analyst	John Bentley	\$43.00
Survey Analyst	Jon Ros	\$40.00
Technician	Leroy Anderson	\$36.00
Support (Admin/Acct)	Teresa Nelson	\$27.50
Support (Admin/Acct)	Barbara Rupp	\$25.50
Support (Admin/Acct)	Jeanette Acosta	\$25.00

The above listed hourly rates will remain fixed for the duration of the project.

Fringe Benefits:	58.39%
Indirect Cost (Overhead and G&A):	117.50%
Fee:	10.00%

Other Cost:

The cost of reproduction, postage, and permit fees will be reimbursed the actual expense when submitted with the appropriate backup documentation and receipts. Mileage will be reimbursed at 56.5 cents per mile for the duration of the project. (Caltrans Milage Reimbursement Rate - Effective January 1, 2013)

Project: Roseville Road Bridge Replacement (T15068500)
 Contract No.: 2008-0333
 Consultant: IFC International (formerly Jones & Stokes Associates, Inc.) (Sub-Consultant)
 Date: November 6, 2013

Classification	Name	Approved Hourly Rate
Principal	Debbie Loh	\$62.25
Principal	Steve Avery	\$62.25
Principal	Maggie Townsley	\$62.25
Project Manager	Clarie Bromund	\$45.67
Project Manager	Steve Avery	\$45.67
Project Coordinator	Tina Sorvari	\$27.27
Botanist	John Holson	\$26.04
Botanist	Lisa Webber	\$40.78
Wildlife Biologist	William Mitchell	\$62.94
Wildlife Biologist	Stephanie Myers	\$47.20
Wildlife Biologist	Jennifer Haire	\$40.05
Wildlife Biologist	Lelia Harris	\$28.24
Biologist	Aundrea Asbell	\$24.00
Biologist	Seth Taylor	\$22.05
Biologist	Adrienne Levoy	\$20.50
Biologist	Stephen Barlow	\$20.50
Permitting Specialist	Michael Vondergeest	\$40.69
Permitting Specialist	Kimberly Stevens	\$37.24
Permitting Specialist	Daniel Cardoza	\$25.25
Permitting Specialist	Dale Pooley	\$36.15
Restoration Specialist	Harry Oakes	\$50.49
Restoration Specialist	Carl Jensen	\$50.49
Restoration Specialist	Brendan Belby	\$45.68
Restoration Specialist	Jeffery Peters	\$41.60
Restoration Specialist	Paul Weller	\$41.75
GIS Specialist	Alex Angier	\$25.01
GIS Specialist	Eric Link	\$37.50
GIS Specialist	Edward Douglas	\$30.29
GIS Specialist	Krisin Lantz	\$36.02
GIS Specialist	Daniel Schiff	\$27.54
GIS Specialist	Sacha Selim	\$26.17
Graphic Artist	John Durnan	\$28.15
Graphic Artist	Timothy Messick	\$39.90
Graphic Artist	Senh Saelee	\$30.09
Graphic Artist	Alan Barnard	\$40.00
Lead Editor	Larry Goral	\$38.57
Lead Editor	Teresa Giffen	\$30.94
Lead Editor	Paul Shigley	\$30.09
Lead Editor	Tami Mihm	\$28.58
Lead Editor	Stephanie Mozon	\$27.26
Publication Specialist	Jody Job	\$29.59
Publication Specialist	Deborah Jew	\$28.50
Publication Specialist	Carol Ortega	\$29.65
Administrative Technician	Dana Rumburg	\$19.70
Administrative Technician	Samuel Mandell	\$16.00
Administrative Technician	Robert Rivasplata	\$16.50

The above listed hourly rates will remain fixed for the duration of the project.

Fringe Benefits:	37.15%
Indirect Cost (Overhead and G&A):	151.34%
Fee:	10.00%

Other Cost:

The cost of reproduction, postage, and permit fees will be reimbursed the actual expense when submitted with the appropriate backup documentation and receipts. Mileage will be reimbursed at 56.5 cents per mile for the duration of the project. (Caltrans Milage Reimbursement Rate - Effective January 1, 2013)

Vehicle Rental and Gas (Task 4, 5, 6) will be reimbursed @ \$70/day for 50 Days

The cost to install the bridge netting will be reimbursed the actual expense when submitted with the appropriate backup documentation and receipts. The approved cost of installation is \$25,700. An additional \$5,000 has been included in the estimated fee to account for any unexpected damage which may occur as a result of vandalism and/or a high water event on Arcaded Creek. Written authorization will be obtained from the City of Sacramento prior to expenditure of contingency funds. The request for authorization will include a detailed breakdown of the cost of services to be performed.

The cost to remove the identified trees will be reimbursed the actual expense when submitted with the appropriate backup documentation and receipts. The approved cost of removal is \$24,436. An additional \$2,000 has been included in the estimated fee to account for any unexpected issues which may occur during removal. Written authorization will be obtained from the City of Sacramento prior to expenditure of contingency funds. The request for authorization will include a detailed breakdown of the costs of services to be performed.

Project: Roseville Road Bridge Replacement (T15068500)
 Contract No.: 2008-0333
 Sub-Consultant: Blackburn Consulting (Sub-Consultant)
 Date: November 6, 2013

Classification	Name	Approved Hourly Rate
Principal	Robert Lokteff	\$62.50
Sr. Project Manager	Rick Sowers	\$55.00
Sr. Project Manager	Dave Morrell	\$47.00
Sr. Project Manager	Dave Buck	\$46.00
Sr. Project Manager	Pat Fischer	\$54.00
Project Manager	Eric Nichols	\$42.00
PE/Geologist	Rob Pickard	\$29.00
Drafter	Mike Robertson	\$33.00
Drafter	Max Khashchuck	\$16.00
Technical Mgr.	Kenneth L. Colburn	\$30.03
Tester/Inspector	Morgan Wright	\$40.60
Assistant	Wendy Supinger	\$42.91
Assistant	Kelly L. Dahill	\$27.78
Assistant	Marguerite Baldwin	\$18.85

The above listed hourly rates will remain fixed for the duration of the project.

Fringe Benefits: 44.21%
 Indirect Cost (Overhead and G&A): 138.00%
 Fee: 10.00%

Other Cost:

The cost of reproduction, postage, and permit fees will be reimbursed the actual expense when submitted with the appropriate backup documentation and receipts. Mileage will be reimbursed at 56.5 cents per mile for the duration of the project. (Caltrans Milage Reimbursement Rate - Effective January 1, 2013)

Project: Roseville Road Bridge Replacement (T15068500)
Contract No.: 2008-0333
Consultant: Dokken Engineering (Sub-Consultant)
Date: November 6, 2013

Classification	Name	Approved Hourly Rate
Project Manager	Pamela Dalcin-Walling	\$60.00
Associate Engineer	Ryan Neves	\$45.00
Assistant Engineer	Matt Atkinson	\$29.00
Assistant Engineer	Travis Weston	\$25.00

The above listed hourly rates will remain fixed for the duration of the project.

Fringe Benefits: 22.43%
Indirect Cost (Overhead and G&A): 134.81%
Fee: 10.00%

Other Cost:

The cost of reproduction, postage, and permit fees will be reimbursed the actual expense when submitted with the appropriate backup documentation and receipts. Mileage will be reimbursed at 56.5 cents per mile for the duration of the project. (Caltrans Milage Reimbursement Rate - Effective January 1, 2013)

Project: Roseville Road Bridge Replacement (T15068500)
 Contract No.: 2008-0333
 Consultant: REY Engineers (Sub-Consultant)
 Date: November 6, 2013

Classification	Name	Approved Hourly Rate
Project Manager, PLS	Joe Feyder	\$65.88
Union Party Chief		\$39.25
Union Chainman		\$32.05
Survey Assistant III	John Wunschel	\$31.00
Survey Assistant III	Erik Kiel	\$31.00
Survey Assistant III	Dave Gutierrez	\$31.00

The above listed hourly rates will remain fixed for the duration of the project.

Fringe Benefits:	25.72%
Indirect Cost (Overhead and G&A):	175.84%
Fee:	10.00%

Other Cost:

The cost of reproduction, postage, and permit fees will be reimbursed the actual expense when submitted with the appropriate backup documentation and receipts. Mileage will be reimbursed at 56.5 cents per mile for the duration of the project. (Caltrans Milage Reimbursement Rate - Effective January 1, 2013)



October 25, 2013

Michael Widmann
Project Manager
David Evans & Associates
401 B Street, Suite 410
San Diego, CA 92101-4223

Subject: Request to Add Additional Staff for Roseville Road Bridge Replacement Project, City of Sacramento, California

Dear Michael:

ICF International (ICF) is requesting approval from the City of Sacramento to add the following staff to the Roseville Road Bridge replacement project (Table 1). All of the new team members are as qualified as the existing team members or have a unique skill set and have been added for the reasons described below. ICF is requesting the additional staff to meet the technical requirements in our scope of work for the construction phase of the project. We have also added additional permitting staff to ensure that ICF is responsive to any unanticipated permitting needs during construction. Lastly we are adding Principal Maggie Townsley to replace Debbie Loh, who has retired from regular project work. Resumes for the additional staff are attached. We have also included a 10H form that includes these staff members.

Table 1. Additional Staff for Roseville Road Bridge Replacement Project

Staff Classifications	Role	Justification
Principal	Maggie Townsley	Replacement for Debbie Loh
Permitting Specialist	Daniel Cardoza	Ensure responsiveness to any permitting requests
Permitting Specialist	Dale Pooley	Ensure responsiveness to any permitting requests
Restoration Specialist	Harry Oakes	Provide technical expertise for restoration implementation

Michael Widmann
October 25, 2013
Page 2 of 2

Staff Classifications	Role	Justification
Wildlife Biologist	Steve Avery	Provide technical expertise for environmental tasks during construction phase
Wildlife Biologist	Aundrea Asbell	Provide technical expertise for wildlife tasks during construction
Wildlife Biologist	Seth Taylor	Provide technical expertise for wildlife tasks during construction
Wildlife Biologist	Adrienne Levoy	Provide technical expertise for wildlife tasks during construction
Wildlife Biologist	Stephen Barlow	Provide technical expertise for wildlife tasks during construction

Please let me know if you have any questions or require additional information.

Sincerely,



Steve Avery
Wildlife Biologist

Attachments

STEVEN AVERY

Project Director and Senior Wildlife Biologist

Steve Avery has 23 years of experience managing biology projects, designing field studies, and conducting special-status species surveys in California. His expertise includes BAs and impacts analyses, wildlife census techniques, CEQA compliance as it relates to biology, and environmental compliance monitoring for large linear projects. Steve has successfully managed the survey efforts, environmental document preparation, and environmental compliance monitoring for several large transmission line and gas line projects. He evaluates impacts of projects on wildlife populations and provides mitigation planning for a variety of threatened and endangered species. Specifically, Steve has conducted surveys and managed technical studies in northern California, Oregon, and Nevada for federally listed species including California red-legged frog, California tiger salamander, giant garter snake, blunt-nosed leopard lizard, desert tortoise, northern spotted owl, marbled murrelet, and San Joaquin kit fox.

Project Experience

Transportation—Roads, Bridges, and Highways

Statewide On-Call Environmental Services (Contract No. 43A0091)—Caltrans, Districts 1, 2, and 4

Has served as senior wildlife biologist or task order manager for three task orders under this contract. Task orders have included preparing NEPA/CEQA documents for water quality improvement, a highway widening project, noise and vibration studies, special-status wildlife surveys and habitat assessments, wetlands delineations, wetland/riparian mitigation plans, bald eagle nest monitoring and reporting program, installation of bird exclusion netting on bridges, BAs, general biological monitoring, and permit applications.

U.S. Highway 101 Richardson Grove Protocol Surveys and Construction Monitoring—Caltrans, Humboldt County, California

Served as project manager and senior wildlife biologist. Conducted two-year protocol-level surveys for marbled murrelets at Richardson Grove State Park and prepared an education awareness program related to northern spotted owls and marbled murrelets for construction contractors

Years of Experience

- Professional start date: 03/1985
- ICF start date: 12/1989

Education

- MA, Biology, University of Northern Colorado, Greeley, 1990
- BS, Zoology/Wildlife Biology, Ohio University, Athens, 1985

Professional Memberships

- The Wildlife Society

Licenses

- CDFW Scientific Collecting Permit, No. 801244-01
- USFWS 10(a)(1)(A) Permit to conduct surveys for Mexican spotted owl and California gnatcatcher surveys

Training

- Fiber-Optic Safety Training, Union Pacific
- Water Quality Chlorine Safety Training, Sacramento Regional County Sanitation District Department



Forest Highway 105 (Marysville Road) Biological Surveys—FHWA, Yuba County, California

Served as lead wildlife biologist. Conducted biological surveys as part of a road improvement project along Forest Highway 105. Report discussed survey results (northwestern pond turtles identified during the survey), identified potential impacts, and recommended mitigation measures for impacts on northwestern pond turtles and California spotted owls.

Conway Summit Facility Biological Monitoring—Caltrans, Mono County, California

As project manager, managed the environmental compliance during construction of Caltrans storage facilities on Conway Summit. Supervised one biologist who conducted swallow surveys every other day during the nesting season to prevent swallows from nesting in the project area.

Habitat Assessments for U.S. 50/Missouri Flat Road Interchange Improvement Project—El Dorado County, California

Served as senior biologist on interchange improvement project and addition of auxiliary lanes over Weber Creek, which is habitat for federally and state listed California red-legged frog. Conducted extensive coordination with the USFWS, Corps, and CDFW and prepared a BA and NES.

Forest Highway 120 (Quincy–LaPorte) Biological and Environmental Assessment/Evaluation—FHWA/Plumas County, California

As lead wildlife biologist, conducted biological surveys and prepared biological resources evaluation report as part of road resurfacing and improvement project. Field investigations included surveys for foothill yellow-legged frogs, mountain yellow-legged frogs, and California spotted owls. Report discussed survey results, identified potential impacts, and recommended mitigation measures for impacts on foothill yellow-legged frogs and California northern spotted owls.

Energy

On-Call Master Services Agreement—PG&E, California

Has served as program manager for ICF's on-call master services agreement with PG&E since 2003. Responsible for negotiating contracts, writing scopes of work and cost estimates, delegating work assignments, conducting technical studies, and managing projects for PG&E's O&M throughout its service territory. For several large projects, acted as lead biologist or project manager for field investigations, impact assessment, development of mitigation measures and environmental compliance monitoring for special-status wildlife, including listed fairy shrimp, VELB, California red-legged frog, California tiger salamander, blunt-nosed leopard lizard, northwestern pond turtle, western burrowing owl, Swainson's hawk, and San Joaquin kit fox.

Various Biological Surveys and Monitoring—PG&E, California

Managed the following surveys and construction monitoring as part of the PG&E on-call master services agreement:

- **Carrizo-Midway 230kV Transmission Line Reconductoring Project.** As senior wildlife biologist, provided peer review of USFWS BA and CDFW 2081 agreement documents. Assisted the project manager and PG&E with strategy on difficult permitting

issues, including determination of a federal nexus. Assisted the wildlife biologists with determining the appropriate level of effort for preconstruction special-status wildlife surveys. Also prepared the scope and cost proposals to provide permitting and preconstruction surveys.

- **California Clean Energy 500kV Transmission Line Project.** Served as project director, including providing overall quality assurance to PG&E. Provided management direction and senior-level oversight on scoping document preparation, costing, and availability of company resource to ensure project success. Managed biological resource studies including protocol-level blunt-nosed leopard lizard surveys and botanical, wetland, and general wildlife surveys for more than 300 miles of project alternative alignments. Provided senior-level input on study design and methodology for appropriate biological resource data collection. Provided peer review of biological resource sections prepared for the project.
- **Metcalf-Hicks-Vasona and Metcalf-EI Patio 230kV Tower Construction and Reconductor Projects.** As project manager, managed biological resource surveys and environmental compliance monitoring during reconductor and tower work on the two projects that occurred together. These projects were within Santa Teresa County Park, where several special-status endemic plants and wildlife were identified adjacent to tower construction sites. Conducted preconstruction botanical surveys and mapped rare plant populations near construction sites. The close proximity of rare plant and wildlife resources within the park required diligent biological monitoring and close communication with PG&E construction contractors to ensure protection of these resources.
- **Hollister 115kV Power Line Reconductoring Project PEA.** Served as project director for this 20-mile reconductoring project in Hollister. Ensured overall client satisfaction, provided peer review of technical sections, and prepared scopes of work and contract augmentations. Acted as technical lead for biology and the permitting lead for all of the federal and state permits obtained.
- **Tri-Valley 230kV Transmission Line Installation.** Served as project manager and lead biologist. Conducted biological surveys and managed biological studies for nesting birds, listed fairy shrimp, and San Joaquin kit fox. Prepared a BA for the USFWS for San Joaquin kit fox and California red-legged frog for the new 10-mile construction project. Provided testimony before the CPUC on biological issues related to the project. Directed staff in the design of on-site mitigation for aquatic and upland breeding habitat creation for California red-legged frog and California tiger salamander. Managed cultural resources surveys. Provided environmental compliance monitoring during construction of Phase I and Phase II.
- **Tesla Substation Expansion Project.** As project manager. managed preparation of a site assessment for California red-legged frog, managed protocol-level surveys for California red-legged frog in Patterson Run Creek, conducted surveys for burrowing owls, prepared a BA for the USFWS, managed preconstruction clearance surveys for San Joaquin kit fox and burrowing owls, and managed daily construction monitoring during the one-year project.

Additional PG&E Projects (As Project Manager or Lead Biologist)

- Crane Valley dam seismic upgrade focused biological surveys and wetland delineation; CEQA/NEPA permitting
- Palermo 115kV transmission line 45-mile reconductoring project
- Palermo-to-East Nicolaus PEA and permitting assistance
- San Luis Obispo Carrizo-to-Midway transmission line
- Mather Gas Line BA
- Gas Line 300A anode flex installation and San Joaquin kit fox surveys
- Gas Line 300 valve replacement and recoating biological surveys and monitoring

Preconstruction Surveys and Biological Compliance Monitoring for the Sacramento Area Voltage Support 500kV Transmission Line Project—Western Area Power Administration, Sacramento and Sutter Counties, California

As project manager, supervised ICF wildlife biologists and our subconsultant, who conducted preconstruction vernal pool, giant garter snake, and nesting bird surveys for the 40-mile project and provided environmental compliance monitoring

Biological Surveys for the Path 15 500kV Transmission Line Project—Western Area Power Administration, Fresno and Merced Counties, California

As project manager, supervised the wildlife, botanical, and wetland surveys for the 84-mile project and prepared the technical reports to support NEPA documents previously prepared for the project. Prepared a BA for the USFWS to address project effects on federally listed species. Supervised three biologists, two cultural resource specialist, and four paleontologists conducting field studies, preparing documents, and monitoring construction of sensitive resources along the project route during the three-year project.

Conservation Planning

HCP for San Joaquin Valley Operations and Maintenance Service Area—PG&E, San Joaquin Valley, California

Served as lead wildlife biologist in preparation of the San Joaquin Valley HCP that included nine counties and 24 covered wildlife species, including San Joaquin kit fox. Developed innovative approaches to assessing impacts and providing mitigation to meet PG&E's O&M needs.

Parks, Trails, and Open Space

Lake Mead National Recreation Area Desert Tortoise Construction Monitoring—NPS, Nevada

As project manager, managed biological compliance monitoring for a 26-mile road improvement project in 2006 and 2007 and a 30-mile section in 2009 within the Lake Mead National Recreation Area. Services included preconstruction surveys for desert tortoise and construction compliance monitoring for the 12-month project. Monitors were approved by the USFWS to handle and move desert tortoise out of danger during construction. Managed a crew of three full-time biological monitors.

Expert Witness

John Marsh State Park Damage Assessment—California Attorney General, California

Conducted a damage assessment on state park land to determine the extent of impact to special-status species from unauthorized encroachment from home development on state property. Prepared a report that identified the species affected, the extent of the damage, and the associated cost to mitigate for those damages. Provided expert testimony related to the damage assessment.

Employment History

ICF International. Project Director and Senior Wildlife Biologist. Sacramento, California. 12/1989–Present.

USDA Forest Service. Wildlife Biologist. Fresno, California. 03/1987–11/1989.

Colorado Division of Wildlife. Wildlife Research Technician. Gunnison, Colorado. 05/1986–11/1986.

HARRY OAKES

Habitat Restoration Planner

Harry identifies mitigation opportunities and develops mitigation strategies for riparian, wetland, and oak woodland mitigation projects. He prepares environmental documents, including habitat restoration plans, construction plans and specifications, mitigation and monitoring plans (MMPs), performance monitoring reports, operations and maintenance (O&M) manuals, and Environmental Impact Reports/Environmental Impact Statements (EIRs/EISs). In addition, Harry evaluates mitigation site suitability; maps habitat; evaluates environmental impacts; assesses habitat values and applies Habitat Evaluation Procedures (HEP); provides post-construction monitoring surveys and reporting; and supervises the implementation, maintenance, and monitoring phases of mitigation and restoration projects.

Project Experience

Transportation—Roads, Bridges, and Highways

SR-32 Widening—City of Chico/Mark Thomas & Co., Chico, California

Title/Role. Description of your role and the project.

On-Call Environmental Support Services (Contract No. 03A1317 and No. 03A1573)—Caltrans Districts 1, 2, and 3, California

Senior Habitat Restoration Planner for four tasks orders (TOs) under this contract, including: TO 2 Willits Bypass Habitat Mitigation and Monitoring Plan; TO 11 Biological Services for District 1 (Mitigation and Monitoring Project for the Blue Lake Storm Damage Repair Project); TO 35 Alton Interchange Wetland Mitigation & Monitoring Plan; and TO 20 Smoot Sink Storm Damage Repair Biological Surveys and Permitting. The 35 TOs under this contract to date have included preparation of interdisciplinary National Environmental Policy Act (NEPA)/California Environmental Quality Act (CEQA) documents for water quality improvement, highway widening project, noise and vibration studies, air quality studies, special-status wildlife surveys and habitat assessments, paleontology studies and mitigation plans, wetlands delineations, wetland/ riparian mitigation plans, bald eagle nest monitoring and reporting program, installation of bird exclusion netting on bridges, community impact assessments, biological assessment, general biological and fisheries monitoring, fish snorkel surveys, and permit applications. Some of the task orders under these contracts include:

Years of Experience

- Professional start date: Month/1990
- ICF start date: 08/1995

Education

- BS, Wildlife and Fisheries Biology (minor in Forestry), University of Massachusetts, Amherst, 1988

Professional Memberships

- President (until early May 2009), California Society of Ecological Restoration

Certifications

- International Society of Arboriculture Certified Arborist, No. WE-6496A

Training

- Habitat Evaluation Procedures, Virginia Polytechnic Institute and State University, 1998
- Applied Fluvial Geomorphology, Wildland Hydrology, San Jose, CA, 1997



- **U.S. 101 Bypass Project Mitigation and Monitoring Proposal and Environmental Baseline Conditions Report (Contract #, TO #).** Lead Habitat Restoration Ecologist for preparation of the Mitigation and Monitoring Proposal and the Environmental Baseline Conditions Report for the US 101 Bypass Project.
- **Alton Interchange Wetland Mitigation and Monitoring Plan (Contract 03A1317, TO 35).** Title/Role. Prepared a wetland and riparian mitigation and monitoring plan for the project. The WMMP was prepared in coordination with Caltrans to compensate for impacts to federally regulated wetland and Coastal Zone wetlands under the jurisdiction of the California Coastal Commission. The WMMP included a description and habitat quality evaluation for onsite resources and provided guidance related to site preparation, seeding, planting, irrigation, plant establishment, and performance monitoring and reporting.
- **Willits Bypass Habitat Mitigation and Monitoring Plan (Contract 03A1573, TO 2).** Title/Role. Description of your role and the project.
- **District 1 Biological Services (Contract 03A1573, TO 11).** Title/Role. Description of your role and the project.
- **Wetland Mitigation Design for US101 Willits Bypass (Contract 03A1573, TO 12).** Title/Role. Description of your role and the project.

US 50/Missouri Flat Road Interchange Project—El Dorado County and Caltrans, California

Title/Role. Performed site assessments to evaluate mitigation opportunities and constraints for implementing oak woodland and riparian restoration projects. Performed tree surveys to determine impacts to oak woodland and riparian habitat and prepared an arborist report. Coordinated with Quincy Engineering, El Dorado County, Caltrans, the resource agencies to develop an onsite riparian mitigation plan and a tree replacement program for the Highway 50/Missouri Flat Road interchange and other open space areas in the project vicinity. Developed construction plans and specifications.

HMMPs for the Bridge Road Bridge Replacement Project—City of Sacramento, California

Title/Role. Prepared HMMPs for the project, using Corps' guidelines. The HMMPs included a description and habitat quality evaluation for onsite resources and provided guidance related to site preparation, seeding, planting, irrigation, plant establishment, and performance monitoring and reporting.

Conservation Planning

Habitat Mitigation Planning for San Joaquin County MSCP and Open Space Plan—San Joaquin Council of Governments, California

Title/Role. Coordinated with the San Joaquin Council of Governments (SJCOG) to evaluate and select suitable agricultural and open space parcels considered for acquisition, enhancement and preservation under the San Joaquin County MSCP and Open Space Plan. Performed site assessments on potential preserves throughout San Joaquin County and developed preserve management plans for selected preserves. Coordinated with SJCOG, land owners, the resource agencies to design and implement enhancement projects. Developed requests for proposals

and scopes of work, coordinated with restoration contractors and oversaw the implementation and maintenance phases of enhancement projects. Performed monitoring and reporting. Coordinated with SJCOG, a local environmental education organization, the resource agencies, and local high schools to implement enhancement features.

Water

Habitat Mitigation Planning for Water Supply Improvement Program—San Francisco Public Utilities Commission (SFPUC), California

Title/Role. Performed site assessments in the Sunol Valley watershed, the Calvaeras Reservoir, San Andreas Reservoir and the Crystal Springs Reservoir to evaluate mitigation opportunities and constraints for implementing wetland, oak woodland, riparian, grassland, and scrub habitat restoration projects. Coordinated with SFPUC, the resource agencies, and other environmental professionals to identify mitigation strategies, as well as potential benefits and effects. Developed conceptual mitigation plans for selected mitigation sites.

Arcade Creek Impacts of Urbanization—City of Sacramento Department of Utilities, Sacramento, California

Title/Role. Surveyed and mapped nonnative plant species and performed a reconnaissance level survey of riverine, riparian and terrestrial habitat types along Arcade Creek. Identified and ranked potential nonnative plant species removal areas and habitat restoration projects, assisted with preparing a site evaluation report, and coordinated with restoration contractors on implementing selected restoration areas. Also coordinated preparation of a GIS resource inventory for the project.

Tisdale Bypass Habitat Mitigation and Monitoring Plan—California Department of Water Resources (DWR), California

Title/Role. Prepared a wetland and riparian mitigation and monitoring plan. The MMP was prepared in coordination with DWR planners and biologists to compensate for impacts to federally regulated wetlands under the jurisdiction of the California Coastal Commission. The MMP included a description and habitat quality evaluation for onsite resources and provided guidance related to site preparation, seeding, planting, irrigation, plant establishment, and performance monitoring and reporting.

North Delta Improvements Project—California Department of Water Resources (DWR), Sacramento-San Joaquin River Delta, Sacramento, California

Title/Role. Evaluated potential impacts associated with project alternatives and prepared the wildlife section of an EIR/EIS.

South Delta Improvements Program EIR/EIS—California Department of Water Resources (DWR) and U.S. Bureau of Reclamation, Contra Costa and San Joaquin Counties, California

Title/Role. Evaluated potential impacts associated with project alternatives and prepared the wildlife section of the EIR/EIS. Coordinated preparation of an ASIP, a CALFED required document that evaluated program effects on fisheries, wildlife, plants, and natural communities. ASIP preparation included attending multi-agency meetings, preparing the wildlife section of the document, reviewing other resource sections, and coordinating document preparation.

Lower Northwest Interceptor Project—Sacramento Regional County Sanitation District, Sacramento and Yolo Counties, California

Title/Role. Provided construction oversight services related to tree resources for a 19-mile pipeline that would provide sewer service for the areas of northern Sacramento County area, West Sacramento, and a portion of Yolo County. Services included coordinating with construction managers, contractors, and arborists during tree removal and tree pruning operations; maintaining a data base of tree resources; performing tree surveys; preparing supplemental impact reports and tree mitigation; and preparing wetland mitigation plans.

Habitat Mitigation and Monitoring Proposals for the Bradshaw and Laguna Interceptor Projects—Sacramento Regional County Sanitation District, Sacramento County, California

Title/Role. Prepared habitat mitigation and monitoring proposals (HMMPs) for the projects, using the Corps guidelines. The interceptor projects include installation of several miles of sanitary sewer lines that affected wetland habitats. The HMMPs included a description and habitat quality evaluation for onsite resources and provided guidance related to site preparation, seeding, planting, irrigation, plant establishment, and performance monitoring and reporting.

Lower Guadalupe River Flood Protection Project Riparian Mitigation Plan—Santa Clara Valley Water District (SCVWD), Santa Clara County, California

Title/Role. Prepared construction documents (plans and specifications) to mitigate riparian habitat impacts associated with the Lower Guadalupe River Flood Control Project. Coordinated with representatives of SCVWD, the resource agencies, and the project engineers; evaluated potential riparian planting areas; assisted with development of construction drawings; and prepared specification sections related to seeding, planting, irrigation, and plant establishment.

Bear River Levee and Western Pacific Interceptor Canal Levee Improvement Project—Three Rivers Levee Improvement Authority, Marysville, California

Title/Role. Assisted with preparation of an EIR, BAs for fisheries and terrestrial resources, and a habitat MMP. Evaluated potential impacts associated with project alternatives, coordinated vegetation and wildlife surveys, and prepared the wildlife and vegetation sections of the EIR.

Sacramento River Bank Protection Project 42B—U.S. Army Corps of Engineers (Corps), Sacramento District, California

Title/Role. Surveyed and mapped existing terrestrial habitat types at six proposed bank protection sites along the Sacramento River, collected and analyzed data for use in a HEP analysis, performed VELB surveys, and surveyed each site for the presence of special-status species or their habitats.

West Walker River, Section 208—Corps, Sacramento District, Lyon County, Nevada

Title/Role. Provided technical input to the Corps and its contractor during implementation of clearing and snagging operations along the West Walker River. Performed construction observations to ensure conformance to the construction plans and specifications, provided technical assistance on field modifications, and prepared a channel stabilization memorandum after completion of the project.

Los Vaqueros Project Construction Support Services—Contra Costa Water District, California

Title/Role. Provided technical input to CCWD and its contractor during construction of valley oak and riparian woodland habitats and of seasonal wetland and semi-permanent marsh habitats for the Los Vaqueros Project, including construction and maintenance phase inspections.

Los Vaqueros Project Wetland and Oak and Riparian Woodland Performance Monitoring Programs— Contra Costa Water District, California

Title/Role. Performed vegetation, hydrology, and wildlife monitoring for the Los Vaqueros Project's wetland, valley and blue oak woodland, and riparian woodland mitigation programs. Performed field surveys, provided data analysis, and prepared annual monitoring reports. Also provided technical assistance with placement of California red-legged frog aestivation structures, selection of plant materials, identification of maintenance and site management needs, and determining potential management actions.

Elderberry Transplant Plan and Mitigation Design Plans—U.S. Army Corps of Engineers

Institutional Facilities

CAL FIRE Warner Springs Forest Fire Station Replacement Facility—California State Department of General Services (DGS), Warner Springs, San Diego County, California

Title/Role. Prepared an arborist report for the Warner Springs Forest Fire Station Replacement Facility. Supervised the collection of survey data, provided data analysis, and performed an impact assessment based on location of the proposed replacement facilities and associated infrastructure, and summarized the results in an arborists report.

Fisheries

Lower Guadalupe River Fisheries Survey—Santa Clara Valley Water District (SCVWD), Santa Clara County, California

Title/Role. Surveyed and mapped existing terrestrial habitat types, assisted with surveying and mapping of SRA overhead cover vegetation and instream fisheries habitat, and evaluated potential impacts of project alternatives. Also coordinated preparation of a GIS resource inventory for the project and evaluated potential impacts of project alternatives.

Habitat Mitigation Planning for the Battle Creek Salmon and Steelhead Restoration Project—U.S. Bureau of Reclamation, California

Title/Role. Performed site assessments in the Battle Creek watershed to evaluate mitigation opportunities and constraints for implementing wetland, oak woodland, and riparian habitat restoration projects. Developed conceptual mitigation designs for selected mitigation sites and prepared a habitat mitigation and monitoring plan.

SETH A TAYLOR

Wildlife Biologist

Seth has three years experience as a wildlife biologist and biological monitor. He has excellent knowledge of California Fauna and is a strong hiker and accustomed to working in arduous mountainous conditions. He is certified by the State of California to operate All Terrain Vehicles and is also certified by the Forest Service to operate snowmobiles. Seth has intimate knowledge of radio telemetry and sage grouse monitoring protocols, and he is also proficient in the use of GPS systems, CSI receiver transponders, compasses, and maps.

Years of Experience

- Professional start date: 06/2009
- ICF Start Date: 06/2009

Education

- BS, Environmental Biology and Management, University of California Davis, 2007
-

Project Experience

PG&E Palermo to East Nicolaus 115kV Transmission Line Reconductor Project—Construction Compliance Monitoring

Approved by the USFWS and DFG to conducted environmental construction compliance monitoring for listed vernal pool branchiopods and giant garter snake. Prepared daily compliance logs for submittal to the California Public Utilities Commission (CPUC) assisted with fencing sensitive resources, and worked with the construction contractor to ensure sensitive resource protection. (2012)

Enxico Shiloh III Wind Power Construction Project, Solano County—Construction Monitoring

Conducted environmental awareness training and construction compliance monitoring for California tiger salamander and sensitive vernal pool habitat. Prepared daily compliance logs and worked with the construction contractor to ensure sensitive resource protection. (2011 to 2012)

Western Area Power Administration's Sacramento Area Voltage Support Transmission Line Project—Construction Monitoring

Conducted Special status species monitoring including Swainson's hawk, and tricolored blackbird and birds protected by the Migratory Bird Treaty Act. Other special-status species monitoring included vernal pool fairy shrimp, vernal pool tadpole shrimp, and giant garter snake. (2011)

PG&E Crane Valley Dam Seismic Upgrade Project

Conducting routine inspections on the PG&E Crane Valley Powerhouse located at Bass Lake, Madera County and focused surveys of the proposed quarry site, dam site, and mitigation areas located on the Sierra National Forest listed below:

- Performed USFS Protocol-level Dawn Acoustical Surveys for northern goshawks (*Accipiter gentilis*).

- Conducted nighttime protocol-level acoustical surveys of great grey owls (*Strix nebulosa*) and spotted owls (*Strix occidentalis*).
- Conducted protocol-level surveys for forest carnivores with baited camera stations
- Participated in visual surveys of bald eagle nests at Bass Lake (*Haliaeetus leucocephalus*)
- Conducted surveys for nesting birds and roosting bats within project area.
- Conducted visual encounter surveys for foothill yellow-legged frogs (*Rana boylei*) in all suitable habitat located near the Crane Valley Dam site including portions of Willow Creek, and several small unnamed drainages.
- Conducted cliff swallow (*Petrochelidon pyrrhonota*) surveys to ensure exclusion netting placed on the powerhouse structure prevented nesting. (2010 to 2012)

California Department of Transportation—Conway Summit Sand Shed Construction Project

Conducted cliff swallow surveys on SR 395, Conway summit in Mono County to ensure that cliff swallow nests are not established in the project area (2010)

California Department of Fish and Game—Bridgeport, California

Field Technician

- Conducted Field research to locate and document occurrences of State Listed Sierra Nevada red fox (*Vulpes vulpes necator*) along the eastern Sierra Nevada Mountains.
- Conducted remote station surveys from snowmobile and/or snowshoes to place baited stations with infrared remote cameras, track plates, and hair snares.

California Department of Fish and Game & University of Idaho—Bishop, California

Field Technician

- Used direct observation radio telemetry to independently locate sage grouse (*Centrocercus urophasianus*) in mountainous terrain as part of a DFG study.
- Searched for greater sage grouse nests to monitor reproduction and enable the later capture of chicks.
- Captured and PIT tagged greater sage grouse chicks.
- Captured, banded, radio-collared and extracted blood samples from greater sage grouse in accordance with DFG trapping and handling protocols.
- Performed winter monitoring of greater sage grouse in the eastern Sierra using snowshoes, cross country skis and snowmobiles to obtain locations.

California Department of Fish and Game & US Forest Service —Bishop, California

Field Technician

- Searched for sooty grouse (*Dendragapus fuliginosus*) breeding grounds in winter and spring conditions in the Sierra Nevada.

- Searched for sooty grouse nests and brooding areas as part of a team.
- Applied experimental capture and survey methods to Sierra Nevada sooty grouse.
- Monitored sooty grouse breeding behavior.
- Performed line-transects and canopy analysis in sooty grouse seasonal habitats.

Volunteer Field Biologist — California Department of Fish and Game—Bishop, California

- (2003 – 2007) Assisted as a volunteer during a routine DFG capture program of mule deer (*Odocoileus hemionus*) and conducted visual surveys of both mule deer and Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*) populations.
- (2004 – 2007) Assisted with the collection of tissue samples from harvested mule deer as part of a Chronic Wasting Disease surveillance program.

DALE POOLEY

Project Manager/Regulatory Compliance Specialist

Dale Pooley is an environmental planner, scientist, and CEQA/NEPA compliance and permitting specialist. He has several years of environmental science experience with multiple years of consulting in regulatory permitting, NEPA/CEQA documentation, and environmental compliance. Dale's expertise includes resource management and assessment, field biology, wetlands ecology, environmental assessment, public outreach, and natural resources conflict resolution.

Key Skills

Resource Management and Assessment. Dale has experience and specialized training in the tools and techniques used for land, water, plant and wildlife assessment, and the mechanisms for incorporating resource assessment data into resource management decisions. He has competency in the principles and practices of managing natural resources both in public and private lands, as well as urban-wildland interface areas, including fire ecology, wetland ecology, forest ecosystems, air quality, water quality, erosion prevention and abatement, threatened and endangered species, exotic species control, and hazardous materials.

Regulatory Permitting. Dale has extensive experience in the preparation of environmental documents and regulatory permits in accordance with federal, state, and local regulations including Sections 401, 402, and 404 of the federal CWA, both federal and state ESAs, and California Fish and Game Code Sections 1600–1616. He regularly consults with regulatory agencies such as the Corps, State Water Resources Control Board and various RWQCBs, USFWS, NOAA Fisheries Service, and U.S. Forest Service and Department of Agriculture, and California DFG, and serving as agency-public liaison. Dale is managing projects with regulatory compliance needs and coordinating production and submittal of environmental documents and permitting packages to regulatory agencies for large construction, restoration, and water resource projects.

Environmental Impact Assessment. Dale has expertise in the legislative/ judicial history and current implementation of NEPA and CEQA. He performs analysis and prepares impact

Years of Experience

- Professional start date: 05/1992
- ICF start date: 07/2009

Education

- MS, Environmental Management, University of San Francisco, 2001
- BS, Natural Resources Planning and Interpretation, Humboldt State University, 1993

Professional Memberships

- Association of Environmental Professionals
-

assessments and compliance documentation for development and regulatory projects.

Natural Resources Conflict Resolution. Dale has experience and training in complex natural resource disputes, planning culturally appropriate and inclusive public participation processes, meeting facilitation, and conflict mediation.

Project Experience

Transportation—Roads, Bridges, and Highways

Bon Air Road Bridge Replacement Project—City of Larkspur, California

Served as regulatory compliance specialist. Prepared regulatory permit application packages, including a Practicable Alternatives Analysis requested by the San Francisco Bay Regional Water Quality Control Board under California Water Code §§ 13000-14958 to support CWA § 401 Water Quality Certification, for the replacement of a structurally deficient bridge which is a critical component of a major thoroughfare in Marin County, California.

Interstate 5—Deschutes Road/Factory Outlets Drive Interchange Improvements Project—City of Anderson, California

Served as biologist and permitting project manager/agency liaison. While employed with PMC, managed the regulatory permitting effort for proposed Interstate highway and urban surface road interchange improvements project. Prepared a NES, BA, wetland delineation, and rare plant surveys. Identified the rare fox sedge (*Carex vulpinoidea*) as occurring on site and submitted the data to the CNDDDB.

Morning Drive/SR-178 Interchange Project—Caltrans, Bakersfield, California

Served as biologist. While employed with PMC, performed a BA, NES, wetland delineation, rare plant and special-status wildlife surveys, and CEQA documentation for a proposed a highway widening and new interchange project which was a component of State Project No. 060C9408L.

Environmental Support Services for Transportation Improvement (Contracts No. 03A1317 and No. 03A1573)—Caltrans Districts 1, 2, and 3, California

Served as regulatory compliance specialist/biologist. Providing on-call biologist and regulatory permitting services for various District 1 projects. Duties include teaming with an on-site employee working out of the District 1 offices in Eureka; on-site meetings

with District 1 project managers, engineers, and other staff; coordinating and managing wetland delineations, biological analyses, regulatory permit application processing, mitigation and monitoring proposals and reports, and serving as regulatory agency liaison. Successfully oversaw the largest highway culvert replacement project ever to receive a water quality certification through the North Coast RWQCB.

Smoot Sink Storm Damage Repair—Caltrans, North Region, Mendocino County, California

Served as task order manager and regulatory compliance specialist. A complex landslide attenuation project with wildlife, anadromous fisheries, and rare plant ESA compliance issues. Managed the production of NES, two BAs, an MMP, and regulatory permitting under the federal CWA 404 and 401 and California Fish and Game Code 1602.

NEPA/CEQA Compliance and Regulatory Permitting Feasibility Study—PacifiCorp, Siskiyou County, California

Served as environmental planner. While employed with CH2M HILL, conducted feasibility study and alternatives analysis for a proposed bridge replacement over the Klamath River, near the Oregon border.

Vann Street Construction Project—City of Williams, California

Served as project manager and agency liaison. While employed with Foothill Associates, managed and produced a full biological resources assessment and permitting effort for a road crossing over Corps jurisdictional waters and successfully secured a Corps Nationwide Permit 14, DFG streambed alteration agreement, RWQCB Section 401 water quality certification, and wetland mitigation bank habitat credits purchase.

Farmers Lane—Highway 12/Hoen Frontage Road Partial Interchange—Caltrans and FHWA, Santa Rosa, California

Served as environmental planner. While employed with CH2M HILL, provided environmental documentation and permitting support for this highway construction project. Successfully resolved an eleventh-hour issue of isolated wetlands features discovered subsequent to the initial environmental review through consultation with the Corps. Wrote the NES for the Caltrans component of the environmental documentation. Completed NEPA/CEQA documentation and initiated CWA Sections 404 and 401 permit applications. Provided technical support for a conceptual mitigation/replanting plan. Wrote and implemented the health and safety plan for aerially deposited lead investigations,

and performed field reconnaissance to assist the visual impacts subcontractor.

Hyampom Road (CA FH 114)—FHWA, Central Federal Lands Highway Division, Trinity County, California

While employed with CH2M HILL, acted as task lead for the preparation of floodplains evaluation and supporting biological impact assessment for proposed improvements to California Forest Highway 114, Hyampom Road. Addressed many special-status fisheries, wildlife, plant issues of concern, and watershed-wide South Fork Trinity River TMDL.

Parks, Trails, and Open Space

Regional Red Sesbania Mapping and Control—California Department of Food and Agriculture/Ducks Unlimited, Redding, California

Served as project manager. Managed local eradication effort of a statewide invasive exotic plant mapping and control project made possible through an ARRA “federal stimulus” grant. A statewide inventory of the plant’s extent of infestation was undertaken in the first year of the grant, and a targeted effort to eradicate the infestation was conducted during the second year on Churn Creek in Shasta County, California. Western Shasta Resource Conservation District was engaged to remove the biomass and volunteer trained to monitor the creek in the future for resprouts and emerging seedlings. This type of community partnership is vital in maintaining long-term control over a highly invasive plant.

Water

Baldwin Creek Flow Augmentation and Fish Barrier Project—U.S. Bureau of Reclamation, Shasta and Tehama Counties, California

Served as regulatory compliance specialist. Prepared CWA § 404 Individual Permit (Letter of Permission) application, including a §404(b)(1) alternatives analysis, for a component of the Battle Creek Salmon and Steelhead Restoration Project, which will reestablish prime salmon and steelhead habitat on Battle Creek while minimizing the loss of renewable energy produced by the Battle Creek Hydroelectric Project, owned and operated by PG&E and licensed by FERC. Once complete, the project will be among the largest cold water anadromous fish restoration efforts in North America, restoring approximately 42 miles of habitat in Battle Creek, a tributary to the Sacramento River, and an additional six miles of habitat in tributaries to Battle Creek.

Roseville Creek and Riparian Management and Restoration Plan—City of Roseville, California

Served as environmental planner. While employed with Foothill Associates, wrote a programmatic IS/MND for a management and restoration plan of a municipality's 38 miles of creeks. The plan serves to characterize the condition of the City's riparian habitat and creek channels and to develop a comprehensive approach to preservation, restoration and community-based stewardship for these resources.

Land Use Planning

Rocklin General Plan Update—City of Rocklin, California

Served as biologist. While employed with PMC, prepared biological resources section for the City of Rocklin's general plan update.

Publications

Pooley, Dale. "EPA and USACE Issue Draft Guidance Identifying Waters Protected by the Clean Water Act." Thinking Forward. ICF International. July 25, 2011.

Pooley, Dale S. Wetland science in an evolving world and regulatory climate. Presentation to Society of Wetland Scientists, Western Chapter: Annual chapter meeting. Tiburon, California. 2002.

Pooley, Dale S. "The future of wetlands regulation in the wake of the SWANCC decision." Environmental Monitor. 2002.

Pooley, Dale S. "The future of wetlands regulation under the Clean Water acts". Russian River Bulletin. 5 (3). 2001.

Employment History

PMC. Senior Biologist. Chico, California. 02/2008–02/2009.

Foothill Associates. Regulatory/Resource Assessment Specialist, Project Manager. Chico, California. 11/2004–11/2007.

Robertson-Bryan Inc. Project Scientist. Elk Grove, California. 07/2004–11/2004.

CH2M HILL, Inc. Environmental Planner. Oakland and Redding, California. 08/2000–07/2004.

DANIEL CARDOZA

Regulatory Specialist

Daniel Cardoza is an environmental regulatory specialist who has experience with Sections 401 and 404 of the CWA, Section 1600 of the California Fish and Game Code, the state and federal ESAs, and jurisdictional delineations. As regulatory specialist, he conducts field delineations, prepares jurisdictional delineation reports, and prepares permit applications. Daniel brings a strong analytical skillset, the ability to work independently or as a team, and maintains attention to detail while still remaining organized and efficient.

Key Skills

Wetland Delineation and Permitting. Daniel assists clients in complying with the CWA Section 404 permitting process, including CWA 401 water quality certifications, 1602 streambed alteration agreements, and other state and local regulations relating to jurisdictional waterways.

Vegetation Mapping. Daniel's experience includes conducting field surveys and preparing GIS-based maps for various vegetation mapping projects, with a specific focus on southern California plant communities.

Project Experience

Transportation—Roads, Bridges, and Highways

Cajalco Road Expansion—Riverside County Transportation Department, Corona, California

Served as delineator. The project involved delineating aquatic resources over a four-month period to prepare for the widening of a 15-mile segment of a high-traffic arterial road.

Years of Experience

- Professional start date: 06/2008
- ICF start date: 05/2011

Education

- MS, Environmental Studies (emphasis in Environmental Policy and Planning), California State University, Fullerton, 2011
- BA, Environmental Science and Policy (minor in Geography), California State University, Long Beach, 2009

Training

- 40-hour Wetland Delineation Training Course
 - UC Davis CWA Section 404 Permitting Course
 - California Rapid Assessment Method (CRAM) Riverine Practitioner
 - California Native Plant Society (CNPS) Vegetation Assessment Methods
-

**Repair of Lenwood Road at the Mojave River Project—County of San Bernardino
Department of Public Works, Community of Lenwood, California**

Served as delineator and regulatory specialist. The project involved a routine-level jurisdictional delineation at a bridge crossing over the Mojave River. Assisted with the preparation of permit applications for a 404 nationwide permit, 401 water quality certification, and 1602 streambed alteration agreement.

**SR-210/Pepper Avenue Interchange Project—San Bernardino Associated Governments,
Rialto, California**

Served as delineator and regulatory specialist. The project involves the construction of a new interchange between SR-210 and Pepper Avenue. Conducted jurisdictional delineation and assisted with the jurisdictional delineation and 401/404/1602 permit applications.

Meadowpass Road Mitigation Monitoring—City of Walnut, California

Served as regulatory specialist. Conducted photo point monitoring for an ongoing mitigation monitoring project.

Repair of 2nd Street Bridge at Warm Creek—AECOM, San Bernardino, California

Served as regulatory specialist. Provided client coordination and regulatory support for the preparation of the jurisdictional delineation report, jurisdictional delineation, CWA 401 and 404 permit applications, and streambed alteration agreement notification.

**Repair of Old Waterman Canyon Road Bridge—AECOM, San Bernardino County,
California**

Served as regulatory specialist. Provided regulatory support for the preparation of the jurisdictional delineation report, jurisdictional delineation, CWA 401 and 404 permit applications, and streambed alteration agreement notification.

Water

**Feather River West Levee Project—Sutter Butte Flood Control Agency, Yolo County,
California**

Served as regulatory specialist. Provided regulatory support for 1602 streambed alteration agreement application.

**Whitewater River Stormwater Channel and Coachella Valley Stormwater Channel JD—
Coachella Valley Water District, California**

Served as delineator. The proposed project is to identify areas under the Corps, EPA, State Water Board, and DFG jurisdiction, for the purpose of obtaining a CWA 404 regional general permit, CWA 401 permit, and DFG streambed alteration agreement for routine O&M activities within the Whitewater River Stormwater Channel and Coachella Valley Stormwater Channel. Assisted with the jurisdictional delineation of approximately 55 river-miles on an aggressive schedule.

Sand/Upper Warm Creek Confluence Project—County of San Bernardino Department of Public Works, Highland, California

Serves as delineator. The proposed project is to reconfigure the existing Sand/Upper Warm Creek confluence for flood protection purposes. Conducted a routine-level jurisdictional delineation.

Water Conservation Programs—Long Beach Water Department, California

Created and implemented water conservation programs to meet BMP targets. Work included research, program design, public interaction, grant writing, financial reporting, and fieldwork.

Conservation Planning

East Contra Costa County HCP/NCCP Programmatic 401—East Contra Costa County, California

Served as regulatory specialist. Assisted with the development of a programmatic 401 water quality certification to align with the existing Regional General Permit and HCP/NCCP guidelines in coordination with multiple Regional Water Quality Control Boards and the State Water Resources Control Board.

Santa Clara County HCP/NCCP Regional General Permit—Santa Clara County, California

Served as regulatory specialist. Assisted with the development of a CWA 404 Regional General Permit and programmatic 401 water quality certification in coordination with the Regional Water Quality Control Board and the U.S. Army Corps of Engineers.

Orange County Transportation Authority HCP/NCCP—OCTA, California

Served as regulatory specialist. Provided regulatory support for the preparation of the jurisdictional delineation report and multiple jurisdictional delineations. The project involved delineating aquatic resources for 13 linear transportation projects and creating programmatic 401/404/1602 permits.

Environmental Training and Lecturing

Cardoza, Daniel. Coastal Sage Scrub Plant Primer. Geosciences Diversity Enhancement Program. Long Beach, California. 2009.

Employment History

ICF International. Regulatory Specialist. Irvine, California. 05/2011–Present.

Long Beach Water Department. Water Conservation. Long Beach, California. 08/2009–05/2011.

California State University, Long Beach. Geoscience Diversity Enhancement Program Research Assistant. Long Beach, California. 06/2009–08/2009.

Palos Verdes Peninsula Land Conservancy. Field Intern. Palos Verdes, California. 02/2009–06/2009.

Koke`e Resource Conservation Program. Summer Field Intern. Kaua`i, Hawai`i . 06/2008–08/2008.

AUNDREA ASBELL

Wildlife Biologist/Invertebrate Specialist

Aundrea has twelve years of experience as an invertebrate specialist and laboratory manager. Her research position utilized her technical aptitude to conduct sediment and water toxicity testing for pyrethroid insecticides using the freshwater amphipod *Hyalella azteca* for numerous projects throughout California's Central Valley and beyond. Her work as an invertebrate ecologist included surveys for listed fairy and tadpole shrimp species, valley elderberry longhorn beetle and butterflies tracked by the Nevada Natural Heritage Program. She has conducted benthic macroinvertebrate (BMI) bioassessment and has extensive experience in taxonomic identification of freshwater invertebrates. Her skills also include identification of botanical resources and proficiency in the use of Google Earth. Her duties as lab manager included supervising undergraduate and temporary lab assistants, ordering and organization of supplies, implementing university policies on maintaining chemical inventories and managing hazardous materials waste.

Key Skills

Invertebrate identification. In-field identification of listed fairy and tadpole shrimps, order and/or family level identification of many terrestrial and aquatic groups. Extensive experience with taxonomic keys to freshwater aquatic invertebrates.

Field experience. Capable hiker in varied terrain, off-road driving experience, orienting and navigation with maps, and habitat mapping with GPS. Identification of vertebrate groups assisted with field guides and use of the Jepson Manual for keying plants.

Project Experience

UC Berkeley, Weston Laboratory—Richmond, California

Staff Research Associate III in Environmental Toxicology Lab

Responsibilities applicable to most projects include:

- Pre-field reconnaissance of sample sites using Google Earth and CA, OR and WA state gazetteers
- Collection of water and sediment environmental samples

Years of Experience

- Professional start date: 08/2000
- ICF start date: 04/2013

Education

- BS, Entomology, University of California Davis, 2000

Special Training and Professional Development

- Forest Benthic Macroinvertebrate Bioassessment Workshop, Shasta Junior College, October 2000
- California Fairy Shrimp Biology and Taxonomy, Denton Belk, Ph.D., February 2001
- Field Botany, Sacramento City College, May 2001
- Freshwater Crustacea of Western North America Workshop, California Aquatic Macroinvertebrate Laboratory Network, November 2005
- The Dytiscidae of California Workshop, California Aquatic Macroinvertebrate Laboratory Network, November 2005
- The Fall Birds of Northern California, UC Davis Extension, December 2010
- 51 Families in the Field, Jepson Herbarium, April 2011
- The Spring Birds of Northern California, UC Davis Extension, June 2011
- Bees and Pollination Ecology of Spring Wildflowers, Jepson Herbarium, June 2012

Comment [AA1]: Steve – Do you want to keep this as part of my title since I don't have much vertebrate experience?



- Toxicity testing using *Hyalella azteca* in either water or sediment matrices
- Determinations of lethal concentration₅₀ for various compounds in either water or sediment matrices
- Liquid:liquid chemical extraction of water samples for analysis in a gas chromatograph
- Use of Comprehensive Environmental Toxicity Information System (CETIS) software package to run statistical tests

Projects performed in this role include:

- Modified in situ toxicity testing at the Lower American River during storm events using standard test invertebrates, wild-collected aquatic insects representing fish-prey species, and Nimbus hatchery-raised juvenile fishes (steelhead and Chinook salmon). Study aimed to assess whether insecticides in runoff cause acute toxicity to salmon prey species and endocrine changes in juvenile fishes. Collected live aquatic insects for testing using a litter bag substrate technique.
- Investigation of intermittent paralysis of the water flea *Ceriodaphnia dubia* exhibited when exposed to San Jose/Santa Clara Water Pollution Control Plant final effluent. Analyzed data and drafted report to plant toxicologist.
- Investigation of toxicogenetic variation in cultured and wild populations of the *H. azteca* species complex. Study aimed to characterize insecticide resistance in wild *Hyalella* spp. populations. Collect live amphipods for toxicity testing and propagated wild-collected populations for F1 test animals. Prepared amphipod tissue samples for genetic analysis.
- Investigation of pyrethroid insecticide sources to Cache Slough. Study aimed to assess the impact of pyrethroids in runoff to the zooplankton community forming the prey base for the endangered delta smelt. Assisted in zooplankton tows and analyzed samples. Drafted journal publication and managed Surface Water Ambient Monitoring Program (SWAMP) data reporting.
- Study of pyrethroid insecticides in municipal wastewater to assess sources, treatment effectiveness, effluent quality and receiving water monitoring.
- Study of pyrethroid insecticides in urban salmon streams in the Pacific Northwest. Study aimed to characterize sediment-associated pyrethroids in salmon spawning and rearing habitat extant in urban and suburban land uses. Drafted journal publication.
- Investigation of sources of pyrethroid insecticides to the Sacramento-San Joaquin River Delta including agricultural drains, stormwater inputs and wastewater treatment plant effluent, and compare to the receiving waters of the Sacramento and San Joaquin Rivers. Drafted quality assurance project plan (QAPP) and managed SWAMP data reporting.
- Evaluate sediment toxicity potential of eleven non-pyrethroid pesticides with high use in the San Joaquin Basin. Cooperated with agricultural coalitions to collect and screen samples with known toxicity but unknown toxicant. Drafted reports of findings to participating coalitions.
- USGS-UC Berkeley study of transport processes of pyrethroid insecticides in streams and rivers of the San Joaquin Basin. Study aimed to characterize pyrethroids in



sediments of streams receiving agricultural discharge. Performed grain-size analysis of sediment samples and drafted report of findings to USGS.

- Evaluation of best management practices to mitigate off-site transport of agriculturally applied pesticides. Field trials conducted in Salinas, Davis and Chico, representing different crop and planting conditions. Management practices evaluated included sediment traps and vegetated ditches for tailwater discharge and polyacrylamide (PAM) applications to control soil erosion. Used continuous-flow centrifugation to collect suspended sediment samples for chemical analysis.

Invertebrate Ecologist Jones & Stokes — Sacramento, California

Middle Kyle Canyon Complex—U.S.D.A. Forest Service, Clark County, Nevada

Conducted focused surveys for Spring Mountains butterfly species of concern. Surveys were conducted weekly during butterfly flight periods, late spring through summer, for monitoring years 2006 and 2007. Identified butterfly voucher specimens from 2006 surveys. Surveys were conducted to assess the baseline condition of biological resources for the proposed Spring Mountains National Recreation Area improvement project.

Oak Canyon Ranch Residential Development—Copperopolis, Calaveras County, California

Conducted dry-season sampling at 20 pools and protocol-level wet-season survey at 30 pools for listed fairy and tadpole shrimps. Assisted with site assessment for California Red-legged Frog (*Rana aurora draytonii*) on Littlejohn and Sawmill Creeks. Surveys were conducted to fulfill requirements to obtain regulatory permits for the project.

Altamont Water Treatment Plant and Pipeline —Black and Veatch/Zone 7 Water Agency, Alameda County, California

Conducted protocol-level wet-season survey and dry-season sampling for listed fairy and tadpole shrimps at 13 seasonal pools, two roadside ditches and an alkali wetland. Observed California Tiger Salamander individuals (larvae and one adult) while conducting the wet-season fairy and tadpole shrimp surveys. Surveys were conducted to fulfill requirements to obtain state and federal permits for the project.

Edenbridge McCoy Transit Village in Fairfield, Solano County, California

Conducted protocol-level wet-season surveys for listed fairy and tadpole shrimps at more than 200 pools. Surveys were conducted to establish baseline conditions for the proposed mixed-use development project; approximately half of the site's 400 acres were planned for mitigation banking of listed vernal pool species.

Water Quality/Aquatic Resources Monitoring for Ralston Afterbay Sediment Management—Placer County Water Agency, Foresthill, California

Performed high-gradient stream bioassessment on the Rubicon River and Middle Fork of the American River (MFAR), upstream and downstream of Ralston Afterbay. Performed taxonomic analysis of BMI samples for monitoring years 2001, 2002, 2004, and 2005. Data were included in the monitoring program report to ensure compliance with established water quality objectives

of the sediment management project, and evaluate the potential project effects on aquatic habitat and benthic invertebrates downstream of Ralston Dam.

Bioassessment Monitoring for City of Stockton and County of San Joaquin NPDES permits—Stockton, California

Performed low-gradient bioassessment in the Stockton Urbanized Area (SUA) on Mosher Slough, Smith Canal, Stockton Diversion Canal-Calaveras River, and Duck Creek-Walker Slough. Processed BMI samples and performed taxonomic analyses for monitoring years 2004 and 2005. Monitoring data were used to detect biological trends in the SUA receiving waters and to support the development of an Index of Biological Integrity (IBI).

Bioassessment Monitoring for the Port of Stockton NPDES permit – Stockton, California

Processed and performed taxonomic analysis of Hester-Dendy artificial substrate samples from intertidal sloughs and estuarine sites within the Port of Stockton including the Deep Water Ship Channel, the San Joaquin River, Burns Cutoff and West Complex Slough for monitoring year 2005. Monitoring data were used to detect biological trends in the receiving waters of the Port of Stockton and support the development of an IBI.

Lower Northwest Interceptor Program—Sacramento Regional County Sanitation District, Sacramento, California

Performed construction monitoring of biological resources within the Lower Northwest Interceptor temporary construction easement. Observed a single, live, male Valley Elderberry Longhorn Beetle (VELB), a federally threatened species, while conducting an elderberry shrub assessment. Duties performed and information collected served to maintain construction contractors' compliance with federal, state, and local environmental regulations.

Camp Roberts Fairy Shrimp Protection—U.S. Army Corp of Engineers, Sacramento District, California

Conducted monitoring surveys for the vernal pool fairy shrimp (*Branchinecta lynchi*) at 60 pools at Camp Roberts. Monitoring was a condition of the California Army National Guard's biological opinion and commenced every October, November, December, or January, depending on rainfall, and continued through April beginning in 1998 until 2008. Performed monitoring surveys from 2001 through 2007.

San Francisquito Creek AHALFA—Northwest Hydraulic Consultants/Santa Clara Valley Water District, Palo Alto, California

Conducted high-gradient and spot-sampling bioassessment and BMI taxonomic analysis for the purpose of assessing food availability for juvenile salmon in San Francisquito and Los Trancos Creeks. Information was presented in a limiting factors analysis for the steelhead population in the San Francisquito Creek Watershed.

Farad Diversion Dam Replacement Project—Sierra Pacific Power Company, Floriston, Nevada County, California

Performed BMI analysis for point-source bioassessment samples from the Truckee River. The purpose of the bioassessment was to provide baseline information on biological conditions above and below the Farad Diversion Dam Replacement Project site. Construction was to occur

in 2006. Baseline data was intended for comparison to post-project conditions to ensure water quality impacts from sedimentation and erosion were less than significant.

Palermo, Rio Oso 115kV Reconductoring—Pacific Gas & Electric, Butte, Yuba, and Sutter Counties, California

Surveyed a 65-mile power transmission corridor to identify and map suitable habitat for listed fairy and tadpole shrimps. Information was used for impact analysis and to set avoidance measures for the project's Biological Assessment.

Kiefer Landfill Expansion Project—Sacramento County, Sacramento, California

Conducted monitoring surveys for listed fairy and tadpole shrimps to establish baseline conditions for 204 vernal pools at Keifer Landfill Wetland Preserve. The biological opinion issued for the Kiefer Landfill Expansion Project requires both short-term and long-term monitoring to evaluate the potential for adverse indirect effects that will exist through the lifetime of the landfill.

Martin Luther King, Jr. Regional Shoreline—East Bay Regional Parks District, Oakland, California

Conducted quantitative invertebrate sampling to evaluate the similarity between natural and restored intertidal marsh and seasonal wetland habitats for project sampling years 2001 and 2004. Examined freshwater and marine invertebrates and performed communities analyses.

Atlantic to Del Mar Underground Evaluation—Pacific Gas & Electric, Rocklin, California

Completed protocol-level fairy and tadpole shrimp surveys at 9 pools in Rocklin. The purpose of this project was to evaluate the feasibility of under-grounding a 1.2-mile segment of a proposed electric transmission line originally planned for construction above ground.

O'Neil to Flores Vernal Pool Surveys—BRG Consulting, Inc./Amtrak, Camp Pendleton, San Diego County, California

Conducted reconnaissance level wet-season and protocol dry season samplings of 30 and 18 vernal pools, respectively, along an Amtrak railroad right-of-way within the bounds of Camp Pendleton Marine Corps Base. Observed the San Diego fairy shrimp (*Branchinecta sandiegonensis*), a federally endangered species, during the wet-season survey. Amtrak proposed to add a second track between Control Point O'Neil and Control Point Flores. The purpose of the survey was to aid Amtrak in avoiding impacts to high quality fairy shrimp habitat and avoid or mitigate impacts to low quality habitat.

Valley Elderberry Longhorn Beetle Data Collection—Pacific Gas & Electric, Central Valley, California

Collected distribution information on VELB and its habitat from various federal, state, and local agencies; conservation organizations; researchers at universities; private firms and individuals. The information was compiled into an Access database, the purpose of which was to help determine where to focus compensation efforts for impacts on VELB throughout its range.

Bear River and Interceptor Levee Improvement—HDR/U.S. Bureau of Reclamation, Yuba County, California

Conducted elderberry shrub surveys for evidence of VELB habitation. More than 100 individual elderberry shrubs were searched for exit holes and adult VELB. In addition, a reconnaissance-level fairy and tadpole shrimp survey was conducted along designated segments of the levee. The information was included in the CEQA documentation for this project.

City of San Jose Stream Flow Augmentation—Tetra-Tech, California

Performed bioassessment of Coyote and Penitencia Creeks. Processed BMI samples and performed taxonomic analysis. The resulting information was used for baseline environmental studies, CEQA documentation, and regulatory permits.

Madera Ranch Groundwater Bank Project—Azurix, Madera, California

Conducted wet season sampling of existing pools for presence of listed fairy shrimp species. Survey results provided supporting information for environmental documents to obtain local, state, and federal permits for the project.

Biological Services for the Williams Ranch—George Allen Atherton, Knights Ferry, California

Collected and analyzed dry-season soil samples for listed branchiopod cysts. Assisted in identifying ecological functions and values for 530-acre parcel near Knights Ferry, California.

Bradshaw Interceptor Section 6A—Sacramento Regional County Sanitation District, Sacramento, California

Collected and analyzed dry-season soil samples for listed fairy and tadpole shrimp cysts. Data were included in environmental analysis for the Bradshaw 6A Interceptor in southern Sacramento County.

Mitigation, Site Planning, and Assessment for Runway Expansion—San Francisco International Airport, San Francisco County, California

Performed seasonal wetland mapping of potential mitigation areas adjacent to San Francisco Bay. The purpose of the project was to develop a detailed mitigation plan that offset impacts of runway expansion.

Publications

D.P. Weston, A.M. Asbell, S.A. Hecht, N.L. Scholz and M.J. Lydy. 2011. Pyrethroid insecticides in urban salmon streams of the Pacific Northwest. *Environmental Pollution* 159(10):3051-3056.

Employment History

Bohart Museum of Entomology, University of California, Davis. Post-graduate researcher. Davis, CA. June 2000–August 2000.

Bohart Museum of Entomology, University of California, Davis. Student assistant. Davis, CA. July 1999–June 2000.

2790 L.K. Wood Blvd. apt. A
Arcata CA. 95521

Phone (909) 725-7983
E-mail: Sbarlow33@gmail.com

Stephen Barlow

Education

B.S. Wildlife Management and Conservation Humboldt State University (HSU) (2008-2012)

Arcata, CA

A.S. Human Anatomy and Physiology Crafton Hills College (2006-2008)

Yucaipa, CA

Relevant Coursework

Raptors Management

Wetlands Management

Wildlife Diseases

Shorebird Management

CEQA / NEPA

Mammalogy

Ornithology

Wildlife Energetics

GIS

Clubs and Affiliations

North Coast Chapter of the Wildlife Society

President

2010-2011

Vice President

2009-2010

Wildlife Conclave Member

Extensive study of wildlife skins, skulls, songs/vocalizations

2008-2009

Job Experience

PRBO Conservation Science

Sacramento River, CA June - August 2012

State Endangered Bird Survey Technician: Yellow-billed Cuckoo (~ 40-hour work week)

Conducted call-playback surveys, vegetation assessments, and data entry. Transects were three kilometers, along dense riparian corridors of the Sacramento River.

University of Illinois

Fort Hood, TX Feb - May 2012

Endangered Species Monitoring, Nest Searching, and Banding (~ 48-hour work week)

Nest searched/monitored, target netted, color banded, color band re-sighted for federally endangered Golden-cheeked Warblers. Delineation of territories was necessary before target netting took place. I used multiple speakers for target netting male GCWAs. Extensive off-road driving along unmaintained trails.

University of Minnesota

Rice Lake National Wildlife Refuge, MN May - July 2011

Golden-winged Warbler Study

(~ 55-hour work week)

Mist netted and banded over 100 birds. Color banded and attached transmitters to adult and fledgling warblers. Collected ticks from banded birds for Lyme disease study. Nest searched, and target netted Golden-winged Warblers. Collected vegetation data for habitat in use by warblers for fledgling foraging, and nesting habitat. Radio tracked adults and fledglings through dense marshy habitat.

Montana Cooperative Wildlife Research Unit

Coconino National Forest, AZ May - July 2010

Nest Searching Technician

(~ 55-hour work week)

One-on-one training in nest searching with Dr. Tom Martin in high elevation (8000 ft.) forests. Nestling measurements taken from hatch date through fledge. Color band re-sighting of resident passerines. Several weeks of vegetation surveys cataloging plant species, densities, height, and DBH within a grid system. Living within a

remote tent camp in a high elevation ecosystem that was several hours from a paved road. Compass navigation within a pre-established study plot.

Missouri Ozark Forest Ecosystem Project

Ozark Mountains, MI May - July 2009

Point Counts, Spot Mapped, Bander in Charge

(~ 50-hour work week)

My work with the Missouri Ozark Forest Ecosystem Project (MOFEP) provided me with extensive experience conducting point counts and spot maps for over 40 different eastern migratory bird species. I was bander in charge during the banding portion of this project for my crew. Nest searches were an important aspect of this season as well as the ability to safely monitor nests. I navigated using compass, aerial photos, and GPS to locate permanent plots within a study forest.

Bureau of Reclamation

Sevilleta and Bosque Del Apache NWR, NM May - July 2008

Endangered Species Monitoring

(~ 50-hour work week)

I worked with the Bureau of Reclamation surveyed and nest searched for Southwestern Willow Flycatchers, and Yellow-billed Cuckoos. I also surveyed for Least Terns at Brantley Lake State Park. I target netted, radio tagged and used telemetry to track Yellow-billed Cuckoos. Watercraft use was required to reach remote segments along the Rio Grand River where the only mode of orienteering was with a hand compass, GPS, and aerial images. Long hours in hot, aired environments with many days spent as a pincushion in dense Russian Olive or army crawling through Salt Cedar.

Humboldt Bay Bird Observatory

Arcata, CA Intermittently Fall 2009 – Spring 2012

Volunteer Bird Bander, Area Search

(4-8 hours a week during migration)

Volunteering at HBBO has provided me a strong familiarity of MAPS protocol as well as provided me with experiences learning from visiting bird banders from all over the world. I now have several years experience with net extractions and bird processing. Banding at HBBO has taught me the value of accurate, meticulous data collection. I have acquired a working familiarity with using the Pyle guide to age and sex passerines. Provided experience working with over 40 different species of migrant/resident bird species of northwest California.

Interests

I maintain a highly active lifestyle throughout the year, running over 10 miles and biking approximately 40 miles a week. I am an avid hiker and backpacker. I rock climb both in the gym as well as outdoors. I am a birder and have traveled throughout the U.S. as well as within Central America.

Adrienne E. W. Levoy

18 Peter Coutts Circle, Palo Alto, CA

aelevoy@gmail.com

(650) 279-3265

EDUCATION: U.C. Berkeley National Society of Collegiate Scholars: 3.5 GPA 2004-2008

B.A. in Art, with a Minor in Conservation and Resource Studies (constructed to focus on sustaining wildlife populations through behavioral ecology). Helped write initial sustainability report and recommendations for the Chancellor's Advisory Committee. 40 units of biology coursework: Wildlife ecology, Animal Cognition, Behavioral Ecology and lab, Natural History of the Vertebrates, Biology, Statistics

RELEVANT WORK EXPERIENCE:

PRBO Conservation Science

Yellow-billed Cuckoo survey technician Chico, CA June-Aug 2012

Surveyed for the California state endangered Yellow-billed Cuckoo using playback. Walked a three km long transect through dense riparian forest, playing calls every 100 meters. Navigated using GPS, map and compass. Collected vegetation data.

University of Illinois

Endangered Species Nest Searcher/ Target Netter Ft. Hood, TX Feb-May 2012

Nest searched for and monitored nests of Federally endangered Golden-Cheeked warblers. Target-netted using playback, and color banded warblers. Re-sighted color bands and delineated territories. Extensive 4WD off-road navigation on unmaintained trails.

USFS Redwood Sciences Lab

Contracted Bander Humboldt Co., CA fall 2011

Ran USFS's banding sites in Six Rivers NF. Worked as head bander for the Humboldt Bay Bird Observatory, performed area searches. Primary data enterer for lab. Tested for and gained the North American Banding Council Trainer Level certification.

University of Minnesota

Banding and Radio tracking Rice Lake NWR., MN, summer 2011
(50 hour work week)

Color-banded and attached transmitters to adults and fledgling Golden Winged Warblers. Nest searched for warblers and tracked birds through dense marsh, collected vegetation data. Banded 100 birds and collected ticks for Lyme's disease study.

University of Maine

Crew Supervisor for banding station Acadia NP., ME, fall 2010
(54 hour work week)

Ran a high volume island migration station (100+ captures/day). Decided how many nets to safely run (usually 18) with one assistant. Aged, sexed, conducted measurements, took stable isotope feather samples, safely processed birds in approx. two min per bird. Precision-aged 80% of birds using Pyle's guide. Conducted 20-minute point count surveys twice during banding effort. Set up and ran acoustic recording station for migrating birds.

Tom Martin/ Montana Cooperative Wildlife Research Unit

Banding and target netting Coconino Nat. Forest, AZ, Summer 2010
(60 hour work week)

Carried 10 poles and hiked to a different plot each day to set up five nets alone. Choose net locations for optimal target netting of ground-nesting warblers (OCWA, RFWA). Bled and color-banded approx. 200 birds. Monitored nests every other day from lay to fledge and measured and bled nestlings. 20 hours of vegetation surveys. Remote tent living for two months of 10-day work weeks.

Missouri Ozark Forest Ecosystem Project

Spot Mapper and Head Bander Ozark Mountains, Missouri, Summer 2009
(50 hour work week)

Created spot maps for all observed birds in a one-mile square plot. Nest searched and monitored nests. Navigated a different plot each day using a compass, map and GPS. Worked as the head bander for a three-week effort, creating a new banding site with ten nets every other day.

Ohio State University (master's project assistant)

Tremealeau NWR, Wisconsin, Summer 2009

Radio Telemetry/ Target Netting

(60 hour work week)

Head bander for two target netting stations, planned and created target netting banding site with 5 nets in thick marsh veg., target-netted Yellow-Rumped warblers and Northern Water thrushes. Radio-tracked warblers through dense underbrush and deep marsh water, resighted color-banded warblers. Navigated using GPS, frequently radio-tracked for 14 hours/day.

Klamath Bird Observatory

Cascade Mountains, OR, Summer/fall 2008

Bird Banding Intern

(65 hour work week)

Assisted in data collection for five months of constant effort mist netting at 17 sites. Extracted and banded over 800 birds, conducted daily area searches. Trained six interns with no previous experience the basics of extraction and banding. Conducted one month of six km. kayak surveys for nesting black terns daily after banding, navigated using GPS through dense marsh grass.

ADDITIONAL WORK EXPERIENCE:

Naturalists At Large

Catalina isl. And other locations throughout California, fall 2009, spring 2010

Environmental Educator

(66 hour work week)

Traveled throughout California to lead outdoor programs focused on team-building, environmental consciousness, and natural history knowledge. Spent a month on Catalina Isl. Teaching groups of 16 middle and high school students a variety of subjects including ecology, botany, native peoples' history, sustainability, astronomy, and zoology. Instructed and led groups on hikes, snorkeling, ocean kayaking, ropes courses, and tide pooling. I was solely responsible for 12 students' safety, tone-setting, group boundaries and program activities.

Ducks Unlimited/SeaGrant

Invasive Eel grass removal technician

Humboldt Co., CA, Nov 2010-current

Assisted in study design for invasive eel grass (*Zostera japonica*) management program. Waded into knee deep inter-tidal mud in frequently rainy conditions.

Museum of Vertebrate Zoology

Specimen Preparation Volunteer

UC Berkeley, CA, 2007-2009

Prepared bird skeletons, skins, and tissue samples for the Museum of Vertebrate Zoology collection.

National Science Foundation

After School Environmental Science Teacher

Oakland CA, Spring 2008

Led science lessons twice weekly for 3rd-5th graders in marginalized communities in Oakland. Planned curriculum aimed at enhancing students' critical thinking skills and science research skills.

Golden Gate Audubon Society

Environmental Educator

Oakland, CA, Fall 2009

Assisted with inner-city class field trips to marshlands (ages 8-11) Led or co-led birding instruction, macro-invertebrate sampling and discussion, habitat restoration, discussions on environmental stewardship.

Sylvan Learning Center

After School English Teacher

Richmond, CA, 2004-2005

Taught reading and writing skills to non-English speaking third grade students in a low-income school district.

Humboldt Wildlife Care Center

Volunteer Wildlife Rehabilitation Technician

Arcata CA, 2010

Answered hot-line and accepted new patients. Administered medications and mixed food-formulas for brown pelicans, geese, passerines, corvids, grebes.

PERSONAL INTERESTS:

14 years experience wilderness backpacking (in the Sierras, Dolomites, Alps, and Poland). Kayaking, 10 years climbing, 14 years cross-country/downhill skiing, bike toured 600 miles. Maintain active lifestyle: practice yoga three times weekly, bike or run daily. Aspiring scientific illustrator; enjoy painting and drawing wildlife subjects.

CURRENT CERTIFICATIONS:

North American Banding Council trainer-level certification, banded approx. 2,000 birds

Previously Wilderness First Responder Certified (first aid and CPR) (expired dec 2011)

Defensive Driving Certification through National Safety Council for USGS

Dear Mr. Avery,

I am interested in working as an avian biologist with ICF. I have conducted bird surveys in eight states. In Missouri, I was responsible for accurately spot-mapping every bird's territory in a one-mile square plot using GPS. Texas, and Minnesota I performed territory mapping and point counts. During my work in Oregon, California, and Maine I was responsible for conducting two area searches daily. As a Bay Area Native and longtime California resident I am especially familiar with Northern California birds.

I have ten seasons of field experience working with birds. I have banded 2,000 birds and worked as a banding crew leader on seven projects. I have a trainer-level North American Banding Council certification for my ability to identify and band passerines.

For my most recent position, I conducted transect surveys along the Sacramento River for the state-endangered Yellow-billed Cuckoo. During these surveys I was able to identify all central valley birds by sight or sound. I also have five seasons of experience radio-tracking and resighting color banded birds from my work in Wisconsin, Minnesota, Texas and Arizona. I gained experience with operating Anabat and analyzing sonar data during an independent research project on bat foraging habitat preferences in Missouri.

After working with multiple projects, I recognize communication as being crucial to a successful season. I am well organized with my professional responsibilities. As you can see from my three years of teaching experience, I am a people-person. The eye-opening experiences I have gained from teaching help me respectfully interact with diverse personnel.

I graduated from Berkeley four years ago with a minor focused on sustaining bird populations and I am interested in gaining experience with an environmental consulting company. I hope that you will consider asking me to be part of your team.

I look forward to talking with you.

Respectfully yours,

Adrienne Levoy
Cell: 650.279.3265

MAGGIE TOWNSLEY

Project Director and Environmental Planner

Maggie Townsley is a project director with experience in the CEQA/NEPA compliance and impact analysis; land use planning and impact analysis; planning policy consistency assessment; environmental documentation; geological studies; and project management. She manages projects for CEQA and NEPA documents and related regulatory compliance documents for land use planning, transportation, wastewater, and water projects.

Project Experience

Transportation—Highways

Environmental Compliance Document for Elk Grove/Rancho Cordova/El Dorado Connector Project—Parsons Brinckerhoff, Sacramento County, California

Project Director. ICF is assisting the JPA with environmental documentation for the Capital SouthEast Connector Project, a proposed project to improve mobility throughout a corridor linking the cities of Elk Grove, Rancho Cordova, and Folsom and the communities of Franklin, Sheldon, and El Dorado Hills in Placer and Sacramento counties. Our work has included assisting the JPA and JPA Board of Directors with strategies for complying with CEQA and NEPA and federal permits. We have prepared a program EIR to allow the JPA Board to comply with CEQA and move forward with development of project specific components, while preserving right of way.

I-5/Cosumnes River Boulevard Interchange—Mark Thomas & Company/City of Sacramento, Sacramento, California

Principal-in-Charge for proposed extension of the existing Cosumnes River Boulevard to a new interchange with I-5 and new intersections at Franklin Boulevard and in the community of Freeport. ICF is preparing a full suite of Caltrans technical studies and an EIS/EIR for NEPA/CEQA compliance.

US-50/Hazel Avenue Interchange Project—Sacramento County, California

Project Coordinator for the EIR prepared for the US-50/Hazel Avenue Interchange project, which included improvement to the on- and off-ramps, right-of-way acquisition, and preconstruction surveys. Issues

Years of Experience

- Professional start date: Month/1988
- ICF start date: 09/1990

Education

- MS, Community and Regional Planning, University of Texas, Austin, 1990
- BS, Geological Sciences, University of Texas, Austin, 1988
- BA, French, University of Texas, Austin, 1988

Professional Memberships

- American Planning Association
 - American Association of Petroleum Geologists
-

analyzed included effects on access and adjacent land uses, biological resources, cultural resources, and air quality.

U.S. Highway 50/Ray Lawyer Drive Interchange Project IS/EA—El Dorado County, California

Project Manager for the IS/EA for the proposed U.S. Highway 50 (US 50)/Ray Lawyer Drive interchange project east of Placerville. Managed preparation of IS/EA and related permitting documents. Coordinated with Caltrans District 3, FHWA, El Dorado County, and Sacramento Area Association of Governments staff. Presented information at public hearings and assisted Caltrans and local agency staff in fielding questions from the public.

US-101/La Cumbre Road Interchange Project IS/EA—Santa Barbara County, California

Project Manager for the IS/EA and technical studies for the US 101/La Cumbre Road Interchange project east of the City of Santa Barbara. Coordinated with Caltrans District 5 and local government staff, including the City of Santa Barbara and the Santa Barbara County Association of Governments. Met with neighboring residents to address concerns, presented environmental conclusions at public hearings, and responded to questions raised by the public.

EA/IS for Construction of State Route 139—Lassen County (Caltrans District 2) Susanville, California

Project Manager for an IS/EA and biological survey report for the realignment of State Route 139 around Eagle Lake in Lassen County. Critical issues were potential impacts on water quality and biological resources, changes in access to recreation facilities, visual effects, and effects on wildfire suppression activities.

Transportation—Roads and Bridges

La Cumbre Road/US 101 Interchange Widening IS/EA—Caltrans, Tams Consultants, Inc., Santa Barbara County, California

Role/Title. Managed an IS/EA for an interchange of US 101 and La Cumbre Road in Santa Barbara County (Caltrans District 5). Addressed traffic, air quality, noise, and land use compatibility.

American River Bridge Crossing Project EIR/EIS—City of Folsom, California

Project Manager. Prepared EIR/EIS and Section 4(f) in compliance with both FHWA and U.S. Bureau of Reclamation NEPA guidelines. The environmental issues included land use, parklands, and relocation

concerns and potential impacts on cultural and biological resources. Special attention was given to the traffic, air quality, noise, water quality, and growth inducement issues, which are a major public concern. ICF prepared an alternatives analysis to satisfy Section 404(b)(1) of the CWA, a cultural resources report to comply with Section 106 of the NHPA, a biological assessment to comply with Section 7 of the ESA, and a separate Section 4(f) evaluation in accordance with FHWA requirements to evaluate the impacts of the proposed project on the American River Parkway and the historic Rainbow Bridge. The project also included an extensive public involvement component, including three public hearings, 10 special interest group meetings, many public agency meetings, a newsletter, press releases, and a video.

Auburn-Folsom Road Widening EIR/EA—Placer County/U.S. Bureau of Reclamation

Project Manager for an EIR/EA for the County's primary transportation corridor that connects the communities of Auburn, Rocklin, and Roseville, with Folsom and eastern Sacramento County. The proposed widening of this portion of Auburn-Folsom Road will reduce the current and anticipated congestion along this corridor as well as improve the roadway's operation and safety. The main topics analyzed include biological resources, cultural resources, air quality, noise, transportation, water quality and soils, and visual resources. Also assisted the County and Reclamation in preparing and implementing a community outreach program that targeted key stakeholders, agencies, and public groups with interest in the project.

Central City Two-Way Conversion Project Program EIR—City of Sacramento, California

Project Manager for technical analyses the City of Sacramento's traffic calming Two-Way Conversion Study program EIR. Project involves numerous traffic calming measures in Mid-town Sacramento, including Work to be performed includes air quality, noise, socioeconomics, and cultural resources.

LeisureTown Road Project Extension Project IS/EA—City of Vacaville, California

Project Manager for an IS/EA for a roadway extension project in Solano County sponsored by the City of Vacaville, Caltrans District 4, FHWA, and Solano Transportation Authority. Coordinated extensively with lead agencies and regulatory agencies to ensure successful completion of environmental review and permitting procedures. Prepared technical studies for each resource topic addressed in the IS/EA.

Peabody Road/Vanden Road/Cement Hill Road Intersection Improvement Project IS/EA—City of Fairfield, California

Project Manager for IS/EA for intersection improvement/road realignment project in unincorporated Solano County. Performed duties similar to the Leisure Town Road project for the City of Vacaville.

Watt Avenue Widening Project Permitting—Sacramento County, California

Project Manager for the permitting requirements for the Sacramento County Watt Avenue Widening project from US 50 to Fair Oaks Boulevard. Worked with Sacramento County and Caltrans staff to address permitting requirements for the proposed bridge-widening project. Assisted county staff in identifying relevant permit requirements for several resource topics including wetlands, endangered species, floodplain encroachment, and streambed alteration.

American River Bridge Crossing Project—City of Folsom, California

Project Coordinator for an EIR/EIS and Section 4(f) preparation. Coordinated with Caltrans, FHWA, and city staff in preparing the environmental documentation for the proposed project.

Employment History

University of Texas, Department of Geology. Field Geologist.

American Planning Association. Assistant Editor for the Environmental Planning Quarterly.

University of Texas, School of Architecture. Teaching and Research Assistant.