

**DOCKETED**

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**Before the Energy Resources Conservation and Development  
Commission of the State of California  
1516 Ninth Street, Sacramento, CA 95814  
1-800-822-6228 – [www.energy.ca.gov](http://www.energy.ca.gov)**

***APPLICATION FOR A SMALL POWER PLANT  
EXEMPTION FOR THE:***

**MCLAREN BACKUP GENERATING  
FACILITY PROJECT**

**Docket No. 17-SPPE-01**

## **MCLAREN EVIDENTIARY HEARING**

Declarations and resumes of Energy Commission Staff responsible for developing the technical sections of the Initial Study and responses to comments received on the Initial Study.

**DECLARATION OF  
Gerald R. Bemis**

I, Gerald R. Bemis, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as an Air Resources Supervisor I.
2. I reviewed and edited sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Air Quality/Public Health and Greenhouse Gases.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8-16-18

Signed: 

At: Sacramento, California

## DECLARATION OF GERALD BEMIS

I, Gerald Bemis, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as an Air Resources Supervisor I.
2. I prepared or reviewed sections of staff's response to comments on the Initial Study addressing Air Quality and Public Health.
3. It is my professional opinion that the prepared responses are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: August 15, 2018

Signed: G. Bemis

At: Sacramento, California

**GERALD R. (Gerry) BEMIS, PE**  
**Air Quality & Public Health Supervisor**

**Experience Summary**

Over forty years of experience in the energy field, including electric power plant facility siting, advanced electricity production technologies, regulatory compliance; energy research and development; energy transportation technology and policy and analysis of regulatory issues.

**Education**

B.S.; Civil Engineering (CSU Sacramento, 1969)  
M. Engr; Civil/Environmental Engineering (UC Davis, 1978).

Registered Professional Civil Engineer (California).

**Experience (at California Energy Commission)**

**2009-present** – Air Resources Supervisor in the Siting, Transmission and Environmental Protection Division. Supervises and leads the review and environmental evaluation of power plant and other proposals, identifies issues and resolutions; coordinates with other agencies; and reviews and prepares expert testimony in the areas of:

- Air quality impacts and mitigation;
- Public health impacts;
- Transmission Line Safety and Nuisance.

Coordinates with local air quality districts, the Air Resources Board (ARB) and U.S. Environmental Protection Agency (U.S. EPA).

**2001-2009** – Developed and updated the statewide California Greenhouse Gas (GHG) emissions inventory, including training ARB staff to take over responsibility for the GHG inventory as part of Assembly Bill 32 (in 2007). Developed a strategy to enable California's light-duty vehicle sector to do its "fair share" of GHG emissions reductions to meet a 2050 goal of reducing statewide GHGs 80 percent below 1990 levels.

**1994-2001** – Managed Fuel Resources Office. This consisted of a staff of 23 professionals who performed various activities related to fuel supply adequacy, including natural gas for power plants and petroleum for transportation.

**1991-1994** – Supervised Heavy-Duty Alternative Fuels Program. This group was responsible for the \$100 million Safe School Bus Program and provided funding for several clean fuel transportation technology research and grant activities.

**1982-1991** – Supervised or performed technical analyses and support for several activities, including the *Energy Technologies Status Report* used to document the commercial availability of advanced power plant technologies which were alternatives to conventional power plants during Energy Commission siting cases.

**1977-1982** – Power plant siting air quality reviews and analysis. Evaluated large thermal power plant siting proposals, coordinating with the U.S. EPA, ARB and local air quality districts.

**DECLARATION OF  
Edward James Brady**

I, Edward James Brady, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as a Mechanical Engineer.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Noise and Energy Resources.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: August 16, 2018

At: Sacramento, California

Signed: Edward James Brady



# **Edward James Brady**

## **Mechanical Engineer**

### Summary of Experience

Forty years of experience in the profession of mechanical engineering as a staff engineer to the California Energy Commission, engineering consultant, design group supervisor in a major power plant project, senior engineer for a gas and electric utility, sales and design engineer for a contractor, and instructor in a community college.

### Education

- BSME, Santa Clara University, 1972
- Graduate Engineering Studies, Santa Clara University
- Graduate Business Studies, University of San Francisco
- Continuing Education, UC Extension

### Professional Registration

- Mechanical Engineer      (M17924) California  
   (25505) Washington  
   (33082) Colorado  
   (9248, Inactive) Nevada
- Civil Engineer                (C36194) California

### Affiliations

- American Society of Mechanical Engineers (ASME), Member
- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), Member
- International Code Council (ICC), Member
- International Association of Plumbing and Mechanical Officials (IAPMO), Member
- National Fire Protection Association (NFPA), Member

## Curriculum Vitae

- 2011 – Present      **Staff Mechanical Engineer**, California Energy Commission, Siting, Transmission, and Environmental Protection Division (STEP). Performs analysis of generating capacity, reliability, efficiency, noise and vibration, and the mechanical, civil, electrical, and structural aspects of power plant siting and construction cases.
- 1988-2011      **Principal Mechanical Engineer**, Brady Engineering. Provided design and consulting services for the permitting and construction of industrial and commercial facilities, and residential buildings in the fields of heating, ventilating air conditioning (HVAC), plumbing, fire protection and energy analyses.
- 1984-1988      **Design Group Supervisor**, Joint PG&E and Bechtel Project. Worked as the mechanical group supervisor responsible for the design modifications required for the licensing of Diablo Canyon Power Plant, Units 1 and 2.
- 1980-1988      **Senior Mechanical Engineer**, PG&E Civil Engineering Department, Architectural Section. Provided work group supervision and design of building mechanical systems for common utility plant facilities (CUP) and balance of plant systems for power production facilities.
- 1977-1980      **Mechanical Engineer**, PG&E Civil Engineering Department, Architectural Section. Provided HVAC and plumbing design for CUP and power production facilities.
- 1974-1977      **Instructor**, San Francisco Community College District, John O'Connell Evening School. Provided apprenticeship training in the technical fields of HVAC and refrigeration.
- 1977      **Design Engineer**, Charles and Braun Consulting Engineers, San Francisco. Worked as a staff designer in the fields of HVAC and plumbing for commercial facilities include a sentence detention facilities and a proto-type regional facility for a federal agency.
- 1972-1976      **Sales and Design Engineer**, Scatena York Company, San Francisco. Worked as a sales and design engineer for a refrigeration contractor, which provided design and installation of refrigeration systems for supermarkets and cold storage facilities.



### Power Plant/Utility Experience

California Energy Commission, Rio Mesa Solar Electric Generation Station (RMSEGS).  
500 MW Solar Power Tower. Riverside County

, Hidden Hills Solar Electric Generating Station  
(HHSEGS). 500 MW Solar Power Tower. Inyo County.

, Hydrogen Energy California (HECA). 405 MW  
Combined Cycle, Fuel Gasification, CO<sub>2</sub> Sequestration,  
Ammonia Production. Kern County

, Quail Brush Generating Project (QBGP). 1100 MW  
Reciprocating Engine Electric Generation. City of San  
Diego

, Huntington Beach Energy Project (HBEP). 939 MW  
Combined Cycle. City of Huntington Beach.

, Redondo Beach Energy Project (RBEP). 496 MW  
Combined Cycle. City of Redondo Beach, Los Angeles  
County.

PG&E , Diablo Canyon Power Plant, Units 1 and 2. Licensing of safety related systems.  
, Diablo Canyon Power Plant, Administration Building, SLO County Emergency  
Response Building

, Geysers Power Plant, Units 16, 17, 20, and 21. Ventilation and cooling for  
turbine building and hazardous waste disposal facilities, administration building.

, Helms Pumped Storage Facility, Kern County. Smoke control ventilation for  
underground transformer vaults.

, Humboldt No. 3, Eureka. Decommissioning of nuclear facility and construction  
of hazardous materials storage and handling.

, Moss Landing Power Plants, Units 1 through 6, Monterey County

, Morro Bay Power Plant, Morro Bay

, Hunters Point Power Plant, San Francisco

, Potrero Power Plant, San Francisco. Combined Cycle

, Gas Transmission Facilities, Line 300 and 400, Topock and Corning Compressor Stations, McDonald Island and Brentwood Gas Storage Facilities

, Central Computer Facilities, San Francisco and Vacaville

, 77 Beale Street, San Francisco. Energy Management System

, 215 Market Street, San Francisco. Boiler Replacement

, Underground Fuel Tank Replacement. Upgrade of more than 500 gallon fuel storage tanks to meet double containment requirements.

, Contra Costa Power Plants, Unit 1 through 6, Water Treatment

, Pittsburg Power Plants, Unit 1-5, Water Treatment Facilities

, Avon, Martinez and Oleum (AVO), Water Treatment Upgrade

, Tiger Creek Powerhouse, North Fork Feather River

, Kirchoff No. 2 Pump Storage Facility.

, Technical Support Services, Marketing Department

South Bay Sanitary Authority, 1400 Radio Road, Redwood Shores. Gas piping and boiler conversion.

**DECLARATION OF  
Matthew Braun**

I, Matthew Braun, declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Office of the Siting, Transmission and Environmental Protection Division as a Planner II.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Cultural Resources.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8/20/2018  
At: Sacramento, California

Signed: Matthew Braun

**MATTHEW BRAUN**  
Cultural Resources Specialist

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**Academic Background**

MA, Anthropology (Archaeology), Northern Illinois University  
BS, Anthropology and Psychology, University of Pittsburgh

**Professional Experience**

Mr. Braun is a Secretary of the Interior qualified prehistoric archaeologist and cultural anthropologist. He has over 9 years of experience conducting archaeological field work, consulting with Native American groups, researching, analyzing, and writing about Native American concerns, archaeology, ethnohistory, anthropology, cultural and ethnographic landscapes and paleontology. Mr. Braun has experience preparing cultural resources technical reports and environmental documents pursuant to applicable federal, state and local regulations in compliance with the National Environmental Policy Act (NEPA), Section 106 and 110 of the National Historic Preservation Act (NHPA), and the California Environmental Quality Act (CEQA).

**California Energy Commission.....2014-present**

The California Energy Commission is the State Agency responsible for licensing energy facilities 50 megawatt and greater and environmental review is conducted under a CEQA-equivalent Certified Regulatory Program. As a Planner II, Mr. Braun provides independent analyses of prehistoric and ethnographic resources for proposed energy facilities throughout California by conducting fieldwork, report writing, and critical analysis of Applicant proposed impacts and mitigation measures. As a cultural resources analyst with the Energy Commission, Mr. Braun participated in the following projects:

- **Alamitos Generating Station.** Mr. Braun conducted analyses of impacts to ethnographic resources for this natural gas-fired power plant in Long Beach, California.
- **Carlsbad Energy Center Project.** Mr. Braun conducted analyses of impacts to ethnographic and archaeological resources for this natural-gas fired power plant in Carlsbad, California.
- **Argus Cogeneration Project.** Mr. Braun conducted analyses of impacts to ethnographic and archaeological resources from the decommissioning of this coal-fired powered plant in Trona, California.
- **Gateway Generating Station Power Project.** Mr. Braun oversaw portions of the compliance efforts of this natural gas-fired power plant in Antioch, California.
- **Puente Power Proejct.** Mr. Braun conducted analyses of impacts to ethnographic and archaeological resources for this natural-gas fired power plant in Oxnard, California.
- **Mission Rock Energy Center.** Mr. Braun conducted analyses of impacts to ethnographic and archaeological resources for this natural-gas fired power plant in Santa Paula, California.
- **Desert Renewable Energy Conservation Plan.** Mr. Braun conducted analyses of impacts to ethnographic and archaeological resources for this planning document for renewable energy in the California Desert.
- **Palmdale Energy Project.** Mr. Braun conducted analyses of impacts to ethnographic and archaeological resources for this natural-gas fired power plant in Palmdale, California.
- **Pomona Repower Project.** Mr. Braun conducted analyses of impacts to ethnographic and archaeological resources for this natural-gas fired power plant in Pomona, California.

Aspen Environmental Group.....2012-2014

California Energy Commission. Under contract with the CEC as an employee of Aspen, Mr. Braun participated in the following projects:

- **Rio Mesa Solar Electric Generating Facility, Cultural Resources Staff Assessment (2012-2013).** Mr. Braun conducted analyses of impacts to archaeological resources, ethnographic resources and ethnographic landscapes through fieldwork, archival research and interviews with local Native American tribal representatives from the area near the 3,960 acre 500 MW solar concentrating thermal plant located on the Palo Verde Mesa near Blythe, California. Important resource issues included impacts to trail systems, prehistoric archaeological sites, plant and animal resources, and other elements that are part of a Native American tribe's ethnographic landscape. This was a large, complex project, coordinated with other solar projects and with Native American representatives from the Fort Mojave Tribe, the Chemehuevi Tribe, the Colorado River Indian Tribes, the Agua Caliente Band of Cahuilla Indians, and the Fort Yuma Quechan Tribe.
- **Hydrogen Energy California, Cultural Resources Staff Assessment (HECA) (2012-present).** Mr. Braun conducted analyses of impacts to ethnographic resources and ethnographic landscapes through consultation with local Native American Tribal representatives and archival research of the area near the 453 acre 400 MW Integrated Gasification Combined Cycle (IGCC) power plant and associated linear facilities. Important resources include known and unknown burials, traditional gathering and hunting areas, and other ethnographic resources. This project was coordinated with the Department of Energy and Native American representatives from the Tejon Indian Tribe and the Tubatulabal of Kern County.
- **Palen Solar Electric Generating Facility, Cultural Resources Staff Assessment (2013).** Mr. Braun is conducting analyses of impacts to ethnographic resources through fieldwork, archival research and interviews with Native American tribal representatives from the area near the 3,794 acre concentrating solar thermal plant located near Desert Center, California. He is the lead author of the ethnographic technical report, and co-author to the Staff Assessment issued by the CEC. Important resource issues include impacts to cultural landscapes, components of which include trail systems, archaeological sites, plant and animal resources, rock art and earth figures, among intangible spiritual and religious values. This is a large, complex project coordinated with other solar projects and with Native American representatives from the Chemehuevi Tribe, Colorado River Indian Tribes, Fort Mojave Tribe, Fort Yuma Quechan Tribe, Cocopah Indian Tribe, Morongo Band of Cahuilla Indians, San Manuel Band of Mission Indians, Agua Caliente Band of Cahuilla Indians, Cabazon Band of Mission Indians, and Soboba Band of Luiseño Indians.
- **Desert Renewable Energy Conservation Plan, southern CA desert (DRECP) (2013-present).** The goal of this planning project is to generate an efficient and effective biological mitigation and conservation program providing renewable project developers with permit timing and cost certainty under the federal and California Endangered Species Acts while at the same time preserving, restoring and enhancing natural communities and related ecosystems. The DRECP Plan Area consists of approximately 22.5 million acres of federal and non-federal California desert land in Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego counties. Mr. Braun is an author of the Cultural Resources and Tribal Interest chapters of the associated EIR/EIS (BLM and CEC lead agencies).
- **Genesis Solar Energy Project, Cultural Resources Compliance (2010-2014).** Mr. Braun reviewed all of the licensees' submittals and actions related to compliance with cultural resources conditions of certification and providing recommendations to staff regarding acceptability. The GSEP is a large, complex project for which cultural resources compliance review has been coordinated with other



solar projects, with BLM as the federal lead agency, and with local Native American tribal representatives. This effort included reviewing more than 3100 daily monitoring logs, 30 monthly compliance reports, and more than 950 DPR forms associated with the collection of more than 2700 artifacts.

**Western Power Administration, Desert Southwest Region.** Under contract with WAPA as an employee of Aspen, Mr. Braun participated in the following project:

- **Parker-Blythe Transmission Line 1 & 2, Cultural Resources Survey (2014).** Mr. Braun co-led an archaeological field crew in re-recording 56 archaeological sites, and providing recommendations concerning the NRHP eligibility of these resources. Important resources included trails, lithic scatters, petroglyphs, intaglios, ceramics, and cleared circles. The transmission line is located on land managed by the Colorado River Indian Tribes, several different BLM field offices, and the BOR, and this project required coordination for permits and fieldwork.

#### **Other California projects**

- **Renewable Energy General Plan Amendment, Opportunities and Constraints Study (2013-present).** Inyo County is proposing to amend their General Plan to designate some lands for renewable energy development. As part of this amendment, an Opportunities and Constraints Technical Study was conducted to identify areas of the County that would be less likely to impact cultural resources. Mr. Braun worked closely with GIS specialists to construct cultural resources sensitivity maps to identify those less sensitive areas.
- **California Valley Solar Ranch, Cultural and Paleontological Resources Compliance (2012-2013).** The CVSR project is a 250 MW solar photovoltaic power plant on the Carrizo Plain in rural San Luis Obispo County. The solar arrays for the project will cover nearly 2,000 acres. Mr. Braun served as an assistant technical reviewer for cultural resources and paleontology during the compliance process. Duties included the review of licensees' submittals and actions related to compliance with cultural resources and paleontological conditions of approval and providing recommendations to San Luis Obispo County regarding acceptability.
- **Renewable Energy General Plan Amendment, Opportunities and Constraints Study (2013-present).** San Luis Obispo County is proposing to amend their General Plan to designate some lands for renewable energy development. As part of this amendment, an Opportunities and Constraints Technical Study was conducted to identify areas of the County that would be less likely to impact cultural resources. Mr. Braun worked closely with GIS specialists to construct cultural resources sensitivity maps to identify those less sensitive areas.
- **Santa Margarita Quarry Expansion Project, Environmental Impact Report (2013-present).** The Santa Margarita Quarry is an aggregate quarry along the Salinas River in San Luis Obispo County, and is proposing to expand existing operations by approximately 50 acres and is applying for a Conditional Use Permit to expand. A Reclamation Plan is also being proposed, and Mr. Braun is authoring the corresponding cultural and paleontological resources EIR section and conducting Native American outreach with those groups interested in the project.
- **Donnell Basin Flood Control Project, Initial Study and Mitigated Negative Declaration (2013).** Mr. Braun conducted archaeological survey of the 65 acre Donnell Basin and co-authored the technical report. Donnell Basin is an area proposed by the San Bernardino Flood Control District to be used for overflow in the Twenty-nine Palms area. Important resource issues included a prehistoric quarry and built-environment resources.

- **Mission Channel and Zanja Creek Routine Maintenance Project, Technical Report and Mitigated Negative Declaration (2014-present).** Under contract with the Department of Public Works, Flood Control District Mr. Braun conducted a cultural resources record search, and is the co-author a technical report and IS/MND sections associated with vegetation management, channel shaping, slope repairs and sediment removal along approximately 8 miles of the Mission Channel/Zanja Creek in Redlands, CA. The Mission Channel/Zanja Creek was built in 1819 and is listed on the National Register of Historic Places.
- **Costa Photovoltaic Solar Energy Facility, Cultural Resources Reconnaissance Survey and Technical Report (2013).** Mr. Braun conducted a cultural resources reconnaissance survey and co-authored a technical report in support of a CEQA review and preparation of an Initial Study for a proposed 170 acres solar energy facility on private land in Kings County, California. Cultural resources identified and evaluated include segments of an historic irrigation canal.
- **Gales Photovoltaic Solar Energy Facility, Cultural Resources Reconnaissance Survey and Technical Report (2013).** Mr. Braun conducted a cultural resources reconnaissance survey and co-authored a technical report in support of a CEQA review and preparation of an Initial Study for a proposed 20 acre solar energy facility on private land in Kings County, California. Cultural resources identified and evaluated include segments of two historic irrigation canals.
- **Venable Photovoltaic Solar Energy Facility, Cultural Resources Reconnaissance Survey and Technical Report (2013).** Mr. Braun conducted a cultural resources reconnaissance survey and co-authored a technical report in support of a CEQA review and preparation of an Initial Study for a proposed 20 acre solar energy facility on private land in the City of Blythe, Riverside County, California.
- **Zuni Photovoltaic Solar Energy Facility, Cultural Resources Reconnaissance Survey and Technical Report (2013).** Mr. Braun conducted a cultural resources reconnaissance survey and co-authored a technical report in support of a CEQA review and preparation of an Initial Study for a proposed 20 acre solar energy facility on private land in the town of Apple Valley, San Bernardino County, California.
- **Desert Harvest Solar Project (CEQA-equivalent document) (2012).** Under contract with EDF Renewable Energy, Mr. Braun assisted senior cultural resources staff with writing the cultural resources, Native American concerns, and paleontology sections of the Desert Harvest EIS. The proposed project is a 1,280 acre 150 MW photovoltaic generating facility in the Chuckwalla Valley near Desert Center, California.

**Argonne National Laboratory (Environmental Sciences Division) ..... 2010-present**

The Environmental Sciences Division at Argonne conducts environmental analyses in compliance with NEPA and other applicable environmental regulations. The main Argonne Campus is located in Lemont, Illinois with satellite branches in Denver, Colorado and Washington, D.C.

- **Programmatic Environmental Impact Statement for Solar Energy Development in Six Western States (2010-2012).** Under contract with the BLM, Mr. Braun provided technical expertise by developing, synthesizing, and interpreting prehistoric and historic contexts, ethnohistoric contexts, paleontological contexts and Native American concerns in order to assess the impacts to these resources at the programmatic level and a more focused Solar Energy Zone level. The six western states that were analyzed in this study were California, Nevada, Arizona, Utah, New Mexico, and Colorado. This research involved archival studies, communication and coordination with cooperating partners in the BLM, National Park Service (NPS), State Historic Preservation Officers (SHPO), as well

as Native American tribal governments, and responding to and addressing comments from cooperators and the public.

- **Oil Shale and Tar Sands Programmatic Environmental Impact Statement (2011-2012).** Mr. Braun assisted senior cultural resource staff in updating a Class I survey based on GIS data from SHPOs in Wyoming, Colorado and Utah for the BLM. Through the analysis of this data, a predictive model was developed in determining the probability of encountering significant archaeological sites in the affected areas proposed for oil shale and tar sands development.
- **Generic Environmental Impact Statements for License Renewals for the Nuclear Regulatory Commission (NRC) (2010-2012).** Under contract with the Nuclear Regulatory Commission, Mr. Braun conducted archival and site specific analyses for impacts related to the relicensing of NRC permitted facilities for the Diablo Canyon Nuclear Power Plant (California), the Davis Besse Nuclear Power Station (Ohio), and the Grand Gulf Nuclear Station (Mississippi).
- **2012-2012 Outer Continental Shelf Oil and Gas Programmatic Environmental Impact Statement (2012).** Mr. Braun conducted archival research related to whaling practices by indigenous groups on the North Slope, the Chukchi Sea and the St. Lawrence Island regions of Alaska. This information was then used to analyze potential impacts that off-shore oil and gas leases issued by the Bureau of Ocean Energy Management, Regulation and Enforcement would have on indigenous whaling practices.
- **Uranium Leasing Program Programmatic Environmental Impact Statement (2012).** Mr. Braun conducted research analyzing potential impacts to cultural resources in uranium mining lease tracts in Colorado. This research was conducted in conjunction with the Department of Energy which issues the leasing permits and the Colorado and Utah SHPOs.
- **Long-Term Monitoring Strategies for Cultural and Natural Resources Affected by Utility Scale Solar Energy Development on BLM lands (2011).** Mr. Braun collaborated in a multi-disciplinary group to develop strategies for the protection and monitoring of significant resources affected by large-scale solar energy projects on BLM land in California, Nevada, Arizona, Utah, New Mexico and Colorado.
- **National Register of Historic Places Evaluation of Five Test Grids and Buildings at Dugway Proving Ground, Dugway, Utah (2011).** Under contract with the Department of Defense, Mr. Braun conducted field work and evaluations of historic properties related to the chemical and biological weapons testing that occurred at Dugway Proving Ground in the post-World War (WW) II and Cold War Eras. Evaluations were conducted of large-scale grids which were laid out in a pattern to collect sampling information about the rate of dispersal and efficacy of the agent being tested from the air or the ground, as well as evaluations of a naval gun and a WW II Era tar-paper structure.
- **National Register of Historic Places Evaluation of the Intense Pulsed Neutron Source (IPNS) at Argonne National Laboratory, Argonne, Illinois (2012).** Under the direction of senior cultural resources staff, Mr. Braun conducted research related to the history of neutron studies at Argonne and other facilities to evaluate the significance of the IPNS located at Argonne. The IPNS was the first neutron accelerator of its kind constructed in the world, and this user-facility provided physicists extensive knowledge regarding the behavior of high-speed neutron activity.
- **Phase I Cultural Resources Survey for the Materials Design Laboratory at Argonne National Laboratory, Argonne, Illinois (2010).** Mr. Braun assisted senior cultural resources staff in planning, conducting and authoring a Phase I survey for cultural resources potentially affected by construction of the Materials Design Laboratory and ancillary facilities.

**American Resources Group.....(2012)**

American Resources Group is a cultural resources firm based out of Carbondale, Illinois.

- **Keystone XL Pipeline Phase I Cultural Resources Survey (2012).** Mr. Braun conducted a pedestrian survey in Eastern Nebraska for a re-alignment of the controversial Keystone XL Pipeline.

### **Professional Affiliations and Training**

- Section 106 Agreement Documents (National Preservation Institute, 2012)
- Consultation and Protection of Native American Sacred Lands (National Preservation Institute, 2012)
- NEPA and the National Historic Preservation Act (ICF, 2013)
- CEQA and Historic Resources (CPF, 2013)
- UXO Hazards Training



**DECLARATION OF  
Huei-An (Ann) Chu**

I, Huei-An (Ann) Chu, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as an Air Resources Engineer.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Air Quality/Public Health. I also prepared sections of Staff's response to comments on the Initial Study addressing Air Quality/Public Health.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8/20/2018

Signed: Huei-An Chu

At: Sacramento, California



# Huei-An (Ann) Chu

1516 Ninth Street, MS-46, Sacramento, CA 95815  
Phone: (916) 651-0965 , Email: [Ann.Chu@energy.ca.gov](mailto:Ann.Chu@energy.ca.gov)

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## EDUCATION

**PhD**, Environmental Sciences and Engineering, 05/2006  
School of Public Health, University of North Carolina at Chapel Hill  
Area of Specialization: Environmental Risk Assessment, Environmental Management and Policy, Risk-Based Regulation, Biostatistics, Environmental Epidemiology

**MEM**, Environmental Management, 05/2000  
School of Forestry and Environmental Studies, Yale University, New Haven, CT

**MS**, Environmental Engineering, 06/1998  
National Taiwan University, Taipei, Taiwan

**BA**, Geography, with honors, 06/1996  
National Taiwan University, Taipei, Taiwan

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## SKILLS

Language: Fluent in Chinese and English.

Computer software and programming skills: HARP, SAS, Stata, Minitab, ArcGIS, ArcView, ArcInfo, Stella, Crystal Ball, ISC, ERMapper, Microsoft Excel, PowerPoint, Word.

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## WORK EXPERIENCE

**Air Resources Engineer**, California Energy Commission, 1/12/2012 - Present

- Independently performs responsible, varied analyses assessing air quality and public health impacts of energy resource use and large electric power generation projects in California.
- Model air quality and public health impacts of stationary sources using HARP (Hot Spot Analysis and Reporting Program).
- Identify air quality and public health impacts of stationary sources and measures to mitigate these impacts following California Environmental Quality Act and regulations of US EPA (including the National Environmental Policy Act), ARB, and the Districts.
- Collect, analyze, and evaluate data on the effects of air pollutants and power plant emissions on human health, and the environment.
- Ensure conditions of certification are met and recommending enforcement actions for violations.

**Research Associate**, Taiwan Development Institute, 10/01/2010 – 12/31/2011

- Provided professional consultation for the environmental risk assessment of Taiwan's techno-industrial development initiatives
- Reviewed the environmental risk assessment reports of Taiwan's techno-industrial development initiatives
- Presented in various distinguished lecturer series about environmental risk assessment

**Consultant**, Chu Consulting, 08/2007 - 07/2010

- Conducted a cumulative risk assessment to evaluate the risk associated with the emissions of VOCs from a petrochemical plants in southern Taiwan
- Used EPA's ISC3 model (based on Gaussian dispersion model) to simulate the dispersion and deposition of VOCs from this petrochemical plant to the neighboring areas, then used ArcGIS to spatially combine the population data and VOC simulation data (and further calculated risks)

- Built a framework of risk-based decision making to set the emission levels of VOCs to reduce people's exposure and the risk of experiencing health problems
- Presented in conference: SRA 2007
- Awarded: CSU-Chico BBS Faculty Travel Funds (2007)

**Environmental Justice Intern**, Clean Water for North Carolina (CWFNC), Summer, 2005

- Reviewed and critiqued key state environmental policies and the federal EPA Public Participation Policy.
- Interviewed impacted communities, member organizations of the NC Environmental Justice Network, state policy officials about how those policies are actually implemented.
- Wrote a report about the survey and review of environmental justice needs for key state policies.
- Report Publication: "Achieving Environmental Justice in North Carolina Public Participation Policy" (Aug, 2005).

**Volunteer**, New Haven Recycles and Yale Recycling, 08/1998 – 05/2000

- Promoted recycling and conservation
- Checked trash cans (chosen randomly) and recycling bins at each entryway of residential college, then gave grades.

**Volunteer**, Urban Resource Initiative (URI), Summer, 1998

- Planted trees for local community of New Haven for a better and sustainable environment

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## RESEARCH EXPERIENCE

### Postdoctoral Research

Department of Public Health Sciences, University of California, Davis, 07/01/2010 - present

Research advisor: Dr. Deborah H. Bennett and Dr. Irva Hertz-Picciotto

- Work on two projects: NIEHS-funded ***Childhood Autism Risks from Genetics and Environment (CHARGE)*** and EPA-funded ***Study of Use of Products and Exposure Related Behavior (SUPERB)***.
- Perform statistical and quantitative analyses with SAS to analyze collected house dust data and children's urine concentrations of metabolites.
- Conduct exposure assessment to investigate if pesticides, flame retardants, and phthalates are risk factors for children autism.
- Conduct exposure assessment to explore the relationships between children's exposure to phthalate, benzophenone-3 (oxybenzone), triclosan, and parabens, and the use of personal care products.
- Produce scholarly peer-reviewed publications of methodology and findings, and write the final reports of both projects.

Carolina Environmental Program, University of North Carolina at Chapel Hill, 01/01/2006 – 12/31/2006

Research advisor: Dr. Douglas J. Crawford-Brown

- Applied a framework of risk-based decision-making to perchlorate in drinking water. (Awarded: SRA Annual Meeting Travel Award 2006)
- Conducted a material and energy flow analysis (MEFA) to quantify the overall environmental impact of Bank of America operations, and quantitatively analyze the strategies BOA might adopt to reduce these impacts and achieve sustainability. (Report Publication: "Environmental Footprint Assessment")

### Doctoral Research, 08/2000-12/2005

Department of Environmental Sciences and Engineering, School of Public Health, University of North Carolina at Chapel Hill

Research advisor: Dr. Douglas J. Crawford-Brown

- Dissertation topic: "**A framework of Risk-Based Decision Making by Characterizing Variability and Uncertainty Probabilistically: Using Arsenic in Drinking Water as an Example**".
- Conducted risk assessment for arsenic in drinking water.
- Conducted theoretical analysis on the variability and uncertainty issues of risk assessment.

- Conducted a meta-analysis to improve dose-response assessment.
- Conducted analytical and numerical analysis to build a new framework of risk-based decision-making which can be applied coherently across the regulation decisions for different contaminants.
- Presented in conferences: APPAM (2004), SRA (2004, 2005 and 2006), DESE Seminar (2005), CEP Symposium on Safe Drinking Water (2006).
- Awarded: SRA Annual Meeting Student Travel Award (2004 & 2005), UNC-CH Graduate School Travel Grants (2004), UCIS Doctoral Research Travel Awards (2002).

### **Master's Research**

School of Forestry and Environmental Studies, Yale University, 08/1999 - 06/2000

Research advisor: Dr. Xuhui Lee

- Master's project: "**Forest Stand Dynamics and Carbon Cycle**".
- Research project: "Monitoring Forest CO<sub>2</sub> Uptaking"
- Used remote sensing (ERMapper) to investigate the role of forest in the uptake of CO<sub>2</sub>.
- Awarded from Teresa Heinz Scholars for Environmental Research Program (2000) and Klemme Award (1999).

Graduate Institute of Environmental Engineering, National Taiwan University, 06/1996 - 06/1998

Research advisor: Dr. Shang-Lien Loh

- Master's thesis: "**The Loads of Air Pollutants from Urban Areas on a Neighboring Dam and its Water Quality**"
- Research Projects: "Research on Air Pollutant Deposition in Urban Areas" and "the Fate and Flow of Recyclable Materials"
- Used Gaussian's Dispersion model (ISC3) to investigate the loads of air pollutants on dam water.

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## **TEACHING EXPERIENCE**

### **Lecturer**

Department of Environmental Studies, California State University at Sacramento

- Environmental Politics and Policy, Fall 2011

Department of Geological & Environmental Science, California State University at Chico

- Environmental Risk Assessment, Spring 2009 & 2010
- Applied Ecology, Spring 2008
- Pollution Ecology, Fall, 2007

Department of Geography & Planning, California State University at Chico

- Seminar in Applied Geography & Planning – Environmental Regulation and Policy, Fall, 2007

Department of Forestry and Environmental Resources, North Carolina State University

- Environmental Regulation, Fall, 2006

### **Teaching Assistant**

Department of Environmental Sciences and Engineering, UNC-Chapel Hill

- Environmental Risk Assessment, Spring, 2002
- Introduction to Environmental Science, Fall, 2001
- Analysis and Solution of Environmental Problems, Fall, 2001

### **Lab Instructor**

Department of Environmental Sciences and Engineering, UNC-Chapel Hill

- Biology for Environmental Science, Fall, 2000

Graduate Institute of Environmental Engineering, National Taiwan University

- Water Quality Analysis, Fall, 1997



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## AWARDS and HONORS

- CSU-Chico BBS Faculty Travel Funds, 2007
- Member of Society of Risk Analysis (SRA), 2006-2008
- SRA Annual Meeting Student Travel Award, 2004-2006
- UNC-CH Graduate School Travel Grants, 2004
- Member of Association for Public Policy Analysis and Management (APPAM), 2004-2005
- UCIS Doctoral Research Travel Awards, 2002
- Graduate Student Teaching and Research Assistantships, 2000-2005
- Teresa Heinz Scholars for Environmental Research Program, 2000
- Yale Forestry & Environmental Studies, Klemme Award, 1999

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## PUBLICATIONS (SELECTED LIST)

**Huei-An Chu**, Deborah H. Bennett, Irva Hertz-Picciotto, "Phthalates in relation to autism and developmental delay: Exploratory analyses from the CHARGE Study". (In preparation)

**Huei-An Chu**, Deborah H. Bennett, Irva Hertz-Picciotto, "Personal Care Products: Possible Sources of Children Phthalate Exposure". (In preparation)

**Huei-An Chu** and Douglas J. Crawford-Brown, "A Probabilistic Risk Assessment Framework to Quantify the Protectiveness of Alternative MCLs for Arsenic in Drinking Water", *Journal of American Water Works Association*. (Being revised)

**Huei-An Chu** and Douglas J. Crawford-Brown, "Letter to the Editor: Inorganic Arsenic in Drinking Water and Bladder Cancer: A Meta-Analysis in Dose-Response Assessment", *International Journal of Environmental Research and Public Health*, 2007, 4(4), 340-341.

**Huei-An Chu** and Douglas J. Crawford-Brown, "Inorganic Arsenic in Drinking Water and Bladder Cancer: A Meta-Analysis in Dose-Response Assessment", *International Journal of Environmental Research and Public Health* 2006, 3(4), 316-322.

S.L. Lo and **H.A. Chu**, "Evaluation of Atmospheric Deposition of Nitrogen to the Feitsui Reservoir in Taipei", *Water Science & Technology*, 2006, 53(2), 337-344.

CSE Consulting and the UNC Carolina Environmental Program (CEP), "Environmental Footprint Assessment", Report for Bank of America, Aug, 2006.

**Huei-An Chu**, "Achieving Environmental Justice in North Carolina Public Participation Policy", Report for Clean Water for North Carolina (CWFNC), Aug, 2005.

**Huei-An Chu**, "Arsenic and its Health Implications", Report for University Center for International Studies Graduate Travel Awards, 2002.

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## PRESENTATIONS (SELECTED LIST)

Guest Speaker, "Human Health Risk Assessment – Arsenic in Drinking Water as an Example". Tunghai University, Taichung, Taiwan. (December 16<sup>th</sup>, 2010)

Guest Speaker, "Environmental Problems in Developing Countries", Course Title: Developing Countries, Department of Economics, CSU-Chico (October 31<sup>st</sup>, 2008)

"Cumulative Risk Assessment for Volatile Organic Compounds (VOCs) from Petrochemical Plants in Southern Taiwan". Oral Presentation in Society of Risk Analysis (SRA) 2007 Annual Meeting, San Antonio, TX. (December, 2007)

Guest Speaker, "Arsenic in Drinking Water", Course Title: Environmental Geology, CSU-Chico. (November 13<sup>th</sup>, 2007)

"Risk-Based Environmental Regulation for Arsenic in Drinking Water", Oral Presentation in Department of Environmental Health Seminar, East Tennessee State University (February 2<sup>nd</sup>, 2007)

"A Framework of Risk-based Decision Making by Characterizing Variability and Uncertainty Probabilistically: Using Arsenic in Drinking Water as an Example", Oral Presentation in Society of Risk Analysis (SRA) 2006 Annual Meeting, Baltimore, MD. (December, 2006)

"A New Policy Tool to Choose Water Quality Goals under Uncertainty", Poster Presentation in Society of Risk Analysis (SRA) 2006 Annual Meeting, Baltimore, MD. (December, 2006)

"A framework of Risk-Based Decision Making by Characterizing Variability and Uncertainty Probabilistically: Using Arsenic in Drinking Water as an Example", Oral Presentation for National Center for Environmental Assessment (NCEA), Environmental Protection Agency (EPA). (October 26<sup>th</sup>, 2006)

"Probabilistic Risk Assessment for Arsenic in Drinking Water", Poster Presentation in Carolina Environmental Program (CEP) 2006 Symposium on Safe Drinking Water, Chapel Hill, NC. (March, 2006)

"Probabilistic Risk and Margins of Safety for Water Borne Arsenic", Poster Platform Presentation in Society of Risk Analysis (SRA) 2005 Annual Meeting, Orlando, FL. (December, 2005)

"Using Meta-Analysis in Dose-Response Analysis – Risk Assessment of Arsenic in Drinking Water as an Example", Poster Platform Presentation in Society of Risk Analysis (SRA) 2004 Annual Meeting, Palm Springs, CA. (December, 2004)



**DECLARATION OF  
Mike Conway**

I, Mike Conway, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as an Engineering Geologist.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Hydrology and Water Quality and Utilities and Service Systems.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: August 16, 2018

At: Sacramento, California

Signed: Mike  
Conway Digitally signed by  
Mike Conway  
Date: 2018.08.16  
14:04:12 -07'00'

**Mike Conway, California Energy Commission, STEP Division, Engineering Office**

**Education:** Master of Science in Geology, California State University, Sacramento, August 2012  
Bachelor of Science in Geology, University of California, Davis, August 2003

**Certifications:** California Professional Geologist (PG), no. 9107  
California Certified Hydrogeologist (CHG), no. 1024  
Certified Professional in Erosion and Sediment Control (CPESC)  
Qualified Storm Water Pollution Prevention Plan (SWPPP) Developer (QSD) and Practitioner (QSP)  
Leadership in Energy and Environmental Design Accredited Professional (LEED AP)

**Experience:** *Engineering Geologist: California Energy Commission, Sacramento, CA* **2009-Present**

- Serve as an expert witness in water resources and technical analyses for power plant siting cases
- Prepare expert testimony in subject areas of hydrogeology, soil erosion, surface water flow
- Lead technical reviewer for Yucca Mountain Waste Repository Environmental Impact Statement
- Prepare expert analyses of state law, ordinances, regulations, and standards applicable to water use
- Perform onsite evaluations of soil and water resource impacts pre- and post-project
- Construct hydraulic and hydrogeologic models (MODFLOW, GIS, WMS) to evaluate resource impacts

*Environmental Scientist: Central Valley Water Board, Rancho Cordova, CA* **2009**

- Wrote municipal storm water permits for Phase I communities in the Central Valley
- Reviewed storm water annual reports for Phase I and II municipalities
- Conducted audits of industrial sites for compliance with storm water permits
- Conducted audits of municipalities for compliance with municipal permits
- Represented Water Board in large technical workshops and other public forums

*Environmental Consultant: Wood Rodgers, Inc., Sacramento, CA* **2006-2009**

- Consulted clients on how to comply with Federal, State and local storm water quality regulations
- Helped public and private sector clients gain State Water Resources Control Board (SWRCB) permit coverage under Large and Small MS4 General Permits, NPDES Permits, CWA Section 401 Permits
- Consulted clients on Army Corps of Engineers, 404 Permitting
- Developed a storm water quality manual for Yolo County
- Prepared Caltrans environmental documentation and design for all project phases
- Drafted water pollution control exhibits using both AutoCAD and MicroStation
- Prepared Caltrans Storm Water Data Reports including cost estimates
- Designed landscaping plans for Caltrans' Modesto Ramp Rehabilitation Project
- Prepared Spill Prevention Control and Countermeasure (SPCC) plans

*Storm Water Quality Consultant: Envirosafety Services, Elk Grove, CA* **2004-2006**

- Wrote site specific SWPPPs to include guidance specific to city, county, and geographical constraints
- Designed exhibits using AutoCAD
- Conducted inspections at construction sites throughout the Central Valley for (SWPPP) compliance
- Resolved storm water compliance issues in cooperation with site superintendents and inspectors

*Post-Graduate Researcher: Dept. of Land, Air, and Water Resources, U.C. Davis, CA* **2003**

- Studied the affect of irrigation practices on wetland ecology and water quality
- Independently organized monthly analyses and data processing of selenium contaminated invertebrate, algae, and water samples from the Tulare Lake Drainage District
- Managed concentrated acids, carcinogenic solutions, and final fluorescence measurements
- Compiled research data and presented findings to a team of eight colleagues

**DECLARATION OF  
Brett Fooks**

I, Brett Fooks, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as a Mechanical Engineer.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Hazards and Hazardous Materials. I also prepared sections of Staff's response to comments on the Initial Study addressing Hazards and Hazardous Materials.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8/17/18

At: Sacramento, California

Signed: Brett Fooks

# BRETT FOOKS, P.E.

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## MECHANICAL ENGINEER

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### PROFESSIONAL EXPERIENCE

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**California Energy Commission - STEP**                      **Sacramento, CA**                      **2/2014 - Present**

The Commission ensures that energy facilities (power plants) are permitted in an acceptable manner. The STEP division prepares environmental documentation for the Commission as required by the California Environmental Quality Act (CEQA).

#### **MECHANICAL ENGINEER**

*Provide independent engineering analysis for various technical areas with an emphasis on hazardous materials management, worker safety, & fire protection.*

- Review, analyze and prepare engineering analysis for hazardous materials management, fire protection, and worker safety for gas-fired power plants.
- Provide written and oral expert witness testimony at commission hearings.
- Conduct power plant inspections during construction and operational phases.
- Investigate accident, fire, and hazardous materials incidents at licensed power plants.

**Capital Engineering Consultants, Inc.**                      **Rancho Cordova, CA**                      **6/2004 – 2/2014**

A leader in mechanical engineering design in Northern California since 1947 specializing in areas including K-12 Education, Higher Education, Civic and Justice, and Healthcare.

#### **SENIOR ENGINEER, ASSOCIATE**

*Manage the design, project specification, calculations and cost estimations for new and renovated construction projects.*

*Oversee and supervise the daily workload, mentoring, and quality control for an assigned junior engineer.*

- Plan and monitor the workload of projects, while preparing and taking responsibility for the concept of and preliminary engineering solutions for the detailed design phase.
- Implement the detailed design engineering of HVAC systems; code review, heating and cooling load calculations, air-flow requirements, ductwork sizing and layout, piping sizing and layout, equipment selection, and system controls with an emphasis on healthcare facilities.
- Prepare and deliver calculations for Title 24 building compliance.
- Prepare and deliver calculations and documents for project LEED certification.

#### **Select Accomplishments**

- Assisted in the implementation and teaching of new 3-D modeling software, CAD-MECH, to team members for the Sutter Health Eden Medical Center.
- Worked with co-workers to create and implement standards for plumbing calculations firm wide leading to an increased efficiency.

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### EDUCATION

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**STATE OF CALIFORNIA ~ LICENSED PROFESSIONAL ENGINEER**  
**UC DAVIS EXTENSION – WORKPLACE HEALTH & SAFETY CERTIFICATE (2016)**

**BACHELOR OF SCIENCE ~ MECHANICAL ENGINEERING (2004)**  
California Polytechnic State University, San Luis Obispo

**Computer Literacy:** Proficient in the use of various software applications including Microsoft Office (Word, Excel, PowerPoint, Outlook) AutoCAD 2012/2013, Revit 2013/2014, Visio, NavisWorks, and ProjectWise.

**DECLARATION OF  
Thomas Gates**

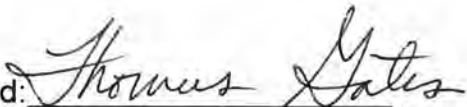
I, Thomas Gates, declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Office of the Siting, Transmission and Environmental Protection Division as a supervisor of the Cultural Resources Unit and as the tribal liaison.
2. I reviewed sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing cultural resources, tribal cultural resources and tribal consultation.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: August 20, 2018

At: Sacramento, California

Signed: 



**Thomas M. Gates, Ph.D.**  
*Curriculum Vitae*

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**EDUCATION**

University of North Carolina at Chapel Hill, Ph.D., Anthropology, Chapel Hill, NC 8/95

Humboldt State University, B.A., Anthropology, B.A., Philosophy, Minor Studio Painting, Arcata, CA, 6/87

**NON-ACADEMIC EMPLOYMENT**

**California Energy Commission, Sacramento, CA, 1/1/12 – Present**

Planner II 2012- 2015, Planner III Cultural Resources Unit Supervisor and Tribal liaison (2015 - Present)

Work with a team of cultural resources professionals to review and respond to energy facility siting applications proposing energy facility construction or facility amendments located within the State of California. Specifically provide tribal consultation and ethnographic methods expertise. Provide tribal liaison services on behalf of entire CEC.

**Preservation Management Services, Sacramento, CA, 9/14/11 – Present**

Self-Employed Owner

Secure, perform and complete contract work for tribal, federal, state, and local governments. Work includes following services: Tribal Historic Preservation Office (THPO) program development, operations and related training; THPO Cultural Resources Management Planning and facilitation; Cultural Landscape, Traditional Cultural Property and Sacred Site Assessments, Cultural Resources Surveys and Cultural Resources monitor mitigation.

**North State Resources, Inc., Sacramento, CA, 11/1/2009 – 11/08/11**

Senior Program Manager:

Direct Cultural Resource Program for a team of CRM professionals to secure, perform and complete CRM cultural resource contracts on behalf of diverse client base (government agencies, developers, tribal governments. Also provided services in cultural resources training and tribal government planning facilitation.

**SWCA Environmental Consultants, Sacramento, CA, 6/23/08-10/30/09**

Senior Program Manager:

Direct Cultural Resource Program for a team of CRM professionals to secure, perform and complete CRM cultural resource contracts on behalf of diverse client base (government agencies, developers, tribal governments). Also provide training for Tribal Historic Preservation Officer (THPO) programs, NHPA Section 106 and Consultation with Indian Tribes.

**Yurok Tribe, Klamath, CA, 5/1/03- 6/15/08**

Self Governance Officer:

Coordinated Yurok governmental functions with local, state, federal governments; negotiated contracts, compacts, annual funding agreements, memorandums of understanding per the Indian Self Determination Act. More recently, handled tribal land appraisals, acquisitions, land acquisition funding, sustainable forestry management, tribal park planning and youth workforce creation.

**Yurok Tribe, Klamath, CA, 9/4/96-6/15/08**

Heritage Preservation Officer:

Performed Tribal Heritage Preservation Officer functions for Yurok Tribal Lands per NHPA § 101d(2)NPS Agreement. Provided Section 106 comment and made National Register nominations related to undertakings affecting tribal lands. Coordinated CHRIS North Coastal Info Center/Tribal Inventory. Reviewed archeology survey reports and site records. Participated in the North Coast Strategic Partnership Coalition.

**Yurok Tribe, Klamath, CA, 10/1/93– 5/1/03**

Culture Department Director:

Directed a department with four divisions: Archeology, Archives, NAGPRA, Mapping and Compliance. Coordinated Tribal Elder's Cultural Committee, represented the tribe in Federal and State consultations pertaining to Yurok Culture. Managed multi-account program budget (\$300,000/year) of base funding, grants and contracts for ethnographic research, archeological survey and monitoring and related planning.

**USFS - Inyo NF, Bishop, CA, 6/1/80 – 8/31/89 (Seasonal)**

Watershed Restoration Crew Leader/Member:

Supervised summer work-crews performing erosion control, dam construction, trail and road work and trout spawning site restoration in remote wilderness and back country settings; coordinated crew safety program.

## ACADEMIC EMPLOYMENT

**Humboldt State University, Arcata, CA, 6/1/92 - 5/31/07**

Lecturer:

Cultural Anthropology, North American Indians and Anthropology of Religion

**College of the Redwoods, Eureka, CA, 8/94-5/98**

Adjunct Instructor:

Cultural Anthropology, Archeology, Folklore

**University of North Carolina at Chapel Hill, Chapel Hill, NC, 8/1/88-5/31/90**

Instructor:

General Anthropology

Teaching Assistant:

General and Cultural Anthropology

## RESEARCH and PROJECTS

**PMS – Wisconsin Department of Transportation and 9 Affiliated Tribes – Cultural Resources Training. 2013**

Developed training curriculum for WISDot and tribal cultural resources staff to facilitate implementation of revised WISDot cultural resources chapter of the WISDot Manual. Deliverables included a course workbook, course power point presentation and related instructional materials such as course exercises, agenda and evaluation form.

**CEC – Hidden Hills Solar Energy Generating Systems – Ethnographic Report. 2012**

Conducted ethnographic research with several Native American Tribes concerning the documentation of the Pahrump Paiute Tribe life-ways related to several cultural landscapes, including the Salt Song Trail, located in and about the Pahrump Valley, Ca.

**NSR – Assessing Effects to Indian Trust Resources and Cultural Values as a Result of Implementing the Klamath Basin Settlement Agreement to Remove Four Dams Along the Klamath River. 2010 – 2011.** Project manager responsible for facilitating project Sub team (BIA and BOR) tribal consultations with 6 Klamath Basin Tribal governments and owners and heirs of Public Domain Allotments. Project also entails writing a Background Technical Report that assesses historic and current operation effects on trust resources. A final report is also being completed that assesses future operations affects on trust resources for two broad alternatives: “dams in” and “dams out.”

**SWCA – California Indian Heritage Center, Sacramento, CA, 2008 – 2011**

Consult on behalf of California State Parks with tribal entities throughout the State of California in relation to the planning, design and construction of a \$50 million facility and grounds located in Sacramento, and representing all California Tribes. Center will feature archaeological collections, archives, education classrooms, botanical gardens and demonstration village along banks of Sacramento River.

**Yurok Tribal Park and Homeland Restoration, Klamath, CA, 2003 – 2008**

Team Leader:

Coordination, planning, and acquisition for the Yurok Tribe initiative to regain homelands through creation of a tribal park system, marine sanctuary, community forest and related land purchases and transfers.

**Yurok Tribe Condor Re-Introduction, Klamath, CA, 2007 – 2008**

Principal:

Study of historic and environmental conditions conducive to the re-introduction of condor into Yurok territory.

**Bald Hills Ethnographic Landscape Study, Orick, CA, 1999 – 2001**

Co-Principal: Yurok Ethnographic use study of Bald Hills, Redwood National and State Parks (RNSP), Interview, field survey and record

**Dissertation Fieldwork: Yurok Trail System, Klamath, CA, 1991-1995**

Ph.D. Candidate: Compiled a history of Yurok trail systems, obtaining information from ethnographic interviews, literature, cartographic inventories, and archeological surveys.

## PUBLICATIONS

***Yurok Tribe Comprehensive Cultural Resource Management Plan*** A 15 Year Plan for the Implementation of the Yurok Tribe - NPS Agreement to perform § 101d(2) functions of NHPA and other cultural resource related Tribal, Federal and State laws.

***Along the Ridgelines: The History of Yurok Trail Systems***, (Ph.D. Dissertation, UNC), 12/94

***The Asdiwal Myth Complex of the Tsimshian of the Northwest Coast of British Columbia*** (4th semester paper, UNC), 5/89

***Watershed Restoration Construction Safety Precautions Watershed Restoration Construction Manual*** 6/87, Inyo National Forest, U.S. Forest Service

**APPOINTMENTS**

National Association of THPOs – Co-founder and Board member 1998-2008  
Historic Resource Information Centers of California – President 1999-00  
Jacoby Creek Land Trust – Board Member and Recording Secretary 1998-00

**AWARDS**

CEC Outstanding Employee 2013, 2014, 2016, 2017  
CA State Senator Chesbro - *Recognition of Achievement* 2002  
Research and Teaching Assistantships, UNC Dept. of Anthropology 1987, 88, 89, 90  
USFS Employee Award – *Outstanding Service in the Field* 1980, 81, 82, 86

**TRAINING**

PSMJ Project Management Bootcamp, Phoenix, Arizona 2009

**DECLARATION OF  
Jon R. Hilliard, AICP**

I, Jon R. Hilliard, declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Office of the Siting, Transmission and Environmental Protection Division as an Energy Resource Specialist - Supervisor.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Biological Resources.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8/17/

At: Sacramento, California

Signed: 

Jon R. Hilliard





# CALIFORNIA ENERGY COMMISSION

## **JON R. HILLIARD**

Energy Commission Specialist III  
(Supervisory)

### **Education, Certification & Associations**

- Bachelor of Arts, Urban and Regional Planning, Texas State University (1987)
- Post-graduate courses in Project Management, Planning and Environmental Law, Resilience and Sustainability, Real Estate Development - UC Davis
- Completion of Project Management Body of Knowledge (PMBOK) Course – GW University
- American Institute of Certified Planners (AICP) Certification (since 2008)

### **Select Projects**

#### **CA Energy Commission (CEC) - from 2013 to Present**

**Puente Power Project - Oxnard, Ventura County, CA.** Served as Project Manager (2015) and Biological Resources Supervisor for the siting process for a proposed 262 MW gas fired, simple-cycle replacement facility for an existing generation facility that must alter operations due to a state policy requiring phase-out of once-through ocean water cooling. Managed all facets of the CEC siting process for the project, later transitioning to Biological Resources director upon change in position, assuming responsibility for coordination and presentation of expert testimony before the public and commission committee conducting the project review.

**Carlsbad Energy Center Project - San Diego County, CA.** Served as a project manager for the review and environmental entitlements for a 600 MW rebuild of a gas fired, simple-cycle power plant on 37 acres of land in Carlsbad, California. Responsibilities included coordinating preparation of the Preliminary and Final Staff Assessment (equivalent to DEIR, FEIR), and representing the state's interest in the administrative hearings for the project.

**Palen Solar Holdings, LLC – Riverside County, CA.** Served as Cultural Resources team manager for the review and approval of applicant geospatial studies, and in-house preparation of an ethnography evaluation, for a planned 500 MW solar energy facility on 3800 acres. Project entailed a landscape approach to cultural resources review, as required by DOI Order 3330 (10-31-2013).

**Genesis Solar Electric Project – Riverside County, CA.** Served as project lead for a multi-disciplined crew of archaeologists and ethnographers implementing a programmatic mitigation agreement between the State Cal SHPO, US DOI BLM and stakeholder Native American Tribes to address resources encountered during construction and compliance phase of a new solar generation facility on 1800 acres, including the goal of obtaining state and federal historic designation for an adjacent resource district (Ford Dry Lake).

**CEC Rules of Practice and Procedure Update** (Title 20, CCR, (Ch. 6 Environmental Protection) Sections 1970-2308). Lead the preparation of major revisions to the CEQA Cultural Resources and NHPA compliance components of the Commission facility siting review and approval statutes and procedures.

#### **Leidos (formerly SAIC) - from 2010 to 2013**

**State of California Emergency Functions Development - Cal Emergency Management Agency (OES).** As Project Manager, oversaw the work and administration of a state-wide effort by a technical team of Subject Matter Experts (SME's) assisting in the development of eighteen discrete Emergency Functions annexes to be incorporated in a 2013 update to the State of California Emergency





## CALIFORNIA ENERGY COMMISSION

Management Plan. Responsibilities included internal direction of staff resources, client representation, meeting facilitation, public and stakeholder outreach and project QA-QC and controls.

**Butte Regional HCP/NCCP – Butte County Association of Governments.** As Senior Planner, coordinated preparation of a Wetlands and Aquatics Resources program that will be used for Section 404 Clean Water Act (CWA) compliance and Section 1602 CA Fish and Game Code (FGC) compliance as part of a regional habitat conservation plan covering approximately 620,000 acres of lowland Butte County and including portions of the Feather River. The project required coordination among nine governmental agencies including BCAG, Butte County, the cities of Chico, Oroville, Gridley and Biggs, the USA Army Corp of Engineers, the US Fish and Wildlife Service and the California Department of Fish and Game. Responsibilities also included assisting in project administration and general support of documents addressing grasslands, wetlands (including vernal pools), oak woodlands, riverine and riparian habitats, and agricultural lands.

**Yolo County Natural Heritage Program Plan – Yolo JPA.** As Senior Planner, prepared programmatic strategy for CWA Section 404 compliance (Regional Permit) and assisted in project management and Quality Assurance/ Quality Control of documents for a habitat conservation plan of Yolo County, addressing a variety of natural communities including uplands, riparian, and agricultural lands and over 36 special statues species.

**Bay Delta Conservation Plan (BDCP) – California Natural Resources Agency.** As Senior Planner, provided technical support and management for a joint HCP/NCCP for the Sacramento-San Joaquin Delta to provide Federal and California Endangered Species Act compliance for water deliveries from Federal and State water projects supplying over 25 million people and 2.5 million acres of farmland. Responsibilities included assisting in project management and controls, pursuant to the requirements of the contract procurer, the State Department of Water Resources.

**Marine Corp School of Infantry – USMC Base Camp Pendleton, San Diego County, CA.** As Senior Planner and Environmental Analyst, prepared documentation for the Environmental Assessment and Description of Alternatives for a series of upgrades to the School of Infantry/ RECON Company Base Recon Course and Instruction Facilities. Project analyzed the potential impacts of a new classroom building and ancillary training fields on adjacent riparian habitats and endangered species (southwestern arroyo toad, *bufo californicus*) known to occur in the area.

### **Jacobs Engineering – from 2006 to 2009**

**San Luis National Wildlife Refuge, West Bear Creek Unit Access Improvements – US Fish and Wildlife Service.** As environmental entitlements manager, prepared and coordinated the technical studies to assist the US Fish and Wildlife Service in obtaining encroachment permits and CEQA approvals from the California Department of Transportation (Caltrans) for access improvements from a State Highway into San Luis National Wildlife Refuge in Merced County, CA. His efforts moved the project forward after seven years of delay due to agency miscommunication.

**North County Corridor (State Route 120) Route Adoption Program – Stanislaus Council of Governments.** As Environmental Coordinator, prepared the Community Impact Assessment of potential physical, socioeconomic and public policy impacts associated with a 2,000 foot-wide corridor for the planned interregional route between Salida and Oakdale in Stanislaus County, CA. He coordinated with impacted cities to avoid sensitive areas and explore ways to adjust the corridor alignment to benefit strategic locations.

**Solano County Expansion and Marsh Development Permit - Universal Propulsion Company.** As Project Manager, directed the land use entitlements and environmental permitting for a major expansion to an existing industrial propulsion and testing operation in the unincorporated area of Solano County. Services provided include updating the client's five-year construction and improvement program, a drainage and erosion control analysis, preparation of environmental documents for compliance with





## CALIFORNIA ENERGY COMMISSION

C.E.Q.A. (Mitigated Negative Declaration), and coordination of permitting between the county and the state San Francisco Bay Conservation and Development Commission.

**Jackson Highway and Grant Line East Visioning Programs – Sacramento County.** As Project Manager, led the efforts of a multi-disciplined team to complete the land use, environmental, economic development and policy plans for a large 30,000 acre study area in conjunction with the county's comprehensive General Plan update. The Visioning Program included targets for community development and building efficiency based on LEED standards, to align with State SB 375 policies that promote the integration of land use, housing and transportation decision-making to reduce vehicle miles travelled and resultant greenhouse gas emissions. The Visioning Program policies were incorporated in Phase 1 of the county's Climate Action Plan that received a US Environmental Protection Agency award of a \$500,000 Climate Showcase Communities Grant to reduce the county's carbon emissions.

**New Neighborhood Markets Planning, Entitlements and Environmental-CEQA, Multiple Locations in Northern California.** As Project Manager, directed the land use permitting and entitlements for numerous grocery store locations planned as part of the entry of a multi-national fresh grocery retailer into the western United States. Services provided include advance site feasibility analysis, research of local permitting and impact fee requirements, and representing the project and client interests before local agencies.

**Rinker/ Cemex Land Use Planning and Entitlements, Fairfield, California.** As Project Manager, oversaw the preliminary land planning for a seventeen acre industrial property, positioned for redevelopment with a multifamily residential project. Services included a land yield assessment, preliminary environmental site reconnaissance, site planning and assisting the project proponent in selecting project building prototypes that would meet the project objectives and receive support from the local community.

**Township 9, Sacramento, CA.** As Senior Planner, prepared form-based Design Guidelines and PUD Plan elements for a mixed-use, urban in-fill development located on the south bank of the American River in the River District of Sacramento, California. Project responsibilities included coordinating with local planning and redevelopment agency staff to assure the land use and circulation plan met the city's vision for a vibrant mixed-use neighborhood developed to a human scale in accordance with principles of the New Urbanism, which will serve as a catalyst for a newly-emerging transit hub.

### **GSJ, Inc. - from 2005 to 2006**

**Morgan Place, Placer County, CA.** As Project Director, directed the land use planning, entitlements and CEQA compliance for a planned 90-unit residential subdivision on a 10 acre infill development site, and worked with the surrounding neighborhood to address concerns with visual encroachment and aesthetic quality of project design to secure project approval.

**Bakersfield Northeast Master Plan , Bakersfield, CA.** As Project Manager, managed the land use and environmental entitlements for a 190 acre mixed-density residential development located in a sensitive hillside context. He negotiated amendments to the city's General Plan and Circulation Plan for a land exchange that furthered the city's master trails plan goals and allowed the project to move forward.

**Fresno SW Residential Development, Fresno, CA.** Directed the complete forward planning and land use approvals for a proposed 365 unit residential subdivision in the southwest Fresno growth area, from performance of site due diligence, engineering design and environmental study procurement, educating the local City Council of the project benefits, and guiding the public process to a successful project approval.





### **City of Fairfield – from 1989 to 2005**

**Solano County I-80 Reliever Route/Jepson Parkway, Fairfield, Solano County, California.** Environmental Management and Impact Assessment. As senior planner, managed the consultant procurement and technical support for preparation of a combined mitigated negative declaration/FONSI for the local three-mile section of an inter-regional roadway improvements in Solano County designed to divert county through-traffic from the Interstate 80 and Interstate 680 confluence. Responsibilities included initiating agency contact and coordination, complete quality control of environmental studies, and assessment of the initial Area of Potential Effect (APE), to allow completion of environmental documents required to secure \$2.5 M in project funding from the Metropolitan Transportation Commission (MTC).

**Kinder-Morgan Fuels Pipeline, Fairfield, California.** As Senior Planner for Fairfield was responsible for reviewing and coordinating the local components of an EIR prepared by the CA State Lands Commission (the Lead Agency) for a new regional fuels pipeline extending from Concord to Sacramento. Project responsibilities included coordinating review and comments on the EIR between affected City departments, preparing and presenting suggested mitigation measures to the State Lands Commission, and conducting the local review and outreach process mandated by CEQA. As the City's representative, was able to resolve potential conflicts between the proposed pipeline and local stakeholders including the City, County, and an independent sewer district.

**Fairfield Corporate Commons, Fairfield, CA.** As Senior Planner and Project Lead for the City of Fairfield, managed the land use and environmental permitting for a planned mixed use project containing 600,000 square feet of office and 450 residential units on 75 acres. Project responsibilities included managing the EIR, Development Agreement, land entitlements, outside agency permitting (Sec 404 and Sec 1602 Streambed Alteration Agreement) and public outreach.

**Fairfield Employment Center/ Green Valley Corporate Park, Fairfield California.** As Project Lead, prepared the environmental studies and land entitlement documents required as part of the transfer of a 220 acre business park between the Redevelopment Agency and a private developer. Project responsibilities included drafting a public-private Development Agreement guaranteeing approvals for up 2 million square feet of office development on the property.

**Gold Ridge Planned Community, Fairfield, CA.** As Project Lead for the City, collaborated with the City leadership and project proponent in devising an acceptable land planning approach for a 600 acre new growth area encumbered with significant environmental and political constraints. Managed the full breadth of environmental and land planning entitlements for the 1200 unit master planned, mixed-density community ultimately approved for the site, and assisted the City Attorney in compiling and presenting the project review record that was used to successfully prevail in legal challenges to the project approvals.

**Solano County Government Center, Fairfield, CA.** As Senior Planner, served as the City of Fairfield's liaison in the planning, environmental review and design procurement of the \$120 million Solano County Government Center. Responsibilities throughout this four-year project included participation in design charrettes for the initial land planning and building form studies, commenting and review on the project Environmental Impact Report, sitting on the interview and selection committee for the project architectural and engineering consultants, and coordination of the project construction of a City-owned plaza within the site improvements. The project included extensive community involvement and public contact at each stage off review, approval and development, including regular presentations at City Council and Board of Supervisors workshops.



**DECLARATION OF  
Jeanine Hinde**

I, Jeanine Hinde, declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Office of the Siting, Transmission and Environmental Protection Division as Planner II.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Agriculture and Forestry Resources, and Land Use and Planning.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8/16/2018  
At: Sacramento, California

Signed: Jeanine Hinde

## JEANINE M. HINDE

### Professional Experience

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#### Planner II

February 2010–Present

*California Energy Commission, Sacramento, CA*

*Environmental Office of the Siting, Transmission, and Environmental Protection Division*

Generalist skilled in research and analysis and preparing staff assessments on proposed power plants. Assesses environmental impacts on land use, agricultural resources, and visual resources. Prepared the agricultural resources, forestry, and land use analyses for the McLaren Backup Generating Facility Project. Prepares alternatives analyses to comply with environmental regulations. Preparing the alternatives analysis on the Mission Rock Energy Center, a simple-cycle, natural gas-fired (NGF) power plant with 25 megawatts of battery energy storage in Ventura County. Prepared the alternatives analysis on the Puente Power Project, an NGF power plant proposed to replace two aging once-through cooled units at the Mandalay Generating Station in Ventura County. Prepared the visual resources analysis for the Huntington Beach Energy Project in Orange County. Prepared the alternatives analysis for an amendment to the Palen Solar Electric Generating System (SEGS) in the Colorado Desert. Prepared the alternatives analysis on the Hidden Hills SEGS in the Mojave Desert. Participates in public workshops and presents testimony on contested issues at evidentiary hearings before the Energy Commission. Prepared the land use analyses for a geothermal power plant in Imperial County and an NGF power plant in Stanislaus County. Coauthored the alternatives analyses on the proposed amendments to the Carlsbad Energy Center and El Segundo Energy Center projects.

#### Environmental Analyst and Project Coordinator

2004–2009

*EDAW-AECOM, Sacramento, CA*

Coordinated preparation of environmental studies to satisfy the California Environmental Quality Act (CEQA) and the National Environmental Policy Act and related permitting and regulatory requirements. Contributed to the preparation of regulatory compliance documents for projects addressing flood protection, wastewater management, water quality, habitat restoration, and urban development. As an assistant project manager, contributed to the preparation, technical review, and distribution of a variety of environmental compliance documents for projects that included a levee repair project on the Feather and Yuba Rivers, a levee seepage project on the San Joaquin River near the Sacramento-San Joaquin Delta (Delta), a wastewater treatment plant improvement project in Atwater, and a habitat restoration project adjacent to the middle Sacramento River. As an analyst, prepared environmental impact analyses for resource topics that included land use; agricultural resources; visual/aesthetic resources; public services, utilities and service systems; hazardous materials; recreation; and geology, soils, and mineral resources. Prepared mitigation monitoring and reporting program documents and assisted with fulfilling CEQA noticing and filing requirements.

#### Environmental Analyst, Independent Consultant

2003–2004

*Sackheim Consulting, Fair Oaks, CA*

Researched and wrote the aesthetics analyses for the CEQA documents on related neighborhood electrical distribution projects in the Natomas and Elkhorn areas of Sacramento. Prepared a similar analysis for a project in Elk Grove. Assisted with the analyses addressing potential impacts on cultural resources and issues related to hazards and hazardous materials.

#### Environmental Specialist II

1986–1997

*Jones & Stokes Associates, Sacramento, CA*

Evaluated impacts on land use, visual resources, and recreation for several state and federal projects, including a water supply management program in the East Bay, a project addressing long-term management of resources in the Delta and Suisun Marsh, and a military operations project at Camp Roberts. Provided technical review and coordinated preparation of report sections prepared by staff, and assisted with research and documentation of required federal, state, and local permits and approvals to include in regulatory compliance plans.

### Education

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**B.A. Geography, California State University, Chico**

**DECLARATION OF**  
**John Hope**


I, John Hope, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as an Environmental Planner II.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Aesthetics.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 08/16/18

At: Sacramento, California

Signed:   
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# CALIFORNIA ENERGY COMMISSION

**JOHN HOPE**  
**Environmental Planner II**

## **Education, Certification & Associations**

- Bachelor of Science, City and Regional Planning, California Polytechnic State University San Luis Obispo (1999)

## **Experience**

### **California Energy Commission (CEC) – from 12/2011 to present**

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#### *Environmental Planner II*

As part of the Environmental Protection division, he prepares environmental documentation for proposed energy facilities for the Commission as required by the California Environmental Quality Act (CEQA). Specifically, he writes technical analyses for facility siting cases and planning studies in the areas of socioeconomics, environmental justice, land use, traffic and transportation, and visual resources, along with formulating solutions and mitigation unique to each individual energy facility. He provides expert technical expertise and serves as a member of inter-disciplinary team that evaluates potential environmental and socioeconomic effects of proposed power plants, policies, and plans for energy development in order to satisfy the requirements of the Warren-Alquist Act and CEQA.

### **AECOM – from 02/2010 to 07/2011**

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#### *Noise Analyst*

He served as an assistant project manager, environmental planner, or air quality/noise analyst for various CEQA/NEPA documents. His work focused on preparing environmental setting and impact analysis sections, such as land use, traffic, public services, for projects related to infrastructure improvements, residential development, fairgrounds, industrial expansion, business parks, mixed-use developments, and economic appraisal. He used various modeling techniques along with SoundPLAN, a software-based noise prediction modeling program, to assess project-generated noise levels in an environment. Through the use of SoundPLAN, he graphically mapped and visually evaluated project-generated noise levels based on principles of acoustics. He also learned to use SoundPLAN to model noise maps, design traffic noise mitigation, and predict combined noise levels. His experience in long-range planning also involved preparation of various elements for general plans and community plans.

### **EDAW | AECOM – from 09/2004 to 06/2009**

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#### *Associate Environmental Planner*

He wrote technical sections and managed environmental documents that analyzed, described, and informed the public and decision-makers the potential environmental impacts of implementing development projects, including needed on-site and offsite infrastructure. He supervised preparation of environmental documents utilizing information from the client (i.e., state, county, city) and other professionals (e.g., air quality consultant, traffic engineers) to conduct environmental impact analysis of development projects. He also wrote sections and





## CALIFORNIA ENERGY COMMISSION

conducted research for general plans and specific plans. He worked as part of a team in preparing these documents to meet the requirements of state and federal permit regulations. He diligently maintained budgets and worked within stringent schedules as part of managing preparation of environmental and community planning documents with local agencies, cities and counties, and environmental specialists. He prepared scopes of work and proposals for new work opportunities.

### **Stantec – from 07/2002 to 08/2004**

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#### *Project Planner*

He was responsible for providing land planning and environmental impact analysis in an environmental engineering firm overseeing various environmental remediation projects throughout northern California. He conducted hands-on oversight of remediation projects to assess the onsite environmental impacts and analyzed their successfulness. He was relied upon to provide my land planning, environmental impact analysis, and entitlement processing expertise. He was also responsible for providing assistance to land developers through the entitlement process including preparing development applications, preparing due diligence reports, and representation of the project to the public-at-large. He assisted cities and counties with the preparation of environmental documents and the processing of proposed land development projects. He managed the implementation of land development projects including large residential subdivisions, commercial development, public facilities, and business parks by coordinating efforts being pursued by other associates including surveyors, engineers, environmental specialists, public agencies, and the developer themselves. He also wrote technical sections that analyzed the environmental impacts associated with large infrastructure improvement projects and prepared the environmental document articulating the team's findings. Co-workers relied upon him to provide land use and environmental planning expertise towards a team effort.

### **Pacific Municipal Consultants – from 07/1999 to 07/2002**

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#### *Assistant Planner*

As part of my first work experience he evaluated proposed development projects, provided code enforcement, and assisted the public-at-large. He gained experience in long-range planning from diligent researching, and writing technical sections for general plans and environmental documents. As part of a team effort, he was responsible for the expedited review and management of proposed development applications through the entitlement process and conducting environmental review while working as a land use planner for the City of Elk Grove. He was responsible for processing and reviewing current planning projects applications such as subdivision maps, use permits, design review applications, staff level discretionary review, and other entitlements as assigned. As part of this process, he evaluated proposed projects with the requirements of the municipal code and general plan, presented development projects, and portrayed issues surrounding the project to decision-makers and the public through writing staff reports and articulating my professionalism to Planning Commissions and City Councils. In addition, he worked on the City of Elk Grove's first General Plan by writing and analyzing all the quantitative and statistical data for the Housing element and administered public meetings and workshops. I wrote the draft Housing Element, started the State certification process with the Department of Housing and Community Development, and assisted with the preparation of other required elements of their General Plan.

**DECLARATION OF  
Shahab Khoshmashrab**

I, Shahab Khoshmashrab, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as a Senior Mechanical Engineer.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Noise and Energy Resources.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8/16/2018

Signed: 

At: Sacramento, California



**DECLARATION OF  
SHAHAB KHOSHMAHRAB**

I, Shahab Khoshmashrab, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as a Senior Mechanical Engineer.
2. I prepared sections of staff's response to comments on the Initial Study addressing reliability and capacity.
3. It is my professional opinion that the prepared responses are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 5/16/2018

At: Sacramento, California

Signed: 

**Shahab Khoshmashrab**  
Senior Mechanical Engineer

**Experience Summary**

Eighteen years experience in the mechanical, civil, structural, and manufacturing engineering fields involving engineering and manufacturing of various mechanical components and building structures. This experience includes QA/QC, construction/licensing of electric generating power plants, analysis of noise pollution, and engineering and policy analysis of thermal power plant regulatory issues.

**Education**

- California State University, Sacramento-- Bachelor of Science, Mechanical Engineering
- Registered Professional Engineer (Mechanical), California License No. M 32883, Exp. 9/30/2014

**Professional Experience**

**2001-Current**—Senior Mechanical Engineer – Siting, Transmission, and Environmental Protection Division – California Energy Commission

- Perform analysis of generating capacity, system reliability and safety, energy efficiency, noise and vibration, jurisdictional determination, and the mechanical, civil, electrical, and structural aspects of power plants during licensing, construction, and operation.
- As the Facility Design Unit's lead, or senior, review and manage the work of technical staff (other engineers) and contractors; ensure project deadlines are met; and ensure that projects propose and implement the most energy efficient technologies to satisfy project objectives while protecting the environment;
- Independently review and evaluate Applications for Certification to ensure compliance of power plants and related facilities with applicable laws, ordinances, regulations, and standards and California Environmental Quality Act, or CEQA;
- Prepare and recommend to the Siting Committee, conditions of certification (including mitigation measures) under which power plants should be licensed, constructed and operated;
- Present oral and written expert testimonies in support of analysis at evidentiary hearings held before the Siting Committee and the public; and
- Assist the California Energy Commission in policy making related to power generation.



**1998-2001—Structural Engineer – Rankin & Rankin**

Engineered concrete foundations, structural steel and sheet metal of various building structures including energy related structures such as fuel islands. Performed energy analysis/calculations of such structures and produced both structural plans and detailed shop drawings using AutoCAD.

**1995-1998—Manufacturing Engineer – Carpenter Advanced Technologies**

Managed manufacturing projects of various mechanical components used in high tech medical and engineering equipment. Directed inspection of first articles. Wrote and implemented QA/QC procedures and occupational safety procedures. Conducted developmental research of the most advanced manufacturing machines and processes including writing of formal reports. Developed project cost analysis. Developed/improved manufacturing processes.

**DECLARATION OF  
Andrea Koch**

I, Andrea Koch, declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Office of the Siting, Transmission and Environmental Protection Division as a Planner II.
2. I prepared the Traffic and Transportation section of staff's Initial Study on the McLaren Backup Generating Facility Project.
3. It is my professional opinion that the prepared section is valid and accurate with respect to the issues addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: Aug. 17, 2018

Signed: Andrea Koch

At: Sacramento, California

# ANDREA KOCH

## PROFESSIONAL EXPERIENCE

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**CALIFORNIA ENERGY COMMISSION**, December 2009 – Present

*Siting, Transmission, and Environmental Protection Division, Sacramento, California*

Environmental Planner II- Perform environmental review of power plant applications.

- Review power plant applications for traffic and transportation and land use impacts.
- Write environmental analysis documents.

**CITY OF SACRAMENTO**, June 2007 – July 2009

*Planning Department, Long-Range Planning Division, Sacramento, California*

Assistant Planner- Performed long-range city planning for Sacramento.

- Coordinated review of the Draft 2030 General Plan, a comprehensive citywide land use plan.
- Prepared Ben Ali and Hagginwood neighborhood plans. Worked with City staff and community members to identify strategies for resolving neighborhood issues, such as infrastructure deficiencies.
- Reviewed 70 development applications, analyzing their consistency with City policy and providing written feedback to applicants.

**COUNTY OF SANTA CRUZ**, June 2005 – June 2007

*Planning Department, Environmental Planning Division, Santa Cruz, California*

Resource Planner II- Performed resource planning for Santa Cruz County.

- Reviewed development permit applications to ensure their consistency with regulations for creeks, wetlands, grading, geologic hazards, erosion control, and sensitive plant and animal species.
- Wrote staff reports analyzing development proposals and providing recommendations to the Environmental Planning Division Manager.
- Performed an average of 5 weekly pre-construction meetings and final inspections at project sites to ensure that development was consistent with County regulations and required mitigations.
- Regularly assisted the public with resource planning questions, both in-person and over the phone.

**COUNTY OF MONTEREY**, November 2004 – June 2005

*Planning Department, Marina, California*

Assistant Planner- Performed current planning for Monterey County.

- Reviewed development permit applications for consistency with County regulations.
- Prepared and presented staff reports for development applications. Reports provided recommendations to the Zoning Administrator.
- Assisted the public with zoning questions, both in-person and over the phone.

## EDUCATION

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California Polytechnic State University, San Luis Obispo, California

- Master of City and Regional Planning, Concentration in Environmental Planning, 2004

University of California, Davis

- Bachelor of Science in Wildlife, Fish, & Conservation Biology, Concentration in Conservation Biology, 2002
- Graduated with High Honors and a Department Citation

**DECLARATION OF  
Matthew S Layton**

I, Matthew S Layton, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as a Supervising Mechanical Engineer.
2. I oversaw preparation of sections of staff's Initial Study on the McLaren Backup Generating Facility Project. I also prepared sections of Staff's response to comments on the Initial Study addressing capacity determinations and reliability.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: August 21, 2018

Signed: \_\_\_\_\_

*Matthew S Layton*

At: Sacramento, California



**MATTHEW S. LAYTON**  
**1516 Ninth Street, MS-40 Sacramento, CA 95814**  
**(916) 654-3868 matthew.layton@energy.ca.gov**

### **Experience Summary**

Thirty five years of experience in the electric power generation field, including regulatory compliance and modification; research and development; licensing of nuclear, coal-fired, peaking and combined cycle power plants; and engineering and policy analysis of regulatory issues.

### **Education**

B.S., Applied Mechanics, University of California, San Diego.

Registered Professional Engineer - Mechanical, California.

### **Experience**

**2009-present** – Supervising Mechanical Engineer, Engineering Office, Siting, Transmission and Environmental Protection Division, California Energy Commission; managing a multidiscipline program providing engineering and public health assessments of complex energy systems.

**1987-2009** – Senior Mechanical Engineer, STEP Division, Energy Commission. Review and evaluate power plant proposals, identify issues and resolutions; coordinate with other agencies; and prepare testimony, in the areas of:

- Air quality resources and potential impacts, and mitigation measures;
- Public Health; and
- Transmission Line Safety and Nuisance.

Prepared Energy Commission demonstration project process; contributed to the Energy Technology Status, Energy Development, and Electricity Reports; Project Manager for demonstration projects; evaluated demonstration test plans, procedures, data and reports; disseminated test results; and managed research and development contracts.

**1983-1986** – Control Systems Engineer, Bechtel Power Corporation. Part of a multi-disciplined effort to environmentally qualify client's safety related nuclear plant equipment - performed analyses, calculations and reviews against vendor test reports, NRC guidelines and plant normal and postulated accident conditions.

**1981-1983** – Engineer, GA Technologies, Inc. Supervised design and procurement of full-scale test assembly used to evaluate design changes to operating reactor graphite core assembly. Conducted experiment to determine the relationship of graphite oxidation rate to water concentration, temperature, and helium pressure. Environmentally qualified essential and safety related nuclear power plant equipment to comply with NRC guidelines.

**DECLARATION OF**  
**Garry Maurath, PhD., P.G.**

I, Garry Maurath, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as an Engineering Geologist.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Paleontology, Geology and Soils, and Minerals.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 16 Aug 2018

At: Sacramento, California

Signed: 

**Garry Maurath, Ph.D., P.G., CHG**  
**Engineering Geologist**

**Experience Summary**

Dr. Maurath has 40+ years of experience in the design, management, and execution of geologic, hydrogeologic, geotechnical, geophysical, geothermal, and environmental investigations. Dr. Maurath has conducted numerous licensing studies and performed feasibility studies, site assessments, and construction support for power plants, hazardous waste facilities, dams, canals, tunnels, levees, high-temperature geothermal projects, strategic fuel depots, solid waste landfills, hazardous, toxic and radioactive waste (HTRW) facilities, and both permanent and tactical military infrastructure. He has been responsible for examining and evaluating present and potential geology, paleontology, hydrogeology, and environmental conditions for the planning, design, construction, maintenance, and/or clean-up of numerous facilities. This work has been performed in urban, rural, and remote settings.

His work has included CERCLA and RCRA site remedial investigations and feasibility studies, surface geologic mapping in volcanic, metamorphic, and sedimentary terrain, surface geophysical surveys, borehole siting, drilling, logging, aquifer evaluation and testing, subsurface mine evaluations, mine sampling, construction dewatering, and mercury soil surveys. Dr. Maurath has been responsible for the execution of hazardous waste, low-level, and high-level radioactive waste projects within local, state and federal regulatory guidelines in US EPA regions III, V and IX. He has been involved in the preparation of NEPA and CEQA documentation, EISs, EIRs, NDs, MNDs, NPDES permits, and numerous license applications for the Federal Energy Regulatory Commission and the California Energy Commission.

Dr. Maurath has been a senior scientist and managed projects for small, medium, and large size companies; local, state, and federal government agencies; and non-profit organizations. He has worked with or for SMUD, PG&E, Calpine, LADWP, MWD, DWR, California Geological Survey, U.S. Army Corps of Engineers, and several DOE facilities/national laboratories, including Los Alamos, SANDIA, INEL, Savannah River, Maxey Flats, and Hanford. His career has given him the opportunity to work in more than 26 states and 21 countries throughout the world.

**Selected Project Experience [technical position/project name/location/lead agency or owner]**

- Engineering Geologist, North of the Delta Off-stream Storage (NODOS) Project [Sites], US Bureau of Reclamation
- Engineering Geologist, North Umpqua River Project, Roseburg, Oregon
- Engineering Geologist, Piñon Pine Power Project, Sierra Pacific Power Company
- Engineering Geologist, Protected Fuel Depots Feasibility Study, Kuala Lumpur, Malaysia, Malaysian Ministry of Defense
- Engineering Geologist, Sanitary Landfill Siting Investigation, Fort Drum, New York, US Army Corps of Engineers
- Engineering Geologist, Sharp Army Depot Building S-4 Geohazard Assessment, US Army Corps of Engineers
- Engineering Geologist, Site Characterization of Superconducting Super-Collider (SSC) Sites, New York, NY UDC.
- Engineering Geologist, Union Valley Penstock Bifurcation Study, Upper American River, CA, SMUD
- Engineering Geologist, Upper Gorge Bypass Power Plant, Los Angeles Department of Water and Power
- Environmental Geologist, Gardena Sumps, Gardena, California, Atlantic Richfield
- Environmental Geologist, Low-level Radioactive Waste Disposal Site, Moorehead, KY, Maxey Flats Steering Committee.
- Environmental Geologist, Regulatory Compliance and Emergency Reporting Requirements, EG&G
- Field Coordinator, Feather River West Levee Rehabilitation Project, Sutter Butte Flood Control Agency and CA DWR
- Geochemist, Office of Nuclear Waste Isolation Licensing Project Manager, Columbus, OH, Battelle Memorial Institute
- Geologist – Geology and Soils, Supplemental CEQA Document - Slab Creek, SMUD.
- Geologist, Alternative Energy Feasibility Study, Ohioyle State Park, Pennsylvania, PA Department of Natural Resources
- Geologist, Assessment of Geothermal and Precious Metal Prospects, Western United States, AMAX Exploration
- Geologist, Clearlake Hot Dry Rock Demonstration Project, Clearlake, CA, California Energy Commission
- Geologist, Hydropower Relicensing EIS's, California, Federal Energy Regulatory Commission
- Geologist, Paleoliquefaction Studies along the Eastern Seaboard of the United States, Nuclear Regulatory Commission
- Geologist, Public Hearings on the North Carolina Low-Level Waste Siting
- Geologist, Rocky Point Pumped Storage Project, Taylor Park, Colorado, Natural Energy Resource Company
- Geologist, Statewide Liquid Geothermal Resource Evaluation, California, California Energy Commission
- Geologist/Paleontologist, Alamitos Energy Center, Huntington Beach, California, California Energy Commission
- Geologist/Paleontologist, Blyth Solar Power Project, Blyth, California, California Energy Commission
- Geologist/Paleontologist, Carlsbad Energy Center Project, Carlsbad, California, California Energy Commission
- Geologist/Paleontologist, El Segundo Power Project, El Segundo, California, California Energy Commission
- Geologist/Paleontologist, Gateway Generating Station, Antioch, California, California Energy Commission
- Geologist/Paleontologist, Geysers (Lakeview; NCPA #2), Calistoga, California, California Energy Commission
- Geologist/Paleontologist, Humboldt Bay Project, Humboldt, California, California Energy Commission
- Geologist/Paleontologist, Huntington Beach Energy Center, Huntington Beach, California, California Energy Commission
- Geologist/Paleontologist, Mission Rock Energy Center, Santa Paula, California, California Energy Commission
- Geologist/Paleontologist, Oakley Power Project, Oakley, California, California Energy Commission
- Geologist/Paleontologist, Pomona Repower Project, Pomona, California, California Energy Commission
- Geologist/Paleontologist, Pio Pico Energy Project, California, California Energy Commission
- Geologist/Paleontologist, Puente Power Project, Oxnard, California, California Energy Commission



- Geologist/Paleontologist, Ravenswood-Cooley Landing Reconductoring, Menlo Park and East Palo Alto, CPUC
- Geologist/Paleontologist, Stanton Energy Reliability Center, Stanton, California, California Energy Commission
- Hydrogeologist, Arco 5550 – City of Pomona Well-29, California, BP/Atlantic Richfield
- Hydrogeologist, ARCO Alegria/Gaviota Marine Terminal, Gaviota, California, BP/Atlantic Richfield
- Hydrogeologist, Assessment of 14 U.S. EPA Superfund Sites, CA, NJ, VA, OH, PA, and NY, US EPA
- Hydrogeologist, Auburn Tunnel Pumping Project, Auburn, California, City of Auburn
- Hydrogeologist, Defense Fuel Supply Point Ozol, Benicia, California, U.S. Army Corps of Engineers
- Hydrogeologist, Delta Habitat Conservation and Conveyance Project (DHCCP), CA DWR
- Hydrogeologist, Destruction of Wells N-11, N-18, & N-19, Sacramento, CA, Sacramento Suburban Water District
- Hydrogeologist, Diamond Valley Reservoir, Hemet, CA, Metropolitan Water District of Southern California
- Hydrogeologist, Geff Alternative Site Aquifer Characterization, Chicago, IL, State of Illinois
- Hydrogeologist, Groundwater Modeling of Alternative Low-level Waste Vault Designs, Savannah River, Westinghouse
- Hydrogeologist, Groundwater Monitoring in the Globe Mining District, Globe Arizona, Gila River Indian Community
- Hydrogeologist, Hydrogeologic Assessment of Potential Hazardous Waste Sites, San Francisco Bay Area, CA, PG&E
- Hydrogeologist, Kern Water Bank Evaluation Project, Kern Water Bank
- Hydrogeologist, Lake Skinner Groundwater Seepage Adjudication, Metropolitan Water District of Southern California
- Hydrogeologist, Los Baños Grandes Groundwater Resource Evaluation, Los Baños, California, CA DWR
- Hydrogeologist, Municipal Water Supply Well Siting, Design, & Construction, Alleghany County Water District
- Hydrogeologist, Mt. Hope Pumped Storage Project, Mt. Hope, New Jersey, Federal Energy Regulatory Commission
- Hydrogeologist, Platte River EIS, Wyoming and Nebraska, Federal Energy Regulatory
- Hydrogeologist, Sacramento Ethanol and Power Cogeneration Project, Sacramento, CA, ARK Energy
- Hydrogeologist, Sutter Power Plant AFC with the California Energy Commission, Sutter County, Calpine
- Hydrogeologist, Upper Rio Grande Flood Control Sys. Replacement, TX, Int. Boundary & Water Com.- US & Mexico
- Hydrogeologist, Vinvale Terminal, Southgate, California, BP/ARCO
- Hydrogeologist, Well 23 Assessment, Sacramento, CA, Sacramento Suburban Water District
- Hydrogeologist, Well 6 Destruction and Re-design, Sacramento, CA, Sacramento Suburban Water District
- Hydrogeologist, Well15 Rehabilitation, Rio Linda, CA, Rio Linda Elverta Community Water District, Rio Linda
- Independent Technical Reviewer, Calaveras Dam Replacement Project
- Independent Technical Reviewer, Diablo Canyon Nuclear Power Plant, Diablo Canyon, California, CEC
- Independent Technical Reviewer, Panama Canal Pacific Access Channel Project #4, Panama Canal Authority.
- Independent Technical Reviewer, Searchlight Wind Energy Project EIS, Bureau of Land Management
- Program QA/QC Manager, Urban and Non-Urban Evaluation Program (ULE/NULE), Sacramento, California, CA DWR
- Project Manager, Castaic Power Plant FERC Relicensing, Los Angeles Department of Water and Power (LADWP)
- Project Manager, Dos Pueblos Pipeline Removal Project, Goleta, California, BP/Atlantic Richfield
- Project Manager, Hanford, Technical Baseline Studies, Hanford, Washington, Westinghouse Hanford Company
- Project Manager, Los Angeles Terminal, Los Angeles, California, Conoco-Phillips
- Soils Analyst, Soil Trafficability Surveys, Federal Republic of Germany, U.S. Army Corps of Engineers
- Subject Mater Expert - California Geology, CA Board of Professional Engineers, Land Surveyors, and Geologists
- Subject Mater Expert - Hydrogeology, CA Board of Professional Engineers, Land Surveyors, and Geologists
- Task Order Manager, Non-Urban Levee Evaluation Project (NULE), Sacramento Delta, California, CA DWR

#### **Education**

- PhD/Geology/1989/Kent State University, OH
- MS/Geology/1980/Kent State University, OH
- BS/Geology/1974/Lehigh University, PA

#### **Registration**

- 2008/Certified Hydrogeologist/CA/#906
- 1992/Professional Geologist/CA/#8346
- 1985/HAZWOPER/OHSA
- 1991/HAZWOPER Supervisor Certification/OHSA

#### **Professional Societies/Affiliates**

- Sigma Xi, Scientific Research Society, Life Member
- Association of Environmental and Engineering Geologists (former Finance Committee co-chair and member of the Board of Directors)
- Groundwater Resources Association of California

#### **Publications**

Dr. Maurath has more than 40 publications covering topics including paleoliquefaction, terrestrial heat flow, numerical modeling, hydrogeology, nuclear waste, hazardous waste, and geothermal energy. He is co-editor of *Geology of Sacramento*, scheduled to be published in September 2018.

#### **Academia**

Dr. Maurath has taught undergraduate courses in Physical Geology, Hydrogeology, Environmental Habitats, and Laboratory Safety; and graduate level courses in Geology of the Bahamian Platform, Carbonate Deposition, Reef Ecology, Data Management, and ICP Laboratory Techniques for Trace Element Geochemistry. Dr. Maurath has been affiliated with Kent State University, University of California at Davis, California State University Sacramento, Monmouth College, and the University of St. Francis.

**DECLARATION OF  
Melissa Mourkas**

I, Melissa Mourkas, declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Protection Office of the Siting, Transmission and Environmental Protection Division as a Planner II, Cultural Resources.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Cultural Resources-Built Environment.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: August 20, 2018

At: Sacramento, California

Signed: 

# MELISSA MOURKAS

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## EDUCATION

### **MASTER OF ARTS, LANDSCAPE DESIGN & PLANNING, 1994** **CONWAY SCHOOL OF LANDSCAPE DESIGN, CONWAY, MASSACHUSETTS**

Graduate landscape design program providing professional training in site design and land-use planning. Curriculum emphasis is on sustainable landscape planning and design. Graduate projects included: Master Plan for a 45-acre historic resort, original landscape designed by F.L. Olmsted and Performance Standards for a proposed industrial park.

### **BACHELOR OF ARTS, HISTORY OF ARCHITECTURE & ART, 1981** **SCRIPPS COLLEGE, CLAREMONT, CALIFORNIA**

Major studies in Art and Architectural History, Urban Development. Senior thesis: documentation and analysis of the innovative residential designs and construction techniques of California modern architect Rudolf M. Schindler. Minor studies in Art and the Humanities.

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## PROFESSIONAL EXPERIENCE/QUALIFICATIONS

- Licensed Landscape Architect, California # 5139
- Qualified Architectural Historian, Secretary of the Interior's Standards for Historic Preservation, Code of Federal Regulations, 36 CFR Part 61.

### ***PLANNING AND HISTORIC PRESERVATION:***

**April 2010 to Present: Planner II, California Energy Commission, Siting, Transmission and Environmental Protection Division.** Provide technical environmental analysis of proposed energy facilities and development. Review of EIR/EIS documents prepared by other agencies under NEPA. Specific tasks include: the assessment of potential impacts of new electric power plants on both Visual and Cultural Resources; identification of suitable mitigation measures under CEQA; preparation of written testimony; participation in public workshops; presentation of sworn testimony during evidentiary hearings, and project monitoring to ensure compliance with local, state and federal environmental laws and regulations. Cultural Resources specialty in the built environment, architectural and landscape history. Section 106 review of federally-funded energy efficiency upgrades under Programmatic Agreement with California OHP.

**2008-2014: Member, City of Sacramento Preservation Commission** (Chair 2013-2014)

**2005 to 2008: Assistant Planner, Historic Preservation Office, City of Sacramento, CA**  
Responsible for design review and approval for private and public development projects involving rehabilitation, preservation and restoration of historic resources and districts under CEQA. Prepared staff reports for Preservation Commission and Council, and coordinated with other planning staff on concurrent entitlements. Staff liaison on municipal development projects involving historic resources.

### ***LANDSCAPE ARCHITECTURE:***

**1994 to Present: Landscape Architecture and Design.** Experience in landscape architecture, landscape construction estimating, site planning, historic landscapes and landscape master plans. Provide landscape architecture and consulting services to private clients, public organizations, contractors, and design firms. Preparation of Cultural Landscape Reports. Frequent speaker to various groups on landscape design, construction and cultural landscapes.



**DECLARATION OF  
Scott Polaske**

I, Scott Polaske, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as a Planner II.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing cumulative impacts.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: \_\_\_\_\_

8/16/18

At: Sacramento, California

Signed: \_\_\_\_\_

Scott Polaske



# CALIFORNIA ENERGY COMMISSION

**SCOTT POLASKE  
PLANNER II**

## **Education, Certification & Associations**

- Bachelor of Arts, Environmental Studies, University of California at Santa Barbara (2014)

## **Experience**

### **California Energy Commission (CEC) – from 5/2015 to present**

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#### *Planner II*

As a staff Planner with the Energy Commission, Mr. Polaske analyzes the transportation, land use and visual components of energy facilities siting applications to assess resource impacts, develop mitigation, and to evaluate compliance with applicable federal, state, and local, laws, ordinances, regulations, and standards. Mr. Polaske also takes lead on cumulative impact analyses, requiring coordination with local planning jurisdictions as well as with Energy Commission staff to ensure the best available information on cumulative projects is include in staff analyses.

## **Projects**

- Puente Power Project – assisted in cumulative and alternatives analysis
- Alamitos Energy Center – assisted in cumulative and alternatives analysis
- Chemehuevi Community Center Solar Grant Proposal – assisted in grant review
- Pomona Repower Project SPPE – land use analysis
- Mission Rock Energy Center – transportation analysis
- Stanton Energy Reliability Center – visual resources analysis
- McLaren Backup Generating Facility SPPE – cumulative analysis
- Hesperia Farm Solar Photovoltaic Project Initial Study – grant review
- Fly Monterey Solar Program Initial Study – grant review
- Del Mar EIR for Civic Center Energy Efficiency Enhancements – grant review
- Operational Power Plant Amendments – amendment impact review

**DECLARATION OF  
WENJUN QIAN**

I, Wenjun Qian, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as an Air Resources Engineer.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Air Quality. I also prepared sections of Staff's response to comments on the Initial Study addressing Air Quality.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8/17/2018

Signed: 

At: Sacramento, California



# Wenjun Qian, Ph.D., P.E.

## Professional Experience

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**Air Resources Engineer**

*(July 2010 – Present)*

*California Energy Commission, Siting Transmission and Environmental Protection Division*

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Currently acting as air quality technical staff on siting projects filed with the Energy Commission, including El Segundo, Russell City, Palomar, Oakley, Huntington Beach etc. Specific responsibilities include the following:

- Analyze the impacts of the construction and operation of large power generation projects on air quality, Green House Gas and climate change
- Determine the conformance to applicable U.S. EPA, ARB and local air district regulations and standards
- Investigate and recommend appropriate emission mitigation measures
- Prepare air quality staff assessments and technical testimony
- Develop and monitor air quality compliance plans
- Review and evaluate U.S. EPA, ARB, and local air district air quality rules and regulations
- Collect, analyze, and evaluate data for the effects of air pollutants and power plant emissions on human health and the environment
- Assist staff in other technical areas by evaluating nitrogen deposition, thermal plume, and visible plume impacts from power plants

**Research Assistant**

*(Sept. 2005 – June 2010)*

*University of California, Riverside, Mechanical Engineering*

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- Evaluated air quality impact of distributed generations in South Coast Air Basin of California
- Estimated air quality impact from the key power plant of Los Angeles Department of Water and Power in shoreline urban areas
- Improved air quality model results by evaluation with experimental data
- Prepared and presented multiple comprehensive reports, journal papers, and conference papers

## Education

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PhD      Mechanical Engineering, University of California, Riverside (August 2010)  
MS      Mechanical Engineering, George Washington University (August 2005)  
BS      Mechanical Engineering, Shanghai Jiao Tong University (June 2004)

## DECLARATION OF Jacquelyn Record

I, Jacquelyn Record, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as an Air Resources Engineer.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Air Quality and Greenhouse Gas. I also prepared sections of Staff's response to comments on the Initial Study addressing Air Quality and Greenhouse Gas.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8-17-18

At: Sacramento, California

Signed: Jacquelyn L Record

# Jacquelyn Leyva Record

## Experience

**March '09 – Present**      **CA Energy Commission**      **Sacramento, CA**

### **Air Resources Engineer**

- Currently authoring staff assessment analyses for the technical area of air quality for the Engineering and Siting Division permitting power plant projects over 50 MW in the state of CA. Worked on renewable ARRA funding projects along with natural gas power projects.
- Reviewing emission compliance reports
- Authored staff analyses for project amendments
- Trained in CEQA and NEPA analysis, along with AERMOD air modeling.

**August '08 – March '09**      **ERRG, Inc.**      **Martinez, CA**

### **Engineering Assistant**

- Assisted with both technical and field duties for a variety of environmental investigations.
- Assisted on an environmental site assessment, preliminary assessments (PA), site inspections, and remedial investigations feasibility studies.
- Field duties performed include groundwater sampling and air sampling

**June '07 – March '08**      **Tetra Tech EC, Inc**      **Santa Ana, CA**

### **Engineering Assistant Intern**

- Working on various Department of Defense projects in environmental engineering.
- Helped assist in 5 year review of remediation approaches.
- Helping assist with a commercial project creating a water reuse/recycle treatment plant.

**June '05 – September '05**      **SF Regional Water Board**      **Oakland, CA**

### **Contract Work – Special Project**

- Wrote a memorandum regarding total petroleum hydrocarbons showing up as false positives in submitted quarterly monitoring reports for NPDES FUEL permit.
- Researched various EPA methods of testing for VOC, and Fuel constituents in water.
- Communicated with consultants from Weiss Associates and state funded laboratories to come to a conclusion for memorandum.
- Site inspections, site reports.

## Education

2003-June 2008      **University of California Irvine**      **Irvine, CA**

- B.S., Chemical Engineering
- MAES (Mexican American Engineers and Scientists) - Vice Chair 2004-2005
- CAMP summer science program participant 2003



**DECLARATION OF**  
**Tia Mia A. Taylor**

I, Tia Mia A. Taylor, declare as follows:

1. I am presently employed by the California Energy Commission in the Environmental Office of the Siting, Transmission and Environmental Protection Division as a Staff Biologist.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing impacts to biological resources.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8/17/18

At: Sacramento, California

Signed: \_\_\_\_\_





# CALIFORNIA ENERGY COMMISSION

TIA MIA TAYLOR  
STAFF BIOLOGIST/ PLANNER I

## Education, Certification & Associations

- Bachelor of Science, Environmental & Resource Science, University of California Davis (2010)
- Associate of Science, Mathematics & Physical Science, American River College, (2007)

## Experience

### **California Energy Commission (CEC) – from 2015 to Present**

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#### *Staff Biologist*

Under Warren-Alquist Act, Ms. Taylor reviews applications to permit and build new thermal power plants throughout California, and performs California Environmental Quality Act (CEQA) equivalent analyses to assess effects on biological resources. Ms. Taylor serves as an in-house expert in project approval, construction and compliance monitoring on projects ranging in scale from 50 megawatts (MW) to 1,100 MW in generating capacity. Her work includes establishing and maintaining relationships with colleagues at other government agencies such as California Department of Fish and Wildlife (CDFW), US Fish and Wildlife Service (USFWS), US Army Corps of Engineers (USACE) and coordinating with these contacts to make sure power plants are in compliance with CDFW 1600 and 2081 permits, USFWS Section 7 consultations and Section 10 permits, and Clean Water Act 404 permits and 401 certifications.

## Select Projects

**Palmdale Power Plant - Palmdale, San Bernardino County, CA.** Served as lead author of the biological resources analysis for a petition to amend the original CEC license for a 645 MW power generation facility. Ms. Taylor was responsible for coordinating the biological resources review with outside agencies including CDFW and USFWS, and completing a complex review and mitigation plan for potential take resulting from the project of southwestern willow flycatcher based upon new evidence for the species not known at the time of the original Decision. In addition, during the review of the amended project Ms. Taylor recognized inadvertent errors which were overlooked in the original Decision's computation of required mitigation acres for the Mohave ground squirrel and Swainson's hawk. The correction of these errors for the amended project resulted in an additional 10 mitigation acres required for Mohave ground squirrel and 61 mitigation acres required for Swainson's hawk. In order to accurately determine the total amount of acres of each vegetation community permanently lost Ms. Taylor created an ArcGIS map comparing the original project to the amended project which was published in the Final Staff Assessment.

**Alamitos Energy Center – Long Beach, Los Angeles County, CA.** Ms. Taylor was a contributing author in writing the biological resource section of the CEC license, which included analysis of the application for certification provided by the project owner. Ms. Taylor serves as lead for the biological resources mitigation monitoring and compliance activities for this 1,040 MW gas-fired generating facility currently in the middle stages of construction. In this role her responsibilities include monthly assessment of compliance with project conditions of approval pertaining to plant and wildlife avoidance and conservation, coordinating with the owner's





biological experts to resolve issues requiring attention at the site, and conducting regular field visits to assess implementation of and adherence to project mitigation measures. Most recently she is working with the CDFW and the Designated Biologist onsite to adjust current best practices concerning the protection and monitoring of the burrowing owl due to the project site now being recognized as burrowing owl habitat.

**Huntington Beach Energy Center (HBEP) – Huntington Beach, Orange County, CA.** The HBEP is a 844 MW gas-fired power facility currently under construction within an existing power plant site proximate CA Highway 1 and the State Beach. In addition to her compliance and monitoring responsibilities for the new construction as lead biologist for this facility, she serves as the lead on CEC coordination, review and approval of activities and an annual budget on the adjacent Huntington Beach Wetlands Conservancy, a restoration project required as mitigation for the original facility. Ms. Taylor conducts monthly review of monitoring reports and activities and participates in construction site visits to confirm adherence to the project Biological Resources Mitigation Implementation and Monitoring Plan. Most recently she is working with the CDFW and the Designated Biologist onsite to adjust current best practices concerning the protection and monitoring of the burrowing owl due to the project site now being recognized as burrowing owl habitat.

**Stanton Energy Reliability Center – Stanton, Orange County, CA.**

Ms. Taylor was a contributing author of the Preliminary Staff Assessment for the submitted application to build this 98 MW facility consisting of two Hybrid EGT™ General Electric LM6000-based Electric Gas Turbines and a 10-megawatt integrated battery storage component. Ms. Taylor attended the initial site visit and public hearing for support or opposition of the power plant by community members in Stanton, CA. She continues to assist in reviewing and editing documents pertaining to the CEC licensing process.

**McLaren Advantage Data Center – Santa Clara, Santa Clara County, CA.**

Ms. Taylor is a contributing author for the process of completing an Initial Study and Mitigated Negative Declaration for this 98.7MW facility comprised of multiple diesel back-up generators that qualifies for the Small Power Plant Exemption (SPPE) with the CEC since it will produce less than 100MW in energy. This includes responsibilities of analyzing, reviewing, writing and editing documents pertaining to this CEC SPPE process.



**DECLARATION OF  
Lisa Worrall**

I, Lisa Worrall, declare as follows:

1. I am presently employed by the California Energy Commission in the Engineering Office of the Siting, Transmission and Environmental Protection Division as a Planner II.
2. I prepared sections of staff's Initial Study on the McLaren Backup Generating Facility Project addressing Population and Housing, Public Services, and Recreation.
3. It is my professional opinion that the prepared sections are valid and accurate with respect to the issue(s) addressed therein.
4. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 8/17/18

At: Sacramento, California

Signed: Lisa Worrall

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## LISA WORRALL

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### *Summary*

- Preparation of environmental documents in compliance with the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), California Energy Commission siting regulations, and federal, state and local laws, ordinances, regulations and standards (LORS).
- Projects include thermal power plants, private residential and commercial development, county and public works, and state transportation.

### *Employment Experience*

#### **California Energy Commission Planner II**

Sacramento, California  
January 2010 to Present

- Prepare an independent CEQA analysis of the environmental impacts from thermal power plants related to land use and socioeconomics.
- Evaluate projects in accordance with CEQA, the California Energy Commission siting regulations, and federal, state and local LORS.
- Review information provided by the project applicant and other resources to assess the environmental effects of energy facility proposals

#### **Sacramento County Department of Environmental Review & Assessment**

##### ***Associate Environmental Analyst***

Sacramento, California  
April, 2006 – May, 2009

- Prepared a variety of environmental documents in compliance with CEQA, NEPA and local, state and federal LORS.
- Conducted project site assessments, reviewed engineering plans, and researched and interpreted scientific data for project impact analysis.
- Managed multiple public works and private development projects with a variety of environmental concerns and overlapping deadlines.
- Maintained effective relationships with other Sacramento County departments, agencies, and service providers to ensure comments and recommended conditions of project approval were obtained and any associated environmental impacts assessed.

#### **Analytical Environmental Services**

##### ***Associate***

Sacramento, California  
April, 2004 – October, 2005

- Interpreted highly technical traffic impact studies, utilizing the information to develop a traffic impact assessment chapter for use in a variety of environmental documents complying with CEQA, NEPA, and county and city transportation policies and codes.
- Managed the preparation of traffic studies, including developing the scope of study, securing the contract, and reviewing the work product.
- Managed multiple private development projects simultaneously under tight deadlines. Clients included Native American tribes and cities.
- Coordinated with state, county and city officials in the development of traffic study methodology, parameters and assumptions for proposed projects.

- Worked closely with transportation engineers to understand the complexities of each project's specific traffic impacts.

**California Department of Transportation (Caltrans)**  
*Associate Environmental Planner*  
*Environmental Planner*

Fresno, California  
March, 2003 – March, 2004  
August, 2000 – March, 2003

- Prepared all levels of environmental documentation for transportation projects in compliance with CEQA and NEPA.
- Coordinated and interpreted environmental technical studies for incorporation into the environmental document and for explanation to other team members, agencies, and the public.
- Managed and represented environmental concerns with other functional units.
- Led and participated in public outreach events.
- Coordinated project development with other Caltrans departments, agencies and the public.

*Education*

**California State University, Northridge**  
Bachelor of Arts in Geography

May, 2000