June 16, 2010

California Energy Commission
Attn: Docket No. 09AFC6
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

Re: 09-AFC-6 Blythe Solar Power Plant Project

Dear Docket Clerk:

Enclosed are an original and one copy of PREHEARING CONFERENCE STATEMENT OF CALIFORNIA UNIONS FOR RELIABLE ENERGY. Please process the document and provide us with a conformed copy in the envelope provided.

Thank you.

Sincerely,

/S/

Elizabeth Klebaner

EK:bh
Enclosures
STATE OF CALIFORNIA
California Energy Commission

In the Matter of:
The Application for Certification for the Blythe Solar Power Project

Docket No. 09-AFC-6

PREHEARING CONFERENCE STATEMENT
OF CALIFORNIA UNIONS FOR RELIABLE ENERGY

June 16, 2010

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Attorneys for the CALIFORNIA UNIONS FOR RELIABLE ENERGY
Pursuant to the April 30, 2010 Notice of Prehearing Conference and Evidentiary Hearing, California Unions for Reliable Energy (“CURE”) submits this prehearing conference statement. Each informational item requested by the Committee is discussed below.

1. **Topic Areas That Are Complete and Ready to Proceed to Evidentiary Hearing**

All resource areas with the exception of Biological Resources, Cultural Resources, Land Use, Traffic and Transportation, and Transmission System Engineering are complete and ready to proceed to evidentiary hearing.

2. **Topic Areas That Require Further Analysis and Which Are Not Ready for Adjudication**

The following resource areas are not ready for adjudication:

a. **Biological Resources**

The Commission is required under CEQA to analyze the whole of the Project which has the potential to result in a direct physical change in the environment.\(^1\)

In this case, “the whole of the Project” includes Palo Verde Solar I, LLC’s (“Applicant”) proposed 1000 MW power plant, a seven mile transmission line and other linear facilities, and an expansion of the Colorado River substation needed to deliver the Project’s power to the grid. On May 11, 2010, Staff submitted five specific data requests to the Applicant regarding potential impacts to the federally

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\(^1\) 14 Cal. Code Reg. § 15378; see also Laurel Heights Improvement Assn. v. Regents of the University of California (1988) 47 Cal.3d 376.
endangered Coachella Valley milkvetch. The Applicant has not yet provided responses to Staff’s data requests.

On May 14, CURE submitted data requests to the Applicant regarding biological resources, impacts to waters of the State, and worker safety issues. The Applicant has not yet provided responses to CURE’s data requests, although the Applicant stated that it will provide responses in a “Biological Resources Technical Report” to be filed on May 28, 2010.

Although on May 14, 2010, the Applicant provided preliminary survey information for portions of the proposed transmission line corridor, a temporary construction access road, utility corridor, road improvements to Black Rock Road, and additional Project components, the Applicant has not yet submitted final survey results and analysis, which are expected sometime this month.

On June 4, 2010 Staff informed the parties that the California Public Utilities Commission staff asked the Energy Commission to also include a permitting-level analysis of the proposed Colorado River substation expansion that is under their permitting authority. According to Staff, consultants are currently preparing this report, which will be included as part of the Supplemental Staff Assessment. To date, this analysis has not yet been done.

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4 Revised Staff Assessment, p. C.2-4.
5 Revised Staff Assessment, Executive Summary, p. 12.
6 Id., Executive Summary at p. 13.
Although Staff purports to have fully considered data submitted by the Applicant, no party has reviewed and submitted testimony on the Applicant’s new biological data, which was docketed on June 11, 2010 – *the same day opening testimony was due*, after the close of discovery, and after the publication of the Revised Staff Assessment. Similarly, no party will have reviewed and submitted testimony for evidentiary hearings on the Applicant’s biological resource data that the Applicant anticipates docketing sometime this month.⁷

Staff readily recognizes that its biological resource analysis is incomplete. According to the RSA, “there may be late survey results that were received too late to be included in the RSA” and “these late survey results will be included as part of the Supplemental Staff Assessment.”⁸ Because Staff has yet to incorporate analyses regarding the whole of the Project, facts regarding the Project’s potentially significant impacts to biological resources have not yet been fully developed in the record of this proceeding.

It is imprudent and a waste of the Commission’s and the parties’ resources to proceed to evidentiary hearings on an incomplete record. As this Committee is well aware, CEQA requires that conclusions regarding Project impacts and the efficacy of proposed mitigation be based on substantial evidence. Substantial evidence is defined as “*enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though*

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⁷ *See id.*, p. C.2-4.
⁸ Revised Staff Assessment, Executive Summary at p. 12.
other conclusions might also be reached.”9 Pursuant to sections 1723.5(a) and
1748(d) of the Commission’s regulations, the Applicant has the burden to submit
information in support of the Applicant’s Project. Pursuant to sections 1723.5(d)
and 1742, Staff must conduct environmental review of the Applicant’s Project and
prepare a report prior to evidentiary hearings. At this time, the Applicant has not
yet met its burden and Staff’s report is incomplete.

Clearly, the Applicant has not yet met its burden to provide the Commission
with information supporting its application. The Applicant has not yet provided
responses to Staff’s or CURE’s data requests, further data is forthcoming, and
Staff’s report that is required prior to evidentiary hearings is incomplete. These
facts aptly illustrate that the parties need more time to meet their evidentiary
obligations regarding the Project’s impacts to biological resources and compliance
with LORS, and that biological resources are not ready for evidentiary hearings.

CURE requests at least 30 days from the date of Staff’s Supplemental Staff
Assessment (following receipt of the Applicant’s responses to data requests and
final submission of biological data to the Commission) for review of the report and
underlying data and preparation of supplemental testimony on the Project’s
potentially significant impacts to biological resources and compliance with LORS,
and any feasible mitigation measures that are necessary to reduce impacts to a
level of insignificance. Additionally, CURE requests that the Commission provide
an opportunity to conduct limited discovery on all biological data that has been, and
will be presented by the Applicant after the close of discovery on May 17, 2010.

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b. Cultural Resources

The record of this proceeding is devoid of information that is necessary for the Commission to make findings regarding the Project’s potentially significant impacts to cultural resources and the Project’s consistency with LORS.

First, the Committee has not yet received Staff’s analysis. In the Staff Assessment/Draft Environmental Impact Statement published in March 2010, Staff concluded that it was unable to determine whether any of the 234 identified cultural resources within the Project survey area are eligible or ineligible for listing in the National Register of Historical Places or the California Register of Historic Resources.\(^{10}\) Staff did not provide a cultural resources impact analysis in the Revised Staff Assessment.\(^{11}\) Thus, as a matter compliance with its own regulations, the Commission cannot proceed to evidentiary hearings on cultural resources until Staff completes its analysis.

Second, Staff stipulated to accept a limited discovery response from the Applicant at the outset of this proceeding; the Applicant provided responses (or indicated that response would be provided at a later date) to only 25 of the 55 data requests submitted by Staff.\(^{12}\) Now Staff and the Applicant dispute the amount of information that Staff will need to complete its analysis and the adequacy of the Applicant’s proposed mitigation.\(^{13}\)

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\(^{10}\) Opening Testimony of Benjamin Vargas, et al., June 11, 2010, at p. 4.
\(^{11}\) Revised Staff Assessment, p. C.3-1.
\(^{12}\) See Applicant’s Responses to CEC Data Requests Set 1, January 6, 2010, Cultural Resources, DR-CR-98-152.
Third, the Applicant opposes the production of confidential cultural resources data to CURE as a general matter.\textsuperscript{14} However, without information regarding the “need for” or “feasibility” of any condition intended to mitigate for impacts to cultural resources – information that is at this time absent from the record of this proceeding – CURE would be significantly prejudiced as party to this proceeding if the Committee proceeds to evidentiary hearings on these issues.\textsuperscript{15}

CURE requests that the Committee postpone the scheduling of evidentiary hearings on cultural resources until the Commission issues a decision in the Consolidated Hearing on Issues Concerning US Bureau of Land Management Cultural Resources Data\textsuperscript{16} and until CURE is provided with Staff’s analysis and the evidence underlying Staff’s analysis. The Commission’s decision in the consolidated proceeding on cultural resources is necessary to determine whether the Commission intends to comply with its own regulations and State law and whether CURE will be provided with its right to participate as a party in this proceeding. CURE requests at least 30 days from the date of issuance of the Supplemental Staff Assessment and the data underlying its assessment to review and prepare testimony regarding cultural resources.


\textsuperscript{15} See 20 Cal. Code. Regs., § 1748(e).

\textsuperscript{16} See generally, Consolidated Proceeding, Docket No. 10-CRD-1.
c. Land Use and Traffic and Transportation

In preparing the Staff Assessment, Staff is required to determine compliance with LORS. The Riverside County Airport Land Use Commission (“RCALUC”) identified several areas of concern regarding the Project’s consistency with the Riverside County Airport Land Use Compatibility Plan (“2004 Airport Plan”). Staff is working with RCALUC to resolve these issues. Specifically, Staff identified a potential conflict with Policy 4.3.7 of the Countywide Policies of the 2004 Airport Plan, which prohibits land uses that generate glare or distracting lights, or cause sunlight to be reflected towards an aircraft engaged in an initial straight climb. Staff also identified potential hazards to flight as a result of the height velocity of a thermal plume emanating from the Project’s dry cooling unit, among other issues.

In addition to inconsistencies already identified by Staff, recent changes to the Project, namely, 8 newly proposed evaporation ponds totaling 28 acres, pose a new conflict with the 2004 Airport Plan that has not yet been analyzed by Staff in a report to the Commission. These changes to the Project raise significant issues with respect to compatibility with the 2004 Airport Plan. According to the Revised Staff Assessment, prior studies have shown that evaporation ponds act as a bird attractant.

Policy 4.3.7 of the 2004 Airport Plan prohibits new land uses that may cause increased bird strike hazards to aircraft in flight within any airport’s influence area.

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17 Revised Staff Assessment, p. C.6-9.
18 Revised Staff Assessment, p. C.10-10.
19 Id. at p., C.2-81.
Policy 4.3.7 also makes specific reference to the FAA Advisory Circular 150-5200 – 33A, Hazardous Wildlife Attractants On or Near Airports ("FAA Circular"), which recommends a distance of five statute miles between the farthest edge of the airport’s air operation’s area and the hazardous wildlife attractant, if the attractant could cause hazardous wildlife movement into or across the approach or departure airspace. The FAA Circular also provides that constructed natural areas, such as detention and retention ponds and roosting habitats on buildings, can serve as hazardous wildlife attractants.

The Applicant submitted an application for a major land use action review to the RCALUC; however, no consistency determination has been made to date. The matter is scheduled to be heard again by the RCALUC on July 6, 2010. Consistent with Title 20, the Commission cannot determine whether the project is consistent with these policies until Staff completes its analysis of these issues. Therefore, the adjudication of this matter at the California Energy Commission should be postponed until after RCALUC issues its advisory opinion to Staff, and after Staff makes its recommendation regarding the Project’s potential conflicts with surrounding uses in a report submitted to the Commission prior to evidentiary hearings. CURE requests at least 30 days from the issuance of the Supplemental Staff Assessment to review and to prepare testimony on this issue.

d. Transmission System Engineering

The interconnection of the Project and other generators may require upgrades to the Southern California Edison transmission system, including an
expansion of the not yet built Colorado River substation. The adjudication of the Project’s reliability and its downstream transmission impacts cannot proceed until after the California Independent System Operator (“CalISO”) issues the results of its Phase II Interconnection Study and the parties have had an opportunity to review its contents and to provide testimony to the Commission. The Phase II Interconnection Study will provide evidence of the reliability impacts of the proposed transmission upgrades to SCE’s transmission system on which the Project will depend. CURE requests at least 30 days from the issuance of the Supplemental Staff Assessment to review and submit testimony on transmission system engineering, if needed.

3. Resource Areas That Are in Dispute

The following resources areas are in dispute: Biological Resources, Cultural Resources, Land Use, Soil and Water, Traffic and Transportation, Waste Management, Worker Safety, and Transmission System Engineering.

4. Witnesses, Topic Areas, Testimony

Each of CURE’s proposed witnesses and a summary of their testimony is discussed below. A copy of their qualifications is attached as Exhibit A. CURE reserves the right to submit additional testimony at the evidentiary hearings.

a. Vernon C. Bleich, PhD. (Time estimate for direct testimony: 2 hours)

Vernon C. Bleich will testify on the topic area of Biological Resources. Dr. Bleich will testify to the Project’s potentially significant impacts to the Nelson’s bighorn sheep and mitigation measures for Project impacts to the species.
b. Scott Cashen M.S. (*Time estimate for direct testimony: 2 hours*)

Scott Cashen will testify on the topic area of Biological Resources. Mr. Cashen will testify regarding the Project’s potentially significant impacts to federally endangered Coachella Valley milkvetch, State-threatened Gila woodpecker, and Couch’s spadefoot toad, a California Species of Special Concern and Bureau of Land Management sensitive species; mitigation for impacts to Couch’s spadefoot toad; mitigation for potentially significant impacts of construction noise on birds; mitigation measures designed to reduce wildlife hazard from evaporation ponds; and compensatory mitigation for impacts to biological resources.

c. T’ Shaka Toure M.S. (*Time estimate for direct testimony: 1 hour*)

Mr. Toure will testify on the topic of Biological Resources. Mr. Toure will testify regarding the Project’s potentially significant impacts to waters of the State, and mitigation measures and feasible alternatives to avoid and minimize the Project’s significant impacts to waters of the State.

d. Matthew F. Hagemann, P.G. (*Time estimate for direct testimony: 1 hour*)

Matthew Hagemann will testify on the topic areas of Worker Safety and Waste Management. Mr. Hagemann will testify regarding potentially significant impacts to worker safety due to unexploded ordnance and munitions from former military activities within the Project right of way, the mitigation measures necessary to reduce those impacts, and the U.S. Army Corps of Engineers practices regarding investigation and removal of unexploded ordnance under the Defense Environmental Restoration Program Act.
5. **Topic Areas for Cross-Examination**

CURE requires time to cross-examine each of the Applicant’s and Staff’s witnesses presenting testimony in the following areas: Alternatives, Biological Resources, Cultural Resources, Land Use, Project Description, Waste Management, Water Resources, and Worker Safety.

CURE also reserves the right to cross-examine witnesses in any of the other topic areas at the evidentiary hearing.

6. **CURE’s List of Exhibits and Request for Official Notice**

The following is CURE’s tentative list of exhibits, in sequential order. CURE reserves the right to supplement this exhibit list with additional documents, analyses and other information at any time up to and including the close of the evidentiary hearings.

In addition to the exhibits enumerated below, CURE requests that the Committee take official notice pursuant to Title 20, section 1213 of the California Code of Regulations of the U.S. Bureau’s of Land Management California Desert Conservation Area Plan (“CDCA”), as amended in 2002.

<table>
<thead>
<tr>
<th>Exhibit</th>
<th>Witness</th>
<th>Brief Description</th>
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<td>Bleich</td>
<td>Opening Testimony of Vernon C. Bleich</td>
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<td>301</td>
<td>Bleich</td>
<td>Bleich C.V.</td>
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<tr>
<td>301-A</td>
<td>Bleich</td>
<td>Rebuttal Testimony of Vernon C. Bleich</td>
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<td>303</td>
<td>Cashen</td>
<td>Cashen C.V.</td>
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<tr>
<td>No.</td>
<td>Author</td>
<td>Title</td>
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<tr>
<td>306</td>
<td>Cashen</td>
<td>Memo to Craig Hoffman from Heather Blair (2/5/10) Re Abengoa Mojave Solar Project – time sensitive issues and informational needs</td>
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<td>312</td>
<td></td>
<td>Summary of Biological Resource Survey Studies and Methodologies Planned or Currently Being Implemented for 2010 (submitted by Solar Millennium LLC, 4/22/10)</td>
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<tr>
<td>313</td>
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<td>Draft Summary: Preliminary Spring 2010 Survey Results for Desert Tortoise, Rare Plants, and Jurisdictional Waters (submitted by Solar Millennium LLC 5/10/10)</td>
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<td>314</td>
<td></td>
<td>Solar Millennium, LLC response to questions generated at the April 28, 29, and May 7, 2010 CEC Workshops for the Blythe Solar Power Project (5/14/10)</td>
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<td>316</td>
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<td>Notification of Revision Memorandum (submitted by Solar Millennium LLC, 5/28/10)</td>
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<td>317</td>
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<td>Palo Verde Solar I Biological Resources Spring Survey Protocols (6/11/10)</td>
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<td>318</td>
<td>Laurain</td>
<td>Janet Laurain Declaration</td>
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<td>319</td>
<td></td>
<td>BLM Response to FOIA Request (4/12/10)</td>
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<td>320</td>
<td></td>
<td>John Kalish, US Dept of the Interior, letter to Apple and Doolittle, AECOM (8/5/09), authorizing cultural resources fieldwork under Cultural Resource Use Permit CA-09-22 and Fieldwork Authorization No. 66.24-09-18</td>
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**CULTURAL**
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<th>Page</th>
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<td>United Nations Declaration on the Rights of Indigenous Peoples</td>
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<td>Riverside County Airport Land Use Compatibility Plan, Chapter 1, Introduction, and Chapter 2, Countywide Policies (10/14/04)</td>
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<td>323</td>
<td>Federal Aviation Administration, US Department of Transportation, Advisory Circular No. 150/5200-33A, Hazardous Wildlife Attractants on or Near Airports (7/27/04)</td>
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<td>325</td>
<td>Laurain Janet Laurain Declaration</td>
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<td>326</td>
<td>Colorado River Board of California response to CURE’s PRA request (2/22/10)</td>
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<td>327</td>
<td>Agenda, Solar Millennium, LLC/Chevron Energy Solutions Blythe and Palen Projects Meeting with the Colorado River Board of California (11/23/09)</td>
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<td>328</td>
<td>Agenda, Solar Millennium LLC/Chevron Energy Solutions Blythe and Palen Solar Power Projects Teleconference Meeting with the Colorado River Board of California Agenda, (1/6/10)</td>
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<td>329</td>
<td>Solar Millennium LLC Blythe &amp; Palen Solar Power Projects presentation to Colorado River Board of California (1/6/10)</td>
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<td>331</td>
<td>Colorado River Accounting Surface Map “Explanation” (map)</td>
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<td>332</td>
<td>Gerald R. Zimmerman, Colorado River Board letter to Alan H. Solomon, CEC, (3/22/10) requiring a Section 5 BCPA contractual entitlement</td>
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<tr>
<td>333</td>
<td>Hagemann Opening Testimony of Matt Hagemann</td>
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<td>334</td>
<td>Hagemann Hagemann C.V.</td>
</tr>
<tr>
<td>335</td>
<td>Laurain Janet Laurain Declaration</td>
</tr>
<tr>
<td>336</td>
<td>Email to Janet M. Laurain from Anna Ayala (U.S. Army</td>
</tr>
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</table>

**LAND USE**

**WATER**

**WASTE MANAGEMENT/WORKER SAFETY**
Corps of Engineers) re FOIA request (5/20/10)

| 337 | Defense Environmental Restoration Program Formerly Used Defense Sites Findings and Determination of Eligibility Site No. J09CA024500 (18 pages) |
| 338 | Hagemann Boundary Sketch Blythe Army Airfield |
| 339 | Hagemann Installation Map Blythe Army Airfield FUDS Project No. J09CA024502 |
| 340 | Hagemann Poor Man, Blythe Army Airfield, CA FUDS Project No. J09CA024502 CTT (map) |
| 341 | Hagemann Jeep Range Blythe Army Airfield, CA FUDS Project No. J09CA024502 CTT (map) |
| 342 | Hagemann Defense Environmental Restoration Program for the Formerly Used Defense Sites Findings Ordnance and Explosives Archives Search Report for the former Nellis Small Arms Range, Las Vegas, NV, Project Number J09NV051001 |
| 343 | Laurain Janet Laurain Declaration |
| 344 | Department of Fish and Game letter to Janet Laurain responding to CURE’s Public Records Act request (4/8/10) |
| 345 | Email from Shelly Dayman to Tannika Engelhard re Solar Millennium – Desert Tortoise Surveys, Blythe Site (5/26/09) |
| 346 | Hagemann Project Location Map, FUDS and Ranges |
| 347 | Hagemann Reduced Acreage Alternative Map, FUDS and Ranges |
| 348 | Hagemann Reconfigured Alternative Map, FUDS and Ranges |

### 7. Scheduling Matters

CURE proposes the following schedule for discovery, supplemental testimony, and evidentiary hearings.

**PROPOSED SCHEDULE**

<table>
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<tr>
<th>Event</th>
<th>Date</th>
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<tr>
<td>Deadline to submit discovery limited to biological resources data submitted by the Applicant on or after May 17, 2010</td>
<td>15 days from the Applicant’s final submission</td>
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<td>---------------------------------------------------------------</td>
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<tr>
<td>Staff publishes Supplemental Staff Assessment</td>
<td>TBD</td>
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<tr>
<td>Applicant and Intervenors submit supplemental testimony on Biological Resources, Cultural Resources, Land Use, Traffic and Transportation, and Transmission System Engineering</td>
<td>30 days after publication of the SSA</td>
</tr>
<tr>
<td>All parties submit supplemental rebuttal testimony</td>
<td>40 days after publication of the SSA</td>
</tr>
<tr>
<td>Parties file revised prehearing conference statements</td>
<td>42 days after publications of the SSA</td>
</tr>
<tr>
<td>Evidentiary Hearings on Biological Resources, Cultural Resources, Land Use, Traffic and Transportation, and Transmission System Engineering</td>
<td>50 days after publication of the SSA</td>
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</table>

Dated: June 16, 2010

Respectfully submitted,

/S/

Elizabeth Klebaner
Tanya A. Gulesserian
Adams Broadwell Joseph & Cardozo
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South San Francisco, CA 94080
(650) 589-1660 Voice
(650) 589-5062 Facsimile
eklebaner@adamsbroadwell.com
EXHIBIT A
Curriculum Vitae

VERNON C. BLEICH

Eastern Sierra Center for Applied Population Ecology (ESCAPE)

11537 36X St. SW
Dickinson, ND 58601
760/937-5020
701/225-7834
vbleich@ndsupernet.com

Personal Interests:

Hockey (I am a former goaltender), family life, banjo, gardening, hunting, and fishing.

Professional Goals:

To help ensure the persistence of populations of large mammals and their habitats through the study of their ecology and behavior, to apply that knowledge in meaningful conservation efforts, and to impart that knowledge through professional activities including publications, teaching, and other public contacts.

Education:


M.A. California State University, Long Beach (Biology, 1973). Thesis: "Ecology of Rodents at the Seal Beach Naval Weapons Station, Fallbrook Annex, San Diego County, California."

B.S. California State University, Long Beach (Zoology, 1970).

Professional Background:

Senior Conservation Scientist, Eastern Sierra Center for Applied Population Ecology (2007 - present). I provide expertise on natural resource conservation issues, particularly as they relate to large mammals in desert, mountain, and plains environments.

Senior Environmental Scientist, California Department of Fish and Game (2001 – 2008; now retired). I served as the project leader for the Sierra Nevada Bighorn Sheep Recovery Program, a project to conserve mountain sheep in that range and restore them to formerly occupied habitats; I continued to function as the Regional Large Mammal and Desert specialist, with an emphasis on mountain sheep and mule deer in southeastern California.
I served as chair of the Sierra Nevada Bighorn Sheep Recovery Team (also referred to as the Sierra Nevada Bighorn Sheep Science Advisory Group), and continued to serve as a member of the Peninsular Bighorn Sheep Recovery Team.

Senior Wildlife Biologist, California Department of Fish and Game (1999 - 2001). I served as the Regional Large Mammal and Desert Specialist, with an emphasis on mountain sheep and mule deer in southeastern California. At the request of the US Fish and wildlife Service I was appointed by the Department of Fish and Game to serve on the Peninsular Bighorn Sheep Recovery Team.

Senior Wildlife Biologist, California Department of Fish and Game (1993 - 1999). I served as the Regional Large Mammal Specialist and supervised the activities of 5 journeyman wildlife biologists in eastern California. Emphasis species included mountain sheep, mule deer, pronghorn, tule elk, and sage grouse in eastern California.

Associate Wildlife Biologist, California Department of Fish and Game (1986 - 1993). I served as the Regional mountain sheep specialist, and supervised the activities of 5 journeyman wildlife biologists in eastern California. Emphasis species included mountain sheep, mule deer, pronghorn, tule elk, and sage grouse in eastern California.

Project Leader, California Department of Fish and Game, Federal Aid in Wildlife Restoration Project W-26-D (1978 - 1986). I supervised 2 technicians, and planned and implemented habitat management projects designed to benefit waterfowl, sage grouse, mule deer, and mountain sheep in eastern California.

Assistant Wildlife Biologist, California Department of Fish and Game (1975 - 1978). I was an Area Biologist responsible for management of mule deer, mountain sheep, and the Endangered Stephens' kangaroo rat, as well as for environmental review activities in Riverside and San Bernardino counties, California.

Junior Aquatic Biologist, California Department of Fish and Game (1974 - 1975). I was responsible for fisheries management activities, with an emphasis on wild trout and the Endangered unarmored three-spined stickleback in Los Angeles and San Bernardino counties, California.

Park Ranger, Department of Recreation, City of Long Beach, California (1970 - 1973). I was responsible for public education activities, routine patrol, and coordination with other law enforcement agencies in El Dorado Regional Park, Long Beach, California.

Academic Appointments:

Research Professor, Department of Natural Resources and Environmental Science, University of Nevada, Reno (2007 - Present).

Affiliate Faculty, Department of Biological Sciences, Idaho State University, Pocatello, Idaho (2005 - Present).
Senior Research Associate, Institute of Arctic Biology, University of Alaska Fairbanks, Fairbanks, Alaska (1998 - Present).

Affiliate Assistant Professor of Wildlife Ecology, Department of Biology and Wildlife, University of Alaska Fairbanks, Fairbanks, Alaska (1993 - 1998).

Research Associate, Institute of Arctic Biology, University of Alaska Fairbanks, Fairbanks, Alaska (1993 - present).

Adjunct Assistant Professor of Natural Resource Science, Department of Natural Resource Science, University of Rhode Island, Kingston (1992 - 1994).


Assistant Professor, Department of Biology, Rio Hondo College, Whittier, California. I instructed lecture and laboratory sections of General Zoology (biology major emphasis), General Biology (general education emphasis), and Marine Biology (1973 - 1974).

Teaching Assistant, California State University, Long Beach. I instructed laboratory sections of General Biology (for non-majors) and General Zoology (for majors) (1972 - 1973).

Graduate Research Assistant, California State University, Long Beach. I prepared specimens and curated the collection of mammals (> 10,000 specimens) in the Bird and Mammal Museum, and instructed laboratory sections of General Ecology (for majors), General Mammalogy (for majors), and Advanced Mammalogy (1970-1972).

Graduate Student Supervision:

Chair of Graduate Committee:

Kevin L. Monteith (Ph.D.), Reproductive ecology of migratory and resident mule deer in the eastern Sierra Nevada, California. Idaho State University, Pocatello. Graduation expected December, 2010. Co-chair with Dr. R. T. Bowyer.


Graduate Committee Membership:

Cody J. McKee (M.S.), Ecology of mule deer in the eastern Mojave Desert, California. University of Nevada, Reno (Graduation expected June 2011).

Jeffrey T. Villepique (Ph.D.), Interactions between mountain lions and mountain sheep: an assessment of forage benefits and predation risk. Idaho State University, Pocatello (Graduation expected December 2010).

Sabrina Morano (Ph.D.), Reproductive biology of mule deer in the White Mountains, Inyo and Mono counties, California. University of Nevada, Reno (Graduation expected June 2011).


Holly B. Ernest (Ph.D.), Ecological genetics of mountain lions (Puma concolor) in California. University of California, Davis. Graduated December 2001. Current position: Research Geneticist, School of Veterinary Medicine, University of California, Davis.


Awards and Honors:

Honorary Lifetime Membership, 2010 (in recognition to long and continuing service to the Society for the Conservation of Bighorn Sheep)

Wild Sheep Biologist Wall of Fame Award, 2009 (in recognition of significant contributions to the conservation of wild sheep in North America) (Wild Sheep Foundation)

Lifetime Achievement Award, 2008 (In recognition of contributions toward the conservation of mountain sheep in California) (California Chapter of the Foundation for North American Wild Sheep)

Honor Plaque 2007 (Group Award, in recognition of outstanding contributions toward the recovery of mountain sheep in the Sierra Nevada) (Desert Bighorn Council)

State Statesman Award, 2006 (In recognition of outstanding contributions to the wild sheep of California) (Foundation for North American Wild Sheep)

Trail Blazer Award, 2004 (In recognition of efforts on behalf of mountain sheep conservation in California) (California Chapter of the Foundation for North American Wild Sheep)

Director’s Achievement Award, 2004 (In recognition of editorial services for California Fish and Game (California Department of Fish and Game)

Annual Achievement Award, 2004 (In recognition of conservation of mule deer and their habitats) (Southern California Chapter, California Deer Association)

Alumni Achievement Award for Professional Excellence, 2002 (University of Alaska Alumni Association)

Outstanding Alumnus Award, 2002 (College of Science, Engineering, and Mathematics, University of Alaska Fairbanks)

Sustained Superior Accomplishment Award, 2002 (California Department of Fish and Game)

The Desert Ram Award, 2001 (Desert Bighorn Council)

Outstanding Publication Award for a Monograph, 1998 (The Wildlife Society)

Award of Appreciation, 1998 (San Fernando Valley Chapter of Safari Club International, CA)
Professional Membership, Boone and Crockett Club, 1998 (Boone and Crockett Club)

Certificate of Appreciation, 1997 (Society for the Conservation of Bighorn Sheep)

"Ol' Irongut" Award, 1996 (California Department of Fish and Game, Division of Air Services)

Resources Agency/University of California Fellowship, 1996 (Sponsored jointly by the California Resources Agency and the University of California, Davis)

Director's Achievement Award, 1992 (California Department of Fish and Game)

Outstanding Biology Department Alumnus, 1988 (California State University, Long Beach)

Professional of the Year, 1985 (Western Section of The Wildlife Society)

California Wildlife Officer of the Year, 1984 (Shikar-Safari Foundation)

Award of Honor, 1984 (Society for the Conservation of Bighorn Sheep)

Honorary Lifetime Member, 1984 (Banning [California] Sportsman’s Club)

Professional and Fraternal Memberships:

American Society of Mammalogists (Life Member)
The Boone and Crockett Club (Professional Member)
The Wildlife Society
Society for Conservation Biology
Southwestern Association of Naturalists
Wild Sheep Foundation
National Rifle Association
California Chapter, Foundation for North American Wild Sheep
Society for the Conservation of Bighorn Sheep
Minnesota-Wisconsin Chapter, Foundation for North American Wild Sheep

Licenses and Certifications:

California Community College Credential (#45476, Lifetime)
State of California Certified Blaster's License (#2087)
Certified Wildlife Biologist (1981 - The Wildlife Society)
California Hunter Safety Instructor (#1984)
Other Professional Activities:

Editorial Activities:

Editor-in-Chief, *California Fish and Game* (2009 - present)

Associate Editor, *California Fish and Game* (1995 - 2009).


Associate Editor, *Transactions of the Western Section of The Wildlife Society* (1986-87).

Reviewer for Journals:


Other Activities:

2008 – Present: Member, Big Game Records Committee, Boone and Crockett Club
2007 – Present: Advisory Board Member, Texas Bighorn Society
2006 - Present: Member, Ad Hoc Committee on Professional Membership, Boone and Crockett Club.

1998 - 2002: Coach and member of Board of Trustees, Sierra Roller Hockey League.


1994-98: Member, Board of Directors, The Wildlife Forensic DNA Foundation.


1991: Member, Committee on Support of Symposia and Conferences, The Wildlife Society.


Refereed Publications:

Bleich, V. C. In review. Perceived threats to mountain sheep: levels of concordance among western states, provinces, and territories. Desert Bighorn Council Transactions.


Bleich, V. C. 1996. Interactions between coyotes (Canis latrans) and mountain sheep (Ovis canadensis). Southwestern Naturalist 41:81-82.


Torres, S. G., V. C. Bleich, and J. D. Wehausen. 1994. Status of bighorn sheep in California,


Book Chapters and Proceedings of Symposia:


Agency Reports:


Bleich, V. C. 1975. Wildlife section including habitat and vegetation types in the Lake Mathews study area. Pages 84-130 in A study of the fish and wildlife resources of the Metropolitan Water District property at Lake Mathews with habitat improvement recommendations. California Department of Fish and Game, Long Beach.


Book Reviews and Obituaries:


Popular Articles:


Presentations at Professional Meetings

From 1972 to the present, I have been an author or coauthor of more than 100 presentations at professional meetings. I was selected to present the keynote address, “Ecology of mountain sheep: Ramifications for disease transmission and population persistence” at the April 2007 Workshop on Respiratory Disease in Mountain Sheep: Knowledge Gaps and Future Research held at the University of California, Davis. Details pertaining to these presentations are available upon request.

Grants and Fellowships

During 1973 - 2007, I competed successfully for and received project-specific funding in the amount of $1,636,247 from internal and external sources. Details of grants and other funding received are available upon request.
Scott Cashen, M.S.
Senior Biologist / Forest Ecologist
3264 Hudson Avenue, Walnut Creek, CA 94597. (925) 256-9185. scottcashen@gmail.com

In his 17 years in the profession, Scott Cashen has consulted on projects pertaining to wildlife and fisheries ecology, avian biology, wetland restoration, and forest management. Because of his varied experience, Mr. Cashen is knowledgeable of the link between the various disciplines of natural resource management, and he is a versatile scientist.

Mr. Cashen’s employment experience includes work as an expert witness, wildlife biologist, consulting forester, and instructor of Wildlife Management. He has worked throughout California, and he is knowledgeable of the different terrestrial and aquatic species and habitats present in the state.

Mr. Cashen is an accomplished birder and is able to identify bird species by sight and sound. His knowledge has enabled him to survey birds throughout the United States and instruct others on avian identification. Mr. Cashen’s research on avian use of restored wetlands is currently being used by the United States Fish and Wildlife Service to design wetlands for specific “target” species, and as a model for other restored wildlife habitat monitoring projects in Pennsylvania. In addition to his bird experience, Mr. Cashen has surveyed for carnivores, bighorn sheep, and other mammals; special-status amphibian species; and various fish species.

PROFESSIONAL EXPERIENCE

Litigation Support / Expert Witness

Mr. Cashen serves as the biological resources expert for the San Francisco law firm of Adams Broadwell Joseph & Cardozo. He is responsible for reviewing CEQA/NEPA documents, assessing biological resource issues, preparing written comments, providing public testimony, and interfacing with public resource agencies.

REPRESENTATIVE EXPERIENCE


• Carrizo Energy Solar Farm: San Luis Obispo County, CA (640-acre solar energy facility) – Review of CEQA equivalent documents. Preparation of data requests, comments on Preliminary Staff Assessment, comments on wildlife corridor model...
(CEQA equivalent documents).

- **Live Oak Master Plan**: Hanford, CA (390-acre housing development) – Review of CEQA documents and preparation of comment letter.


- **Columbus Salame**: Fairfield, CA (430,000 ft² food processing plant) – Review of CEQA documents and preparation of comment letter.

- **Concord Naval Weapons Station**: Concord, CA (5028-acre redevelopment) – Review of CEQA documents, preparation of comment letters, and provision of public testimony at County hearings.

- **Chula Vista Bayfront Master Plan**: Chula Vista, CA (556-acre development) – Review of CEQA documents and preparation of comment letter.


- **Solar One Power Project**: San Bernardino County, CA (8230-acre solar facility) – Review of CEQA equivalent and NEPA documents and preparation of data requests. Expert witness providing testimony at California Energy Commission hearings.

- **Solar Two Power Project**: Imperial County, CA (6500-acre solar facility) – Review of CEQA equivalent and NEPA documents. Preparation of data requests and other documents for case record. Expert witness providing testimony at California Energy Commission hearings.

- **Alves Ranch**: Pittsburgh, CA (320-acre housing development) – Review of CEQA documents.


- **Aviano**: Antioch, CA (320-acre housing development) – Review of CEQA documents.


- **Sprint-Nextel Tower**: Walnut Creek, CA (communications tower in open space preserve) - Review of project documents and preparation of comment letter.

**Project Management**

Mr. Cashen has managed several large-scale and high profile natural resources investigations. High profile projects involving multiple resources often require consideration of differing viewpoints on how resources should be managed, and they are usually subject to intense scrutiny. Mr. Cashen is accustomed to these challenges, and he

*Cashen, Curriculum Vitae*
is experienced in facilitating the collaborative process to meet project objectives. In addition, the perception of high profile projects can be easily undermined if inexcusable mistakes are made. To prevent this, Mr. Cashen bases his work on solid scientific principles and proven sampling designs. He also solicits input from all project stakeholders, and provides project stakeholders with regular feedback on project progress. Mr. Cashen’s educational and project background in several different natural resource disciplines enable him to consult on multiple natural resources simultaneously and address the many facets of contemporary land management in a cost-effective manner.

REPRESENTATIVE EXPERIENCE

• Forest health improvement projects – Biological Resources (CDF: San Diego and Riverside Counties)

• San Diego Bark Beetle Tree Removal Project – Biological Resources, Forestry, and Cultural Resources (San Diego Gas & Electric: San Diego Co.)

• San Diego Bark Beetle Tree Removal Project – Forestry (San Diego County/NRCS)

• Mather Lake Resource Management Study and Plan – Biological Resources, Hydrology, Soils, Recreation, Public Access, CEQA compliance, Historic Use (Sacramento County: Sacramento)

• ”K V” Spotted Owl and Northern Goshawk Inventory (USFS: Plumas NF)

• Amphibian Inventory Project (USFS: Plumas NF)

• San Mateo Creek Steelhead Restoration Project – TES species, Habitat Mapping, Hydrology, Invasive Species Eradication, Statistical Analysis (Trout Unlimited and CA Coastal Conservancy: Orange County)

• Hillslope Monitoring Project – Forest Practice Research (CDF: throughout California)

• Placer County Vernal Pool Study – Plant and Animal Inventory, Statistical Analysis (Placer County: throughout Placer County)

• Weidemann Ranch Mitigation Project – Mitigation Monitoring and Environmental Compliance (Toll Brothers, Inc.: San Ramon)

• Delta Meadows State Park Special-status Species Inventory – Plant and Animal Species Inventory, Special-status Species (CA State Parks: Locke)

• Ion Communities Biological Resource Assessments – Biological Resource Assessments (Ion Communities: Riverside and San Bernardino Counties)

• Del Rio Hills Biological Resource Assessment – Biological Resource Assessments (The Wyro Company: Rio Vista)
Biological Resources

Mr. Cashen has a diverse background in biology. His experience includes studies of a variety of fish and wildlife species, and work in many of California's ecosystems. Mr. Cashen's specialties include conducting comprehensive biological resource assessments, habitat restoration, species inventories, and scientific investigations. Mr. Cashen has led investigations on several special-status species, including ones focusing on the foothill yellow-legged frog, mountain yellow-legged frog, steelhead, burrowing owl, California spotted owl, northern goshawk, willow flycatcher, and forest carnivores. Mr. Cashen was responsible for the special-status species inventory of Delta Meadows State Park, and for conducting a research study for Placer County's Natural Community Conservation Plan.

REPRESENTATIVE EXPERIENCE

Avian

- **Study design and Lead Investigator** - Delta Meadows State Park Special-status Species Inventory (*CA State Parks: Locke*)

- **Study design and lead bird surveyor** - Placer County Vernal Pool Study (*Placer County: throughout Placer County*)

- **Surveyor** - Willow flycatcher habitat mapping (*USFS: Plumas NF*)

- **Independent surveyor** - Tolay Creek, Cullinan Ranch, and Guadacanal Village restoration projects (*Ducks Unlimited/USGS: San Pablo Bay*)

- **Study design and Lead Investigator** - Bird use of restored wetlands research (*Pennsylvania Game Commission: throughout Pennsylvania*)

- **Study design and surveyor** - Baseline inventory of bird species at a 400-acre site in Napa County (*HCV Associates: Napa*)

- **Surveyor** - Baseline inventory of bird abundance following diesel spill (*LFR Levine-Fricke: Suisun Bay*)

- **Study design and lead bird surveyor** - Green Valley Creek Riparian Restoration Site (*City of Fairfield: Fairfield, CA*)

- **Surveyor** - Burrowing owl relocation and monitoring of artificial habitat (*US Navy: Dixon, CA*)

- **Surveyor** - Pre-construction raptor and burrowing owl surveys (*various clients and locations*)

- **Surveyor** - Backcountry bird inventory (*National Park Service: Eagle, Alaska*)

- **Lead surveyor** - Tidal salt marsh bird surveys (*Point Reyes Bird Observatory: throughout Bay Area*)
Amphibian

- **Crew Leader** - Red-legged frog, foothill yellow-legged frog, and mountain yellow-legged frog surveys (*USFS: Plumas NF*)
- **Surveyor** - Foothill yellow-legged frog surveys (*PG&E: North Fork Feather River*)
- **Surveyor** - Mountain yellow-legged frog surveys (*El Dorado Irrigation District: Desolation Wilderness*)
- **Crew Leader** - Bullfrog eradication (*Trout Unlimited: Cleveland NF*)

Fish and Aquatic Resources

- **Surveyor** - Hardhead minnow and other fish surveys (*USFS: Plumas NF*)
- **Surveyor** - Weber Creek aquatic habitat mapping (*El Dorado Irrigation District: Placerville, CA*)
- **Surveyor** - Green Valley Creek aquatic habitat mapping (*City of Fairfield: Fairfield, CA*)
- **GPS Specialist** - Salmonid spawning habitat mapping (*CDFG: Sacramento River*)
- **Surveyor** - Fish composition and abundance study (*PG&E: Upper North Fork Feather River and Lake Almanor*)
- **Crew Leader** - Surveys of steelhead abundance and habitat use (*CA Coastal Conservancy: Gualala River estuary*)
- **Crew Leader** - Exotic species identification and eradication (*Trout Unlimited: Cleveland NF*)

Mammals

- **Principal Investigator** - Peninsular bighorn sheep resource use and behavior study (*California State Parks: Freeman Properties*)
- **Scientific Advisor** - Red Panda survey and monitoring methods (*The Red Panda Network: CA and Nepal*)
- **Surveyor** - Forest carnivore surveys (*University of CA: Tahoe NF*)
- **Surveyor** - Relocation and monitoring of salt marsh harvest mice and other small mammals (*US Navy: Skagg’s Island, CA*)

Natural Resource Investigations / Multiple Species Studies

- **Scientific Review Team Member** - Member of the science review team assessing the effectiveness of the US Forest Service’s implementation of the Herger-Feinstein Quincy Library Group Act.

_Cashen, Curriculum Vitae_
• **Lead Consultant** - Baseline biological resource assessments and habitat mapping for CDF management units (CDF: San Diego, San Bernardino, and Riverside Counties)

• **Biological Resources Expert** – Peer review of CEQA/NEPA documents (Adams Broadwell Joseph & Cardoza: California)

• **Lead Consultant** - Pre- and post harvest biological resource assessments of tree removal sites (SDG&E: San Diego County)

• **Crew Leader** - T&E species habitat evaluation for BA in support of a steelhead restoration plan (Trout Unlimited: Cleveland NF)

• **Lead Investigator** - Resource Management Study and Plan for Mather Lake Regional Park (County of Sacramento: Sacramento, CA)

• **Lead Investigator** - Wrote Biological Resources Assessment for 1,070-acre Alfaro Ranch property (Yuba County, CA)

• **Lead Investigator** - Wildlife Strike Hazard Management Plan (HCV Associates: Napa)

• **Lead Investigator** - Del Rio Hills Biological Resource Assessment (The Wyro Company: Rio Vista, CA)

• **Lead Investigator** – Ion Communities project sites (Ion Communities: Riverside and San Bernardino Counties)

• **Surveyor** – Tahoe Pilot Project: CWHR validation (University of California: Tahoe NF)

**Forestry**

Mr. Cashen has five years of experience working as a consulting forester on projects throughout California. During that time, Mr. Cashen has consulted with landowners and timber harvesters on best forest management practices; and he has worked on a variety of forestry tasks including selective tree marking, forest inventory, harvest layout, erosion control, and supervision of logging operations. Mr. Cashen’s experience with many different natural resources enable him to provide a holistic approach to forest management, rather than just management of timber resources.

**REPRESENTATIVE EXPERIENCE**

• **Lead Consultant** - CDF fuels treatment projects (CDF: San Diego, Riverside, and San Bernardino Counties)

• **Lead Consultant and supervisor of harvest activities** – San Diego Gas and Electric Bark Beetle Tree Removal Project (SDG&E: San Diego)

• **Crew Leader** - Hillslope Monitoring Program (CDF: throughout California)

• **Consulting Forester** – Inventory and selective harvest projects (various clients throughout California)
EDUCATION / SPECIAL TRAINING
      Forestry Field Program, Meadow Valley, California, Summer (1991)

PERMITS
U.S. Fish and Wildlife Service Section 10(a)(1)(A) Recovery Permit for the Peninsular bighorn sheep
CA Department of Fish and Game Scientific Collecting Permit

PROFESSIONAL ORGANIZATIONS / ASSOCIATIONS
The Wildlife Society
Society of American Foresters
Mt. Diablo Audubon Society

OTHER AFFILIATIONS
Scientific Advisor and Grant Writer – The Red Panda Network
Scientific Advisor – Mt. Diablo Audubon Society
Grant Writer – American Conservation Experience
Land Committee Member – Save Mt. Diablo

TEACHING EXPERIENCE
Teaching Assistant: Ornithology, The Pennsylvania State University, 1996-1997
I've worked in the field of science and have 19 years of diverse experience in research biology with an emphasis in wetland and restoration ecology, open space planning, wildlife monitoring and surveys, and regulatory permitting. I've conducted wildlife studies on ants, aquatic insects, bats, birds, bees, small mammals, amphibians and reptiles. In addition, I've designed, conducted and supervised studies on vernal pools, created ponds and wetlands, environmental assessments, and impacts of urbanization to wildlife populations for open space and urban planning. Prior to my entry into environmental consulting in 2004, I served as a research ecologist for the U.S. Geological Survey (Western Ecological Research Center, San Diego Field Station, Carlsbad Office), where my primary focus was on restoration ecology and developing protocols for monitoring aquatic and terrestrial wildlife populations in fragmented regions of southern California. I've also worked as a museum specialist and principal investigator for the Division of Vertebrate Zoology while at the Smithsonian Institution (Washington, D.C.).

During the last ten years of my career, I have had extensive working experience in the areas of wildlife biology, wetland and vernal pool creation, conservation and restoration ecology, hydrology, hydrogeology, open space planning, jurisdictional delineations, and regulatory permitting. I have a diverse background on working with environmental conservation groups, developers, and urban planners. I've also conducted seminars to instruct and train scientists/biologists employed by state and federal agencies. As a biologist and regulatory specialist, I have a strong background and working knowledge of regulatory issues such as Sections 404 and 401 of the Clean Water Act, Section 1602 Streambed Alteration Agreements, Endangered Species Act, and CEQA/NEPA compliances. My regulatory specialist experience includes training and certification in Wetland Delineation with Emphasis on Hydric Soils and Arid West Supplement Wetland Delineation; Hydrogeological Site Characterization and Monitoring Well Construction; and Stormwater Pollution Prevention for Construction Sites. In addition, I have working knowledge of the recently implemented EPA and Corps Clean Water Act Jurisdiction Following Rapanos v. United States and the northern, central and southern California counties Natural Community Conservation Plan (NCCP) & Habitat Conservation Plan (HCP), western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), and several other scientific, biological, and regulatory issues pertaining open space planning and the acquisition of regulatory permits.

My career experience expands working on CEQA/NEPA, Corps, USFWS, CDFG, USGS, city, county, and private sector projects. Your company and/or agency would gain an experienced consulting staff knowledgeable in addressing and resolving a variety of complex to standard environmental issues. I have a positive track record of professional and responsive coordination with city, county, state, and federal agencies to include the private sector in providing technical studies, field research, scientific analysis and recommendations, regulatory permitting, and multi-tasking of projects.
Professional Experience

- Coordination and preparation of regulatory permit applications ranging from Sections 404/401 of the CWA, Section 1602 of CDFG, and CEQA compliant biological assessments. Conducted jurisdictional delineations and Rapanos v United States evaluations for preparation and submission to clients, responsible agencies, city municipalities, state and federal regulatory agencies.

- Conducted general and focused biological surveys and provided biological reports such as Biological Technical Reports, Resource Habitat Assessment, Determination of Biologically Equivalent or Superior Preservation (DBESP), and Conceptual Mitigation and Monitoring Plans (CMMP). Conducted field studies and project manager for the implementation of restoration conservation and creation of wetlands, vernal pools, and riparian habitats. Conducted and reviewed studies for aquatic resources to include pond and vernal pool design for amphibians, reptiles, and other wildlife species. Responsibilities included restoration ecology and development of resource management plans for public recreation and hiking, native wildlife species assemblage, eradication and control of nuisance and exotic plant and wildlife species to include, peer-reviewed scientific publications, technical reports, and field guide contributions.

- Coordinated numerous wetland and habitat enhancement-planning protocols with federal, state, and local agencies such as the United States Geological Service (USGS), United States Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), Maryland Game and Fish Department (MGFD), and non-government environmental groups.

- Supervised and managed restoration and habitat enhancement projects. The geographic areas of responsibility included California, Arizona, Nevada, Utah, Virginia, Washington DC, and Maryland.

- Supervised and trained federal, state, and other agencies natural resource staff of biologists, ecologists, and fisheries in fieldwork sampling and data collection.

- Preparation of environmental documents in the areas of biology, hydrology, and geology (EIR/EIS, scientific publications, popular magazines, technical reports, seminars, and presentations) to include project proposals and budgets.

- Research biologist/museum specialist and principal investigator at the Smithsonian Institution (National Museum of Natural History) Department of Vertebrate Zoology, Division of Mammalogy and Herpetology.

- Participated in numerous consultations and preparation of Biological Opinion pursuant to the Endangered Species Act and Section 7 Consultation.

- Adjunct Professor of Biology at the Rancho Santiago Community College District lecturing in molecular biology, cellular biology, human anatomy/physiology, and general biology.
Professional History

01/2009 – present  Touré Associates, Fresno, CA. Project Director
01/2006 – Present: Rancho Santiago Community College. Orange, CA. Adjunct Professor of Biology

Education


Bachelor of Science (BS): Zoology/Chemistry. Howard University, Washington D.C.

N/A. Zoology/Chemistry Long Beach State University (transfer to Howard Univ.)

Additional Training

Professional Publications


Professional Presentations
2007. Wetland and aquatic habitats of Orange County. [Education Series: Donna O'Neill Land Conservancy]
2006. Aquatic and riparian restoration ecology. [Seminar: Orange County Natural History Museum/Acorn Naturalist Center]
2004. Floral and faunal species conservation and management [Seminar: Santa Ana Park Naturalist Program, Department of Parks and Recreation]
2004. Spadefoot toad habitat enhancement training [Education Series: Laguna Coast Wilderness Park]
2003. Amphibian management: Concerns and opportunities. [Seminar: Nature Reserve of Orange County]
2003. Vernal pool ecology and spadefoot toads (Spae hammondii) of Orange County. [Seminar: Orange County Natural History Museum/Acorn Naturalist Center]
2003. Long-term monitoring of fragmented habitats in coastal southern California. [George Wright Society and ASIH, annual meeting]
2003. Exotic amphibians, current status and possible impacts. [Western Division of the American Fisheries Society, annual meeting]
2001. Vertebrate abundance and diversity in fragmented habitats of coastal southern California. [Society for Conservation Biology, annual meeting]
2000. Constructed wetland and its ability to sustain amphibian and reptile populations. [Society of Wetland Scientists, annual meeting]
2000. Herpetofauna of a constructed wetland and adjacent forest. [ASIH, annual meeting]
2000. Reptiles and amphibians of the Sands Road Wetland Sanctuary. [ASIH, annual meeting]
1996. Snake species of the world: A taxonomic view. [ASIH, annual meeting]

Professional Affiliations
Association of Environmental Professionals
American Society of Ichthyologists and Herpetologists
Herpetologist League
Partners in Amphibian and Reptile Conservation
Declining Amphibian Task Force
Society of Conservation Biology
Society of Wetland Scientists
Southern California Wetland Recovery Project

Awards
2000. U.S. Geological Survey, Scientific Achievement Award, Patuxent Wildlife Research Center, Maryland
1999. Smithsonian Institution Libraries, Distinguished Subject Award
1998. Graduate Symposium Award, Howard University
1990. Smithsonian Tropical Research Institution, Research Internship Award, Republic of Panama

Professional Job References
Robert Francisco, Michael Brandman Associates, Vice-President (619) 764-9934
Tony Bomkamp, Glenn Lukos Associates, Senior Regulatory Specialist (949) 837-0404
Trish Smith, The Nature Conservancy, Senior Project Ecologist (714) 955-2810
Dr. Robert Fisher, USGS San Diego Field Station, Research Zoologist (619) 225-6436
Dr. Roy McDermid, Smithsonian Institution Museum of Natural History (202) 357-2778
Matthew F. Hagemann, P.G.

Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Regulatory Compliance
CEQA Review
Expert Witness

Education:
M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certification:
California Professional Geologist, License Number 8571.

Professional Experience:
Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA’s Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:
- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Senior Environmental Analyst, Komex H2O Science, Inc (2000 – 2003);
- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
• Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
• Instructor, College of Marin, Department of Science (1990 – 1995);
• Geologist, U.S. Forest Service (1986 – 1998); and

Senior Regulatory and Litigation Support Analyst:
With SWAPE, Matt’s responsibilities have included:
• Manager of a project to evaluate numerous formerly used military sites in the western U.S.
• Manager of a project to provide technical assistance to a community adjacent to a former Naval shipyard under a grant from the U.S. EPA.
• Lead analyst in the review of numerous environmental impact reports under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions and geologic hazards.
• Lead analyst in the review of environmental issues in applications before the California Energy Commission.
• Technical assistance and litigation support for vapor intrusion concerns.
• Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
• Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
• Expert witness on two cases involving MTBE litigation.
• Expert witness and litigation support on the impact of air toxins and hazards at a school.
• Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt’s duties included the following:
• Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
• Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
• Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
• Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
• Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.
• Expert witness testimony in a case of oil production-related contamination in Mississippi.
• Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
• Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:
As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of
wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

**Hydrogeology:**

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.
- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance withSubtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
• Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
• Wrote contract specifications and supervised contractor’s investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:
• Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
• Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
• Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
• Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
• Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
• Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
• Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:
Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:
• Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
• Shaped EPA’s national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
• Improved the technical training of EPA’s scientific and engineering staff.
• Earned an EPA Bronze Medal for representing the region’s 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
• Established national protocol for the peer review of scientific documents.

Geology:
With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:
• Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
• Coordinated his research with community members who were concerned with natural resource protection.
• Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.
As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

**Teaching:**
From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

**Invited Testimony, Reports, Papers and Presentations:**


**Hagemann, M.F., 2004.** Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

**Hagemann, M.F., 2004.** Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.


**Hagemann, M.F., 2004.** Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

**Hagemann, M.F., 2003.** Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.


Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.


I, Bonnie Heeley, declare that on June 16, 2010, I served and filed copies of the attached PREHEARING CONFERENCE STATEMENT BEHALF OF CALIFORNIA UNIONS FOR RELIABLE ENERGY FOR THE BLYTHE SOLAR POWER PROJECT dated June 16, 2010. The original document, filed with the Docket Office, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: http://www.energy.ca.gov/sitingcases/solar_millennium_blythe/index.html.

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission’s Docket Office via email and U.S. mail as addressed below:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 09-AFC-6
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct. Executed at South San Francisco, California on June 16, 2010.

/s/
Bonnie Heeley
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| e-recipient@caiso.com  
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