

**Testimony of
Robert Thornton**

**Before
Committee on Oversight and Government Reform
Subcommittee on the Interior**

Barriers to Endangered Species Act Delisting

April 20, 2016

Background.

My name is Robert Thornton. I am a partner in the Irvine, California office of the Nossaman law firm.¹ For over thirty-five years, I have represented both plaintiffs and defendants in Endangered Species Act litigation, and have both challenged and defended rules adopted by the U.S. Fish and Wildlife Service and NOAA Fisheries to implement the Endangered Species Act. I have assisted clients in preparing and implementing over a dozen habitat conservation plans approved by the Fish and Wildlife and NOAA Fisheries. These conservation plans have conserved hundreds of thousands of acres of habitat for endangered and threatened species and other species of concern. I was counsel to the House Fisheries and Wildlife Conservation Subcommittee during the Congressional consideration of the 1978 and 1979 Endangered Species Act amendments.

¹ My testimony is provided as an individual and not on behalf of Nossaman LLP or any of its clients.

My testimony is based on by experience working on several matters concerning the listing and delisting of species under the ESA. In particular, my testimony focuses on my experience concerning the listing and delisting of two subspecies – the coastal California gnatcatcher – a bird found from Southern California to the southern end of the Baja Peninsula in Mexico, and the valley elderberry longhorn beetle – an insect that is endemic to the Central Valley of California.

Summary.

The best scientific data available indicates that neither species qualifies for listing under the ESA because they are not threatened or endangered. The record of the Fish and Wildlife Service’s consideration of delisting petitions for these two subspecies demonstrate the significant institutional resistance to delisting species within the Fish and Wildlife Service, and that the Service is not applying consistent and transparent standards to listing and delisting decisions.

The purpose of the ESA is to protect genetically unique or evolutionarily distinct life forms. It does this by requiring that listing decisions be based on the “best scientific . . . data available” and by requiring that a species or subspecies be threatened or endangered “throughout all of a significant portion of its range.” The failure to use the best scientific data available in listing decisions can only serve to engender cynicism that listing decisions are a product of ideological and regulatory motives rather than the best available scientific data. It also diverts scarce private and public resources from more important conservation challenges.

The Petition goes to the heart of the ESA because an objective, science-based listing process is central to the statute’s integrity. Transparency, in turn, is an essential component of the “best science” requirement. The Service cannot comply with the ESA requirement to base listing decisions on the “best scientific data available” while, at the same time, withholding documents generated by an outside committee consultants that include facts necessarily required of a full, fair and transparent evaluation of the Petition.

1993 Decision to List the Coastal California Gnatcatcher As A Threatened Species.

Polioptila californica (commonly referred to as the “California gnatcatcher”) is a species of song bird that extends from the southern tip of the Baja peninsula in Mexico north to Ventura County (north of Los Angeles) in California. It is common in central and southern Baja California and throughout Baja California Sur, and less common in southern California.

The Service listed the coastal California gnatcatcher as a threatened subspecies in 1993 based on the analysis of morphological data (physical characteristics such as degree of brightness of breast feathers, purity of back feathers). The petitioner for the listing, Dr. Jonathan Atwood argued at the time that there are three valid subspecies of *Polioptila californica*. At the time of the debate over the listing, Dr. Atwood acknowledged that the subspecies designation for the northernmost subspecies -- coastal California gnatcatcher -- was central to the listing decision because “[n]o credible scientist would claim or has claimed that California gnatcatchers as a species are endangered or threatened throughout their entire range.” (Testimony to California Fish and Game Commission, August 31, 1991.) This statement remains correct today.

During the listing process, Dr. Barrowclough of the American Museum of Natural History and other scientists testified that the morphological data reported by Dr. Atwood did not support a conclusion that coastal California gnatcatcher was a distinct subspecies. These scientists suggested that a genetic study should be conducted to resolve the serious questions that had been raised concerning the morphological data. The scientists testified that any morphological differences between gnatcatchers in the northern, central and southern portions of the gnatcatcher range could be explained by the aged condition of specimens (feather coloration fades over time, such that two groups of individuals sampled from the same place 50 year apart would appear to differ), technical problems with plumage color measuring devices, and environmental, not genetic, causes of color differences in feathers.

Relying on the disputed morphological data, the Service listed the coastal California gnatcatcher, but acknowledged that the data was not definitive, and suggested that additional research might support a different conclusion.

2000 – First Gnatcatcher Genetic Study Published.

Taking a cue from the Service's acknowledgement of the need for a genetic analysis, Dr. Zink, Dr. Barrowclough and other scientists (including Dr. Atwood) spearheaded a new study that would focus not on gnatcatcher morphology but rather on the bird's mitochondrial DNA (mtDNA) – dna that is past by mothers to their offspring. Robert M. Zink, *et al.*, *Genetics, Taxonomy, and Conservation of the Threatened California Gnatcatcher*, 14 *Conservation Biology* 1394 (2000) [hereinafter Zink (2000)] (Exh. C to Delisting Petition (attached)). Mitochondrial dna analysis leaves substantially less room for guesswork, judgment, and human error than morphological analysis standing alone. For example, measuring small body parts is prone to measurement error, which if not accounted for statistically, seriously undermines morphological studies. In the past three decades, thousands of mtDNA studies have been published and applied to conservation questions.

Zink et al.'s 2000 study (in which Dr. Atwood was a co-author) found *no* abrupt change in gnatcatcher mtDNA characters at the purported southern limit of the range of the coastal California gnatcatcher at approximately El Rosario in Baja, Mexico. Instead, the genetic change was gradual. *See* Zink (2000), *supra*, at 1401-02. Consequently, the study concluded that there is no mtDNA basis to support a subspecies classification for the California gnatcatcher. *Id.* at 1402.

Zink et al. 2000 concluded, on the basis of analysis of mitochondrial DNA studies, that no genetic distinction exists between the southern California populations of *Polioptila californica* and the flourishing *Polioptila californica* populations found throughout central and southern Baja California and throughout all of Baja California Sur.

Service Denial of 2010 De-Listing Petition.

Based on the 2000 Zink et. al. genetic study and other new scientific data generated after the gnatcatcher listing decision, in 2010, a coalition of property owners and other groups petitioned the Service in 2010 to delist the coastal California gnatcatcher.

On October 26, 2011, the Service denied the petition to delist *coastal California gnatcatcher*. 76 Fed.Reg. 66,255 (Oct. 26, 2011). The Service determined that the Zink analysis, although probative, was not decisive. *See id.* at 66,258. The Service suggested that mitochondrial DNA analysis, standing alone, is insufficient to overturn the gnatcatcher's subspecies classification, and that a *nuclear* DNA analysis should be conducted. *Id.* The Service stated that nuclear genes not mtDNA, should have priority in determining avian species delimitation.

In summary, the Service elected to continue to rely on measurement of morphological characteristics collected from museum specimens (some of which were 100 years old) despite (1) the availability of a mitochondrial DNA concluding that there were no distinct subspecies of *Polioptila californica*, and (2) Dr. Atwood's acknowledgment that he had "serious doubts" about the accuracy of several of the measurements that were key to the delineation of coastal California gnatcatcher as a subspecies with a southern range limit at 30 degrees N in Baja, Mexico. The conclusion that the Service would not acknowledge mitochondrial DNA as the best scientific data was particularly noteworthy given the Service's and NOAA Fisheries' prior reliance on mtDNA in other regulatory decisions under the ESA. On more than 80 occasions the Service or NOAA Fisheries has relied on mtDNA evidence to make listing determinations under the ESA. See, Exh. D to Delisting Petition. *See* 76 Fed. Reg. at 66,255.

2013 – Second Genetic Study Confirms That the Coastal California Gnatcatcher Is Not A Genetically Distinct Subspecies.

Dr. Zink, Dr. Barrowclough and others continued their analysis of gnatcatcher genetics – this time analyzing nuclear dna as suggested by the Service in its decision denying the delisting petition. The new genetic analysis using eight different nuclear dna. The 2013 published and peer reviewed paper regarding the new genetic study concluded that “[a]nalysis of the nuclear loci . . . identified no geographic groupings that corresponded with any previously suggested subspecies, nor any other significant evolutionary divisions.” *Zink et. al.* at 453. The study concluded that “the California Gnatcatcher is not divisible into discrete, listable units.” *Id.* at 456. In other words, the coastal California gnatcatcher does not qualify as a threatened subspecies because gnatcatchers in Southern California and northern Baja, Mexico are not genetically distinct from the missions of gnatcatchers in central and southern Baja, Mexico.

Zink et al. (2013) presented an important test of the ESA command that the Service use the best scientific data available in listing determinations. In rejecting the 2010 petition and the Zink et al. (2000) mtDNA study on which the petition was based, the Service suggested that the mtDNA evidence reported in Zink et al. (2000) needed to be supplemented with an analysis of nuclear genes. Zink et al. (2013) provides precisely the data set that the Service acknowledged “should have priority” in avian taxonomy.

The extensive scientific controversy and disagreement over the use of gnatcatcher morphology to list coastal California gnatcatcher as a threatened subspecies vividly illustrates the problems associated with the Service’s continued reliance on analysis of gnatcatcher morphology. This is particularly the case where a robust analysis of both mtDNA and nuclear DNA exists to evaluate directly genetic differences among gnatcatcher populations. In fact, the reanalysis of morphological data, mtDNA data, nuclear gene data, and ecological niche modeling (Zink et al. 2013) are remarkably consistent in their unified support of the lack of subspecies in the California gnatcatcher. Given the dramatic advances in genetic analysis in the last two decades, it is no longer legally or scientifically defensible for the Service to continue to rely on measurements of such characteristics as brightness of breast feathers and purity of back feathers from

differently aged museum specimens to determine whether coastal California gnatcatcher is a valid subspecies. The best available data agree that the California gnatcatcher not divisible into discrete, listable units, but instead is a single historical entity throughout its geographic range.

2014 – Service Finding That De-Listing “May Be Warranted”

In 2014, several organizations filed a second petition to delist the gnatcatcher based on the new gnatcatcher genetic study published by Dr. Zink and his colleagues. My firm represents two of the petitioners regarding the petition. In December 2014 the Fish and Wildlife Service made a “90-day finding” that the delisting of the coastal California gnatcatcher may be warranted. The deadline for the Service to determine whether delisting the gnatcatcher is warranted, and to determine whether to propose a rule to delist the gnatcatcher expired in July 2015. To date, the Service as not made the “12-month finding” required by the ESA whether the de-listing is warranted..

Service Refusal to Provide Records Regarding Review of Delisting Petition.

After the Service missed the deadline for the 12 month finding on the delisting petition, we learned that the Service had hired an outside contractor organize a committee of scientists to review the evidence regarding the subspecies delineation for the coastal California gnatcatcher. In September 2015, I filed a Freedom of Information Act (“FOIA”) request that the Service provide us with certain documents related to the Service’s review of the petition to delist the coastal California gnatcatcher.² The request included all records relating to any working group, committee, advisory group or any other groups or individuals outside of the U.S. Fish and Wildlife Service . . . regarding the taxonomy of the coastal California gnatcatcher, or the matters described in paragraph (1)(a) through 1(e)” of the FOIA Request.”

² The FOIA request is described in greater detail in the attached appeal of the Service’s response to the FOIA request.

FOIA is based on the theory that “in order for democracy to function properly, citizens must have access to government information.” *Pacific Fisheries Inc. v. United States*, 539 F.3d 1143, 1147 (9th Cir. 2008). The “core purpose” of FOIA is to inform citizens about “what their government is up to.” *Dep’t of Justice v. Reporters Comm. For Freedom of the Press*, 489 U.S. 749, 773, 775 (1989). Unless a document falls within one of FOIA’s specific exemptions to disclosure, it is presumed to be available for public inspection. *Nat’l Wildlife Fed’n v. United States Forest Serv.*, 861 F.2d 1114, 1116 (9th Cir. 1988).

The Service’s Response to the FOIA Request.

The Service provided three sets of documents to us in response to the FOIA Request. The documents provided indicate that there numerous other documents responsive to the FOIA Request are in the possession of the Service, but that the Service has withheld from disclosure. The Service refused to provide a number of documents to us, and that the Service has redacted information from other documents, on the purported grounds that the withheld documents are subject to the so-called “deliberative process exemption.” The withheld documents include, but are not limited to, the following:

- Documents identifying the names of review panel members engaged by the Service’s contractor;
- Attachments to e mail communications between the Service’s contractor (“AMEC”) and the Service regarding the Petition;
- Reports prepared by AMEC and panel members hired by AMEC;
- Service responses to questions posed by AMEC regarding the Petition; and
- Documents identifying attendees at meetings between the Service and AMEC.

FOIA Requires the Service to Provide the Withheld Documents.

None of the above-referenced documents are subject to the “Deliberative Process” exemption. First, the documents generated by AMEC and sent to the Service were not generated by the Service, and thus, by definition, are not “inter-agency or intra-agency” documents which would not be available by law to a party in litigation with the agency.

Second, the Service would be required to include all of the withheld documents in the administrative record of the Service’s action on the Petition. Thus, they would be required to be made available in litigation against the Service regarding its action on the Petition. The withheld documents would also certainly be subject to discovery under the Federal Rules of Civil Procedure.

Third, the deliberative process privilege does not apply to factual information, unless release of such information would reveal the deliberative process. *Coastal States Gas Corp. v. Dep’t of Energy*, 617 F.2d 854, 866-67 (D.C. Cir. 1980). “The burden is on the agency to establish that all reasonably segregable portions of a document have been segregated and disclosed.” *Id.* at 1148.

The withheld documents include factual information that is not part of any deliberation by the Service. For example, the names and curriculum vitae of the individuals selected by AMEC to participate in the science panel are facts; They are not deliberation. Revealing the names and qualifications of these individuals would not disclose any deliberations of the Service. Similarly, the facts in the reports and other documents are just that – facts. Disclosing the facts in these documents as required by FOIA will not disclose the deliberations of the Service.

Service Consideration of Petition to Delist the Valley Elderberry Longhorn Beetle.

The valley elderberry longhorn beetle (“VELB”) is an insect that is endemic to the Central Valley of California. The VELB is associated with two species of elderberry

plants. Elderberry are found in diverse vegetation associations, ranging from lowland riparian forest to foothill oak woodlands, and VELB may occur in any of these locations.

Basis for the 1980 Listing. The Service listed the VELB in 1980 based on two of the five listing factors: (1) criterion one -- “the present or threatened destruction, modification, or curtailment of [the species’] habitat or range” and (2) criterion four -- “the inadequacy of existing regulatory mechanisms.” 16 U.S.C. § 1533(a)(1). *See* 45 Fed. Reg. 52803; 52804-52805 (1980).

The Service concluded that the VELB satisfied the first criterion because: (1) “the [VELB] is presently known from less than 10 localities in Merced, Sacramento, and Yolo Counties;” (2) the habitat of the VELB has “largely disappeared throughout much of its former range due to agricultural conversion, levee construction, and stream channelization;” and (3) remnant populations in state and county parks are threatened by clearing of undergrowth. 45 Fed. Reg. 52805 (1980). At the time of the listing, the Service concluded that “[t]here currently exist no State or Federal laws protecting this species.” 45 Fed. Reg. 52805 (1980).

Status Review Concludes That VELB is No Longer Threatened and Recommends Delisting.

Since the listing of the VELB in 1980, many different persons conducted dozens of surveys of VELB in its historic range. The best scientific data available present a dramatically different picture of VELB presence throughout the Central Valley, and demonstrate that assumptions the VELB range is restricted to a few, threatened locations is no longer correct.

Nearly 200 records of VELB occurrence -- contained in the California Natural Diversity Database (“CNDDDB”) -- reveal that the VELB is distributed across an area more than 500 miles long and 150 miles wide, extending into Shasta County to the north and to Fresno County in the south, making the VELB one of the more widely distributed animal species in California. VELB occupancy data obtained from habitat conservation planning efforts and Service biological opinions confirm the expansive distribution of the

VELB. See VELB Distribution Map, Biological Opinion and HCP Locations (ECORP 2005).

The VELB's range extends throughout the Central Valley and associated foothills from the watershed of the Central Valley on the west and approximately the 3,000-foot elevation contour on the east. The data reveal that the range of the VELB far exceeds that of its non-listed coastal relative, the California elderberry longhorn beetle, *Desmocerus californicus californicus*. Moreover, the VELB is now known to occur outside of riparian corridors, in non- riparian communities, such as oak woodlands, foothill pine-oak woodlands, and chaparral.

The Service cited the following reasons, among others, supporting its delisting recommendation:

1. **The range of VELB is dramatically improved from the assumed range of the species at the time of the listing.** At the time of its listing in 1980, the VELB was believed to be restricted to 10 locations along the American and Merced Rivers and Putah Creek in California's Sacramento Valley. The Status Review found that "the known range now extends from southern Shasta County to Fresno County and from the east side of the Coast Range to the foothills of the Sierra Nevada in the Central Valley." Status Review, p. 4.
2. **Substantial permanent protection for the beetle is now in place.** "Approximately 50,000 acres of existing riparian habitat has been protected in the Sacramento and San Joaquin Valley since 1980." Status Review, p. 7.
3. **Loss or riparian habitat has slowed.** "At the time of listing, loss of riparian habitat was identified as the primary threat to the beetle. Since that time, the rate of riparian habitat loss has slowed due to efforts to protect and restore riparian areas." Status Review, p. 12.

Based on the conclusion in the Status Review, in October 2012, the Service published a propose rule to delist the VELB based on the results of the Status Review. 77 Fed.Reg. 60238 (Oct. 2, 2012).

The Service Reverses Course and Withdraws Proposed Delisting Rule.

Two years later, the Service dramatically changed course, and withdrew the proposed rule to delist the VELB. 79 Fed.Reg. 55,874 (Sept. 17, 2014) (attached). The Service claimed that “because the best scientific and commercial data available, including our reevaluation of information related to the species’ range, population distribution, and population structure, indicate that threats to the species and its habitat have not been reduced such that removal of this species from the Federal List of Endangered and Threatened Wildlife is appropriate.” *Id.*

CONCLUSION

The record of the Service’s consideration of the listing and delisting of the coastal California gnatcatcher and the VELB exemplifies the resistance within the Service to the delisting of species – even in circumstances where published and peer reviewed papers and the Service’s own status review document that the original grounds for the listing no longer exist or are now known to be incorrect.

*Committee on Oversight and Government Reform
Written Disclosure Requirement – “Truth in Testimony”
Required by House Rule XI, Clause 2(g)(5)*

Name: Robert D. Thornton

1. Please list any federal grants or contracts (including subgrants or subcontracts) you have received since October 1, 2012, and the source and amount of each grant or contract.

I have not received any federal grants or contracts since October 1, 2012. My law firm, Nossaman LLP, from time to time has received grants from the Transportation Research Board of the National Academy of Science to conduct research and studies on transportation policy issues. I am not aware of any such grants since or contracts since October 1, 2012.

2. Please describe any entity you are testifying on behalf of and briefly describe your relationship with these entities.

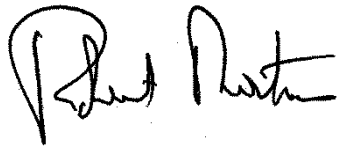
I am testifying as an individual and not on behalf of Nossaman or any Nossaman clients. Nossaman represents a wide variety of public agencies and private entities on various environmental policy, litigation and regulatory matters. My testimony refers to information derived during the course of the representation of various Nossaman clients, including the National Association of Home Builders and the California Building Industry Association.

3. Please list any federal grants or contracts (including subgrants or subcontracts) received since October 1, 2012 by the entities you listed above. Include source and amount of each grant or contract.

I am not testifying on behalf of any entity and, therefore, there are no grants or contracts to any such entities received since October 1, 2012.

I certify that the above information is true and correct.

Signature:



Date: April 17, 2016



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Practice Areas & Industries

- Environment and Land Use
- Litigation
- Public Agency Law
- Climate Change
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Robert D. Thornton | Partner

Robert Thornton specializes in representing public agencies on federal environmental issues. He has successfully defended more than \$10 billion in regional infrastructure improvements against federal and state environmental challenges. Mr. Thornton is nationally recognized as an expert on endangered species issues. He assisted clients in obtaining approval of precedent-setting habitat conservation plans, including the first and some of the most complex HCPs in the nation.

His work is well respected by his colleagues and clients who have ranked him among the nation's top environmental lawyers.

Individual recognition in California Environmental law by *Chambers USA*, 2013-2015.

Top 10 environmental lawyers, *United States Lawyer Rankings* from 2006 through 2014.

"The Best Lawyers in America" for Environmental Law, 2003-2015.

Named to *The National Law Journal's* list of "Top 50 Litigation Trailblazers & Pioneers" in 2014

Representative Work -- Endangered Species; Habitat Conservation Plans.

- **Orange County Central/Coastal Natural Community Conservation Plan.** Assisted Transportation Corridor Agencies and other parties in negotiation of first Natural Community Conservation Plan. Lead role in drafting NCCP Implementation Agreement.
- **Pacific Lumber Company – Headwaters Forest Purchase and Habitat Conservation Plan.** Special endangered species and real estate counsel on sale of the Headwaters Forest to the California and U.S. governments, and related 211,000-acre habitat conservation plan - the largest private timber HCP and the first Habitat Conservation Plan addressing aquatic salmon and steelhead in California.
- **Imperial Irrigation District Water Transfer Project.** Environmental counsel to Irrigation District for the nation's largest water transfer project. Work involved negotiating and obtaining federal and state environmental approvals for the water transfer project, including approvals from the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife.
- **Metropolitan Bakersfield Habitat Conservation Plan.** Counsel to City and other permit applicants in regional HCP in 400 square mile area in Kern County – at the time of its approval the largest regional HCP in the nation.
- **Kern Water Bank Natural Community Conservation Plan/Habitat Conservation Plan.** Counsel to public agency on NCCP and HCP regarding nation's largest groundwater storage project.
- **California Water Supply – Bay Delta Conservation Plan.** Counsel to Coalition for a Sustainable Delta and other parties regarding endangered species issues concerning State Water Project operations. Counsel in multiple litigation matters regarding Endangered Species Act approvals of State Water Project.
- **No Surprises Rule Litigation.** Lead counsel to intervenor-defendants in successful defense of Endangered Species Act "No Surprises" rule regarding habitat conservation plans. *Spirit of the Sage Council v. Kempthorne*, 511 F.Supp.2d 31 (D.D.C. 2007).
- **Critical Habitat Litigation.** Successfully challenged the critical habitat designations of four endangered species in Southern California. See e.g., *Building Industry Legal Defense Foundation v. Norton*, 231 F.Supp.2d 100 (D.D.C. 2002).
- **California Sea Otter Recovery Plan.** Counsel in implementation of Sea Otter Recovery Plan to reduce risks from oil and gas exploration and development. Work included

advocating for amendments to Endangered Species Act supported by environmental community and oil and gas industry.

- **San Bruno Mountain Habitat Conservation Plan.** Counsel to landowners in nation's first Habitat Conservation Plan. Lead counsel in negotiation of 1982 amendments to Endangered Species Act to authorize incidental take permits pursuant to habitat conservation plans.
- **Counsel to House of Representatives Subcommittee.** Counsel to Congressional subcommittee during 1978 and 1979 amendments to the Endangered Species Act.

Representative Work -- Public Agency Infrastructure Projects

- **Los Angeles Light Rail Transit Project.** Successful defense of \$1.5 billion rail transit project in west Los Angeles in litigation through the California Supreme Court. *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority*, 57 Cal. 4th 439 (2013).
- **Honolulu Transit Project.** Successful defense of 20-mile, \$5 billion Rail Transit Project in NEPA, Section 4(f) and National Historic Preservation Act litigation. *HonoluluTraffic.Com v. Federal Transit Administration*, 742 F.3d 1222 (9th Cir. 2014)
- **Orange County Transportation Corridor Agencies.** Devised and implemented a successful environmental compliance strategy to defend against twenty lawsuits challenging \$3 billion in regional transportation improvements in Southern California. *Laguna Greenbelt Inc. v. United States Department of Transportation*, 42 F.3d 517 (9th Cir. 1994).
- **San Diego Expressway (SR 125).** Successfully obtained state and federal environmental clearances and permits for development of a 10-mile toll highway in San Diego. Successfully defended project against complex state and federal litigation brought by several environmental groups on CEQA, NEPA, ESA, and Clean Water Act. *Center For Biological Diversity et al. v. Federal Highway Administration*, 290 F.Supp.2d 1175 (S.D.Cal. 2003).

Recent Presentations

Program Co-Chair and Speaker. NEPA: Recent Case Law Developments. CLE International's 10th Annual NEPA Conference. San Francisco, CA March 2014

Program Co-Chair and Speaker, "NEPA Overview – Regulations and Cases," and "Federal Environmental Streamlining – NEPA, CEQA and the Economy," CLE International's 8th Annual NEPA Conference – Recent Developments Under the National Environmental Policy Act, Sacramento, CA January 23-24, 2012.

Program Co-Chair and Speaker, "NEPA Regulations and Cases - A Primer," CLE International's 7th Annual NEPA Conference - Climate Change, Renewable Energy and More, San Francisco, CA, January 20-21, 2011.

Program Co-Chair and Speaker, "A Primer on the NEPA Statute" and "Renewable Energy," CLE International's 6th Annual NEPA Conference - Climate Change, Cumulative Impacts and Compliance, San Francisco, CA, January 21-22, 2010.

Program Co-Chair and Speaker, "A Primer of the NEPA Statute: What You Need to Know," and "NEPA and CEQA Programmatic Approaches to Solving California's Water Supply Challenges," CLE International's 5th Annual NEPA Conference: Climate Change, Cumulative Impacts and Compliance, San Francisco, CA, March 5, 2009 and San Diego, CA, February 23, 2009.

Publications

Co-Author, "The Critical Habitat Exclusion Policy: Implications for Conservation Partnerships on Private Land," *Natural Resources & Environment*, Summer 2015.

Author, "Cases Pending Before the California Supreme Court on Climate Change May Foreshadow Federal Law Challenges," *The Natural Lawyer*, April 6, 2015.

Author, "Proposed Critical Habitat Rules Change reach of the Endangered Species Act," *The Natural Lawyer*, July 14, 2014.
Author, "'Urban Decay' Still Plaques Calif. Big-Box Retail Plans," *Law360*, April 22, 2014
Author, "9th Circ. Simplifies Enviro Process For Transit Projects," *Law360*, March 7, 2014.
Author, "Habitat Conservation Plans: Frayed Safety Nets or Creative Partnerships?" *Natural Resources & Environment*, Fall 2001.
Co-Author, "Contractual Ecosystem Management Under the Endangered Species Act: Can Federal Agencies Make Enforceable Commitments?" 26 *Ecology Law Quarterly* 489, 1999.

Education

J.D., University of San Francisco School of Law, 1976, *with distinction*
Law Review
B.A., University of California, Berkeley, 1972, *with distinction*

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