



ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

Inland Empire Chapter NEWSLETTER – August 2026

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Inland Empire (IE) Chapter News

Our eighth meeting of the year was a SOUTH meeting on August 12, 2026, which featured a great presentation from Mr. Carlos Hernandez, Geotechnical Engineer with the United States Army Corps of Engineers (USACE), currently serving with the Southwestern Division Dam Safety Production Center (SWD DSPC) who presented on *"Rehabilitation of the Main Dam at the Isabella Lake Dam Safety Modification Project"*. (See Page 3 of the August Meeting Summary).

Save the Date: AEG-IE *NORTH* Meeting October 14th

AEG-IE will not be hosting a chapter meeting in September, due to the AEG 69th Annual Meeting being held September 14 through 19, 2026 in Chattanooga, Tennessee.

AEG-IE will host our next **NORTH** chapter meeting on **Wednesday, October 14, 2026**, at **Old Spaghetti Factory** in the city of **Rancho Cucamonga**. October's program will feature Dr. Heather Ford, Associate Professor in the Department of Earth and Planetary Sciences at the University of California, Riverside, presenting **"Mounting Evidence for an Ancient Suture within the Eastern Wyoming Craton: Results from the CIELO Seismic Experiment"**.

Come hear Dr. Ford's presentation on new seismic insights into the Wyoming Craton, one of North America's oldest continental cores. Drawing on data from the CIELO seismic experiment and other regional studies, the presentation will explore evidence beneath the Powder River Basin and what it reveals about craton formation, evolution, and boundaries (Please see details about Dr. Ford's presentation on pages 5 and 6).

Save the Date: AEG-IE Field Trip Opportunity Saturday November 14th

Mark your calendars for **Saturday, November 14, 2026**, when the AEG-IE Chapter will host a **field trip to Wrightwood, California**. Join fellow members for a day of geology and exploration in the San Gabriel Mountains. **Additional details, registration information, and the trip itinerary will be announced soon in a separate communication.**

Job Postings

Career Opportunity: Assistant Professor in Engineering Geology or Applied Geology at California State University, San Bernardino

Applications are invited for an **Engineering Geologist or Applied Geoscientist**, with strong preference given to candidates with industry or government experience in applied geosciences, who can mentor our students in pursuing professional licensure. We welcome candidates with experience in geotechnical analysis; site investigation; hazard assessment; civil, mining and environmental projects; shallow imaging for engineering applications; and/or remote sensing.

The candidate will be expected to teach Engineering Geology; a course in their area of expertise such as site investigation or advanced field geology; general education courses such as environmental geology; and other courses as needed. The candidate will also be expected to mentor undergraduate and graduate (masters) students in research. A Ph.D. is required.

Formal review of applications will begin Monday, **November 2, 2026**, and continue until the position is filled.

For details and instructions on how to apply, see the full job announcement at <https://careers.csusb.edu/en-us/job/561353/departments-of-geological-sciences-assistant-professor>. Send enquiries to search committee chair, Codi Lazar, clazar@csusb.edu or to the department chair, Claire Todd, Claire.todd@csusb.edu.

Career Opportunity: Engineering Geologist – Los Angeles Department of Water and Power

The application period for **Engineering Geologist Associate** is expected to open on Friday September 4, 2026, and close on **Thursday September 17, 2026**.

To subscribe to the job and be notified when the application window opens, please access the link(s) below:

Subscribe to Engineering Geologist Associate:
<https://www.governmentjobs.com/careers/lacity/classspecs/741209>

Career Opportunity: Senior Geologist – Earth Mechanics, Inc.

Earth Mechanics, Inc. (EMI) is seeking a **Senior Geologist (PG/CEG)** for its **Fountain Valley** office. The position involves leading geologic and geotechnical investigations, evaluating geologic hazards, preparing technical reports, and supporting transportation and public infrastructure projects. EMI is seeking candidates with **10-15 years of experience** in engineering geology and geotechnical consulting. **Location:** Fountain Valley, CA For more information and to apply, visit the EMI careers page: [Senior Geologist Position](#).

Membership

Support our chapter, gain access to publications, and stay engaged by renewing your membership today here: <https://www.aegweb.org/membership>

August 2026, AEG-IE Meeting Summary

Mr. Carlos Hernandez, Geotechnical Engineer with USACE Presented "*Rehabilitation of the Main Dam at the Isabella Lake Dam Safety Modification Project*".

At the August 2026 AEG Inland Empire Chapter meeting, which featured a robust turnout, Mr. Carlos Hernandez of USACE presented on the Isabella Lake Dam Safety Modification Project (DSMP), a major infrastructure project completed between January 2018 and April 2023. Mr. Hernandez highlighted how the project successfully reduced the Dam Safety Action Classification (DSAC) rating from DSAC 1 to DSAC 4, significantly improving dam safety and long-term performance. The project included the excavation of approximately 3.5 million cubic yards (CY) of rock from the emergency spillway footprint, placement of 2.8 million CY of fill material for both dams, construction of a 56,000-CY concrete labyrinth weir, more than 2.6 million labor hours without a serious injury, and approximately \$323 million in construction costs.

The presentation provided an overview of the project's background, geologic setting, dam safety concerns, design solutions, construction challenges, and key lessons learned. Originally constructed between 1948 and 1953, the Isabella Lake Dam complex was identified as having urgent dam safety concerns related to internal erosion, seismic stability, liquefaction potential, and erosion risks associated with existing infrastructure. To address these issues, the rehabilitation included raising both the Main Dam and Auxiliary Dam, constructing new filter and drainage systems, installing a downstream buttress, and constructing a new emergency spillway featuring a labyrinth weir.

Attendees learned about the complex geologic conditions underlying the dam system, consisting primarily of granitic bedrock overlain by alluvial deposits, and the extensive engineering and construction efforts required to complete the modifications. The presentation highlighted large-scale excavation, material production, dewatering operations, embankment construction, and rigorous quality control measures implemented throughout the project. Despite challenges including the COVID-19 pandemic, major wildfires, and record snowpack and flooding in 2023, the project team successfully completed construction while maintaining an exceptional safety record.

Mr. Hernandez concluded by sharing key lessons learned from the project, emphasizing the importance of reducing uncertainty prior to construction, maintaining a culture of quality, and fostering a collaborative "One Project Team" approach. He also discussed how the lessons learned at Isabella Lake will continue to influence future dam safety and rehabilitation projects. The presentation provided AEG members with valuable insight into one of California's most significant geotechnical infrastructure projects and highlighted the critical role of engineering, construction management, and teamwork in delivering complex dam safety improvements.

August 2026

Mr. Hernandez presenting on the Isabella Lake Dam Safety Modification Project and the robust attendance at the AEG-IE Chapter's SOUTH August meeting held at Luna Modern Mexican Kitchen in Corona, California.





ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

INLAND EMPIRE CHAPTER

OCTOBER 2026 MEETING ANNOUNCEMENT

Greetings AEG Inland Empire Chapter Members

We hope you will join us for our 9th 2026 AEG Inland Empire meeting. The meeting will be held Wednesday, October 14th, at the Old Spaghetti Factory in Rancho Cucamonga. This is our “NORTH” venue of our roving AEG-IE meeting locations. Looking forward to seeing you there!

Meeting date: Wednesday, October 14, 2026

Location: Old Spaghetti Factory
11896 Foothill Blvd
Rancho Cucamonga, CA 91730

Time: 5:30 pm Social Hour
6:30 pm Dinner
7:30 pm Presentation



Cost: \$45 per person with advance online registration for AEG members,
\$50 without registration (RSVP or at the door) and non-members,
\$10 for students with a valid student ID and current AEG Student membership.

Food: Italian

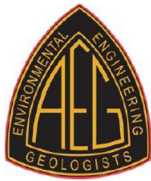
RSVP: Register and pay online at our website: <https://aeg-ie.org/meeting>

Please register prior to 12 p.m., Monday October 12th

Topics and speakers:

“Evidence for an Ancient Suture within the Eastern Wyoming Craton: Results from the CIELO Seismic Experiment”

Dr. Heather Ford
Associate Professor
Department of Earth and Planetary Sciences
University of California, Riverside (UCR)



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***“Mounting Evidence for an Ancient Suture within the
Eastern Wyoming Craton: Results from the CIELO Seismic
Experiment”***

Dr. Heather Ford, Associate Professor, UCR

ABSTRACT

Global seismic imaging models reveal the presence of seismically fast, relatively thick regions of lithosphere beneath the stable cores of continents, commonly referred to as cratons. These deep “cratonic keels” are thought to be cold, strong and highly viscous, properties that have allowed them to remain stable for billions of years. While global seismic models suggest that cratons are relatively homogeneous, other observables such as geologic mapping, thermochronological petrological studies, and regional geophysical studies, point to a much more complex history within individual cratons. These varied, and sometimes contradicting results, have made it difficult to reach a consensus on how cratons formed and evolved.

The Wyoming Craton provides an excellent natural laboratory for improving our understanding of craton formation and evolution. Numerous exposures of basement rocks, along with targeted geophysical studies, allow us to investigate subsurface structures not resolvable in global surveys. Temporary seismic arrays, including the CIELO experiment, were deployed to better understand the evolution of the Wyoming Craton and to better define its boundaries. While geophysically and geologically inferred boundaries agree in parts of the craton, the location and nature of the eastern boundary have proven difficult to determine because of significant sedimentary cover.

Using improved station coverage from CIELO, along data from other experiments, we have completed a suite of seismic analyses which allow us to characterize changes in the structure of the crust and upper mantle beneath Wyoming Craton. Our results reveal a well-defined change in seismic properties beneath the Powder River Basin. We hypothesize that this feature is the result of suturing that occurred prior to the Proterozoic and before the Wyoming Craton was fully cratonized. This hypothesis differs from previous suggestions that the seismically observable feature marks the eastern boundary of the craton. Instead, it is consistent with geological evidence suggesting that the Black Hills were already part of the Wyoming Craton prior to the Trans-Hudson Orogeny in the Proterozoic.

SPEAKER BIO

I am an Assistant Professor in the Department of Earth and Planetary Sciences at the University of California, Riverside. My research focuses on the tectonic and dynamic evolution of the Earth’s continents and interior. My research program at UCR focuses on using seismic waves generated by distant earthquakes to image deep into the Earth’s interior, a technique conceptually similar to medical CT scans. The seismic data are collected by seismometers that are either permanently installed or temporary deployed across a region of interest. The primary goal of my research efforts is to better understand how the continents initially formed, the physical and chemical properties that have allowed them to endure, and their relative strength over time.