



American River Parkway, Sacramento. Photo by K. Holland 2021.

GEI Consultants Environmental Insights

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Practice and People Updates

GEI's Growing Cultural Resources Team

Kyle Brudvik is GEI's new geoarchaeologist and paleontologist! Kyle's professional career includes geoarchaeology, paleontology, and osteology. Kyle holds an M.A. in Integrative Biology (paleoanthropology and archaeology) from UC Berkeley, a B.A. in Anthropology (paleoanthropology) from the University of Chicago, and a B.S. in Geophysical Sciences (sedimentology/stratigraphy and paleontology) from the University of Chicago. He is a Registered Professional Archaeologist and is 40-Hour HAZWOPER Certified. Kyle has professional cultural resources management experience in California, Nevada, Arizona, and Vermont. Kyle will assist with projects in California and throughout the U.S.

Lena Philliber has joined GEI's Sacramento Cultural Resources group as an architectural historian. Lena earned her B.A. in history from California State University, Sacramento. Lena is currently working on her M.A. in Public History. Lena worked previously as an intern with the City of Sacramento.

Jamie Lanning is our recent addition to GEI's Madison, WI branch. Jamie is an archaeologist with more than a decade of experience in Midwestern archaeology, especially Michigan and Wisconsin. Jamie received his B.A. in Anthropology from the University of Wisconsin, Madison. Jamie is on the list of Qualified Archeologists to work within the boundaries of a human burial site by the Wisconsin Historical Society and he will be assisting the Central Region cultural resources team as we continue to support GEI project managers in the midwestern U.S. with cultural resource studies and grow our team.

Gary Scholze, formerly in GEI's Madison, WI branch, has moved to Maine. Gary holds an M.A. in anthropology. Gary will continue to support midwestern and western project managers with cultural resources studies, just in a different state!

Matt Chouest recently moved from Sacramento to Lansing, MI. Matt has an M.A. in anthropology and helps the West and Central regions with cultural resources studies. Matt joins our cultural resources staff in the midwestern U.S.

GEI Contact



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Practice and People Updates (continued)

GEI's Denise Jurich Achieves New Certification

Denise Jurich recently completed the Yale School of Management's certification course in Corporate Sustainability Management: Risk, Profit, and Purpose. This program focused on developing skills and knowledge to implement purpose-driven corporate sustainability strategies that address challenges related to climate change while also identifying financial risks and opportunities. The course has given Denise the tools to develop and implement corporate sustainability plans, identify procedures for integrating sustainability into business operations, and set short- and long-term sustainability targets.



Denise Jurich
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Yale SCHOOL OF
MANAGEMENT

GEI's Growing CEQA Team

GEI is excited to announce that **Ken Koch** has joined us as an environmental planner and project manager. He brings 29 years of experience in CEQA and NEPA compliance and permitting for a full range of projects, with a focus on land use development projects and renewable energy projects. He has worked closely with lead agencies, legal counsel, scientists, technical experts, and engineers to prepare Environmental Impact Reports, Initial Studies, Environmental Assessments, technical reports, opportunities and constraints analyses, and related planning documents to support entitlement processing.

Mr. Koch earned his M.S. in Environmental Policy and Planning from the California State University, Fullerton and his B.S. in Environmental Health and Planning from the University of California, Irvine.

GEI Contact



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GEI is excited to announce that **Melinda Mohamed** has joined us as an environmental planner and project coordinator. She brings over 10 years of experience in natural resources including: wildlife surveys and reporting; site assessments; authoring various sections of CEQA documents; Biological Assessments for both USFWS and NOAA Fisheries; project permitting; and providing local, state, and federal environmental policy interpretation to clients. Her academic and professional work has focused on aquatic resources, especially on projects with potential impacts to sensitive fish species. However, Melinda also has broad experience with terrestrial wildlife and ecosystems as well, with a focus on California endemic species.

Ms. Mohamed earned her M.S. in Aquatic Resource Management from King's College London and her B.S. in Zoology from the University of California, Santa Barbara.

GEI Contact



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Project Updates

GEI Project Awarded at AEP Conference

In April, the Environmental Insights Newsletter highlighted our project with the City of Monterey and project partners Kimley-Horn, “Adapting a Threatened Transportation Road Network to Sea Level Rise.” We’re delighted to announce the project captured the Outstanding Climate Document Award for 2021 at the annual conference of the Association of Environmental Professionals (AEP). “I was thrilled to hear of this award,” says Rebecca Verity, GEI’s project manager and adaptation lead. “This project was one of my career favorites. The client was really open to creative solutions, wanting to explore as many options as possible. By looking wholistically at community risks, we were able to emphasize solutions, which protect the regional transportation network and which also highlight important community values, ecological restoration, economic stability, quality of life, and increased biking and pedestrian options. I’m so grateful to our whole team, and a big thank you to the AEP for recognizing their hard work.”

When asked what comes next in climate adaption, Ms. Verity responded “Earlier this year, GEI staff realized many of us have experience on different aspects of wildfire: climate-enhanced fire risk prediction, risk reduction, debris-flow modeling and post-fire infrastructure and ecological response and recovery. We’ve spent the summer coming together (virtually), sharing expertise and project examples, and we’ve begun sharing that with clients. Preparing for and recovery from wildfire is such an urgent need in the West. We’re excited to share GEI’s strengths and keep our clients safe.”

GEI Contact



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NEPA Complete on RD 17 Levee Seepage Area Project (LSAP) Project

On August 12, 2021, the U.S. Army Corps of Engineers (Corps) issued its Record of Decision to grant permission to the Central Valley Flood Protection Board to implement the Reclamation District (RD) 17 Levee Seepage Area Project. Since 2009, GEI has been supporting RD 17 in their efforts to design and permit this project, including preparing the NEPA and CEQA documents and all environmental permits. The proposed project would implement repairs to the San Joaquin River east levee in an effort to reduce flood risk to the cities of Stockton, Lathrop, and Manteca. The proposed work includes repairing the existing deficient levee segments and constructing a setback levee with the following features: seepage berm, under-seepage cutoff wall, and through-seepage chimney drain.

The Corps issued the Final Environmental Impact Statement on April 30, 2021. One comment letter was received, from the U.S. Environmental Protection Agency, expressing appreciation toward the joint efforts between the Corps and RD 17. As this project goes to construction in 2022, GEI will be providing construction compliance monitoring and support.

GEI Contact



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Project Updates (continued)

Post-Fire Watershed Hydraulic and Hydrology Study

Since 2017, the GEI team was tasked by the California Department of Water Resource (DWR) to develop an approach to evaluate pre- and post-fire impacts. The goal with the pilot project is to develop a process for providing awareness mapping in both Northern and Southern California to compare clear water, debris flows, and mud flows for future fire impacted areas. The pilot studies included the Paradise, Bond, Kincade, Woolsey, and River Fires from 2018, 2019 and 2020, respectively. GEI used the Corps' updated hydraulic modeling program, Hydrologic Engineering Center River Analysis System program version 6.0 (HEC-RAS 6.0), and other publicly available data.

One example shown below is the River Fire, which started in August 2020 in Monterey County. On January 27, 2021, significant mud and debris flows were captured with drone video near River Road on the east side of the Coastal Range within the Salinas River Valley after an intense rainstorm. The mud and debris inundated several buildings as shown on Figure 1. Using HEC-RAS 6.0, best available high resolution topographic LiDAR, burn intensity mapping from the United States Geological Survey, and National Weather Surface rainfall data, GEI validated the hydraulic model floodplain impacts to the drone video. Figure 1 and 2 presents the hydraulic model results compared to the drone video. The red outline shown in Figure 2 is the estimated mud flow extents. These techniques will be applied to evaluate and forecast other pre- and post-fire flooding impacts throughout California.

GEI Contact



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Figure 1 Top: HEC RAS model results
Bottom: Drone footage

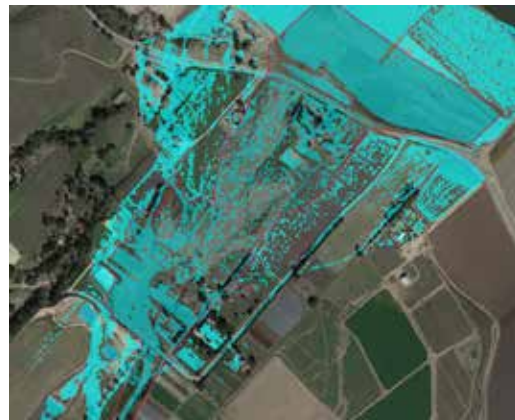


Figure 2: HEC RAS mudflow (red boundary) results within estimated flood extents

Industry Updates

New CEQA Exemption for Habitat Restoration Projects

California Senate Bill 155, approved on September 23, 2021, includes a provision establishing a CEQA exemption for certain restoration projects, until January 1, 2025. Projects must satisfy requirements added to Public Resource Code (PRC) Section 21080.56, related to restoration goals, achieving and managing long-term net-benefits, and limiting construction to habitat restoration activities. The lead agency shall obtain the concurrence of the Director of the California Department of Fish and Wildlife for determining consistency with PRC Section 21080.56. Within 48 hours of making a determination that a project is exempt, the lead agency is required to file a notice of exemption with the Office of Planning and Research and the Department of Fish and Wildlife is required to post the Director's concurrence on its website. Projects shall remain subject to all other applicable federal, state, and local laws and regulations. GEI's CEQA Practice and Ecological Restoration Teams are reviewing this new policy and evaluating opportunities to assist clients with their projects.

GEI Contact



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View of habitat restoration project along the Southport Levee Improvement Project

Changes to the Definition of Navigable Waters

On January 23, 2020, the U.S. Environmental Protection Agency (USEPA) and the Corps issued the Navigable Waters Protection Rule (Rule) which defined the waters of the United States (WOTUS) into four streamlined categories. On August 30, 2021, however, the U.S. District Court for the District of Arizona issued an order vacating and remanding the Rule in the Pascua Yaqui Tribe case. Consequently, the USEPA and the Corps have halted implementation of the Rule and are interpreting WOTUS consistent with the pre-2015 regulatory regime (i.e., Rapanos significant nexus test). Per the USEPA and the Corps, the agencies will continue to review the order and consider next steps, including the proposed rulemakings announced on [June 9, 2021](#). More information can be obtained on USEPA's website at <https://www.epa.gov/wotus>. GEI wetland biologists and regulatory specialists are very adept at navigating the biological and legal complexities of this order and recommend a proactive approach to ensure your project obtains the appropriate environmental regulatory compliance.

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