



GEI's Environmental Team assisting with biological and cultural resource assessments for DWR's snow stations.

GEI Consultants Environmental Insights

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People Updates

Our Environmental Team Takes the Spotlight in a New Video

Our Environmental Practice Group was ready for their closeup this summer. And they delivered in a new video we've just released about the people, teams, and services behind our environmental services practice. Our team's commitment to the environment drives everything we do, and this video highlights how our environmental team is making a real impact. From sustainable practices to innovative solutions, we're dedicated to preserving our natural resources while addressing complex challenges to maintain critical infrastructure.

We'll be sharing this video regularly in the months ahead at conferences, on social media, directly to our partners, and throughout GEI.

Watch the video on YouTube: <https://youtu.be/p0WBcBBiflk>

Special thanks to our team members involved:

- Environmental Services Program Leader Cindy Davis
- Senior Environmental Compliance Project Director Ryan Jolley
- Climate Resiliency Program Manager Rebecca Verity
- Permitting Practice Leader Eric Htain
- Biological Resources Practice Leader Kelly Fitzgerald-Holland
- Restoration Practice Leader Lynn Hermansen
- Cultural Resources Practice Leader Denise Jurich
- Restoration Ecologist Carol Maxwell
- Environmental Planner Melinda Mohamed

Our passion, interests, and skills make our team shine, and we're excited to share these with you.



People Updates (continued)

GEI's Growing Environmental Practice



Christiana Conser has joined GEI in Sacramento as a Senior Restoration Ecologist. Christiana brings more than 25 years of experience in habitat restoration and invasive plant science and management. She has extensive experience with every stage of the habitat restoration process: project development and planning, restoration plans, permitting and regulatory compliance, funding and budgeting, project management, habitat design for specific outcomes (habitat enhancement, endangered species recovery, water management, etc.), project implementation, development of performance metrics and site monitoring, data management and analysis, stakeholder outreach, and public education and engagement. Christiana's passion is working with clients to develop and secure grant funding for conservation, habitat restoration and invasive plant projects.



Olivia Wreden is a recent graduate from U.C. Davis and joins the Ecosystem Restoration Practice in Sacramento. Olivia spent one year working professionally as a landscape designer. Olivia brings familiarity with native California habitats and enthusiasm for sustainability and contributing as an environmental steward. She has been a dedicated member of the Girl Scout community and hopes to give back to an organization that helped her grow as a leader. Olivia will be providing support to the restoration team in preparing restoration plans and specifications, providing field support for implementation oversight and assisting with writing restoration and land management plans. Olivia's enthusiasm for learning and expanding our innovative restoration practices is a great asset.



Erika Garig joined the GEI Environmental Practice Team as a biologist. Erika recently attained her Masters in Environmental Science from CSU Monterey Bay, after attending U.C. Santa Cruz for her undergraduate studies. She has broad experience in wildlife ecology, particularly with birds and aquatic species. She worked with the U.S. Forest Service on fuel reduction projects, and, thus, has both strong field experience and understands environmental compliance monitoring. She is providing compliance oversight on many of the construction projects that GEI is supporting this season, including biological monitoring at the Sutter Bypass Pump Plant Rehabilitation project. *Left Photo: Erika helping to relocate fish and wildlife during dewatering in advance of pump plant rehabilitation.*



Ryan Schuette joined the GEI Environmental Practice Team as a biologist, the latest addition to GEI's Biological Resources Team. Ryan graduated from McGill University with a B.S. in Environmental Science, and recently relocated to California, where he worked for the California Conservation Corps on a wide range of field projects, including habitat restoration and fuels reduction. He has strong field experience, which well-position him for the environmental compliance monitoring work that he is supporting this season.



Wayne Shijo recently joined GEI as a Senior Transportation and Air Quality Specialist to provide transportation, air quality and global climate change analysis services for CEQA and NEPA documentation. Wayne has 44 years of experience managing traffic, air quality and global climate change analyses of infrastructure facilities and land use development projects, focusing on Northern and Central California. He has conducted travel forecasting using computer simulation models, provided training in the application of air quality analysis software, provided peer review services to ensure the technical adequacy of air quality assessments for environmental documents, and developed software applications to improve air quality analysis methods.

People Updates (continued)

GEI Staff: Leaders in Our Practice

In April, **Jennifer Burt** and **Carol Maxwell** presented a poster entitled “Promoting Natural Recruitment for Ecosystem Resilience in Process-Based Floodplain Habitat Restoration” at the 2023 Society for Ecological Restoration California (SERCAL) Conference. The presentation highlighted climate-resilience and other benefits of harnessing natural recruitment in process-based habitat restoration. Their discussion illustrated critical factors affecting the likelihood of successful restoration using a natural recruitment approach by reviewing commonalities among riverine and floodplain habitat restoration projects in the Central Valley. They described how site selection and management approaches to promote recruitment may vary from a more traditional horticultural restoration mindset. If you’d like a pdf of the poster or you’re interested to learn more, please email Jennifer and/or Carol.

GEI Contacts



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The Floodplain Management Association (FMA) recently hosted its annual conference in Los Angeles. The theme for this year’s event was Mitigating the Equity Gap: Creating Climate Resilient Communities Together. GEI Environmental Team members **Rebecca Verity**, **Vance Howard**, **Nick Tomera**, and **Katelyn Matroni** attended the four-day event. Aligning with the conference theme, GEI’s Climate Program Manager, **Rebecca Verity** co-instructed a workshop with representatives from the California Department of Water Resources and the U.S. Army Corps of Engineers. The workshop entitled, “*National Levee Safety Guidelines: Showcasing best practices for managing levees in an uncertain future – U.S. Army Corps of Engineers*,” focused on the National Levee Safety Guidelines. The Guidelines are currently under development by the U.S. Army Corps of Engineers and the Federal Emergency Management Agency, in cooperation with multi-disciplined federal subject matter experts and private-sector professionals, under the new National Levee Safety Program. The Guidelines is a resource for decision-makers, levee owners/operators, and communities around the U.S. who will require greater access to an updated suite of programs, tools, and resources to help them effectively and consistently manage their infrastructure, make informed flood risk management decisions for the benefit of all, and increase resiliency.

GEI Contact



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People Updates (continued)

Meet Up with Our Team at Upcoming Conferences: Hope to See You There!

If you missed our Team at this past FMA conference (see above), at the annual California Association for Environmental Professionals Conference in Lake Tahoe in April 2023 (attended by GEI staff **Ryan Jolley**, **Drew Sutton**, **Erick Cooke**, **Anne King**, and **Chrissy Russo**), or at the bi-annual Association of California Water Agencies (ACWA) conference in Monterey in May 2023 (attended by GEI staff **Cindy Davis**, **Ryan Jolley**, and **Summer Pardo**), stop by our booth at one of these upcoming conferences!



Senior Environmental Compliance Project Director, **Ryan Jolley**, and Senior Natural Resources Professional, **Nick Tomera**, will be attending the ACWA Fall Conference and Expo November 28th-30th in Indian Wells. The bi-annual ACWA Conference provides water industry professionals the opportunity to learn and connect on the latest and best information about water issues surrounding the reliable delivery of safe water to millions of Californians.

Established in 1960, the National Waterways Conference (NWC) is the leading national organization to advocate for funding and common-sense policies and laws that recognize the widespread public benefits of our nation's water resources infrastructure. **Erick Cooke**, **Satya Gala**, and **Dan Wade**, among others from GEI Consultants, will be attending the conference. The NWC conference is being held this year from October 2 – 4 in Sacramento and is sponsored by the Sacramento Area Flood Control Agency (SAFCA). GEI Consultants and The Westervelt Company are Gold Partners of this year's conference kickoff welcome reception on the evening of October 2nd that will include special guest the Honorable Doris Matsui (Calif.-07), Congresswoman, U.S. House of Representatives. This year's conference will include

speaker presentations and panel discussions on flood risk reduction, updates on the National Flood Insurance Program, the latest updates to the regulation of waters of the United States, U.S. Army Corps of Engineers (USACE) internal collaboration, managing water resources, funding of water resources projects, and updates on the water issues within California and the lower Colorado basin. GEI Consultants works regularly with SAFCA, USACE, the California Department of Water Resources, and other flood and water clients attending the conference. GEI Consultants provides our clients with a wide range of experience on flood and water resources projects in California providing engineering, design, and environmental regulatory services and will be available at the conference to discuss our services in detail for your projects.

Senior Wildlife Biologist, **Kelly Holland**, will be attending The Wildlife Society's (TWS) national conference in Louisville, Kentucky, this November. Kelly is one of eight members of the TWS Certification Review Board, which will be meeting to evaluate applications for wildlife biologist certification to ensure that the applicant meets the rigorous education, experience, and ethical requirements. As such, Ms. Holland is a co-presenter for a presentation "Wildlife undergraduate curriculum from the perspective of the TWS Certification Review Board members." Finally, Kelly is also presenting "Federal Policy Engagement with Local Impacts: Supporting Science-Based Decision Making From a Section Perspective" within the *Wildlife Professionals Take Action: Policy Engagement Through TWS' Conservation Affairs Network Symposium*.

People Updates (continued)

GEI Office Supports Safe and Healthy Housing in Sacramento

GEI's Sacramento office sponsored Birdies and Brunch, a fundraising event hosted by Rebuilding Together Sacramento (RTS). A remarkable \$40,000+ was raised that will be used to foster safe and healthy housing in the Greater Sacramento area. RTS' purpose is to build awareness of the importance of home safety enhancements and critical home repairs in a community where housing is aging and deteriorating at an alarming rate. By helping improve the home and keeping individuals in their homes, RTS and its supporters empower independence and pave the way for generational prosperity.



Photo L-R: GEI staff who participated in Birdies and Brunch: Krishna Amirineni, Satya Gala, Summer Pardo, and Vance Howard.

Project Updates

GEI Assists EID in Vegetation Management Strategies

GEI's Environmental Team led CEQA compliance for a program to conduct vegetation management along 88 miles of El Dorado Irrigation District's (EID) water transmissions system corridors. GEI prepared the IS/MND based on desktop review of publicly available biological and cultural resources information and developed mitigation measures to avoid and reduce impacts within potentially sensitive areas with site-specific surveys and other feasible requirements.

After the project was approved by EID, GEI biologists conducted surveys along the two pipeline segments to identify sensitive biological habitats and potential for special-status species. Being in sub-alpine elevations with variable topography, several aquatic resources that provide potentially suitable habitat for special-status species were identified in and adjacent to the surveyed area. GEI Biologist **Devin Barry** is working closely with the EID manager to determine avoidance measures for sensitive resources or locations to apply alternative vegetation removal methods. These surveys will help EID plan to minimize impacts and maintain compliance with the IS/MND.

GEI Contacts



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GEI Team Supporting Desalinization Project

GEI prepared an innovative environmental study that evaluated the environmental constraints and regulatory requirements for a 10-million gallon-per-day seawater desalination project, which included seven seawater intakes and three brine management options. GEI Environmental staff led screening to select alternatives and technical evaluations to identify constraints related to sensitive biological habitats and species, land use conflicts, Ocean Plan and Bay Plan regulations for desalination, water quality, energy use, and climate change. GEI then prepared a comprehensive analysis of requirements and strategy for public stakeholders and outreach, permitting, CEQA/NEPA compliance issues, and environmental justice. GEI Environmental staff then scored and ranked project options and alternatives and developed recommendations and next steps.

GEI Contact



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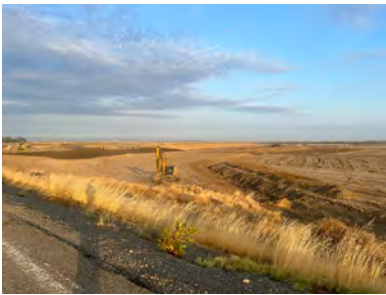
Project Updates (continued)

GEI's Biological Resources Team Helping Construction Projects Stay in Compliance

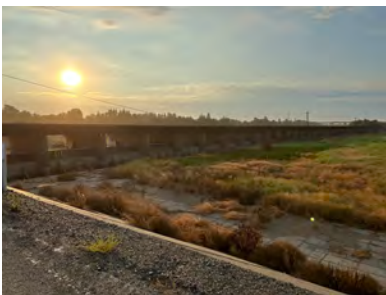


GEI's Biological Resources Team has been supporting a number of active construction and maintenance projects this season, helping clients stay in compliance with their permits and authorizations while keeping the projects on schedule. Here is a summary of some of the projects that this team has been supporting.

Reclamation District 17 is closing in on the last phase of construction on its Levee Seepage Repair Project. The GEI Team has supported this project through all stages of planning and permitting, into construction (which commenced in 2017). This project, which is now in its final construction year, included various elements of levee stabilization, rebuild, and setback along the San Joaquin River. Earlier this summer, our Team led a fish rescue and relocation effort in a flooded up area of the project footprint, that is now being regraded and prepared for mitigation riparian habitat. GEI will continue to support this project as establishing this habitat within a new setback levee begins later this fall, led by GEI's Restoration Team.



Construction began in July 2023 on a Phase 2b of the Marysville Ring Levee Improvement Project, led by Odin Construction. This project involves the construction of a cutoff wall and a setback levee along the Yuba River. GEI is providing environmental construction monitoring for on-site sensitive biological, cultural, and historical resources.



The Sacramento Weir Widening Project began construction after GEI assisted with environmental planning and permitting. Now, GEI is partnered with Granite Construction to provide construction monitoring for several biological resources, including fish rescue along Tule Canal and the Sacramento River.



DWR's Sutter Bypass Pumping Plant Rehabilitation Project, which began construction in August 2023, includes the demolition of three abandoned pumping plants. The GEI team is providing daily monitoring for sensitive biological resources, including western pond turtle, giant garter snake, and nesting swallows, and is assisting with relocating fish and turtles during dewatering of the pump basins.

GEI Contacts



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Project Updates (continued)

Surveys to Support Upgrades at DWR Snow Stations

GEI's biologists and cultural resource specialists are supporting the California Department of Water Resources (DWR's) Statewide Monitoring Network Modernization Project (Project). The Project entails updating portions of the Statewide Monitoring Network that DWR operates in coordination with various state and federal agencies and other institutions to monitor weather and snow pack across mountainous areas of California. DWR proposes to modernize approximately 70 of these stations over the next few years. The stations are a key component in the DWR data acquisition monitoring network, which provides DWR with data critical to forecasting water supplies and preparing for droughts and floods.

GEI staff are conducting desktop- and field-based investigations of the cultural and biological resources within the Project sites, for environmental compliance. Our work entails travel to these sometimes-remote sites to investigate on-site conditions, and reporting results for DWR's compliance with CEQA. This summer, GEI biologists (**Leslie Parker**, **Maggie Woodworth**, and **Sarah Roy**) and archaeologist **Ben Curry** have been conducting resource surveys throughout the Sierra Nevada for this Project. Locations have ranged from the foothills up to high alpine sites along the Sierra crest, including one site that requires the crew to backpack into Desolation Wilderness. Along with cultural surveys, biological studies have included aquatic resources delineation, rare plant surveys, and habitat assessments. All surveys and their associated reports will support future environmental reviews for the projects.

GEI Contact



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Conducting biological surveys at station in southern Sierras.



Conducting delineation in wet meadow near snow station in southern Sierras.



Old homestead site in southern Sierras.



Snow stations surrounded by blooming Wyethia in northern Sierras.

Practice Updates

Unique Applications Within Our Practice

SCUBA Diving for Species



Alicia holding one of the Sheepnose mussels discovered during the SCUBA survey.

GEI Restoration Ecologist, **Alicia Beverage**, had the opportunity to partner with GEI's Green Bay, Wisconsin, office on a unique project that required SCUBA certifications. GEI is consulting for the Wisconsin Department of Transportation to clear sections of the Wisconsin River of all bivalves upstream and downstream of a bridge, which is in need of structural repair. USFWS recovery permits were required on the project as this section of the river has known populations of the federally endangered Sheepnose mussel (*Plethobasus cyphus*), the potentiality of the Higgen's eye (*Lampsilis higin*), and other federally protected mussels in Wisconsin. Alicia is a trained PADI dive master with a NAUI rescue certification and is also trained as a scientific diver under AAUS standards. Her love of all things water (usually the Pacific Ocean) took on a new form as she felt her way through the silty waters of the Wisconsin river. Much to her delight, during the last transect of her week in Wisconsin, she found one of only a few Sheepnose that was retrieved during the 2023 summer surveys. Alicia hopes that GEI seeks out more opportunities to use her skills as a trained diver and field scientist, but in the meantime, terrestrial ecology and restoration projects are keeping her busy in California!

Funding Restoration Projects Through Grants

Christiana Conser, Senior Restoration Ecologist, brings more than 25 years of experience in habitat restoration and invasive plant science and management. She has extensive experience developing new habitat restoration projects and securing grant funding to get them done. She works closely with clients and partners to identify and prioritize potential projects, work with regulatory agencies, secure grant funding, and implement the project from start to finish. Her goal is to help the client build their capacity to get more ecological restoration work done. We are excited that Christiana is able to provide this unique application within our Environmental Practice.

GEI Contact



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California's Newest Wolf Pack

Exciting news out of Tulare County, California! Multiple sightings, camera trapping, DNA analysis, and other methods have confirmed the presence of California's now southernmost documented gray wolf pack (*Canis lupus*). The pack is made up of at least six wolves of a single-family unit, including one who confirmed to be a direct descendant of California's first documented (in 2011) wolf within its borders following the species' extirpation in 1920.

As recently as February during The Wildlife Society Western Section's Annual meeting, California Department of Fish and Wildlife (CDFW) wolf biologists reported only three wolf packs within California's state borders, all within counties in the northernmost portion of the state following the species' range extension south from Oregon. The Tulare County wolf pack represents an exciting big step southward in recovery of the species. Gray wolves, once ubiquitous over North America, are currently listed as endangered under both the Federal and California Endangered Species Acts.

CDFW hosts a program to help livestock owners implement non-lethal wolf deterrents on their properties, as well as a [compensation program](#) for owners of domestic livestock that may experience predation losses to wolves. All individuals are encouraged to report potential wolf sightings to CDFW through their [online portal](#). Contact GEI biologists if your project needs guidance on wolf impacts!

GEI Contact



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Practice Updates (continued)

Tracking Updates in California Environmental Policy

In late July, Governor Newsom signed a suite of bills aimed at accelerating what are deemed “critical infrastructure projects” to California. These projects include but are not limited to further improving California’s energy grid towards a 100% renewable goal, ensuring access to safe drinking water to all, boosting state water supply, and modernizing the state’s transportation system. Proposed by California State Senator Angelique Ashby, SB 147 was included in the approved suite of bills and immediately amends sections 395, 3511, 4700, 5050, and 5515 of the California Fish and Game Code and adds Section 2081.15 to the California Fish and Game Code.

While previously unable to do so, CDFW can now issue “take” for species listed as “fully-protected” under the California Endangered Species Act, similar to the process for obtaining take coverage for other state threatened or endangered species. However, these fully-protected species’ take permits can only be obtained for a limited list of projects, including:

- California Department of Water Resources (DWR) projects relating to the maintenance, repair, or improvement of the State Water Project
- Any “critical regional or local water agency” projects relating to the maintenance, repair, or improvement of their infrastructure
- Any state, regional, or local agency projects relating to transportation projects that do not increase highway or street vehicle capacity; especially those projects relating to improving wildlife habitat connectivity or those specifically installing wildlife crossings
- Wind or solar energy-related projects that connect to the California energy grid, along with their associated transmission and other related infrastructure

SB 147 removed American peregrine falcon (*Falco peregrinus anatum*), the California brown pelican (*Pelecanus occidentalis californicus*), and the extinct thickettail chub (*Gila crassicauda*) from the list of fully-protected species. Currently, the list of California fully-protected species includes 37 species of fish and wildlife ranging throughout the state.

As a reminder, the California Fish and Game Code defines “take” as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” (Fish & G. Code, § 2080; Cal. Code Regs., tit. 14, § 783.1). GEI’s staff have extensive experience navigating protected species’ issues encountered during water or energy infrastructure projects.

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