



Upper Sailor Bar, Lower American River, before project implementation

Upper Sailor Bar, Lower American River, after project implementation

GEI Consultants Environmental Insights

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People Updates

GEI Welcomes New and Advancing Staff

CEQA Compliance New Hire: Chrissy Russo

Chrissy Russo, B.S., recently joined GEI's CEQA/NEPA Practice Group as an Environmental Planner. Ms. Russo will be assisting with the preparation of California Environmental Quality Act and National Environmental Policy Act compliance documents for public infrastructure projects, creating maps using GIS, and assisting with wetland delineations and developing permit applications. Ms. Russo also has considerable experience designing, implementing, and managing restoration sites with the goal of improving the quality of the landscape and increasing biodiversity. She has worked on numerous restoration sites throughout the University of California, Davis Campus and at Mt. Sutro in San Francisco, CA.

Growing Biological and Cultural Resources Teams

Over the past year, our biological and cultural resources teams have added more staff to assist with delivering high-quality work products to our clients.

Biological Resources: At the end of 2019, **Tara Hannon** joined our team as a Junior Biologist to assist with biological resource surveys and compliance monitoring, and **Kim Fettke** joined as a Bat Ecologist to help evaluate potential bat roost habitat and develop and implement bat-specific mitigation measures.

Cultural Resources: Architectural Historian **Joshua Severn, M.A.**, has joined the cultural resources group. Joshua specializes in historic preservation, architectural history, and cultural resources management.



Staff Achievements

In August 2019, **Eric Htain** earned a Master's Degree in Business Administration from California State University Sacramento. Eric was enrolled in the Master's of Business Administration for Executives program which allowed him to complete his degree while working full-time.



GEI biologists conducting field monitoring

Project Updates

GEI Finalizes EIR and Implements Restoration Project along the West Bank of the Sacramento River

GEI, led by Senior Environmental Practice Leader, Ryan Jolley, recently prepared a Supplemental EIR for the Southport Sacramento River Early Implementation Project (Southport Project) for the West Sacramento Area Flood Control Agency (WSAFCA). The Supplemental EIR evaluated use of up to 600,000 cubic yards of borrow material from a borrow site at the Sacramento Regional Wastewater Treatment Plant; use of this borrow site was not evaluated in the original EIR prepared in 2014. The Supplemental EIR contained only information necessary to make the previous EIR adequate and focused on evaluating potentially new or more severe significant impacts related to emissions of criteria air pollutant and greenhouse gases, aesthetics from use of nighttime lighting during construction, and nesting birds at the new borrow site.

WSAFCA completed construction of the levee improvements in 2019 and, with design and implementation support from GEI, commenced with restoring the 120-acre floodplain area created by the new setback levee. GEI, led by Kesha Chapman, Senior Restoration Designer, provided on-site technical support to WSAFCA and the construction manager during planting of more than 80,000 plants and installing 57 large woody material structures. The new floodplain area contains a mix of wetland and riparian habitats designed to support out-migrating juvenile salmonids, Delta smelt, and other terrestrial and avian species. GEI continues to provide support to WSAFCA during the habitat establishment period.

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Aerial view of the Southport Setback Levee Restoration Site
Image Courtesy of SkyHigh Perspectives

GEI Restoration Ecologists Design and Implement Multi-benefit Flood Risk Reduction Solutions with Wind-wave Buffers

In October, the Sacramento Area Flood Control Agency (SAFCA) began construction at the Beach-Stone Lakes Mitigation Site to implement a multi-benefit project that balances ecological restoration, active agriculture, and flood risk reduction. Woodland corridors, located south of Sacramento on two sites, will provide compensatory mitigation for vegetation and high-hazard tree removal associated with a portion of SAFCA's Levee Accreditation Program. Once plantings have reached target heights and densities, the woodland corridors will help protect the Beach Lake Levee from wind-driven wave energy by reducing wave height during flood events. The woodland corridors will also augment important nesting habitat for neotropical migratory birds and special-status raptor species, including Swainson's hawk. SAFCA has worked diligently with the property owners, Sacramento Regional County Sanitation District (SRCSD), and Sacramento Area Sewer District to obtain easement rights and identify site improvements to enhance the agricultural and ecological values of the land. GEI was integral in planning and designing this multi-benefit project that balances competing interests and limited funding.

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Cross-section of the Stone Lakes Mitigation Site

Project Updates (continued)

GEI Obtains Expedited Environmental Clearances Enabling Construction of the Lower American River Anadromous Fish Habitat Restoration Project in 2019

The City of Sacramento (Water Forum) and the U.S. Bureau of Reclamation, in partnership with the Sacramento Area Flood Control Agency (SAFCA) and many other agencies and stakeholders, recently completed constructing and enhancing salmon and steelhead habitat at Sailor Bar across from the Nimbus Fish Hatchery. Over an expedited and intense 4-week period, restoration teams placed 14,000 cubic yards of spawning gravel into the river and carved a 1,400-foot side channel into the north bank of the river to provide both rearing and spawning habitat.

GEI is providing overall program coordination and regulatory compliance for this 16-year effort to plan, evaluate, and implement restoration actions annually in the Lower American River. The program is required by the Central Valley Project Improvement Act to enable continued operation of Central Valley Project dams. GEI prepared the following critical documents under an expedited time frame to obtain all environmental clearances and facilitate project construction in 2019: a joint EA/IS/MND and permitting packages to successfully obtain a USAE Section 408 Categorical Permission, CVFPB Encroachment Permit, CDFW Section 1600 application/waiver, and State Lands Commission lease. GEI prepared the CEQA/NEPA documents to cover 16 years of annual projects, and avoid annual CEQA/NEPA documentation, and is currently working to streamline future permitting with a programmatic approach to cover all 10 potential restoration sites and several types of restoration treatments for the project's duration. A link to a video of 2019 construction at Upper Sailor Bar is available here: <https://youtu.be/riuWkSpe4Zg>. All photos of this project courtesy of Sacramento Water Forum.

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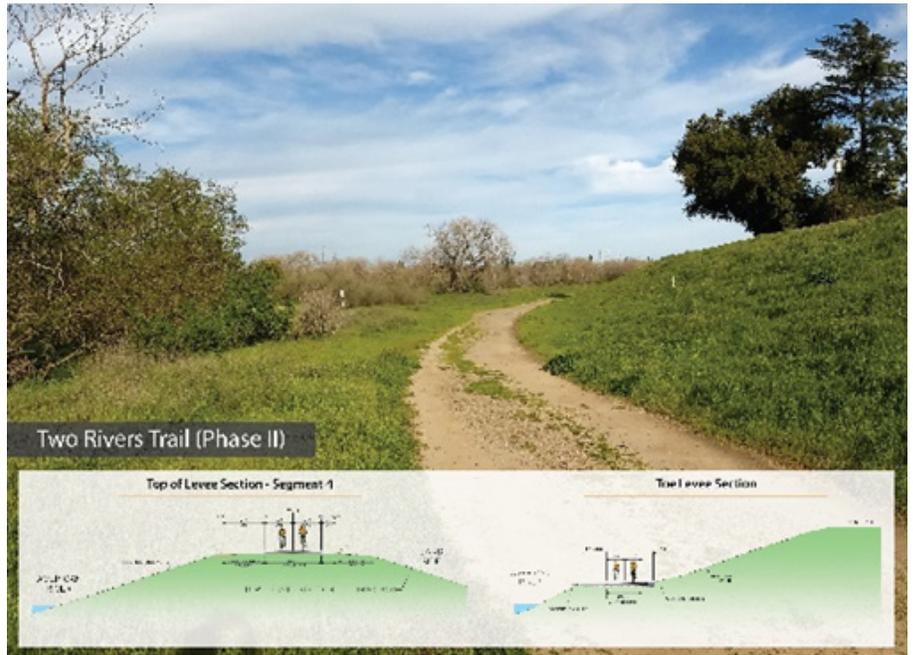


River-friendly bulldozer grading newly placed spawning gravels

Project Updates (continued)

GEI Nears Completion of Environmental Compliance and Trail Design for the Two Rivers Trail Project Phase II in Sacramento

The City of Sacramento is proposing a 3.4-mile-long multi-use trail along the south bank of the American River, between 16th Street to Sutter's Landing Park and H Street, by Sacramento State University. The overall vision is to eventually have the trail connect to the Sacramento River Parkway and create a continuous trail system along both sides of the Sacramento and American Rivers. GEI is leading both the environmental compliance and trail design components of the project, which include a unique trail design that reduces the paved width to discourage high biking speeds and adds additional shoulder width for pedestrians. GEI will complete the CEQA/NEPA compliance process for the project in early 2020, followed by regulatory permitting compliance and final design.



Cross-section of proposed trail design

GEI Helps Advance Round Valley Road Bridge Replacement Project in Inyo County

The Inyo County Department of Public Works is proposing to replace the existing North Round Valley Road Bridge over Pine Creek, which was damaged from high-velocity flows in Pine Creek. GEI is completing the environmental compliance and Section 106 compliance phase of the project and is preparing permit applications for the California Department of Fish and Wildlife and the Lahontan Regional Water Quality Control Board.



Round Valley Road Bridge

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Project Updates (continued)

GEI Conducting Cultural Resources Studies for the U.S. Army Corps of Engineers, Sacramento District

GEI is providing extensive cultural resources support to the U.S. Army Corps of Engineers, Sacramento District for the American River Common Features Cultural Resources Studies in Sacramento County, CA. This 5-year project includes background research and phased archaeological work, including pedestrian survey, archaeological testing, cultural resources evaluation, and assessment of effects to identify and evaluate potential cultural resources in support of the American River Common Features Project. Additional work includes preparing Historic Properties Treatment Plans for adversely affected historic properties and appropriate mitigation measures.



Archaeological survey along the American River

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Intensive Monitoring Completed for Year 1 Construction on Sutter Basin Levee

Beginning last spring and continuing through this winter, GEI has provided biological and cultural resources construction monitoring for the Sutter Basin Flood Risk Management Cypress to Tudor Project along the Feather River Levee. The project consists of installing cutoff walls for approximately 5 miles of levee located between a dense riparian wildlife area and farmer-owned orchards just south of Yuba City. GEI's presence on this project has been constant, with multiple archaeologists, biologists, and osteologists on-site daily throughout the year to ensure compliance with permit conditions, including 12-hour night shifts through several months. The project's initial phase is expected to be completed by the end of this January and resume for remaining construction efforts in spring 2020.

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Practice Updates

Practice Leadership at Professional Conferences and Trainings

GEI Leads Panel on Multi-Benefit Projects at National Conference

In September 2019, Lynn Hermansen, Senior Restoration Ecologist with GEI, led a panel on multi-benefit projects at the National joint conference of The Wildlife Society and American Fisheries Society (TWS/AFS) in Reno. Increasingly, obtaining funding for infrastructure projects mandates developing and delivering a project that not only achieves the built objective (e.g., flood protection, water storage, etc.), but equally considers and incorporates other important goals and objectives, including restoring ecosystem function, improving fish and wildlife habitat, improving water quality, retaining and promoting agriculture, and increasing recreational opportunities. Successful implementation of these multi-benefit projects necessitates navigating through a myriad of regulatory, design, financial, ecological, management, and stakeholder interests and constraints. GEI brought together experts and practitioners to discuss the successes, challenges, and hurdles to achieving balance in multi-benefit projects and provide insight on how multi-benefit project objectives are defined and achieved in a landscape of competing interests and limited resources. The panel included: Kris Tjernell, California Department of Water Resources Deputy Director for the Integrated Watershed Management Program; Bjarni Serup, California Department of Fish and Wildlife Coordinator for Yolo Bypass Fisheries Restoration Projects; Tim Washburn, Sacramento Area Flood Control Agency former Director of Planning; and Jennifer Pierre, State Water Contractors General Manager.

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GEI Continues to Provide “CEQA for Biologists” Training

Kelly Holland and Anne King – Senior Wildlife Biologists in GEI’s Environmental Practice – are continuing to lead a 4-hour training session entitled “CEQA for Biologists.” They recently presented this training at the National TWS/AFS Conference in September in Reno, and again at a Science Symposium organized by the North Coast Chapter of The Wildlife Society in Arcata in December. This training provides an overview of CEQA, and describes a step-by-step process for approaching, developing, and preparing a biological resources section in a CEQA document. Ms. Holland and Ms. King lead an in-depth discussion of field work needed to support the Biological Resources section, ways to focus the environmental setting, how to evaluate impacts, and how to develop effective mitigation.

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Practice Updates (continued)

GEI Presents on Regional Conservation Investment Strategy (RCIS) and Advance Mitigation Planning

GEI Restoration Ecologist, Vance Howard, presented at the 2019 Flood Management Association Conference offering guidance for securing advance mitigation as part of multi-objective project implementation. Increasingly, obtaining funding for infrastructure projects in California mandates projects that not only achieve the built objective (e.g., flood protection, water storage), but equally considers and incorporates other important goals and objectives, including restoring ecosystem function, improving fish and wildlife habitat, improving water quality, retaining and promoting agriculture, and/or increasing recreational opportunities. One of the key benefits of implementing multi-objective projects is the ability to mitigate on-site for project impacts to protected species and habitats. In some cases, more habitat can be created than is needed for project mitigation, creating the opportunity to provide advance mitigation for impacts caused by future projects. Federal and State regulatory agencies are increasingly receptive to well-planned and thoughtfully designed advance mitigation. Using the recently constructed Southport Levee Improvement Project built by the West Sacramento Area Flood Control Agency, which created 120 acres of new floodplain habitat connected to the Sacramento River, as an example, Vance discussed how to approach project planning, permitting, design, construction, and long-term management to take advantage of advance mitigation opportunities. Vance covered the more familiar permittee-responsible advance mitigation approach, as well as the Mitigation Credit Agreement (MCA) approach under the new RCIS Program being implemented by the California Department of Fish and Wildlife. The RCIS/MCA approach is particularly well suited to supporting advance mitigation created by large multi-benefit water supply and flood risk reduction projects.

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Regulatory Updates

Understanding Changes to the Clean Water Act

The Trump administration rolled back a key provision of the Clean Water Act in September, doing away with protections for many wetlands and streams across the country. This action rescinded 2015 guidance that sought to remove ambiguity about what waterways should be regulated and directed the U.S. Environmental Protection Agency to safeguard all water bodies that feed larger rivers and lakes. The repeal of the Waters of the United States rule, however, will not directly affect landowners and businesses in California; State regulators passed a sweeping wetlands policy in April that secured State oversight of California's waterways and goes into effect March 2020. The new State policy retains the rescinded 2015 Federal guidance.

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Practice Updates (continued)

Regulatory Updates

U.S. Department of the Interior Finalizes Changes to the Endangered Species Act

In August, the Trump administration finalized updates and revisions to the Federal Endangered Species Act (ESA). The changes, finalized by the U.S. Fish and Wildlife Service and National Marine Fisheries Service, apply to ESA Sections 4 (i.e., adding and removing species from the endangered species list and critical habitat designations) and 7 (i.e., consultations with other Federal agencies). The changes include: (1) rescinding the USFWS “blanket 4(d) rule,” which extended endangered species-level protections to threatened species and requires that threatened species now have species-specific 4(d) rules; and (2) applying a 60-day deadline to the request for concurrence and a written response from the agencies. Although there were numerous changes, overall, the process is expected to be streamlined and clarified, with few changes to the application of ESA.

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Updates to State CEQA Guidelines

The State CEQA Guidelines were significantly amended in December 2018. GEI has completed numerous CEQA compliance documents using the new State CEQA Guidelines. The following highlights key aspects of a few important changes we have found are applicable to public infrastructure, water resources, and energy projects.

- New Public Noticing Requirements for EIR's. CEQA now requires sending the Notice of Preparation stating that an EIR will be prepared to the county clerk of each county in which the project will be located. This means more noticing to comply with the CEQA process for EIR's prepared for larger projects and programs.
- New Energy and Wildfire CEQA Impact Sections. The evaluation of impacts related to energy consumption for construction activities is primarily related to construction equipment use. GEI has found efficient approaches to this analysis pivoting from the analysis of air pollutant and greenhouse gas emissions. For wildfire, the level of analysis required depends on a project site's location in or in proximity to State responsibility areas or lands classified as very high fire hazard severity zones.
- New Vehicle Miles Traveled (VMT) Transportation Analysis. Starting July 1, 2020, VMT will be used Statewide to determine the significance of transportation impacts. GEI is already using the VMT approach. VMT from construction activities can be evaluated qualitatively. GEI has also found efficient approaches to this analysis pivoting from the analysis of air pollutant and greenhouse gas emissions.
- New Sustainable Groundwater Management Act (SGMA) Related Criterion. SGMA requires preparation of Groundwater Sustainability Plans (GSPs) in high- and medium-priority basins in California for managing and using groundwater without causing undesirable results: significant groundwater-level declines, groundwater-storage reductions, seawater intrusion, water-quality degradation, land subsidence, and surface-water depletions. CEQA now requires evaluating if a project will impede sustainable groundwater management or conflict with implementation of GSPs. GEI is preparing numerous GSPs and our CEQA team has already developed an effective approach to evaluate potential groundwater sustainability impacts relative to the new CEQA requirements.

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